Friday, October 9, 2015

Day-At-A-Glance

Time/Event/Location **All locations in the Washington State Convention Center unless otherwise noted**

ASBMR REGISTRATION OPEN

7:00 am - 7:00 pm **Washington State Convention Center**
Atrium Lobby - Level 4

GERALD D. AURBACH LECTURE

PRESENTATION OF THE WILLIAM F. NEUMAN AND LAWRENCE G. RAISZ AWARDS

8:00 am - 9:30 am **Washington State Convention Center**
Hall 4A

8:00 am **Bone, Fat and Energy Regulation**
Bruce Spiegelman, Ph.D.
Dana-Farber Cancer Institute and Harvard Medical School, USA
Disclosures: Bruce Spiegelman, None

NETWORKING BREAK

9:30 am - 10:00 am **Washington State Convention Center**
Atrium Lobby - Level 4

MEET-THE-PROFESSOR SESSIONS

10:00 am - 11:00 am **Washington State Convention Center**
Rooms 6A-619

Meet-the-Professor Session: Bone Biomechanics and Age-Dependent Changes
Room 616
Sandra Shefelbine, Ph.D.
Northeastern University, USA
Disclosures: Sandra Shefelbine, None

Meet-the-Professor Session: Bone Quality-Raman, FTIR, SAXS, BSEM: What Do These Acronyms Mean?
Room 615
Eleftherios Paschalis, Ph.D.
Ludwig Boltzmann Institute for Osteology, Austria
Disclosures: Eleftherios Paschalis, None

Meet-the-Professor Session: Communicating Benefits and Risks of Osteoporosis Treatment
Room 6A
E. Michael Lewiecki, M.D., FACP, FACE
University of New Mexico School of Medicine, USA
Disclosures: E. Michael Lewiecki, Amgen 13; Alexion 14; Radius Health 14; Lilly 13; Merck 13; AgNovos 14

Meet-the-Professor Session: Inflammatory Bone Loss
Room 617
Deborah Novack, M.D., Ph.D.
Washington University in St. Louis School of Medicine, USA
Disclosures: Deborah Novack, None

Meet-the-Professor Session: Osteosarcopenia: Managing Frailty
Room 618

This program is supported by an educational grant from Merck & Co., Inc.
Neil Binkley, M.D.
University of Wisconsin, Madison, USA
Disclosures: Neil Binkley, None

Meet-the-Professor Session: Skeletal Aging
Room 619

Stavros Manolagas, M.D., Ph.D.
Central Arkansas VA Healthcare System, University of Arkansas for Medical Sciences, USA
Disclosures: Stavros Manolagas, None

GRANT WRITING SESSION: HOW TO CONNECT YOUR SPECIFIC AIMS TO YOUR HYPOTHESES

Sponsored by the ASBMR Membership Engagement and Education Committee.

10:00 am - 11:30 am **Washington State Convention Center**
Room 606-607

A panel of experts made up of senior scientists will offer insights on how to write the specific aims section of a grant to clearly connect to your hypotheses. Panelists will review both basic and clinical grant examples and will compare and contrast the differences in these grant formats. Participants will also have the opportunity to break into small group discussions with senior scientists at tables labeled either 'basic' or 'clinical'. This is a can't-miss opportunity for researchers at any career stage who want to gain valuable insight into writing a grant and getting their research funded.

Co-Chairs
Stavroula Kousteni, Ph.D.
Columbia University Medical Center, USA
Disclosures: Stavroula Kousteni, None

Melissa Kacena, Ph.D.
Indiana University School of Medicine, USA
Disclosures: Melissa Kacena, None

10:00 am Panelists
Jane Cauley, Ph.D.
University of Pittsburgh Graduate School of Public Health, USA
Disclosures: Jane Cauley, None

Louis Gerstenfeld, Ph.D.
Boston University School of Medicine, USA
Disclosures: Louis Gerstenfeld, None

HIGHLIGHTS OF THE ASBMR 2015 ANNUAL MEETING

10:00 am - 11:30 am **Washington State Convention Center**
Hall 4A

This special session is of interest to all health professionals, first-time meeting attendees, young investigators, individuals new to the field, nurses, clinical research study coordinators, physical therapists and/or those seeking guidance in navigating through the extensive ASBMR program.

Co-Chairs
Joan Lappe, R.N., Ph.D.
Creighton University, USA
Disclosures: Joan Lappe, None

Betsy McClung, R.N., M.N.
Oregon Osteoporosis Center, USA
Disclosures: Betsy McClung, None

10:00 am Basic Science Meeting Overview
Roland Baron, D.D.S., Ph.D.
Harvard School of Medicine and of Dental Medicine, USA
Disclosures: Roland Baron, None

10:45 am Clinical Science Meeting Overview
John Bilezikian, M.D.
Columbia University College of Physicians and Surgeons, USA
Disclosures: John Bilezikian, None

NETWORKING BREAK

11:00 am - 11:30 am **Washington State Convention Center**
Atrium Lobby - Level 4

SYMPOSIUM – METABOLISM OF BONE CELLS

This program is supported by an educational grant from Merck & Co., Inc.

11:30 am - 12:45 pm **Washington State Convention Center**
Room 6B

Co-Chairs
Gerard Karsenty, M.D., Ph.D.
Columbia University, USA
Disclosures: Gerard Karsenty, None

Ernestina Schipani, M.D., Ph.D.
University of Michigan, USA
Disclosures: Ernestina Schipani, None

11:30 am Angiogenesis Revisited: Endothelial Cell Metabolism as a Target?
Peter Carmeliet, M.D., Ph.D.
University of Leuven, Belgium
Disclosures: Peter Carmeliet, None

11:55 am Osteoclast Metabolism
Kyoji Ikeda, M.D.
National Center for Geriatrics and Gerontology, Japan
Disclosures: Kyoji Ikeda, None

12:20 pm The Bioenergetics of Bone
Thomas Clemens, Ph.D.
Johns Hopkins University, USA
Disclosures: Thomas Clemens, None

ASBMR/ECTS SYMPOSIUM – SKELETAL CONSEQUENCES OF DIABETES AND OBESITY

This program is supported by an educational grant from Lilly.

11:30 am - 12:45 pm **Washington State Convention Center**
Room 6E

Co-Chairs
Victoria Borba, M.D., Ph.D.
Serviço De Endocrinologia E Metabologia Da Universidade Federal Do Parana, Brazil
Disclosures: Victoria Borba, None

Diane Schneider, M.D., MSc
University of California, San Diego, USA
Disclosures: Diane Schneider, None

11:30 am **Role of Diabetes and Its Treatments**
Serge Ferrari, M.D.
Geneva University Hospital and Faculty of Medicine, Switzerland
Disclosures: Serge Ferrari, None

11:55 am **Obesity and Skeletal Health**
Juliet Compston, M.D., FRCP
University of Cambridge School of Clinical Medicine, United Kingdom
Disclosures: Juliet Compston, None

12:20 pm **Diabetes, Obesity and Fracture Risk Assessment: Paradox and Progress**
William Leslie, M.D., MSc, FRCPC
University of Manitoba, Canada
Disclosures: William Leslie, None

NETWORKING BREAK

12:45 pm - 1:15 pm **Washington State Convention Center**
Atrium Lobby - Level 4

CONCURRENT ORALS: MUSCULOSKELETAL MAINTENANCE AND REPAIR

1:15 pm - 2:30 pm **Washington State Convention Center**
Room 6C

Moderators:
Matthew Silva, Ph.D.
Washington University in St. Louis School of Medicine, USA
Disclosures: Matthew Silva, None

Tamara Alliston, Ph.D.
University of California, San Francisco, USA
Disclosures: Tamara Alliston, None

1:15 pm **Early response to microgravity in the analysis of whole transcriptome and live imaging**
1001 Masahiro Chatani*[1], Akiko Mantoku[1], Kazuhiro Takeyama[1], Hiroya Morimoto[1], Takehiko Ito[1], Naoki Tanigawa[2], Koji Kubota[2], Hiromi Suzuki[3], Satoko Uchida[3], Fumiaki Tanigaki[4], Masaki Shirakawa[4], Yoshiro Takano[5], Akira Kudo[1]. [1]Tokyo Institute of Technology, Japan, [2]Chiyoda Corporation, Japan, [3]Japan Space Forum, Japan, [4]Japan Aerospace Exploration Agency, Japan, [5]Tokyo Medical & Dental University, Japan
Disclosures: Masahiro Chatani, None

1:30 pm **1,25-Dihydroxyvitamin D Alters Human Skeletal Muscle Mitochondrial Oxygen**
1002 **Consumption through Changes in Mitochondrial Number and Nuclear mRNA Expression**
Zachary Ryan[1], Theodore Craig[1], Clifford Folmes[2], Xuewei Wang[3], Ian Lanza[4], Niccole Schaible[5], Jeffrey Salisbury[6], K. Sreekumaran Nair[4], Andre Terzic[2], Gary Sieck[5], Rajiv Kumar*[1]. [1]Division of Nephrology & Hypertension, Department of Medicine, USA, [2]Division of Cardiovascular Diseases, Department of Medicine, USA, [3]Division of Biomedical Statistics & Informatics, Department of Health Sciences Research, USA, [4]Division of Endocrinology, Department of Medicine, USA, [5]Department of Physiology, Biophysics & Biomedical Engineering, USA, [6]Department of Biochemistry & Molecular Biology, USA
Disclosures: Rajiv Kumar, None

1:45 pm **ASBMR 2015 Annual Meeting Young Investigator Award**
1003 **Glucocorticoids induce bone and muscle atrophy by distinct mechanisms upstream of atrogin1 and MuRF1**
Amy Sato*[1], Ernie Au[1], Danielle Richardson[1], Nicoletta Bivi[2], Meloney Cregor[1], Kevin McAndrews[1], Hannah M. Davis[1], Teresa Zimmers[3], Lilian I. Plotkin[1], Teresita Bellido[1]. [1]Indiana University School of Medicine, USA, [2]Eli Lil, USA, [3]Indiana University Department of Surgery, USA
Disclosures: Amy Sato, None

2:00 pm **ASBMR 2015 Annual Meeting Young Investigator Award**
1004 **Suppressing Sclerostin Activity Alleviates Radiotherapy-Induced Osteoporosis by Accelerating DNA Repair in Osteoblasts and Their Progenitors**
Tiao Lin*[1], Abhishek Chandra[2], Xiaoyuan Ma[3], Wei-Ju Tseng[3], Keith Cengel[4], Xiaowei Liu[3], Ling Qin[3]. [1]University of Pennsylvania, USA, [2]Departments of Orthopaedic Surgery,Perelman School of Medicine, University of Pennsylvania, USA, [3]Departments of Orthopaedic Surgery, Perelman School of Medicine, University of Pennsylvania, USA, [4]Departments of Radiation Oncology, Perelman School of Medicine, University of Pennsylvania, USA
Disclosures: Tiao Lin, Novarits

2:15 pm **Loss of DNMT3b in Chondrocytes Leads to Impaired Angiogenesis and Delayed Fracture**
1005 **Repair**
Cuicui Wang*[1], Jie Shen[1], Tzong_Jen Sheu[2], Regis O'Keefe[1]. [1]Washington University in St. Louis, USA, [2]University of Rochester Medical Center, USA
Disclosures: Cuicui Wang, None

CONCURRENT ORALS: OSTEOARTHRITIS AND OTHER JOINT DISORDERS

1:15 pm - 2:30 pm **Washington State Convention Center**

Room 6B

Moderators:
Mary Goldring, Ph.D.
Hospital for Special Surgery & Weill Cornell Medical College, USA
Disclosures: Mary Goldring, None

Chad Deal, M.D.
Cleveland Clinic Foundation, USA
Disclosures: Chad Deal, None

1:15 pm **High Bone Mass is associated with bone-forming features of osteoarthritis at non-weight**
1006 **bearing joint sites, independent of Body Mass Index**
Aaron Murphy[1], Sarah Hardcastle[1], Martin Williams[2], George Davey Smith[3], Jon H Tobias[1], Celia Gregson*[4]. [1]Musculoskeletal Research Unit, School of Clinical Sciences, University of Bristol, United Kingdom, [2]Department of Radiology, North Bristol NHS Trust, United Kingdom, [3]MRC Integrative Epidemiology Unit at the University of Bristol, United Kingdom, [4]University of Bristol, United Kingdom
Disclosures: Celia Gregson, None

1:30 pm **Osteoarthritis and chronic back pain as predictors of postmenopausal falls**
1007 Nadia Afrin*[1], Heli Koivumaa-Honkanen[2], Toni Rikkonen[1], Heikki Kröger[1], Risto Honkanen[1]. [1]University of Eastern Finland, Finland, [2]Department of psychiatry, University of Eastern Finland, Finland
Disclosures: Nadia Afrin, None

1:45 pm **Subchondral Bone in Human Osteoarthritic Knees Is Characterized By Trabecular Rod Loss**
1008 **and Trabecular Plate Stiffening**
Yan Chen*[1], Bin Zhou[2], Ji Wang[2], Weiwei Zhao[3], FKL Leung[4], Xu Cao[5], William Lu[6], X Edward Guo[2]. [1]Department of Orthopaedics & Traumatology, Faculty of Medicine, the University of Hong Kong; Bone Bioengineering Laboratory, Department of Biomedical Engineering, Columbia University, USA, [2]Bone Bioengineering Laboratory, Department of Biomedical Engineering, Columbia University, USA, [3]Department of Orthopaedics & Traumatology, Faculty of Medicine, the University of Hong Kong, Hong kong, [4]Department of Orthopaedics & Traumatology, Faculty of Medicine, the University of Hong Kong; Shenzhen Key Laboratory for Innovative Technology in Orthopaedic Trauma, the University of Hong Kong Shenzhen Hospital, Hong kong, [5]Department of Orthopaedic Surgery, School of Medicine, Johns Hopkins University, USA, [6]The University of Hong Kong, Hong kong
Disclosures: Yan Chen, None

2:00 pm **A novel method for the assessment of joint space width and subchondral bone texture**
1009 Richard Ljuhar*[1], Astrid Fahrleitner-Pammer[2], Helena Canhao[3], Hans Peter Dimai[2]. [1]Braincon Technologies, Vienna, AustriaUniversity of Technology, Vienna, Austria, At, [2]Medical University Graz, Division of Endocrinology & Metabolism, Austria, [3]Faculdade Medicina Universidade Lisboa, Portugal
Disclosures: Richard Ljuhar, None

2:15 pm **Effects of a Multi-modal Exercise Program on BMD, Muscle Function, Knee Cartilage**
1010 **Structure, Defects and Bone Marrow Lesions in Older Adults: An 18 month RCT**
Robin Daly*[1], Jenny Gianoudis[1], Yuanyuan Wang [2], Christine Bailey[3], Peter Ebeling[4], Caryl Nowson[1], Kerrie Sanders[5], Flavia Cicuttini[2], Keith Hill[6]. [1]Centre for Physical Activity & Nutrition Research, Deakin University, Australia, [2]Department of Epidemiology & Preventive Medicine, Monash University Medical School, Alfred Hospital, Australia, [3]NorthWest Academic Centre, The University of Melbourne, Western Health, Australia, [4]School of Clinical Sciences, Monash University, Australia, [5]Institute for Health & Ageing, Australian Catholic University, Australia, [6]School of Physiotherapy & Exercise Science, Curtin University, Australia
Disclosures: Robin Daly, None

CONCURRENT ORALS: REGULATION OF BONE MASS

1:15 pm - 2:30 pm **Washington State Convention Center**
Room 6A

Moderators:
Paul Baldock, Ph.D.
Garvan Institute of Medical Research, Australia
Disclosures: Paul Baldock, None

Tania Crotti, Ph.D.
University of Adelaide, Australia
Disclosures: Tania Crotti, None

1:15 pm **ASBMR 2015 Annual Meeting Young Investigator Award**
1011 **Activin Receptor Type IIA (ACVR2A) Functions Directly in Osteoblasts as a Negative Regulator of Bone Mass**
Brian Goh*, Vandana Singhal, Angelica Herrera, Thomas Clemens, Se-Jin Lee, Douglas DiGirolamo. Johns Hopkins University School of Medicine, USA
Disclosures: Brian Goh, None

1:30 pm **Six-month of Spaceflight and 1 Year Follow-Up Revealed Differential Responses of Cortical**
1012 **and Trabecular Bone Dependent on Bone Localization and Starting Bone Status**
Laurence Vico*[1], Myriam Normand [2], Bert Van Rietbergen[3], Nicolas Vilayphiou[4], Hervé Locrelle[2], Mohamed Zouch[5], Maude Gerbaix[2], Galina Vassilieva[6], Ivan Morukov[6], Thierry Thomas[2]. [1]University of St-Etienne, France, [2]INSERM-U1059, Biologie du Tissu Osseux, University of Lyon, France, [3]Eindhoven University of Technology, Netherlands, [4]SCANCO Medical AG, Switzerland, [5]Laboratory of Cardio-Circulatory, Respiratory, Metabolic, & Hormonal Adaptations to the Muscular Exercise, Faculty of Medicine Ibn-El-Jazzar, University of Sousse, Tunisia, [6]INSTITUTE OF BIO-MEDICAL PROBLEMS, Russia
Disclosures: Laurence Vico, None

1:45 pm **ASBMR 2015 Annual Meeting Young Investigator Award**
1013 **Osteolineage Notch ligand Jagged1 is critical for maintaining homeostatic trabecular bone mass**
Rialnat Lawal*[1], Benjamin Frisch[2], Matthew Hilton[3], Laura Calvi[2]. [1]University of Rochester Medical Center, USA, [2]University of Rochester, USA, [3]Duke University School of Medicine, USA
Disclosures: Rialnat Lawal, None

2:00 pm **ASBMR 2015 Annual Meeting Young Investigator Award**
1014 **MMP14 Is a Novel Target of PTH Required for Osteocytic PTH Receptor-Driven Bone Remodeling and Mineral Apposition**
Jesus Delgado-Calle*, Gretel Pellegrini, Monica Feustel, Kevin McAndrews, Teresita Bellido. Indiana University School of Medicine, USA
Disclosures: Jesus Delgado-Calle, None

2:15 pm **Mineral remodeling characterized by carbonate ion substitution is associated with MMP-13 in**
1015 **both HYP and wild-type mice during pregnancy and lactation**
Courtney McEachon[1], Carolyn Macica[2], Steven Tommasini*[1]. [1]Yale University, USA, [2]Frank H. Netter, M.D., School of Medicine at Quinnipiac University, USA
Disclosures: Steven Tommasini, None

CONCURRENT ORALS: SCLEROSTIN AND WNT SIGNALING

1:15 pm - 2:30 pm **Washington State Convention Center**
Room 6E

Moderators:
Paul Anderson, Ph.D.
University of South Australia, Australia
Disclosures: Paul Anderson, None

Francesca Gori, Ph.D.
Harvard School of Dental Medicine, and Massachusetts General Hospital, USA
Disclosures: Francesca Gori, None

1:15 pm **Inducible WNT16 Inactivation Demonstrates that WNT16 is a Major Regulator of Cortical**
1016 **Bone Thickness in Adult Mice**
Sofia Moverare Skrtic*[1], Petra Henning[1], Jianyao Wu[1], Karin Gustafsson[1], Klara Sjögren[1], Marie Lagerquist[1], Fu-Ping Zhang[2], Matti Poutanen[2], Ulf Lerner[1], Claes Ohlsson[1]. [1]Center for Bone & Arthritis Research at the Sahlgrenska Academy, Sweden, [2]Department of Physiology, Institute of Biomedicine & Turku Center for Disease Modeling, University of Turku, Finland
Disclosures: Sofia Moverare Skrtic, None

1:30 pm **Osteoclast-Specific Deletion of Mef2C Causes High Bone Mass Independent of Sost**
1017 Nicole Collette[1], Deepa K. Murugesh[1], Cristal S. Yee[2], Nicholas R. Hum[1], David Gravano[2], Jennifer O. Manilay[2], Alex G. Robling[3], Gabriela G. Loots*[1]. [1]Lawrence Livermore National Laboratory, USA, [2]University of California, Merced, USA, [3]Indiana University, USA
Disclosures: Gabriela G. Loots, None

1:45 pm **Sclerostin Antibody (Scl-Ab) Increased Bone Mass and Strength in a Mouse Model of**
1018 **Osteogenesis Imperfecta Caused by Wnt1 Mutation**
Kyu Sang Joeng[1], Ming-Ming Jiang[1], Terry Bertin[1], Hao Ding[2], Yuqing Chen[1], Xiaohong Bi[2], Catherine Ambrose[2], Brendan Lee[1], Yi-chien Lee*[1]. [1]Baylor College of Medicine, USA, [2]University of Texas Health Science Center at Houston, USA
Disclosures: Yi-chien Lee, None

2:00 pm **Romosozumab (Sclerostin Antibody) Improves Bone Mass and Bone Strength in**
1019 **Ovariectomized Cynomolgus Monkeys After 12 Months of Treatment**
Michael Ominsky*[1], Aurore Varela[2], Susan Smith[2], Jacquelin Jolette[2], Elisabeth Lesage[2], Sabina Buntich[1], Rogely W Boyce[1]. [1]Amgen Inc., USA, [2]Charles River Laboratories Preclinical Services, Canada
Disclosures: Michael Ominsky, Amgen

2:15 pm **Neutralizing Antibody and Orally Active Small Molecule Inhibitors of the Secreted WNT**
1020 **Inactivating Lipase NOTUM Stimulate Cortical Bone Formation in Ovariectomized Rodents**
Robert Brommage*[1], Andrea Thompson[2], Melanie Shadoan[2], Jeff Liu[2], Sabrina Jeter-Jones[2], Jie Cui[2], David Potter[2], Dawn Bright[2], Faika Mseeh[2], Jennifer Bardenhagen[2], Gwenn Hansen[2], Peter Vogel[2], James Tarver[2], David Powell[2], Qingyun Liu[2], Brian Zambrowicz[2]. [1]German Mouse Clinic (Helmholtz Center), USA, [2]Lexicon Pharmaceuticals, USA
Disclosures: Robert Brommage, None

NETWORKING BREAK

2:30 pm - 3:00 pm **Washington State Convention Center**
Atrium Lobby - Level 4

PLENARY SYMPOSIUM – BONE MARROW MICROENVIRONMENT

This program is supported by educational grants from Merck & Co., Inc. and Lilly.

3:00 pm - 4:15 pm **Washington State Convention Center**
Hall 4A

Co-Chairs
Maurizio Pacifici, Ph.D.
Children's Hospital of Philadelphia, USA
Disclosures: Maurizio Pacifici, None

Joy Wu, M.D., Ph.D.
Stanford University School of Medicine, USA
Disclosures: Joy Wu, None

3:00 pm **The Bone- Blood Connection: Skeletal Subsets Governing the Production of Immune Cells**
David Scadden, M.D.
Harvard University and Massachusetts General Hospital, USA
Disclosures: David Scadden, None

3:25 pm **Skeletal Stem Cells in Adult Bone Marrow**
Sean Morrison, Ph.D.
University of Texas Southwestern Medical Center, USA
Disclosures: Sean Morrison, G1 Therapeutics 14; OncoMed Pharmaceuticals 16; G1 Therapeutics 16; Molecular Devices 14

3:50 pm **Organization and Function of the Vasculature in the Skeletal System**
Ralf Adams, Ph.D.
Max Planck Institute for Molecular Biomedicine and University of Münster, Germany
Disclosures: Ralf Adams, Ph.D., None

NETWORKING BREAK

4:15 pm - 4:30 pm **Washington State Convention Center**
Atrium Lobby - Level 4

ORAL POSTER PRESENTATIONS: BASIC

4:30 pm - 5:30 pm **Washington State Convention Center**
Room 6B

Moderators:
Kenneth White, Ph.D.
Indiana University School of Medicine, USA
Disclosures: Kenneth White, None

Eileen Shore, Ph.D.
University of Pennsylvania, USA
Disclosures: Eileen Shore, None

4:35 pm **Bone-anabolic effects of histone methyltransferase EZH2 inhibition**
FR0407 Amel Dudakovic*[1], Emily Camilleri[1], Fuhua Xu[1], Scott Riester[1], Meghan McGee-Lawrence[2], Elizabeth Bradley[1], Christopher Paradise[1], Roman Thaler[1], Eric Lewallen[1], John Hawse[1], Malayannan Subramaniam[1], David Deyle[1], Noelle Larson[1], David Lewallen[1], Gary Stein[3], Martin Montecino[4], Jennifer Westendorf[1], Andre van Wijnen[1]. [1]Mayo Clinic, USA, [2]Georgia Regents University, USA, [3]University of Vermont Medical School, USA, [4] Universidad Andres Bello, Chile
Disclosures: Amel Dudakovic, None

4:40 pm **ASBMR 2015 Annual Meeting Young Investigator Award**
FR0404 **A transcription factor Zfhx4 functions as a transcriptional platform for Osterix during endochondral ossification**
Eriko Nakamura*[1], Kenji Hata[2], Michiko Yoshida[2], Tomohiko Murakami[2], Yoshifumi Takahata[2], Makoto Abe[3], Satoshi Wakisaka[3], Toshiyuki Yoneda[4], Riko Nishimura[5]. [1]Osaka University, Japan, [2]Osaka University Graduate School of Dentistry, Dep Mol Cell Biochemistry, Japan, [3]Osaka University Graduate School of Dentistry, Dep Oral Anat Dev Biol, Japan, [4]Indiana University School of Medicine, USA, [5]Osaka University Graduate School of Dentistry, Japan
Disclosures: Eriko Nakamura, None

4:45 pm **CNBP controls Chondrocyte Hypertrophy and Hypertrophic Chondrocyte Cell Size by**
FR0084 **Spatially and Temporally Regulating the Expression of Sox9 and Runx2**
Yun Lu*[1], Wei Chen[2], Guochun Zhu[2], Yi-Ping Li[2]. [1]The University of Alabama At Birmingham, USA, [2]Department of Pathology, University of Alabama at Birmingham, USA
Disclosures: Yun Lu, None

4:50 pm **ASBMR 2015 Annual Meeting Young Investigator Award**
FR0370 **A Complex Set of Distal Enhancers Linked to the Mouse *Tnfsf11* Gene Direct Tissue-specific and Hormone-regulated Expression of RANKL**
Melda Onal*, Hillary StJohn, Allison Danielson, Jon Markert, Wesley Pike. university of wisconsin, USA
Disclosures: Melda Onal, None

4:55 pm **Alternative NF-κB as a Regulator of Osteogenesis**
FR0187 Jennifer Davis*[1], Deborah Novack[2]. [1]Washington University in St. Louis, USA, [2]Washington University School of Medicine, USA
Disclosures: Jennifer Davis, None

Friday

5:00 pm FR0410 **ER Stress Signaling Transducer IRE1a Links ER Stress to Canonical Wnt Signaling in Regulating Postnatal Bone Development and Homeostasis**
Shankar Revu*[1], Kai Liu[1], Konstantinos Verdelis[1], Alejandro Jose Almarza[1], Donna Stolz[2], Hong-Jiao Ouyang[3]. [1]School of Dental Medicine, University of Pittsburgh, USA, [2]School of Medicine, University of Pittsburgh, USA, [3]University of Pittsburgh, USA
Disclosures: Shankar Revu, None

5:05 pm FR0210 **Notch Signaling Mediates Skeletal Sex Differences**
Stefano Zanotti*[1], Ernesto Canalis[2]. [1]UConn Health, USA, [2]University of Connecticut Health Center, USA
Disclosures: Stefano Zanotti, None

5:10 pm FR0403 **Requirement of nitric oxide in bone development and homeostasis informed by genetic deficiency of argininosuccinate lyase**
Zixue Jin*, Jordan Kho, Monica Grover, Brian Dawson, Ming-Ming Jiang, Yuqing Chen, Terry Bertin, Brendan Lee. Baylor College of Medicine, USA
Disclosures: Zixue Jin, None

5:15 pm FR0185 **Structure-Function Analysis of Connexins as Active Regulators of Signal Transduction in Osteoblasts**
Megan Moorer*[1], Carla Hebert[2], Joseph Stains[2]. [1]student, USA, [2]UMB, USA
Disclosures: Megan Moorer, None

5:20 pm FR0209 **Mesenchymal Progenitors Promote Vasculogenesis to Initiate the Formation of Secondary Ossification Center in the Epiphyseal Cartilage**
Wei Tong*[1], Motomi Enomoto-Iwamoto[2], Haoruo Jia[3], Ling Qin[3]. [1]Perelman school of medicine, USA, [2]Department of Surgery, The Children's Hospital of Philadelphia, USA, [3]Department of Orthopaedic Surgery, University of Pennsylvania, USA
Disclosures: Wei Tong, None

ORAL POSTER PRESENTATIONS: CLINICAL

4:30 pm - 5:30 pm **Washington State Convention Center**
Room 6E

Moderators:
Lora Giangregorio, Ph.D.
University of Waterloo, Canada
Disclosures: Lora Giangregorio, None

Serge Ferrari, M.D.
Geneva University Hospital and Faculty of Medicine, Switzerland
Disclosures: Serge Ferrari, None

4:35 pm FR0052 **Maternal Gestational Vitamin D Supplementation and Offspring Bone Mass: A Multicentre Randomised, Double-Blind, Placebo-Controlled Trial (MAVIDOS)**
Cyrus Cooper*[1], Nicholas Harvey[1], Nicholas J Bishop[2], Stephen Kennedy[3], Aris T Papageorghiou[3], Robert Fraser[4], Saurabh V Gandhi[4], Stefania D'Angelo[1], Sarah R Crozier[1], Rebecca J Moon[1], Nigel K Arden[5], Elaine M Dennison[1], Keith M Godfrey[1], Hazel M Inskip[1], Inez Schoenmakers[6], Ann Prentice[6], Zulf Mughal[7], Richard Eastell[8], David M Reid[9], Kassim Javaid[5], Nicholas Harvey[1]. [1]MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, [2]Academic Unit of Child Health, Sheffield Children's Hospital, University of Sheffield, United Kingdom, [3]Nuffield Department of Obstetrics & Gynaecology, John Radcliffe Hospital, University of Oxford, United Kingdom, [4]Sheffield Hospitals NHS Trust (University of Sheffield), United Kingdom, [5]Oxford NIHR Musculoskeletal Biomedical Research Unit, Nuffield Department of Orthopaedics, Rheumatology & Musculoskeletal Sciences, The Botnar Research Centre, University of Oxford, United Kingdom, [6]MRC Human Nutrition Research, Elsie Widdowson Laboratory, United Kingdom, [7]Central Manchester University Hospitals, United Kingdom, [8]Academic Unit of Bone Metabolism, University of Sheffield, United Kingdom, [9]School of Medicine & Dentistry, Medical School, University of Aberdeen, United Kingdom
Disclosures: Cyrus Cooper, None

4:40 pm **The Effect of Vitamin K1 and Vitamin D on Muscle Composition and Muscle Function: the**
FR0310 **ECKO RCT**
Andy Kin On Wong*[1], Maryam Hamidi[2], Lianne Tile[2], George Tomlinson[3], Hanxian Hu[2], Judy Scher[2], Yuna Lee[4], Lilian Thompson[3], Reinhold Veith[5], Robert Josse[4], Sophie Jamal[3], Gillian Hawker[6], Angela M. Cheung[2]. [1]University Health NetworkMcMaster University, Ca, [2]UHN, Canada, [3]University of Toronto, Canada, [4]St. Michael's Hospital, Canada, [5]Mount Sinai Hospital, Canada, [6]Women's College Hospital, Canada
Disclosures: Andy Kin On Wong, None

4:45 pm **Strategies for the reduction of loss of bone and body lean mass after bariatric surgery**
FR0367 Christian Muschitz*[1], Roland Kocijan[2], Judith Haschka[2], Christina Marterer[2], Arastoo Rahbar Nia[2], Gabiela Katharina Muschitz[3], Heinrich Resch[2], Peter Pietschmann[4]. [1]St. Vincent's Hospital, Austria, [2]St. Vincent Hospital – Medical Department II - Academic Teaching Hospital of Medical University of Vienna, Austria, [3]Division of Plastic & Reconstructive Surgery, Department of Surgery, Medical University of Vienna, Austria, [4]Department of Pathophysiology & Allergy Research, Center for Pathophysiology, Infectiology & Immunology, Austria
Disclosures: Christian Muschitz, None

4:50 pm **The Effect of Insulin Resistance on the Cortical Bone-IGF-I Relationship in Children**
FR0053 Joseph Kindler*[1], Norman Pollock[2], Emma Laing[1], Kathleen Hill Gallant[3], Stuart Warden[4], Connie Weaver[3], Munro Peacock[5], Carlos Isales[2], Richard Lewis[1]. [1]The University of Georgia, USA, [2]Georgia Regents University, USA, [3]Purdue University, USA, [4]Indiana University, USA, [5]Indiana University School of Medicine, USA
Disclosures: Joseph Kindler, None

4:55 pm **TBS and HbA1c but not BMD are Predictors of Incident Fractures in Type 1 Diabetes**
FR0355 Thomas Neumann*[1], Martin Keil[2], Gabriele Lehmann[2], Sabine Lodes[2], Bettina Kästner[2], Thomas Lehmann[3], Michael Kiehntopf[4], Didier Hans[5], Olivier Lamy[5], Ulrich-Alfons Müller[2], Gunter Wolf[2], Alexander Sämann[2]. [1]Jena University Hospital, Germany, [2]Jena University Hospital, Department of Internal Medicine III, Germany, [3]Jena University Hospital, Institute of Medical Statistics, Computer Sciences & Documentation, Germany, [4]Jena University Hospital, Institute of Clinical Chemistry & Laboratory Diagnostics, Germany, [5]Lausanne University Hospital, Bone Disease Unit, Switzerland
Disclosures: Thomas Neumann, None

5:00 pm **The Clinical and Genetic Spectrum of Low Alkaline Phosphatase in Adults**
FR0380 Leyre Riancho-Zarrabeitia*[1], María T. García-Unzueta[2], Jair A. Tenorio[3], Juan A. Gómez-Gerique[2], Pablo Lapunzina[3], Jose Riancho[4]. [1]Service of Rheumatology. Hospital UM Valdecilla, Spain, [2]Service of Clinical Analysis. Hospital UM Valdecilla, Spain, [3]Inst. Medical Molecular Genetics, Hospital La Paz., Spain, [4]University of Cantabria, Spain
Disclosures: Leyre Riancho-Zarrabeitia, None

5:05 pm **Advancing Muscle Measurement for Sarcopenia Assessment**
FR0390 Bjoern Buehring*[1], Ellen Fidler[2], Yosuke Yamada[3], Jessie Libber[2], Diane Krueger[2], Shubha Shankaran[4], Gregg Czerwieniec[4], Chancy Fessler[4], William Evans[4], Scott Turner[4], Marc Hellerstein[4], Dale Schoeller[5], Neil Binkley[2]. [1]University of Wisconsin, Madison, USA, [2]Osteoporosis Clinical Research Program, University of Wisconsin - Madison, Madison, USA, USA, [3]National Institute of Health & Nutrition, Japan, [4]KineMed, Inc., USA, [5]Department of Nutritional Sciences, University of Wisconsin-Madison, USA
Disclosures: Bjoern Buehring, Kinemed Inc

5:10 pm **Skeletal Health in Healthy Postmenopausal Women Treated with Exemestane for the Primary**
FR0323 **Prevention of Breast Cancer: 3-year data from the nested bone strength substudy of the MAP.3 trial (MAP3BSS)**
Miranda Boggild*[1], Lianne Tile [1], George Tomlinson[1], Natasha Gakhal[2], Sandhya Pruthi[3], John Robbins[4], Shail Rawal [1], Sharmila Majumdar[5], Sundeep Khosla[3], James Ingle[3], Harriet Richardson[6], Paul Goss[7], Angela Cheung[1]. [1]University of Toronto, Canada, [2]Women's College Hospital, Canada, [3]Mayo Clinic, USA, [4]UC Davis Health System, USA, [5]UCSF University of California, San Francisco, USA, [6]Queen's University, Canada, [7]Harvard University, USA
Disclosures: Miranda Boggild, None

5:15 pm **Prevention of osteoporotic fractures by black tea consumption**
FR0309 Richard Prince*[1], Gael Myers[2], Jonathan Hodgson[3]. [1]Sir Charles Gairdner Hospital, Australia, [2]Curtin University, School of Public Health, Australia, [3]University of Western Australia, School of Medicine & Pharmacology, Australia
Disclosures: Richard Prince, None

5:20 pm **Multiscale characterization of material properties of cortical tissue from patients with atypical**
FR0041 **femoral fractures**
Ashley Lloyd*[1], Bernd Gludovatz[2], Christoph Riedel[3], Emma Luengo[1], Joseph Lane[4], Robert Ritchie[5], Björn Busse[3], Eve Donnelly[1]. [1]Cornell University, USA, [2]Lawrence Berkeley National Laboratory, USA, [3]University Medical Center Hamburg-Eppendorf, Germany, [4]Hospital for Special Surgery, USA, [5]University of California, Berkeley, USA
Disclosures: Ashley Lloyd, None

ORAL POSTER PRESENTATIONS: TRANSLATIONAL

4:30 pm - 5:30 pm **Washington State Convention Center**
Room 6C

Moderators:
Christa Maes, Ph.D.
KU Leuven, Belgium
Disclosures: Christa Maes, None

Nicolas Bonnet, Ph.D.
University Geneva Hospital, Switzerland
Disclosures: Nicolas Bonnet, None

4:35 pm **Osteoblast-specific deletion of Sclerostin rescues ovariectomy-induced bone loss, in adult**
FR0195 **female mice, but does not significantly improve bone parameters in adult males**
Cristal Yee*[1], Nicole Collette[1], Deepa K. Murugesh[1], Aris N. Economides[2], Alexander G. Robling[3], Gabriela G. Loots[4]. [1]Lawrence Livermore National Laboratories, USA, [2]Regeneron Pharmaceuticals, USA, [3]Indiana University, USA, [4]Lawrence Livermore National Laboratory, USA
Disclosures: Cristal Yee, None

4:40 pm **NELL-1 induces Expansion of Sca-1+ Mesenchymal Stem Cell Population for Bone**
FR0063 **Formation**
Aaron James*[1], Jia Shen[2], Greg Asatrian[2], Swati Shrestha[2], Ben Wu[3], Xinli Zhang[2], Kang Ting[2], Chia Soo[4]. [1]University of California, Los Angeles, USA, [2]Division of Growth & Development & Section of Orthodontics, School of Dentistry, USA, [3]Department of Bioengineering, School of Engineering, USA, [4]UCLA Division of Plastic Surgery & Department of Orthopaedic Surgery & the Orthopaedic Hospital Research Center, University of California, Los Angeles, USA
Disclosures: Aaron James, None

4:45 pm **EphB/ephrin-B interactions regulate stromal cell fate determination and bone marrow support**
FR0057 Stan Gronthos*[1], Thao Nguyen[2], Louise Purton[3], Koichi Matsuo[4], Agnes Arthur[5]. [1]University of Adelaide, Au, [2]University of Adelaide, Australia, [3]St. Vincent's Institute of Medical Research, Australia, [4]School of Medicine Keio University, Japan, [5]School of Medical Sciences, Australia
Disclosures: Stan Gronthos, None

4:50 pm **Overexpression of Bmi1 in Mesenchymal Stem Cells Mediates Intracrine Actions of PTHrP**
FR0159 **in Regulating Skeletal Growth and Development**
Guangpei Chen*[1], Ying Zhang[1], Wanxin Qiao[1], Andrew Karaplis[2], Xiang-Jiao Yang[2], David Goltzman[2], Dengshun Miao[3]. [1]Nanjing Medical University, China, [2]McGill University, Canada, [3]Nanjing Medical University, Peoples republic of china
Disclosures: Guangpei Chen, None

4:55 pm **ASBMR 2015 Annual Meeting Young Investigator Award**
FR0193 **Loss of galectin-3 leads to retention of bone mass in aging female mice**
Kevin Maupin*[1], Kevin Weaver[2], Carol Flegler[3], Stanley Flegler[3], Tao Yang[2], John Wang[3], Bart Williams[2]. [1]Van Andel Institute Graduate School, USA, [2]Van Andel Research Institute, USA, [3]Michigan State University, USA
Disclosures: Kevin Maupin, None

5:00 pm **Inhibition of FGF-23 Signaling Ameliorates Anemia in a Mouse Model of Chronic Kidney**
FR0058 **Disease**
Despina Sitara[1], Lindsay Coe*[2], Regina Goetz[2], Moosa Mohammadi[2], Stefano Rivella[3]. [1]New York University College of Dentistry, USA, [2]New York University, USA, [3]Weill Cornell Medical College, USA
Disclosures: Lindsay Coe, None

5:05 pm **Comparative effectiveness of FGF23 blocking antibodies versus daily or intermittent 1,25**
FR0382 **dihydroxyvitamin D as therapies for X-linked hypophosphatemia in mice**
Eva Liu*[1], Adalbert Raimann[2], Daniel Brooks[3], Mary Bouxsein[4], Marie Demay[4]. [1]Brigham & Women's Hospital & Massachusetts General Hospital, USA, [2]Medical University Vienna, Massachusetts General Hospital, Austria, [3]Massachusetts General Hospital, USA, [4]Massachusetts General Hospital, Harvard Medical School, USA
Disclosures: Eva Liu, None

5:10 pm **Genetic keratin invalidation corrects the altered osteoblast function, bone formation and**
FR0102 **osteopenia in F508delta-Cftr mice, a murine model of cystic fibrosis**
Carole Le Henaff*[1], Mélanie Faria[2], Aurélie Hatton[2], Danielle Tondelier[2], Caroline Marty[1], Mylène Zarka[1], Kurt Zatloukal[3], Valérie Geoffroy[1], Aleksander Edelman[2], Isabelle Sermet[2], Pierre J. Marie[1]. [1]INSERM UMR-1132 & University Paris Diderot, Sorbonne Paris Cité, France, [2]INSERM U-1151, Faculté de Médecine Paris Descartes, France, [3]Institute of Pathology, Medical University of Graz, Austria
Disclosures: Carole Le Henaff, None

5:15 pm **Nanomechanical Properties of Human Bone with Varying Continuous Bisphosphonate**
FR0035 **Treatment Durations**
David Pienkowski*[1], Constance L. Wood[2], Hartmut H. Malluche[3]. [1]University of Kentucky, USA, [2]Department of Statistics, University of Kentucky, USA, [3]Nephrology: Bone & Mineral Metabolism, USA
Disclosures: David Pienkowski, None

5:20 pm **Statistical Shape and Appearance Models and Statistical Parameter Mapping for Hip**
FR0261 **Fracture Discrimination: Not Better Than BMD or Less Robust**
Oleg Museyko[1], Valérie Bousson[2], Jean-Denis Laredo[2], Judith Adams[3], Andreas Friedberger[4], Klaus Engelke*[5]. [1]Inst of Med Physics, Univ of Erlangen, Germany, [2]Service de Radiologie OstéoArticulaire, Hôpital Lariboisière, France, [3]Clinical Radiology, The Royal Infirmary, Univ. of Manchester, United Kingdom, [4]Inst of Med Physics, Univ. of Erlangen, Germany, [5]University of Erlangen, Germany
Disclosures: Klaus Engelke, None

DISCOVERY HALL OPEN

5:30 pm - 7:00 pm **Washington State Convention Center**
Discovery Hall - Hall 4BC

WELCOME RECEPTION & PLENARY POSTER SESSION

5:30 pm - 7:00 pm **Washington State Convention Center**
Discovery Hall - Hall 4BC

Attendees and registered guests are invited to meet and mingle during our Wine and Cheese Welcome Reception and Plenary Poster Session in the ASBMR Discovery Hall.

FR0002 **ASBMR 2015 Annual Meeting Young Investigator Award**
Increased Micro Crack Density in Patients with Low Turnover Renal Osteodystrophy
Logan Burgess*[1], Constance Wood[1], David Pienkowski[1], Hanna Mawad[1], Hartmut Malluche[2]. [1]University of Kentucky, USA, [2]University of Kentucky Medical Center, USA
Disclosures: Logan Burgess, None

FR0005 **TBK1 Plays A Critical Role In Myeloma-Induced Osteoclast Formation**
Quanhong Sun*, Peng Zhang, Juraj Adamik, Deborah Galson. University of Pittsburgh, USA
Disclosures: Quanhong Sun, None

FR0008 **Unraveling the Vitamin D Paradox in African Americans**
Mageda Mikhail*, John Aloia, Louis Ragolia, Shahidul Islam. Winthrop University Hospital, USA
Disclosures: Mageda Mikhail, None

FR0014 **Bone Remodeling in Patients With Hypoparathyroidism Treated for 3 Years With Recombinant Human Parathyroid Hormone, rhPTH(1-84), in the Open-Label RACE Study**
Michael Mannstadt*[1], John P. Bilezikian[2], Bart L. Clarke[3], Tamara J. Vokes[4], Mark L. Warren[5], Hjalmar Lagast[6], Dolores M. Shoback[7], Michael A. Levine[8]. [1]Massachusetts General Hospital Harvard Medical School, USA, [2]College of Physicians & Surgeons, Columbia University, New York, NY, USA, [3]Mayo Clinic Division of Endocrinology, Diabetes, Metabolism, & Nutrition, Rochester, MN, USA, [4]University of Chicago Medicine, Chicago, IL, USA, [5]Endocrinology & Metabolism, Physicians East, PA, Greenville, NC, USA, [6]NPS Pharmaceuticals, Inc, Bedminster, NJ, USA, [7]SF Department of Veterans Affairs Medical Center, University of California, San Francisco, San Francisco, CA, USA, [8]Children's Hospital of Philadelphia, Philadelphia, PA, USA
Disclosures: Michael Mannstadt, NPS Pharmaceuticals, Inc

FR0018 **PTH(1-84) Treatment is Safe and Effective in Hypoparathyroidism for Seven Years**
Mishaela Rubin*, Natalie Cusano, Wen-Wei Fan, Yasmine Delgado, Farnoosh Mahdavi, Juviza Rodriguez, Aline Costa, Donald McMahon, John Bilezikian. Columbia University, USA
Disclosures: Mishaela Rubin, NPS Pharma

FR0025 **Does Cortical Bone Loss Preceed Menopause?**
Ashild Bjornerem*[1], Ali Ghasem-Zadeh[2], Roger Zebaze[2], Xiaofang Wang[2], Minh Bui[3], John L Hopper[3], Ego Seeman[2]. [1]UiT The Arctic University of Norway, Norway, [2]Endocrine Centre, Austin Health, Australia, [3]Centre for Epidemiology & Biostatistics, School of Population & Global Health, University of Melbourne, Australia
Disclosures: Ashild Bjornerem, None

FR0028 **Effect of Teriparatide Treatment on Vertebral Strength in Postmenopausal Women with Osteoporosis Assessed Using a Patient-Specific Finite Element Model of the Disc-Vertebra-Disc Unit**
Chuhee Lee[1], Margaret A Paggiosi[1], Eugene V McCloskey[1], Nicola FA Peel[2], Jennifer S Walsh[1], Richard Eastell[1], Lang Yang*[1]. [1]University of Sheffield, United Kingdom, [2]Sheffield Teaching Hospitals NHS Foundation Trust, United Kingdom
Disclosures: Lang Yang, None

FR0029 **Effect of Transforming Growth Factor-Beta Inhibition on the Fracture Resistance of Bone in a Mouse Model of Type 2 Diabetes**
Jeffry Nyman*[1], Stephen O'Brien[2], Sasidhar Uppuganti[3], Amy Creecy[3], Mathilde Granke[3], Paul Voziyan[3], Kuber Sampath[2]. [1]Vanderbilt University Medical Center, USA, [2]Genzyme Research Center, USA, [3]Vanderbilt University, USA
Disclosures: Jeffry Nyman, Genzyme

FR0034 **ASBMR 2015 Annual Meeting Young Investigator Award**
Losing Trabecular Plate and Rod Number in Wrist Fractures
Bin Zhou*[1], Will Smith[2], Ji Wang[3], Yue Yu[3], Kyle Nishiyama[4], Emily Stein[4], Elizabeth Shane[4], X.Edward Guo[3]. [1]Columbia University, USA, [2]Biomedical Engineering, Columbia University, USA, [3]Biomedical Engineering Department, Columbia University, USA, [4]Department of Medicine, Columbia University, USA
Disclosures: Bin Zhou, None

FR0035 **Nanomechanical Properties of Human Bone with Varying Continuous Bisphosphonate Treatment Durations**
David Pienkowski*[1], Constance L. Wood[2], Hartmut H. Malluche[3]. [1]University of Kentucky, USA, [2]Department of Statistics, University of Kentucky, USA, [3]Nephrology: Bone & Mineral Metabolism, USA
Disclosures: David Pienkowski, None

FR0041 **Multiscale characterization of material properties of cortical tissue from patients with atypical femoral fractures**
Ashley Lloyd*[1], Bernd Gludovatz[2], Christoph Riedel[3], Emma Luengo[1], Joseph Lane[4], Robert Ritchie[5], Björn Busse[3], Eve Donnelly[1]. [1]Cornell University, USA, [2]Lawrence Berkeley National Laboratory, USA, [3]University Medical Center Hamburg-Eppendorf, Germany, [4]Hospital for Special Surgery, USA, [5]University of California, Berkeley, USA
Disclosures: Ashley Lloyd, None

FR0042 **Osteocyte Lacunar Characteristics as a Function of Genotype and Age in Bone Tissue**
Valerian Peterson[1], Brad Hugenroth[1], Brett Rosauer[1], Diane Cullen[1], Mohammed Akhter*[2]. [1]Creighton University, USA, [2]Creighton University Osteoporosis Research Center, USA
Disclosures: Mohammed Akhter, None

FR0043 **Unloading conditions negatively affects bone homeostasis via endothelial-osteoblast-osteoclast interactions in vitro and in vivo**
Vimal Veeriah*[1], Mattia Capulli[2], Angelo Zanniti[2], Nadia Rucci[2], Anna Teti[2]. [1]Researcher, Italy, [2]University of L'Aquila, Italy
Disclosures: Vimal Veeriah, None

FR0044 **Effects of 1 Month Spaceflight and 8 Days Recovery on Bone Structural and Quality Properties of Mice**
Maude Gerbaix*[1], Vasily Gnyubkin [2], Delphine Farlay [3], Hélène Follet[3], Patrick Ammann[4], Norbert Laroche[2], Boris Shenkman[5], Guillemette Gauquelin-Koch[6], Laurence Vico[2]. [1]INSERM U1059, Biologie du Tissu Osseux, Université de Lyon, , [2]INSERM U1059, Biologie du Tissu Osseux, Université de Lyon, France, [3]UMR-U1033-INSERM, Université de Lyon, France, [4]Hôpitaux Universitaires de Genève (HUG), Switzerland, [5]Institute for Biomedical Problems, Russian Academy of Sciences, Russia, [6]Centre National d'Etudes Spatiales, France
Disclosures: Maude Gerbaix, None

FR0051 **Greater Bone Accrual Occurs in African American Youth Before and After Puberty Compared to Euro-American Youth**
Laura Armas*[1], Patrice Watson[1], Vicente Gilsanz[2], Thomas Hangartner[3], Heidi J. Kalkwarf Kalkwarf[4], Sharon Oberfield[5], John Shepherd[6], Karen K. Winer[7], Babette Zemel[8], Joan M. Lappe[1]. [1]Creighton University, USA, [2]Children's Hospital Los Angeles, USA, [3]Wright State University, USA, [4]Cincinnati Children's Hospital Medical Center, USA, [5]Columbia University, USA, [6]University of California at San Francisco, USA, [7]Eunice Kennedy Shriver National Institute of Child Health & Human Development, USA, [8]Children's Hospital of Philadelphia, USA
Disclosures: Laura Armas, None

FR0052 **Maternal Gestational Vitamin D Supplementation and Offspring Bone Mass: A Multicentre Randomised, Double-Blind, Placebo-Controlled Trial (MAVIDOS)**

Cyrus Cooper*[1], Nicholas Harvey[1], Nicholas J Bishop[2], Stephen Kennedy[3], Aris T Papageorghiou[3], Robert Fraser[4], Saurabh V Gandhi[4], Stefania D'Angelo[1], Sarah R Crozier[1], Rebecca J Moon[1], Nigel K Arden[5], Elaine M Dennison[1], Keith M Godfrey[1], Hazel M Inskip[1], Inez Schoenmakers[6], Ann Prentice[6], Zulf Mughal[7], Richard Eastell[8], David M Reid[9], Kassim Javaid[5], Nicholas Harvey[1]. [1]MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, [2]Academic Unit of Child Health, Sheffield Children's Hospital, University of Sheffield, United Kingdom, [3]Nuffield Department of Obstetrics & Gynaecology, John Radcliffe Hospital, University of Oxford, United Kingdom, [4]Sheffield Hospitals NHS Trust (University of Sheffield), United Kingdom, [5]Oxford NIHR Musculoskeletal Biomedical Research Unit, Nuffield Department of Orthopaedics, Rheumatology & Musculoskeletal Sciences, The Botnar Research Centre, University of Oxford, United Kingdom, [6]MRC Human Nutrition Research, Elsie Widdowson Laboratory, United Kingdom, [7]Central Manchester University Hospitals, United Kingdom, [8]Academic Unit of Bone Metabolism, University of Sheffield, United Kingdom, [9]School of Medicine & Dentistry, Medical School, University of Aberdeen, United Kingdom

Disclosures: Cyrus Cooper, None

FR0053 **The Effect of Insulin Resistance on the Cortical Bone-IGF-I Relationship in Children**

Joseph Kindler*[1], Norman Pollock[2], Emma Laing[1], Kathleen Hill Gallant[3], Stuart Warden[4], Connie Weaver[3], Munro Peacock[5], Carlos Isales[2], Richard Lewis[1]. [1]The University of Georgia, USA, [2]Georgia Regents University, USA, [3]Purdue University, USA, [4]Indiana University, USA, [5]Indiana University School of Medicine, USA

Disclosures: Joseph Kindler, None

FR0054 **Decreased bone mass in perinatally HIV-infected school-aged South African children on antiretrovirals**

Stephen Arpadi*[1], Stephanie Shiau[1], Renate Strehlau[2], Francoise Pinillos[2], Faeezah Patel[2], Louise Kuhn[1], Ashraf Coovadia[2], Sarah Ramteke[1], Jonathan Kaufman[3], Michael Yin[1]. [1]Columbia University Medical Center, USA, [2]University of the Witwatersrand, South africa, [3]Mount Sinai School of Medicine, USA

Disclosures: Stephen Arpadi, None

FR0055 **Growth, Body Mass Index, Bone Health And Ambulatory Status Of Boys With Duchenne Muscular Dystrophy (DMD) Treated With Daily Versus Intermittent Oral Glucocorticoid Regimen**

Nicola Crabtree*[1], Raja Padidela[2], Nicholas Shaw[1], Wolfgang Hogler[1], Helen Roper[3], Imelda Hughes[2], Judith Adams[4], Anjali Daniel[2], Zulf Mughal[2]. [1]Birmingham Children's Hospital, United Kingdom, [2]Royal Manchester Children's Hospital, United Kingdom, [3]Heart of England Hospital, United Kingdom, [4]Manchester Royal Infirmary, United Kingdom

Disclosures: Nicola Crabtree, None

FR0057 **EphB/ephrin-B interactions regulate stromal cell fate determination and bone marrow support**

Stan Gronthos*[1], Thao Nguyen[2], Louise Purton[3], Koichi Matsuo[4], Agnes Arthur[5]. [1]University of Adelaide, Au, [2]University of Adelaide, Australia, [3]St. Vincent's Institute of Medical Research, Australia, [4]School of Medicine Keio University, Japan, [5]School of Medical Sciences, Australia

Disclosures: Stan Gronthos, None

FR0058 **Inhibition of FGF-23 Signaling Ameliorates Anemia in a Mouse Model of Chronic Kidney Disease**

Despina Sitara[1], Lindsay Coe*[2], Regina Goetz[2], Moosa Mohammadi[2], Stefano Rivella[3]. [1]New York University College of Dentistry, USA, [2]New York University, USA, [3]Weill Cornell Medical College, USA

Disclosures: Lindsay Coe, None

FR0059 **Megakaryocytes: Regulators of Bone Mass and Hematopoiesis**

Marta Alvarez*, LinLin Xu, Evan Himes, Brahmananda Chitteti, Ying-Hua Cheng, Andrew Engle, David Olivos, Paul Childress, Edward Srour, Melissa Kacena. Indiana University School of Medicine, USA

Disclosures: Marta Alvarez, None

FR0060 **Osteoblast Fibronectin Stimulates Myelopoiesis and Affects the Behavior of Myeloid-Derived Cells *In Vivo***
Stephanie Rossnagl*[1], Sabrina Kraft[1], Eva Altrock[1], Carla Sens[1], Katrin Rau[1], Verena Klemis[1], Inaam Nakchbandi[2]. [1]University of Heidelberg & Max-Planck Institute of Biochemistry, Germany, [2]Max-Planck Institute of Biochemistry & University of Heidelberg, Germany
Disclosures: Stephanie Rossnagl, None

FR0063 **NELL-1 induces Expansion of Sca-1+ Mesenchymal Stem Cell Population for Bone Formation**
Aaron James*[1], Jia Shen[2], Greg Asatrian[2], Swati Shrestha[2], Ben Wu[3], Xinli Zhang[2], Kang Ting[2], Chia Soo[4]. [1]University of California, Los Angeles, USA, [2]Division of Growth & Development & Section of Orthodontics, School of Dentistry, USA, [3]Department of Bioengineering, School of Engineering, USA, [4]UCLA Division of Plastic Surgery & Department of Orthopaedic Surgery & the Orthopaedic Hospital Research Center, University of California, Los Angeles, USA
Disclosures: Aaron James, None

FR0066 **N-cadherin in Osteolineage Cells Modulates the Tumor Environment**
Francesca Fontana*[1], Jacqueline Kading[2], Jingyu Xiang [3], Marcus Watkins[4], Katherine Weilbaecher [3], Roberto Civitelli [4]. [1]Bone & Mineral Diseases, USA, [2]Division of Bone & Mineral Diseases, Washington University School of Medicine in St Louis, USA, [3]Division of Molecular Oncology, Washington University School of Medicine, USA, [4]Division of Bone & Mineral Diseases, Washington University School of Medicine, USA
Disclosures: Francesca Fontana, None

FR0067 **Pivotal role of TAK-1 in tumor growth and bone destruction in myeloma: therapeutic impact of TAK-1 inhibition**
Jumpei Teramachi*[1], Masahiro Hiasa[2], Asuka Oda[2], Hirofumi Tenshin[2], Ryota Amachi[2], Takeshi Harada[2], Shingen Nakamura[2], Hirokazu Miki[3], Isturo Endo[2], Tatsuji Haneji[2], Toshio Matsumoto[2], Masahiro Abe[2]. [1]The University of Tokushima, Japan, [2]Tokushima University, Japan, [3]Tokushima University Hospital, Japan
Disclosures: Jumpei Teramachi, None

FR0069 **The anti-diabetic drug Metformin reduces tumour burden and osteolytic bone disease in Multiple Myeloma in vivo**
Siobhan Webb*, Rosie Butler, Amanda Bacon, Ann Snaith, Sarah Gooding, Jessica Whitburn, Claire Edwards. University of Oxford, United Kingdom
Disclosures: Siobhan Webb, None

FR0072 **Long-term Safety of Denosumab Through Greater than 48 Doses in Giant Cell Tumor Patients**
Susan Bukata*[1], Madhuri Sudan[2], William Mendanha[3], Neal Chawla[3], Kamalesh Sankhala[3], Sant Chawla[3]. [1]UCLA, USA, [2]Department of Epidemiology, UCLA School of Public Health, USA, [3]Sarcoma Oncology Center, USA
Disclosures: Susan Bukata, amgen; amgen

FR0075 **A novel p53 isoform-dependent accelerated aging that causes osteoarthritis in mice**
Yasuhiko Kawakami*, Robyn Leary, Keianna Vogel, Hiroko Kawakami, Anindya Bagchi. University of Minnesota, USA
Disclosures: Yasuhiko Kawakami, None

FR0076 **Cartilage repair ability of scaffold-free tissue engineered construct(TEC) derived from osteoarthritis(OA) and rheumatoid arthritis(RA) patients' synovial mesenchymal stem cells(SMSC)**
Kota Koizumi*, Kosuke Ebina, Makoto Hirao, Takaaki Noguchi, Yukihiko Yasui, Norihiko Sugita, Hideki Yoshikawa, Norimasa Nakamura. Department of Orthopaedics, Osaka University Hospital, Japan
Disclosures: Kota Koizumi, None

FR0077 **CK2.1, a novel BMP receptor mimetic peptide, induces cartilage formation *in vivo***
Hemanth Akkiraju*[1], Jonathan Avallone[2], Padma Srinivasan[2], Jeremy Bonor[1], Catherine Kirn Safran[1], Anja Nohe[2]. [1]University of Delaware, USA, [2]University of Delaware, Biological Sciences, USA
Disclosures: Hemanth Akkiraju, None

FR0078 **HIF1α/β-catenin interaction prevents cartilage damage by inhibiting *MMP13* expression in mice**

Wafa Bouaziz*[1], Johanna Sigaux[2], Claire-Sophie Devignes[1], Thomas Funck-Brentano[3], Hang-Korng Ea[1], Dominique Modrowski[2], Sylvain Provot[2], Martine Cohen-Solal[1], Eric Haÿ[4]. [1]INSERM U1132 University paris7, France, [2]INSERM U1132, France, [3]AP-HP, France, [4]INSERMU1132 Université Paris 7, France

Disclosures: Wafa Bouaziz, None

FR0080 **ADAMTS-12 protects against inflammatory arthritis through interacting with and inactivating proinflammatory CTGF**

Jianlu WEI*, Wenyu Fu, Qingyun Tian, Chuanju Liu. Hospital for Joint Diseases of NYU, USA

Disclosures: Jianlu WEI, None

FR0081 **Retinoic Acid Receptor Gamma Agonists Promote Endochondral Ossification And Facilitate Cartilage-to-Bone Transition Together With beta-catenin-Lef/Tcf Signaling**

Kenta Uchibe*[1], Agnese DiRocco[2], Matthew Johnson[3], Sayantani Sinha[2], Colleen Larmour[2], Struan Grant[3], Maurizio Pacifici[2], Motomi Enomoto-Iwamoto[2], Masahiro Iwamoto[2]. [1]Children's Hospital of Philadelphia, Jp, [2]Translational Research Program in Pediatric Orthopaedics, The Children's Hospital of Philadelphia, USA, [3]Divisions of Human Genetics & Endocrinology, The Children's Hospital of Philadelphia, USA

Disclosures: Kenta Uchibe, None

FR0082 **The role of macro-autophagy in cartilage homeostasis**

Andrei Chagin*[1], Karuna Vuppalapati[2], Thibault Bouderlique[2], Phillip Newton[2]. [1]Karolinska Institutet, Sweden, [2]Karolinska Institute, Sweden

Disclosures: Andrei Chagin, None

FR0083 **Scleraxis cells contribute to the development of trauma-induced and genetic HO**

Shailesh Agarwal*[1], Shawn Loder[1], Cameron Brownley[1], John Li[1], Hsiao Hsin Sung[1], Laura Mangiavini[1], Ammar Qureshi[2], Kristoffer Sugg[1], Shuli Li[1], Christopher Mendias[1], Nobuhiro Kamiya[3], Bin Zhao[4], Vesa Kaartinen[1], Thomas Davis[2], Jonathan Forsberg[2], Ernistina Schipani[1], Yuji Mishina[1], Benjamin Levi[1]. [1]University of Michigan, USA, [2]Naval Medical Research Center, USA, [3]Tenri University, USA, [4]Albert Einstein College of Medicine, USA

Disclosures: Shailesh Agarwal, None

FR0084 **CNBP controls Chondrocyte Hypertrophy and Hypertrophic Chondrocyte Cell Size by Spatially and Temporally Regulating the Expression of Sox9 and Runx2**

Yun Lu*[1], Wei Chen[2], Guochun Zhu[2], Yi-Ping Li[2]. [1]The University of Alabama At Birmingham, USA, [2]Department of Pathology, University of Alabama at Birmingham, USA

Disclosures: Yun Lu, None

FR0085 **Histone Deacetylase 3 Controls Extracellular Matrix Remodeling and Proinflammatory Signals in Chondrocytes**

Lomeli Carpio*[1], Elizabeth Bradley[1], Amel Dudakovic[1], Andre van Wijnen[1], Meghan McGee-Lawrence[2], Jennifer Westendorf[1]. [1]Mayo Clinic, USA, [2]Georgia Regents University, USA

Disclosures: Lomeli Carpio, None

FR0086 **PRC2 controls chondrocyte proliferation, differentiation and hypoxic adaptation by suppressing aberrant activation of multiple signaling pathways**

Fatemeh Mirzamohammadi*[1], Garyfallia Papaioannou[2], Erinn Rankin[3], Huanfeng Xie[4], Jennifer Inloes[5], Stuart H Orkin [6], Ernestina Schipani [7], Tatsuya Kobayasi[8]. [1]Massachusetts General Hospital & Harvard Medical School, USA, [2]Massachusetts general hospital & harvad medical school, USA, [3]Stanford cancer institute, USA, [4]Dana-Farber Cancer Institute, USA, [5]Endocrine Unit, Massachusets General Hospital, USA, [6]Boston Children's Hospital & Dana-Farber Cancer Institute, USA, [7]University of Michigan, USA, [8]Endocrine Unit, Massachusetts General Hospital & Harvard Medical School, USA

Disclosures: Fatemeh Mirzamohammadi, None

FR0088 **Partial pharmacological repression of PPARγ balances energy metabolism and increases bone mass**

Lance Stechschulte[1], P.J. Czernik[2], F. Tausif[1], C.A. Corzo[3], A. Asteian[3], M. Cameron[3], T.M. Kamenecka[3], P.R. Griffin[3], Beata Lecka-Czernik*[1]. [1]Department of Orthopaedic Surgery, Center for Diabetes & Endocrine Research, University of Toledo, College of Medicine & Life Sciences, USA, [2]Micro Tomografix Ltd., USA, [3]Department of Molecular Therapeutics, The Scripps Research Institute, Scripps Florida, USA

Disclosures: Beata Lecka-Czernik, None

FR0089 **PTHrP-derived Peptides Restore Bone Mass and Strength in Diabetic Mice: Additive Effect of Mechanical Loading**

Marta Maycas*[1], Kevin A McAndrews[2], Amy Sato[3], Gretel Pellegrini[3], Drew M Brown[4], Matthew R Allen [3], Lilian LI Plotkin [2], Pedro Esbrit[5], Arancha Gortazar[6], Teresita M Bellido [7]. [1]Anatomy & Cell Biology, Indiana University School of Medicine, USA, [2]Department of Anatomy & Cell Biology, Indiana University School of Medicine; Roudebush Veterans Administration Medical Center, USA, [3]Department of Anatomy & Cell Biology, Indiana University School of Medicine, USA, [4], Department of Anatomy & Cell Biology, Indiana University School of Medicine, USA, [5]Instituto de Investigación Sanitaria (IIS)-Fundación Jiménez Díaz, Universidad Autónoma de Madrid (UAM) & Red Temática de Investigación Cooperativa en Envejecimiento y Fragilidad (RETICEF), Spain, [6]Universidad San Pablo-CEU School of Medicine Madrid Spain, Spain, [7]Department of Anatomy & Cell Biology, Indiana University School of Medicine; Department of Medicine, Division of Endocrinology, Indiana University School of Medicine; Roudebush Veterans Administration Medical Center, USA

Disclosures: Marta Maycas, None

FR0090 **ΔFosB in the ventral hypothalamus prevents the age-related dysregulation of metabolic homeostasis in mice**

Kazusa Sato*[1], Anna Idelevich[1], Glenn Rowe[2], Francesca Gori[1], Roland Baron[1]. [1]Harvard School of Dental Medicine, USA, [2]Cardiovascular Institute, Beth Israel Deaconess Medical Center, Harvard Medical School, USA

Disclosures: Kazusa Sato, None

FR0091 **Apolipoprotein E (ApoE) plays a crucial role in maintaining trabecular and cortical bone mass by promoting osteoblastic differentiation via ERK1/2 pathway and suppressing osteoclast differentiation by down-regulation of c-Fos and NFATc1**

Takaaki Noguchi*[1], Kosuke Ebina[2], Makoto Hirao[2], Kota Koizumi[2], Hideki Yoshikawa[2]. [1]Osaka University, Japan, [2]Department of Orthopaedic Surgery, Graduate School of Medicine, Osaka University, Japan

Disclosures: Takaaki Noguchi, None

FR0093 **Impaired Bone Accrual during Obesity occurs by a Neuropeptide Y-dependent Mechanism in the Osteoblast**

Natalie Wee*[1], Nikki Lee[2], Ronaldo Enriquez[3], Herbert Herzog[2], Paul Baldock[3]. [1]Skeletal Metabolism, Osteoporosis & Bone Biology Program, Garvan Institute of Medical Research, , [2]Eating Disorders, Neuroscience Program, Garvan Institute of Medical Research, Australia, [3]Skeletal Metabolism, Osteoporosis & Bone Biology Program, Garvan Institute of Medical Research, Australia

Disclosures: Natalie Wee, None

FR0095 **Increased G_s Signaling in Osteoblasts Increases Metabolic Activity and Reduces Whole Body Adiposity**

Corey Cain*, Joel Valencia, Kate Jordan , Edward Hsiao. University of California, San Francisco, USA

Disclosures: Corey Cain, None

FR0096 **Mitochondrial Sirtuin-3 Regulates Skeletal Homeostasis**

Linh Ho*[1], Yong Pan[2], Emilie Besnard[3], Theresa M. Roth[4], Yuya Nishida[3], Chia-Lin Tsou[3], ChePing Ng[3], Eric M. Verdin[3], Robert A. Nissenson[4]. [1]UCSF, USA, [2]Edison Pharmaceuticals, 350 North Bernardo Avenue, Mountain View, CA 94043, USA, USA, [3]Gladstone Institutes, University of California San Francisco, San Francisco, CA 94158, USA, USA, [4]Endocrine Research Unit, VA Medical Center & Departments of Medicine & Physiology, University of California San Francisco, San Francisco, CA, USA, USA

Disclosures: Linh Ho, None

FR0099 **Metabolic Regulation of Osteoclast Differentiation by Hif1α in Human Osteoclastgenesis**
Koichi Murata*, Min Joon Lee, Seyeon Bae, Sehwan Mun, Kyung-Hyun Park-Min, Lionel Ivashkiv. Hospital for Special Surgery, USA
Disclosures: Koichi Murata, None

FR0101 **Both phosphate replacement and high fat diet cooperatively improve survival and bone quality in Ebf1-deficient mice**
Jackie Fretz*[1], Tracy Nelson[2], Ben-Hua Sun[2], Rose Webb[2], Nancy Troiano[2], Steven Tommasini[2]. [1]Yale University School of Medicine, USA, [2]Yale School of Medicine, USA
Disclosures: Jackie Fretz, None

FR0102 **Genetic keratin invalidation corrects the altered osteoblast function, bone formation and osteopenia in F508delta-Cftr mice, a murine model of cystic fibrosis**
Carole Le Henaff*[1], Mélanie Faria[2], Aurélie Hatton[2], Danielle Tondelier[2], Caroline Marty[1], Mylène Zarka[1], Kurt Zatloukal[3], Valérie Geoffroy[1], Aleksander Edelman[2], Isabelle Sermet[2], Pierre J. Marie[1]. [1]INSERM UMR-1132 & University Paris Diderot, Sorbonne Paris Cité, France, [2]INSERM U-1151, Faculté de Médecine Paris Descartes, France, [3]Institute of Pathology, Medical University of Graz, Austria
Disclosures: Carole Le Henaff, None

FR0103 **Matrix deposition and mineralization in heterozygous and homozygous mouse embryos with Gly610 to Cys substitution in the triple helical region of the α2(I) collagen chain**
Lynn Mirigian[1], Elena Makareeva[1], Shakib Omari[1], Anna Roberts-Pilgrim[1], Edward Mertz[1], Sergey Leikin*[2]. [1]NICHD, NIH, USA, [2]National Institutes of Health, USA
Disclosures: Sergey Leikin, None

FR0105 **MS-275 administration rescues cleidocranial dysplasia (CCD) phenotypes of Runx2+/- mice**
Han-sol Bae*, Won-joon Yoon, Young-dan Cho, Rabia Islam, Hye-rim Shin, Bong-soo Kim, Kyung-mi Woo, Jeong-hwa Baek, Hyun-mo Ryoo. Seoul National University, South korea
Disclosures: Han-sol Bae, None

FR0106 **Osteocyte-specific Overexpression of Human WNT16 Increases both Cortical and Trabecular Bone Density and Improves Bone Strength in Mice**
Imranul Alam*[1], Austin Reilly[1], Charishma Kasipathi[1], Mohammed Alkhouli[1], Rita Gerard-O'Riley[1], Dena Acton[1], Amie Gray[1], Kyung-Eun Lim[2], Alexander Robling[2], Michael Econs[1]. [1]Indiana University School of Medicine, USA, [2]Anatomy & Cell Biology, USA
Disclosures: Imranul Alam, None

FR0107 **PHOSPHO1 is Essential for Normal Bone Fracture Healing**
Mina Morcos*[1], Hadil Al-Jallad[2], Jose Luis Millan[3], Reggie C Hamdy[4], Monzur Murshed[5]. [1]McGill University, Canada, [2]Division of Paediatric Orthopaedic Surgery, Shriners Hospital for Children, Montreal, Canada, [3]Sanford-Burnham Medical Research Institute La Jolla, CA, USA, USA, [4]Division of Paediatric Orthopaedic Surgery, Shriners Hospital for Children, Montreal. Department of Medicine, McGill University, Montreal, QC, Canada, Canada, [5]Department of Molecular Genetics, Shriners Hospital for Children, Montreal. Department of Medicine, McGill University, Montreal, QC, Canada. Faculty of Dentistry, McGill University, Montreal, QC, Canada, Canada
Disclosures: Mina Morcos, None

FR0110 **Integrating genome-wide association and co-expression network data for novel BMD gene discovery**
Gina Calabrese[1], Larry Mesner[2], Joseph Stains[3], Steven Tommasini[4], Mark Horowitz[4], Clifford Rosen[5], Charles Farber*[2]. [1]University of Virgina, USA, [2]University of Virginia, USA, [3]University of Maryland, USA, [4]Yale, USA, [5]Maine Medical Research Institute, USA
Disclosures: Charles Farber, None

FR0111 **A Murine Model with Conditional FGF23 Deletion**
Erica Clinkenbeard*[1], Taryn Cass[2], Julia Hum[2], Matt Allen[3], Teresita Bellido[3], Kenneth White[2]. [1]Indiana University-Purdue University Indianapolis, USA, [2]Department of Medical & Molecular Genetics Indiana University School of Medicine, USA, [3]Department of Anatomy & Cell Biology Indiana University School of Medicine, USA
Disclosures: Erica Clinkenbeard, None

FR0112 **Limb-specific Klotho Expression Is Required for FGF23 Production During Renal Failure**
Jovana Kaludjerovic*[1], Hirotaka Komaba[1], Tadatoshi Sato[1], Takenobu Ishii[1], Hannes Olauson[2], Tobias Larsson[2], Reinhold Erben[3], Beate Lanske[1]. [1]Harvard School of Dental Medicine, USA, [2]Karolinska Institutet, Sweden, [3]University of Veterinary Medicine, Austria
Disclosures: Jovana Kaludjerovic, None

FR0113 **Sustained expression of a soluble form of αKlotho prevents aortic calcification and disease phenotypes during chronic hyperphosphatemia**
Julia Hum*[1], Linda O'Bryan[2], Arun Tatiparthi[3], Robert Johnson[4], Jonathan Wilson[4], Erica Clinkenbeard[5], Taryn Cass[5], Rosamund Smith[2], Kenneth White[5]. [1]Indiana University School of Medicine, USA, [2]Biotechnology Discovery Research, Eli Lilly & Company, USA, [3]Lead Optimization Pharmacology & Toxicology, Covance Laboratories Inc., USA, [4]Investigational Pathology, Eli Lilly & Company, USA, [5]Department of Medical & Molecular Genetics, Indiana University School of Medicine, USA
Disclosures: Julia Hum, None

FR0115 **AMG 416 Prevented Cortical Porosity and Preserved Bone Strength in 5/6 Nephrectomized Rats with Established Secondary Hyperparathyroidism**
Longchuan Yu[1], Frank Asuncion[1], Shawn Alexander[1], Kelly Hensley[1], Chun-Ya Han[2], Denise Dwyer[3], Qing-Tian Niu[1], Marina Stolina[1], Charley Dean Jr[1], Michael Ominsky[1], William Richards[1], Xiaodong Li*[1]. [1]Amgen Inc., USA, [2]Amgen. Inc., USA, [3]Amgen. Inc, USA
Disclosures: Xiaodong Li, Amgen Inc.

FR0117 **Continuous PTH Treatment Induces Bone Loss through GαS Signaling in T cells**
Jau-Yi Li*[1], Jerid W. Robinson[2], Abdul Malik Tyagi[2], Jonathan Adams[2], Neal M. Weitzmann[2], Roberto Pacifici[2]. [1]Emory University School of Medicine, USA, [2]Emory University, USA
Disclosures: Jau-Yi Li, None

FR0118 **CRISPR-mediated RUNX2 Deletion Delineates Mechanisms of Gene Expression throughout Osteoblast Differentiation and Mineralization**
Mark Meyer*, Nancy Benkusky, J. Wesley Pike. University of Wisconsin-Madison, USA
Disclosures: Mark Meyer, None

FR0120 **LRP6 Is Required For PTH-Induced SOST Suppression**
CHANGJUN LI*[1], Liang Xie[2], Xu Cao[2], Mei Wan[2]. [1]Johns Hopkins University School of Medicine, USA, [2]Department of Orthopaedic Surgery, Johns Hopkins University School of Medicine, Baltimore, MD 21205, USA, USA
Disclosures: CHANGJUN LI, None

FR0122 **The large variant of the stimulatory G protein alpha-subunit XLαs mediates early postnatal regulation of renal phosphate handling by enhancing IP3/DAG signaling**
Qing He*[1], Yan Zhu[1], Braden Corbin[1], Antonius Plagge[2], Murat Bastepe[1]. [1]Massachusetts General Hospital, USA, [2]University of Liverpool, United Kingdom
Disclosures: Qing He, None

FR0124 **Androgen receptor signaling in mesenchymal lineage cells suppresses soluble RANKL production, cancellous osteoclast number, and B lymphopoiesis**
Semahat Serra Ucer*[1], Srividhya Iyer[2], Ha-neui Kim[2], Shoshana M Bartell[2], Aaron D Warren[3], Li Han[2], Julie A Crawford[2], Charles A O'Brien[2], Maria Jose Almeida[2], Stavros C Manolagas[2]. [1]University of Arkansas for Medical Sciences, USA, [2]Center for Osteoporosis & Metabolic Bone Diseases, Central Arkansas Veterans Healthcare System, University of Arkansas for Medical Sciences, USA, [3]Central Arkansas Veterans Healthcare System, University of Arkansas for Medical Sciences, USA
Disclosures: Semahat Serra Ucer, None

FR0125 **Conditional knockout of progesterone receptor in the osteoprogenitor cells, but not in the mature osteoblasts, increases trabecular bone formation**
Zhendong Zhong*[1], Weihua Sun[2], Haiyan Chen[2], Yu-an Lay[2], Nancy Lane[2], Wei Yao[2]. [1]University of California, Davis, USA, [2]Musculoskeletal Research Unit, Department of Medicine, University of California Davis Medical Center, Sacramento, CA 95817, USA., USA
Disclosures: Zhendong Zhong, None

FR0126 **ERα Expression in T Lymphocytes is Dispensable for Estrogenic Effects in Bone**
Karin Gustafsson*[1], Annica Andersson [2], Helen Farman[2], Vikte Lionikaite[2], Petra Henning[2], Jianyao Wu[2], Sara Windahl[2], Merja Nurkkala Karlsson[2], Angelina Bernardi[2], Ulrika Islander[2], Sofia Skrtic[2], Klara Sjögren[2], Claes Ohlsson[2], Marie Lagerquist[2]. [1]University of Gothenburg, Sweden, [2]Centre for Bone & Arthritis Research, Institute of Medicine, University of Gothenburg, Sweden
Disclosures: Karin Gustafsson, None

FR0127 **The role of osteocyte estrogen receptor beta (ERβ) in regulating skeletal growth, aging, and the skeleton's anabolic response to physical stimuli**
Maxime Gallant[1], Haisheng Yang[1], Whitney Bullock[2], Teresita Bellido[3], Russell Main*[1]. [1]Purdue University, USA, [2]Indiana University Purdue University Indianapolis, USA, [3]Indiana University School of Medicine, USA
Disclosures: Russell Main, None

FR0128 **Common polymorphism in Vitamin D 25-hydroxylase gene (CYP2R1) abrogates promoter activity and is associated with low serum 25OHD in a Caucasian pediatric cohort**
Jeff Roizen*[1], Alex Casella[2], Jonathan Bradfield[2], Meizan Lai[2], Hakon Hakonarson[2], Michael Levine[2]. [1]The Childrens Hospital of Philadelphia, USA, [2]The Children's Hospital of Philadelphia, USA
Disclosures: Jeff Roizen, None

FR0129 **Conditional Knockout of Osteoblast Vitamin D Receptor and CYP27B1 Implicates Cell-Specific Receptor Signaling but Not Cell-Specific 1,25-dihydroxyvitamin D Production in the Maintenance of Trabecular and Cortical Bone Mass in Male and Female Mice**
Tsui-Hua Chen, Amanda Herberger*, nathan liang, Alfred Li, daniel Bikle, wenhan chang, Dolores Shoback. UCSF, USA
Disclosures: Amanda Herberger, None

FR0131 **A transcriptomic analysis of cortical versus cancellous bone from mechanically-loaded murine tibiae reveals ERα-dependent differential changes in gene expression**
Natalie Kelly*[1], John Schimenti[1], F Patrick Ross[2], Marjolein van der Meulen[1]. [1]Cornell University, USA, [2]Hospital for Special Surgery, USA
Disclosures: Natalie Kelly, None

FR0132 **Inhibition of BMP 2/4 Signaling Reduces Enhanced Cancellous Bone Response to Mechanical Loading in Female ERα-Deficient Mice**
Katherine Melville[1], Gina Surita[1], Natalie Kelly[1], R Scott Pearsall[2], John Schimenti[1], F Patrick Ross[3], Marjolein Van Der Meulen*[1]. [1]Cornell University, USA, [2]Acceleron Pharma, USA, [3]Hospital for Special Surgery, USA
Disclosures: Marjolein Van Der Meulen, None

FR0133 **Low Magnitude Mechanical Loading Regulates Repair Events in Cortical Bone Defect Healing**
Robert Carrera[1], Vittoria Flamini[2], Benson George[3], Daniel Hunter[3], Bo Liu[3], Gurpreet Singh[3], Jill Helms[3], Philipp Leucht[4], Alesha Castillo*[5]. [1]Department of Bioengineering, Stanford University, USA, [2]Department of Mechanical & Aerospace Engineering, New York University, USA, [3]Department of Surgery, Stanford University School of Medicine, USA, [4]Departments of Orthopaedic Surgery & Cell Biology, New York University School of Medicine, USA, [5]Departments of Mechanical & Aerospace Engineering & Orthopaedic Surgery, New York University, USA
Disclosures: Alesha Castillo, None

FR0134 **Mechanical unloading sensitive miR-138 targets MACF1 to regulate bone formation**
Airong Qian*[1], Zhihao Chen[2], Yasir Arfat[2], Lifang Hu[2], Peng Shang[3], Ge Zhang[4]. [1]Northwestern Polytechnical University, Peoples republic of china, [2]Key Laboratory for Space Bioscience & Biotechnology, Institute of Special Environmental Biophysics, School of Life Sciences, Northwestern Polytechnical University, Xi'an 710072, China, China, [3]Key Laboratory for Space Bioscience & Biotechnology, Institute of Special Environmental Biophysics, School of Life Sciences, Northwestern Polytechnical University, China, [4]nstitute for Advancing Translational Medicine in Bone & Joint Diseases, School of Chinese Medicine, Hong Kong Baptist University, Hong Kong, China, China
Disclosures: Airong Qian, None

FR0135 **Pre-exercise through Moderate Treadmill Running Enhances Healing of Wounded Tendons in Aging Rats**
Jianying Zhang*, Ting Yuan, James H-C Wang. University of Pittsburgh School of Medicine, USA
Disclosures: Jianying Zhang, None

FR0136 **ASBMR 2015 Annual Meeting Young Investigator Award**
Preosteoclasts Mediate Bone Modeling by Secretion of PDGF-BB and Induction of CD31^{hi}Emcn^{hi} Vessels
Hui Xie*[1], Zhuying Xia[2], Weicheng Xu[3], Genevieve Brown[4], Mei Wan[3], X. Edward Guo[4], Xu Cao[3]. [1]Johns Hopkins Medical Institution, USA, [2]Xiangya Hospital, Central South University, China, [3]Department of Orthopaedic Surgery, Johns Hopkins University School of Medicine, USA, [4]Department of Biomedical Engineering, Columbia University, USA
Disclosures: Hui Xie, None

FR0137 **Simulated Space Radiation: Murine Skeletal Responses during Recovery and with Mechanical Stimulation**
Yasaman Shirazi-Fard*[1], Ann-Sofie Schreurs[2], Tiffany Truong[2], Candice Tahimic[2], Joshua Alwood[2], Alesha Castillo[3], Ruth Globus[2]. [1]NASA Ames Research Center, Us, [2]NASA Ames Research Center, USA, [3]New York University, USA
Disclosures: Yasaman Shirazi-Fard, None

FR0138 **Sirtuin 1's Role as a Negative Regulator of the Anabolic Response to Mechanotransduction in Mature Osteoblasts**
Elizabeth Rendina-Ruedy*[1], Nicole Fleming[1], Rashmi Pandey[2], Guillame Vignaux[1], Heather Durai[1], Daniel Perrien[3]. [1]Vanderbilt University Medical Center, USA, [2]Vanderbilt University Medical Center, VA Tennessee Valley Healthcare System, USA, [3]VA Tennessee Valley Healthcare System, Vanderbilt University Medical Center, USA
Disclosures: Elizabeth Rendina-Ruedy, None

FR0139 **ASBMR 2015 Annual Meeting Young Investigator Award**
β-catenin deletion in osteocytes does not prevent load-induced bone formation
Kyung Shin Kang*, Alexander Robling. Indiana University, USA
Disclosures: Kyung Shin Kang, None

FR0140 **βcatenin gainoffunction mutation in osteocytes confers protective effects from disuseinduced bone loss**
Whitney Bullock*, Alexander Robling. Indiana University, USA
Disclosures: Whitney Bullock, None

FR0141 **Actin Cytoskeletal Structure Influences MSC Lineage through Balanced Activity of LARG GEF and ARHGAP18**
William Thompson*[1], Sherwin Yen[2], Zhihui Xie[2], Gunes Uzer[2], Buer Sen[2], Maya Styner[2], Keith Burridge[2], Janet Rubin[2]. [1]Indiana University, USA, [2]University of North Carolina Department of Medicine, USA
Disclosures: William Thompson, None

FR0142 **Disruption of nucleo-cytoskeletal connectivity increases intranuclear actin and enhances MSC differentiation**
Gunes Uzer*[1], Buer Sen[1], Zhihui Xie[1], William Thompson[2], Guniz Bas[1], Maya Styner[1], Janet Rubin[1]. [1]University of North Carolina, USA, [2]Indiana University, USA
Disclosures: Gunes Uzer, None

FR0143 **Distinct subcellular activation patterns of Src and FAK by interstitial fluid flow and cytokines**
Qiaoqiao Wan*[1], Hiroki Yokota[2], Sungsoo Na[3]. [1]Department of Biomedical Engineering, Purdue University, USA, [2]Department of Biomedical Engineering, Indiana University Purdue University Indianapolis, USA, [3]Indiana University-Purdue University Indianapolis, USA
Disclosures: Qiaoqiao Wan, None

FR0144 **Diminished Mechanoresponsiveness with Skeletal Maturation occurs via a Sclerostin-Independent Pathway**
Laia Albiol*[1], Annette I. Birkhold[2], David Pflanz[2], Tobias Thiele[2], Ina Kramer[3], Michaela Kneissel[3], Georg N. Duda[2], Sara Checa[2], Bettina M. Willie[2]. [1]Charité – Universitätsmedizin Berlin, Germany, [2]Julius Wolff Institute, Charité Universitätsmedizin, Germany, [3]Novartis Pharma, Switzerland
Disclosures: Laia Albiol, None

FR0145 **Ectopic Tendon Mineralization After Injury Is Progressive, Deteriorates Tendon Biomechanical Properties And Involves BMP Signaling**
Kairui Zhang[1], Shuji Asai[2], Michael Hast[3], Louis Soslowsky[3], Motomi Enomoto-Iwamoto*[1]. [1]Children's Hospital of Philadelphia, USA, [2]Nagoya University, Japan, [3]University of Pennsylvania, USA
Disclosures: Motomi Enomoto-Iwamoto, None

FR0146 **Low Intensity Pulsed Ultrasound Can Promote Stem Cell Proliferation during Fracture Healing but Varied by the Acoustic Wave Patterns**
Yi-Xian Qin[1], Hua Yue*[2], Guoxian Feng[2], Li Huang[2], Jingyu Wang[2], Deyi Zhang[2], Jingbo Liu[2], Kartikey Grover[2]. [1]State University of New York at Stony Brook, USA, [2]Stony Brook University, USA
Disclosures: Hua Yue, None

FR0147 **Withdrawn**

FR0148 **Parathyroid hormone's enhancement of bones' osteogenic response to loading in young mice is lost in the cortical bone of old mice, and reversed in their trabeculae**
Lee Meakin, Henry Todd, Peter Delisser, Alaa Moustafa, Gabriel Galea, Sara Windahl, Lance Lanyon, Joanna Price*. University of Bristol, United Kingdom
Disclosures: Joanna Price, None

FR0149 **Risedronate and Mechanical Loading Have Additive Effects Increasing Bone Mass in Cortical, but Not Cancellous, Bone in Aged Mice**
Peter Delisser*[1], Henry Todd[2], Lee B Meakin[2], Gabriel L Galea[2], Lance E Lanyon[2], Sara H Windahl[3], Joanna S Price[4]. [1]University Of Bristol, United Kingdom, [2]School of Veterinary Sciences, University of Bristol, United Kingdom, [3]Centre for Bone & Arthritis Research, Institute of Medicine, Sahlgrenska Academy, Gothenburg, Sweden & School of Veterinary Sciences, University of Bristol, United Kingdom, [4]chool of Veterinary Sciences, University of Bristol, United Kingdom
Disclosures: Peter Delisser, None

FR0151 **A Natural Antibody Against Oxidized Phospholipids Causes Bone Anabolism**
Elena Ambrogini*[1], Shuling Wang[2], Xuchu Que[2], Fumihiro Yamaguchi[2], Annick Deloose[1], Kanan Vyas[1], Michela Palmieri[1], Stuart B Berryhill[1], Robert S Weinstein[1], Sotirios Tsimikas[2], Stavros C Manolagas[1], Joseph L Witztum[2], Robert L Jilka[1]. [1]Center for Osteoporosis & Metabolic Bone Diseases, University of Arkansas for Medical Sciences & the Central Arkansas Veterans Healthcare System, USA, [2]Department of Medicine, University of California, San Diego, USA
Disclosures: Elena Ambrogini, None

FR0152 **Activation of Protein Kinase A in Mature Osteoblasts Promotes a Remarkable Bone Anabolic Response**
Liana Tascau[1], Thomas Gardner[1], Hussein Anan[2], Charlie Yongpravat[1], Christopher Cardozo[3], William Bauman[3], Francis Lee[1], Daniel Oh[1], Hesham Tawfeek*[3]. [1]Columbia University, USA, [2]SacredHeart Hospital/Temple University, USA, [3]James J Peters VA Medical Center, USA
Disclosures: Hesham Tawfeek, None

FR0156 **Gpr39 deficient mice have increased bone mass during aging as a result of accelerated osteoblast differentiation**
Noam Levaot*[1], Milena Pesic[2], Gail Guterman-Ram[2], Ayelet Orenbuch[2]. [1]Ben-Gurion University of the Negev, Israel, [2]Department of Physiology & Cell Biology, Ben-Gurion University of the Negev, Israel
Disclosures: Noam Levaot, None

FR0157 **Intermittent Parathyroid Hormone Enhances Osseointegration of a Physiologically Loaded Tibial Implant in Ovariectomized Mice**
Xu Yang*[1], Aleksey Dvorzhinskiy[1], Vinicius Ladeira Craveiro[1], Caroline Brial[1], Benjamin Ricciardi[1], F. Patrick Ross[1], Marjolein van der Meulen[2], Mathias Bostrom[1]. [1]Hospital for Special Surgery, USA, [2]Cornell University, USA
Disclosures: Xu Yang, None

FR0159 **Overexpression of Bmi1 in Mesenchymal Stem Cells Mediates Intracrine Actions of PTHrP in Regulating Skeletal Growth and Development**
Guangpei Chen*[1], Ying Zhang[1], Wanxin Qiao[1], Andrew Karaplis[2], Xiang-Jiao Yang[2], David Goltzman[2], Dengshun Miao[3]. [1]Nanjing Medical University, China, [2]McGill University, Canada, [3]Nanjing Medical University, Peoples republic of china
Disclosures: Guangpei Chen, None

FR0160 **Pyk2-Deletion Enhances Bone Mass through Estrogen Signaling in Osteoblasts and Osteoclasts**
Sumana Posritong*[1], Pierre P. Eleniste[2], Evan R. Himes[2], Melissa A. Kacena[2], Angela Bruzzaniti[1]. [1]Indiana University School of Dentistry, USA, [2]Indiana University School of Medicine, USA
Disclosures: Sumana Posritong, None

FR0161 **ASBMR 2015 Annual Meeting Young Investigator Award**
Skeletal Anabolism By Concurrently Targeting the PTH1R and CaSR
Christian Santa Maria*[1], Alfred Li[2], Zhiqiang Cheng[2], Fuqing Song[2], Dolores Shoback[3], Chia-Ling Tu[2], Wenhan Chang[2]. [1]UCSF, USA, [2]San Francisco Veterans Affairs Medical Center, USA, [3]University of California, San Francisco, USA
Disclosures: Christian Santa Maria, None

FR0162 **The Effects of Systemic Hedgehog Pathway Modulation on Fracture Healing**
Jennifer McKenzie*, Evan Buettmann, Matthew Silva, Michael Gardner. Washington University in St. Louis, USA
Disclosures: Jennifer McKenzie, None

FR0164 **Crosstalk between Sensory Neuropeptides Regulating Heterotopic Ossification in Tendon**
Ceren Tuzmen*, Phil Campbell, Lee Weiss. Carnegie Mellon University, USA
Disclosures: Ceren Tuzmen, None

FR0166 **LRP4 in osteoblasts suppresses bone formation and promotes osteoclastogenesis and bone resorption**
Wen-Cheng Xiong*, Lei Xiong. Georgia Regents University, USA
Disclosures: Wen-Cheng Xiong, None

FR0167 **Milk fat globule-epidermal growth factor 8 (MFG-E8) is a novel anti-inflammatory factor in rheumatoid arthritis in mice and men**
Martina Rauner*[1], Elise Albus[2], Kathrin Sinningen[2], Maria Winzer[2], Sylvia Thiele[2], Anke Hannemann[3], Sylvia Grossklaus[4], Triantafyllos Chavakis[4], Mark Udey[5], Lorenz Hofbauer[2]. [1]Medical Faculty of the TU Dresden, Germany, [2]Department of Medicine III, Technische Universität Dresden, Germany, [3]University of Greifswald, Germany, [4]Department of Clinical Pathobiochemistry & Institute for Clinical Chemistry & Laboratory Medicine, Technische Universität Dresden, Germany, [5]Dermatology Branch, Center for Cancer Research, National Cancer Institute, USA
Disclosures: Martina Rauner, None

FR0168 **Tanshinol reverses the impaired bone formation of Glucocorticoid-induced osteoporosis in rats: a role for KLF15**
Liao Cui[1], Yajun Yang*[2], Yanjie Su[2], Yahui Chen[2], Yuyu Liu[2], Tie Wu[2]. [1]Guangdong Medical College, Peoples republic of china, [2]Department of Phamacology, Guangdong Key Laboratory for R & D of Natural Drugs, Guangdong Medical College, China
Disclosures: Yajun Yang, None

FR0169 **Annexin A5 inhibits bony outgrowth at tendon/ligament insertion sites**
Akemi Shimada*[1], Yoshinori Arai[2], Satoshi Wada[3], Hisashi Ideno[4], Taichi Kamiunten[3], Kazuhisa Nakashima[4], Koichiro Komatsu[4], Teruhito Yamashita[5], Yoichi Ezura[6], Norio Amizuka[7], Ernst Pöschl [8], Bent Brachvogel[9], Yoshiki Nakamura[3], Akira Nifuji[4]. [1]Tsurumi University School of Dental Medicine, Japan, [2]Nihon University, School of Dentistry, Japan, Japan, [3]Department of Orthodontics, Tsurumi University School of Dental Medicine, Japan, [4]Department of Pharmacology, Tsurumi University School of Dental Medicine, Japan, [5]Division of Hard Tissue Research, Institute for Oral Science, Matsumoto Dental University, Japan, [6]Department of Molecular Pharmacology, Medical Research Institute, Tokyo Medical & Dental University, Japan, [7]Department of Developmental Biology of Hard Tissue, Division of Oral Health Science, Graduate School of Dental Medicine, Hokkaido University, Japan, [8]School of Biological Sciences, University of East Anglia, Norwich Research Park, Norwich, United Kingdom, [9]Experimental Neonatology, Department of Pediatrics & Adolescent Medicine, Center for Biochemistry, Medical Faculty, University of Cologne, Germany
Disclosures: Akemi Shimada, None

FR0170 **Fusion Induced Hypertrophy of Skeletal Muscle Is Modulated By Pin1 through the Smad3 Pathway**
Rabia Islam*, Won-joon Yoon, Young-dan Cho, Woo-Jin Kim, Han-sol Bae, Hye-rim Shin, Bong-soo kim, Kyung Mi Woo, Jeong-Hwa Baek, Hyun-Mo Ryoo . Seoul National University, School of Dentistry, Department of Molecular Genetics, South korea
Disclosures: Rabia Islam, None

FR0172 **Identification of Muscle-derived Mesenchymal Stem Cells in Traumatic Heterotopic Ossification**
Zijun Zhang*[1], Reed Michell[2], Lew Schon[2]. [1]Union Memorial Hospital, USA, [2]MedStar Union Memorial Hospital, USA
Disclosures: Zijun Zhang, None

FR0174 **Increased Glycolytic Fast-twitch Skeletal Muscle Growth in Mice has Beneficial Effects on Both Loaded and Non-loaded Skeletal Sites**
Joshua Farr*[1], Glenda Evans[1], Thomas White[1], Daniel Fraser[1], Kenneth Walsh[2], Sundeep Khosla[1], Nathan LeBrasseur[1]. [1]Mayo Clinic, USA, [2]Boston University, USA
Disclosures: Joshua Farr, None

FR0177 **Free Fatty Acid Induced Insulin Resistance in Human Synoviocytes: A Potential Link Between Obesity and Osteoarthritis**
Eric Schott*[1], Daisuke Hamada[2], Robert Maynard[3], Michael Zuscik[3], Robert Mooney[4]. [1]University of Rochester Medical Center, USA, [2]Department of Orthopedics, Tokushima University Hospital, Japan, [3]Center for Musculoskeletal Research, University of Rochester Medical Center, USA, [4]Department of Pathology, University of Rochester Medical Center, USA
Disclosures: Eric Schott, None

FR0179 **Therapeutic effects of a novel FGFR1 inhibitor on osteoarthritis**
Yangli Xie*[1], Wei Xu[2], Siru Zhou[2], Zuqiang Wang[2], Junlan Huang[2], Xianding Sun[2], Wanling Jiang[2], Xiaolan Du[2], Lin Chen[2]. [1]Third Military Medical University, Peoples republic of china, [2]Center of Bone Metabolism & Repair, Department of Rehabilitation Medicine, State Key Laboratory of Trauma, Burns & Combined Injury, Trauma Center, Institute of Surgery Research, Daping Hospital, Third Military Medical University, China
Disclosures: Yangli Xie, None

FR0181 **Communication of Cyclic AMP by Connexin43 Gap Junctions Influences Osteoblast Signaling and Gene Expression**
Aditi Gupta*, Hidayah Anderson, Margaret Ren, Joseph Stains. University of Maryland School of Medicine, USA
Disclosures: Aditi Gupta, None

FR0182 **Intravital imaging of coupling between osteoblasts and osteoclasts by using multiphoton microscopy**
Masayuki Furuya*[1], Junichi Kikuta[2], Hiroki Mizuno[2], Shigeto Seno[3], Hiroki Maeda[4], Kazuya Kikuchi[4], Hideo Matsuda[3], Hideki Yoshikawa[5], Masaru Ishii[2]. [1]Osaka university, Japan, [2]Department of Immunology & Cell Biology, Graduate School of Medicine & Frontier Biosciences, Osaka University, Japan, [3]Department of Bioinformatic Engineering Graduate school of Information Science & Technology, Osaka University, Japan, [4]Department of Material & Life Sciences, Graduate School of Engneering, Osaka University, Japan, [5]Department of Orthopaedics, Graduate School of Medicine, Osaka University, Japan
Disclosures: Masayuki Furuya, None

FR0183 **Matrix Vesicles Mediate the Cell-to-Cell Transmission of MicroRNA-125b as an Inhibitor of Osteoclastic Bone Resorption**
Yuichiro Takei*[1], Yuko Nakao[2], Tomoko Minamizaki[1], Yasumasa Irie[2], Faisal Ahmed[2], Hirotaka Yoshioka[1], Shumpei Niida[3], Kotaro Tanimoto[1], Yuji Yoshiko[1]. [1]Hiroshima University Institute of Biomedical & Health Sciences, Japan, [2]Hiroshima University Graduate School of Biomedical & Health Sciences, Japan, [3]Biobank, National Center of Geriatrics & Gerontology, Japan
Disclosures: Yuichiro Takei, None

FR0184 **New Insight into Collagen Assembly Dynamics in Osteoblasts by Live Cell Imaging**
Michael Grillo*[1], LeAnn Tiede-Lewis[2], Lora McCormick[1], Charlotte Phillips[3], Hong Zhao[1], Sarah Dallas[1]. [1]University of Missouri - Kansas City, USA, [2]Univerity of Missouri-Kansas City, USA, [3]Univeristy of Missouri - Columbia, USA
Disclosures: Michael Grillo, None

FR0185 **Structure-Function Analysis of Connexins as Active Regulators of Signal Transduction in Osteoblasts**
Megan Moorer*[1], Carla Hebert[2], Joseph Stains[2]. [1]student, USA, [2]UMB, USA
Disclosures: Megan Moorer, None

FR0186 **A Novel Role of miR-150 in Bone Homeostasis**
Fouad Moussa*[1], Gregory Sondag[1], Thomas Mbimba[1], Kimberly Novak[2], Scott McDermott[3], Fayez Safadi[2]. [1]Kent State University, USA, [2]NEOMED, USA, [3]SUMMA Health System, USA
Disclosures: Fouad Moussa, None

FR0187 **Alternative NF-κB as a Regulator of Osteogenesis**
Jennifer Davis*[1], Deborah Novack[2]. [1]Washington University in St. Louis, USA, [2]Washington University School of Medicine, USA
Disclosures: Jennifer Davis, None

FR0188 **Collagen production of osteoblasts revealed by ultra-high voltage electron microscopy**
Rumiko Hosaki-Takamiya[1], Mana Hashimoto[1], Tomoyo Tanaka[1], Takashi Yamashiro[2], Hiroshi Kamioka*[3]. [1]Department of Orthodontics, Okayama University Graduate School of Medicine, Dentistry, & Pharmaceutical Sciences, Japan, [2]Department of Orthodontics & Dentofacial Orthopedics, Graduate School of Dentistry, Osaka University, Japan, [3]Okayama University Graduate School of Medicine, Dentistry, & Pharmaceutical Sc, Jp
Disclosures: Hiroshi Kamioka, None

FR0189 **Double knockout of CLC3 and CLC5 in murine osteoblasts eliminates all mineralization**
Quitterie C. Larrouture*[1], Deborah J. Nelson[2], Paul H. Schlesinger [3], Peter A. Friedman[4], Irina Tourkova[5], Li Liu[6], Harry Blair[7]. [1]Department of Pathology University of Pittsburgh, USA, [2]Dept of Neurobiology, Pharmacology & Physiology, University of Chicago, USA, [3]Department of Cell Biology, Washington University, USA, [4]Department of Pharmacology & Chemical Biology, University of Pittsburgh, USA, [5]Department of Pathology, University of Pittsburgh, & Pittsburgh Veteran's Affairs Medical Center, USA, [6]Department of Pathology, University of Pittsburgh, USA, [7]University of Pittsburgh, USA
Disclosures: Quitterie C. Larrouture, None

FR0190 **Multi-Modal High-Content Imaging Reveals Relationships Between Cell Signaling and Mineralization in Zebrafish**
Claire Watson*, Edith Gardiner, Werner Kaminsky, Ronald Kwon. University of Washington, USA
Disclosures: Claire Watson, None

FR0191 **Regulation of matrix mineralization and bone vascularization by pigment epithelium-derived factor (PEDF)**
Heeseog Kang*, Joan C. Marini. NIH/NICHD, USA
Disclosures: Heeseog Kang, None

FR0193 **ASBMR 2015 Annual Meeting Young Investigator Award**
Loss of galectin-3 leads to retention of bone mass in aging female mice
Kevin Maupin*[1], Kevin Weaver[2], Carol Flegler[3], Stanley Flegler[3], Tao Yang[2], John Wang[3], Bart Williams[2]. [1]Van Andel Institute Graduate School, USA, [2]Van Andel Research Institute, USA, [3]Michigan State University, USA
Disclosures: Kevin Maupin, None

FR0194 **microRNA Regulation of Circadian Rhythm in the Osteoblastic Lineage**
Spenser Smith*[1], Neha S. Dole[2], Tiziana Franceschetti[2], Anne M. Delany[2]. [1]University of Connecticut Health Center, USA, [2]UConn Health, USA
Disclosures: Spenser Smith, None

FR0195 **Osteoblast-specific deletion of Sclerostin rescues ovariectomy-induced bone loss, in adult female mice, but does not significantly improve bone parameters in adult males**
Cristal Yee*[1], Nicole Collette[1], Deepa K. Murugesh[1], Aris N. Economides[2], Alexander G. Robling[3], Gabriela G. Loots[4]. [1]Lawrence Livermore National Laboratories, USA, [2]Regeneron Pharmaceuticals, USA, [3]Indiana University, USA, [4]Lawrence Livermore National Laboratory, USA
Disclosures: Cristal Yee, None

FR0196 **Serum Amyloid A3: A Novel Means by Which Preosteoclasts Inhibit the Anabolic Effects of PTH**
Shilpa Choudhary*, Sui-Pok Yee, Renata Rydzik, Estus Thomas, Douglas Adams, Joseph Lorenzo, Carol Pilbeam. University of Connecticut Health Center, USA
Disclosures: Shilpa Choudhary, None

FR0197 **Constitutive Activation of NF-κB, Mimicking Inflammation, Inhibits Osteoblast Function by Inducing Glycolysis and mTORC2**
Gaurav Swarnkar*[1], Tim (Hung-Po) Chen[1], Gabriel Mbalaviele[1], Yousef Abu-Amer[2]. [1]Washington University School of Medicine, USA, [2]Washington University in St. Louis School of Medicine, USA
Disclosures: Gaurav Swarnkar, None

FR0198 **Effects of Osteoblast-Specific Gαs Over-Expression on Skeletal Development using a Transgenic Mouse Model**
Lucia Zhang*[1], Kim Sugamori[1], Colin Claridge[1], Ariana Dela Cruz[1], Marc Grynpas[2], Jane Mitchell[3]. [1]University of Toronto, Canada, [2]Lunenfeld-Tanenbaum Research Institute of Mount Sinai Hospital, Canada, [3]Department of Pharmacology & Toxicology, University of Toronto, Canada
Disclosures: Lucia Zhang, None

FR0199 **Promotion of osteoblast differentiation and nodule formation through Ucma as a direct transcriptional target of Runx2 and Osterix**
Yeon-Ju Lee*[1], Seung-Yoon Park[2], So-Jeong Lee[1], Eun-Hye Lee[1], Soon-Young Kim[1], Je-Yong Choi[3], Yeo Hyang Kim[4], Jung-Eun Kim[5]. [1]Dept. of Molecular Medicine, CMRI, BK21 Plus KNU, Kyungpook National University School of Medicine, South korea, [2]Dept. of Biochemistry, School of Medicine, Dongguk University, South korea, [3]Dept. of Biochemistry & Cell Biology, CMRI, BK21 Plus KNU, Kyungpook National University School of Medicine, South korea, [4]Dept. of Pediatrics, Kyungpook National University Hospital, South korea, [5]Kyungpook National University School of Medicine, South korea
Disclosures: Yeon-Ju Lee, None

FR0200 **Runx2 Gene Deletion in Odontoblast Fails to Disrupt Dentin Synthesis**
Mitra Adhami*[1], John C. Clarke[1], Haiyan Chen[1], Harunur Rashid[1], Kayla King[1], Mohammad Hassan[1], Yang Yang[2], Amjad Javed[3]. [1]School of Dentistry, University of Alabama at Birmingham, USA, [2]Department of Pathology, University of Alabama at Birmingham, USA, [3]University of Alabama at Birmingham, USA
Disclosures: Mitra Adhami, None

FR0202 **Dividing Growth Plate Chondrocytes Transdifferentiate into Osteoblasts and Provide a Major Source of De Novo Osteoblasts throughout Postnatal Growth in Mice**
Patrick Aghajanian*[1], Shaohong Cheng[1], Catrina Alarcon[1], Subburaman Mohan[2]. [1]Jerry L Pettis VA Medical Center, USA, [2]Jerry L. Pettis Memorial VA Medical Center, USA
Disclosures: Patrick Aghajanian, None

FR0203 **Histone H2B Monoubiquitination is Required for Bone Development**
Zeynab Najafova*[1], Peng Liu[2], Dominik Saul[3], Hiroaki Saito[4], Wanhua Xie[5], Simon Baumgart[5], Ahmed Mansouri[6], Eric Hesse[4], Stephan Sehmisch[3], Jan Tuckermann[2], Steven A. Johnsen[5]. [1]University Medical Center Goettingen, Germany, [2]Institute for General Zoology & Endocrinology, University of Ulm, Germany, [3]Department of Trauma Surgery & Orthopedics, University Medical Center Goettingen, Germany, [4]Department of Trauma-, Hand- & Reconstructive Surgery, University Medical Center Hamburg, Germany, [5]Clinic for General, Visceral & Pediatric Surgery, University Medical Center Goettingen, Germany, [6]Max Planck Institute for Biophysical Chemistry, Molecular Cell Differentiation Group, Germany
Disclosures: Zeynab Najafova, None

FR0204 **miR-322 and Its Target Protein Tob2 Modulate Osterix mRNA Stability**
Beatriz Gámez Molina*, Edgardo Rodríguez-Carballo, Francesc Ventura . University of Barcelona, Spain
Disclosures: Beatriz Gámez Molina, None

FR0205 **Osteoblast-derived FGF9 Regulates Skeletal Homeostasis**
Liping Wang*[1], Marcia Abbot[2], Theresa Roth[3], Linh Ho[3], Lalita Wattanachanya[3], Rebecca Hayden[3], Robert Nissenson[4]. [1]VA Medical Center, San Francisco, USA, [2]Endocrine Unit, San Francisco VA Medical Center, Canada, [3]Endocrine Unit, San Francisco VA Medical Center, USA, [4]Endocrine Unit, San Francisco VA Medical Center; Department of Medicine & Physiology, University of California, USA
Disclosures: Liping Wang, None

FR0206 **Ablation of a mitochondrial stress sensor, cyclophilinD, increases osteogenicity of MSCs and reduces bone degeneration**
Roman Eliseev*, Jerry Madukwe. University of Rochester, USA
Disclosures: Roman Eliseev, None

FR0207 **Identification of a Subpopulation of Periosteal and Endosteal Prx-1-Expressing Cells in Postnatal Long Bones and Their Contribution to Fracture Repair**
Alessandra Esposito*[1], Ye Ping[2], Tieshi Li[3], Joe Temple[3], Anna Spagnoli[3]. [1]Rush University Medical School, USA, [2]UNC of Chapel Hill, USA, [3]Rush University Medical Center, USA
Disclosures: Alessandra Esposito, None

FR0208 **Large-scale Bone Regeneration by Cells Intermediate between Chondrocytes and Osteocytes**
Gage Crump*, Sandeep Paul, Simone Schindler, Sofia Bougioukli, Jay Lieberman, Francesca Mariani. University of Southern California, USA
Disclosures: Gage Crump, None

FR0209 **Mesenchymal Progenitors Promote Vasculogenesis to Initiate the Formation of Secondary Ossification Center in the Epiphyseal Cartilage**
Wei Tong*[1], Motomi Enomoto-Iwamoto[2], Haoruo Jia[3], Ling Qin[3]. [1]Perelman school of medicine, USA, [2]Department of Surgery, The Children's Hospital of Philadelphia, USA, [3]Department of Orthopaedic Surgery, University of Pennsylvania, USA
Disclosures: Wei Tong, None

FR0210 **Notch Signaling Mediates Skeletal Sex Differences**
Stefano Zanotti*[1], Ernesto Canalis[2]. [1]UConn Health, USA, [2]University of Connecticut Health Center, USA
Disclosures: Stefano Zanotti, None

FR0211 **A Novel Interferon Regulatory Factor-8 (IRF8) Mutation is Associated with Osteoclast-Mediated Idiopathic Tooth Root Resorption**
Vivek Thumbigere Math*[1], Brian Foster[2], Anthony Neely[3], Hiroaki Yoshii[4], Keiko Ozato[4], Martha Somerman[2]. [1]National Institutes of Health, USA, [2]National Institute of Arthritis & Musculoskeletal & Skin Diseases (NIAMS), USA, [3]University of Detroit-Mercy School of Dentistry, USA, [4]National Institute of Child Health & Human Development, USA
Disclosures: Vivek Thumbigere Math, None

FR0212 **Osteoclastic miR-214 targets PTEN to increase bone resorption**
Jin Liu*[1], Li Defang[2], Baosheng Guo[3], Lei Dang[3], Aiping Lu[3], Ge Zhang[3]. [1]Hong kong, [2]Institute for Advancing Translational Medicine in Bone & Joint Diseases, Hong Kong Baptist University, , [3]Institute for Advancing Translational Medicine in Bone & Joint Diseases, Hong Kong Baptist University, Hong kong
Disclosures: Jin Liu, None

FR0213 **Ostm1 expression in mature osteoclasts is both necessary and sufficient to prevent osteopetrosis**
Jean Vacher*[1], Monica Pata[2], Marie Solange Mutabaruka[2]. [1]Institut De Recherches Cliniques De Montréal, Canada, [2]IRCM, Canada
Disclosures: Jean Vacher, None

FR0217 **Conditional abrogation of Atm in osteoclasts leads to reduced bone mass in mice**
Toru Hirozane*, Takahide Tohmonda, Masaki Yoda, Yoshiaki Toyama, Morio Matsumoto, Hideo Morioka, Keisuke Horiuchi, Masaya Nakamura. Keio University School of Medicine, Japan
Disclosures: Toru Hirozane, None

FR0218 **Correlating RANK Ligand/RANK Binding Kinetics with Osteoclast Formation and Function**
Julia Warren*[1], Steve Teitelbaum[2], Wei Zou[2], Nidhi Rohatgi[2], Corinne Decker[2], Christopher Nelson[2], Daved Fremont[2]. [1]Washington University in St. Louis School of Medicine, USA, [2]Washington University in Saint Louis, USA
Disclosures: Julia Warren, None

FR0221 **Sirtuin1 (Sirt1) activation suppresses osteoclastogenesis by deacetylating FoxOs**
Ha-Neui Kim*[1], Li Han[2], Srividhya Iyer[1], Serra Ucer[2], Aaron Warren[2], Haibo Zhao[2], Rafael de Cabo[3], Charles O'Brien[2], Stavros Manolagas[2], Maria Almeida[2]. [1]Univ. Arkansas for Medical Sciences, Central Arkansas VA Healthcare System, USA, [2]University of Arkansas for Medical Sciences & the Central Arkansas Veterans Healthcare System, USA, [3]National Institute on Aging, USA
Disclosures: Ha-Neui Kim, None

FR0223 **Alternative NF-κB Regulates RANKL-induced Osteoclast Differentiation and Mitochondrial Biogenesis via Independent Mechanisms**
Rong Zeng*, Roberta Faccio, Deborah Novack. Washington University in St. Louis, USA
Disclosures: Rong Zeng, None

FR0225 **Function of novel splicing variant of receptor activator of NF-κB**
Riko Kitazawa*[1], Ryuma Haraguchi[2], Yosuke Mizuno[3], Yasuhiro Kobayashi[4], Sohei Kitazawa[2]. [1]Ehime University, Japan, [2]Department of Molecular Pathology, Ehime University Graduate School of Medicine, Japan, [3]Department of Diagnostic Pathology, Ehime University Hospital, Japan, [4]Institute of Oral Science, Matsumoto Dental University, Japan
Disclosures: Riko Kitazawa, None

FR0226 **Loss of PARP1 Poly-ADP-ribosylating Function is Necessary for Osteoclast Differentiation**
Chao Qu*[1], Chun Wang[1], Gaurav Swarnkar[1], Jacqueline Kading[1], Michael Hottiger[2], Yousef Abu-Amer[1], Roberto Civitelli[1], Gabriel Mbalaviele[3]. [1]Washington University School of Medicine, USA, [2]University of Zurich, Switzerland, [3]Washington University in St. Louis School of Medicine, USA
Disclosures: Chao Qu, None

FR0228 **Lineage Tracing of Cathepsin-K in Bone and Other Tissues**
Farzin Takyar*[1], Ryan Berry[2], Lynda Bonewald[3], John J Wysolmerski[4], Mark C Horowitz[2]. [1]Yale University, School of Medicine, USA, [2]Department of Orthopaedics & Rehabilitation, Yale School of Medicine, USA, [3]School of Dentistry, University of Missouri-Kansas City, USA, [4]Section of Endocrinology & Metabolism, Yale School of Medicine, USA
Disclosures: Farzin Takyar, None

FR0230 **STAT5 is a key transcription factor for IL-3-mediated inhibition of RANKL-induced osteoclastogenesis**
Semun Seong*[1], Jongwon Lee[2], Jung Ha Kim[2], Kabsun Kim[2], Inyoung Kim[2], Lothar Hennighausen[3], Nacksung Kim[2]. [1]Chonnam National University Medical School, South korea, [2]Department of Pharmacology, Medical Research Center for Gene Regulation, Chonnam National University Medical School, South korea, [3]Laboratory of Genetics & Physiology, National Institute of Diabetes & Digestive & Kidney Diseases, National Institutes of Health, USA
Disclosures: Semun Seong, None

FR0231 **Analysis of an in Vitro Reconstitution System of Bone Cell Network by Two-Photon Microscopy**
Atsuhiko Hikita*[1], Tadahiro Iimura[2], Yusuke Oshima[2], Shin Yamamoto[2], Takeshi Imamura[2]. [1]Graduate School of Medicine, The University of Tokyo, Japan, [2]Ehime University, Japan
Disclosures: Atsuhiko Hikita, None

FR0232 **Characterization of a New Cre Model Targeting Osteocytes**
Delphine Maurel*[1], Mark L Johnson[2], Stephen E Harris[3], Marie A Harris[3], Lynda F Bonewald[2]. [1]Department of Oral & Craniofacial Sciences, USA, [2]Oral & Craniofacial Sciences, USA, [3]UT Health Science Center at San Antonio, USA
Disclosures: Delphine Maurel, None

FR0233 **Gene Expression and Local in vivo Environment (LivE) Imaging of Osteocyte Subpopulations in trabecular mouse bone**
Andreas Truessel*[1], Felicitas Flohr[2], Gisela Kuhn[2], Ralph Müller[2]. [1]ETH Zurich, Switzerland, [2]ETH Zurich, Institute for Biomechanics, Switzerland
Disclosures: Andreas Truessel, None

FR0236 **Reduction in microRNA21 promotes apoptosis and increases RANKL in osteocytes: a mechanism for enhanced resorption in the absence of Cx43 in osteoblastic cells and with aging**
Hannah Davis*[1], Emily Atkinson[1], Julia Harris[1], Rafael Pacheco-Costa[2], Arancha Gortazar[3], Mircea Ivan[1], Angela Bruzzaniti[4], Teresita Bellido[1], Lilian Plotkin[1]. [1]Indiana University School of Medicine, USA, [2]Federal University of Sao Paulo School of Medicine, Brazil, [3]San Pablo-CEU University School of Medicine, Spain, [4]Indiana University School of Dentistry, USA
Disclosures: Hannah Davis, None

FR0237 **Bone microarchitecture anomalies and vascular expression of osteocytes markers in low serum parathormone CKD rats with vascular calcification**
Sarah-Kim Bisson[1], Roth-Visal Roth[2], Sylvain Picard[2], Richard Larivière[2], Mohsen Agharazii[2], Fabrice Mac-Way*[3]. [1]CHU de Québec Research Center, l'Hôtel-Dieu de Québec Hospital, Laval University, Quebec, CANADA, Canada, [2]CHU de Québec Research Center, l'Hôtel-Dieu de Québec Hospital, Division of Nephrology, Department of Medicine, Laval University, Quebec, CANADA, Canada, [3]CHU de Québec Research Center, l'Hôtel-Dieu de Québec Hospital, Division of Nephrology, Faculty & Department of Medicine, Laval University, Quebec, CANADA, Canada
Disclosures: Fabrice Mac-Way, None

FR0238 **EphrinB2 acts differently in osteoblasts and osteocytes to control bone strength and matrix composition**
Christina Vrahnas*[1], Ingrid Poulton[2], Huynh Nguyen [3], Mark Forwood[3], Keith Bambery[4], Mark Tobin[4], T John Martin[2], Natalie A Sims[2]. [1]St. Vincent's Institute, Australia, [2]St. Vincent's Institute of Medical Research, Australia, [3]Griffith University, Australia, [4]Australian Synchrotron, Australia
Disclosures: Christina Vrahnas, None

FR0239 **FGF9 Potently Induces Dmp1 Expression and Early Osteocyte Markers in a Cell Model of Osteocyte Differentiation**
Lora McCormick*, Kun Wang, LeAnn Tiede-Lewis, Hong Zhao, Yixia Xie, Lynda Bonewald, Dallas Sarah. University of Missouri-Kansas City, USA
Disclosures: Lora McCormick, None

FR0246 **To measure or not to measure? Vitamin D and parathyroid hormone in patients with clinical risk factors for osteoporosis**
Oliver Bock*[1], Silke Nicklisch[1], Christiane Weinberg[2], Ute Dostmann[1]. [1]Promedio - Integrated Medicine, Germany, [2]German Osteoporosis Screening Center, Germany
Disclosures: Oliver Bock, Promedio - Integrated Medicine

FR0248 **Improved Risk Assessment Using Lumbar Spine Trabecular Bone Score (TBS) to Adjust Fracture Probability: The Manitoba BMD Cohort**
William Leslie*[1], Helena Johansson[2], Anders Oden[2], Eugene MCloskey[2], Didier Hans[3], John Kanis[2]. [1]University of Manitoba, Canada, [2]University of Sheffield Medical School, United Kingdom, [3]Lausanne University Hospital, Switzerland
Disclosures: William Leslie, None

FR0252 **Contribution of Lumbar Spine BMD to Fracture risk in individuals with T-score discordance**
Dunia Alarkawi*, Dana Bliuc, Tuan Nguyen, John Eisman, Jacqueline Center. Garvan Institute of Medical Research, Australia
Disclosures: Dunia Alarkawi, None

FR0254 **Net Reclassification Improvement with FRAX Versus a Simpler Risk Assessment System: More is More**
William Leslie*[1], Suzanne Morin[2], Sumit Majumdar[3], Lisa Lix[1], Helena Johansson[4], Anders Oden[4], Eugene MCloskey[4], John Kanis[4]. [1]University of Manitoba, Canada, [2]McGill University, Canada, [3]University of Alberta, Canada, [4]University of Sheffield Medical School, United Kingdom
Disclosures: William Leslie, None

FR0261 **Statistical Shape and Appearance Models and Statistical Parameter Mapping for Hip Fracture Discrimination: Not Better Than BMD or Less Robust**
Oleg Museyko[1], Valérie Bousson[2], Jean-Denis Laredo[2], Judith Adams[3], Andreas Friedberger[4], Klaus Engelke*[5]. [1]Inst of Med Physics, Univ of Erlangen, Germany, [2]Service de Radiologie OstéoArticulaire, Hôpital Lariboisière, France, [3]Clinical Radiology, The Royal Infirmary, Univ. of Manchester, United Kingdom, [4]Inst of Med Physics, Univ. of Erlangen, Germany, [5]University of Erlangen, Germany
Disclosures: Klaus Engelke, None

FR0266 **Multiple GWAS-Implicated Adult Height Loci Operate in the Context of Pediatric Bone Mineral Density and Content Determination**
Alessandra Chesi*[1], Jonathan Mitchell[2], Kevin Basile[3], Shana McCormack[3], Sani Roy[3], Heidi Kalkwarf[4], Joan Lappe[5], Vicente Gilsanz[6], Sharon Oberfield[7], John Shepherd[8], Andrea Kelly[3], Babette Zemel[3], Struan Grant[9]. [1]Children's Hospital of Philadelphia, USA, [2]University of Pennsylvania, USA, [3]Children's Hospital of Philadelphia, USA, [4]Cincinnati Children's Hospital Medical Center, USA, [5]Creighton University School of Medicine, USA, [6]University of Southern California, USA, [7]Columbia University Medical Center, USA, [8]University of California, USA, [9]Children's Hospital of Philadelphia / University of Pennsylvania, USA
Disclosures: Alessandra Chesi, None

FR0305 **Single Nucleotide Polymorphisms Are Associated with Circulating Bone Biomarkers in Young Adults undergoing Initial Military Training**
Erin Gaffney-Stomberg*[1], Anna Shcherbina[2], Darrell Ricke[3], Martha Petrovick[2], Laura Lutz [4], Thomas Cropper[5], Sonya Cable [6], James McClung[4]. [1]USARIEM, USA, [2]Massachusetts Institute for Technology Lincoln Laboratory, USA, [3]Massachusetts Institute for Technology Lincoln Laboratory, Lexington, MA 02420, USA, [4]US Army Research Institute of Environmental Medicine, USA, [5]Lackland Air Force Base, USA, [6]Initial Military Training Center of Excellence, USA
Disclosures: Erin Gaffney-Stomberg, None

FR0309 **Prevention of osteoporotic fractures by black tea consumption**
Richard Prince*[1], Gael Myers[2], Jonathan Hodgson[3]. [1]Sir Charles Gairdner Hospital, Australia, [2]Curtin University, School of Public Health, Australia, [3]University of Western Australia, School of Medicine & Pharmacology, Australia
Disclosures: Richard Prince, None

FR0310 **The Effect of Vitamin K1 and Vitamin D on Muscle Composition and Muscle Function: the ECKO RCT**
Andy Kin On Wong*[1], Maryam Hamidi[2], Lianne Tile[2], George Tomlinson[3], Hanxian Hu[2], Judy Scher[2], Yuna Lee[4], Lilian Thompson[3], Reinhold Veith[5], Robert Josse[4], Sophie Jamal[3], Gillian Hawker[6], Angela M. Cheung[2]. [1]University Health NetworkMcMaster University, Ca, [2]UHN, Canada, [3]University of Toronto, Canada, [4]St. Michael's Hospital, Canada, [5]Mount Sinai Hospital, Canada, [6]Women's College Hospital, Canada
Disclosures: Andy Kin On Wong, None

FR0311 **Does Vitamin D Metabolism Differ by Race? Evaluation of Vitamin D Metabolites in American Indians and Caucasian Americans Prior to and Following Vitamin D_3 Supplementation**
Neil Binkley*[1], Ellen Fidler[2], Gretta Borchardt[3], Diane Krueger[2]. [1]University of Wisconsin, Madison, USA, [2]University of Wisconsin, USA, [3]University of Wisconsin, United states
Disclosures: Neil Binkley, None

FR0312 **The Association between Maternal and Fetal 25OHD and Infant Size and Adiposity at Birth, 6 Months and 2 Years of Age**
Mary Horan[1], Jean Donnelly[1], Malachi McKenna*[2], Brenda Crosbie[2], Mark Kilbane[2], Fionnuala McAuliffe[1]. [1]National Maternity Hospital, Ireland, [2]St. Vincent's University Hospital, Ireland
Disclosures: Malachi McKenna, None

FR0314 **ASBMR 2015 Annual Meeting Young Investigator Award**
A neuronal action of Sirtuin 1 Suppresses Bone Mass in young and aging mice
Na Luo*[1], Ioanna Mosialou[1], Aruna Kode[1], Mattia Capulli[2], Stavroula Kousteni[1]. [1]Columbia University Medical Center, USA, [2]University of L'Aquila, Italy
Disclosures: Na Luo, None

FR0319 **Glucocorticoids attenuate bone formation independently of FoxOs**
Srividhya Iyer*[1], Elena Ambrogini[2], Li Han[2], Shoshana Bartell[2], Ha-Neui Kim[3], Aaron Warren[2], Julie Crawford[2], Stuart Berryhill[2], Stavros Manolagas[2], Maria Almeida[2]. [1]Central Arkansas VA Healthcare System, Univ of Arkansas for Medical Sciences, USA, [2]Center for Osteoporosis & Metabolic Bone Diseases, Central Arkansas Veterans Healthcare System, University of Arkansas for Medical Sciences, USA, USA, [3]Center for Osteoporosis & Metabolic Bone Diseases, University of Arkansas for Medical Sciences, USA, USA
Disclosures: Srividhya Iyer, None

FR0320 **Sost/sclerostin deficiency protects the murine skeleton from glucocorticoid-induced bone loss by inhibiting bone resorption**
Amy Sato*, Meloney Cregor, Jasmine Tzeggai, Kevin McAndrews, Jesus Delgado-Calle, Alexander G. Robling, Lilian I. Plotkin, Teresita Bellido. Indiana University School of Medicine, USA
Disclosures: Amy Sato, None

FR0321 **NR2C2 gene regulated osteoblasts bone formation activity through mir34a TGIF signaling pathway**

Eric Beier*[1], Hsin-chu Ho[2], Shen-chin Hsu[3], John Holz[4], Tzong-Jen Sheu[5], I-Hui Su[6], Edward puzas[5]. [1]Rutgers, USA, [2]Wan-Chuan Clinics, Fangliao General Hospital, Taiwan, [3]Chung Shan Medical University Hospital Dept of Pharmacy, Taiwan, [4]D'Youville College Department of Math & Natural Sciences, USA, [5]University of Rochester, USA, [6]Fangliao General Hospita, Taiwan

Disclosures: Eric Beier, None

FR0323 **Skeletal Health in Healthy Postmenopausal Women Treated with Exemestane for the Primary Prevention of Breast Cancer: 3-year data from the nested bone strength substudy of the MAP.3 trial (MAP3BSS)**

Miranda Boggild*[1], Lianne Tile [1], George Tomlinson[1], Natasha Gakhal[2], Sandhya Pruthi[3], John Robbins[4], Shail Rawal [1], Sharmila Majumdar[5], Sundeep Khosla[3], James Ingle[3], Harriet Richardson[6], Paul Goss[7], Angela Cheung[1]. [1]University of Toronto, Canada, [2]Women's College Hospital, Canada, [3]Mayo Clinic, USA, [4]UC Davis Health System, USA, [5]UCSF University of California, San Francisco, USA, [6]Queen's University, Canada, [7]Harvard University, USA

Disclosures: Miranda Boggild, None

FR0324 **Bone Health in Glucocorticoid-Treated Men and Women**

Edward Leib[1], Renaud Winzenrieth*[2]. [1]University of Vermont, USA, [2]Med-Imaps, France

Disclosures: Renaud Winzenrieth, None

FR0325 **Does a specific bone pattern exist in patient suffering from Cushing's disease?**

Amandine Boisson*[1], Renaud Winzenrieth[2], Antoine Tabarin[3], Thierry Schaeverbeke[1], Nadia Mehsen-Cetre[1]. [1]Rheumatology department, CHU Pellegrin, France, [2]R&D department, Med-Imaps, France, [3]Endocrinology Department, France

Disclosures: Amandine Boisson, None

FR0326 **Endogenous Cortisol Levels Are Positively Correlated to Adrenal Androgens But Negatively to Total Testosterone and Estradiol Whereas Exogenous Glucocorticoids Suppress Both Adrenal and Gonadal Steroid Hormones in Elderly Men**

Anna Nilsson*[1], Claes Ohlsson[2], Mattias Lorentzon[2], Liesbeth Vandenput[2], Magnus Karlsson[3], Ulf Lerner[2], Östen Ljunggren[4], Dan Mellström[2]. [1]Sahlgrenska University Hospital, Sweden, [2]Center for Bone & Arthritis Research, Department of Internal Medicine & Clinical Nutrition, at the Institute of Medicine, Sahlgrenska Academy, Gothenburg University, Sweden, [3]Clinical & Molecular Osteoporosis Research Unit Department of Clinical Sciences & Orthopaedic Surgery Lund University, Skåne University Hospital, Sweden, [4]Department of Medical Sciences, University of Uppsala, Uppsala, Sweden, Sweden

Disclosures: Anna Nilsson, None

FR0327 **Effects of Denosmab on vertebral fractures in patients with Glucocorticoid-Induced Osteoporosis**

Ikuko Tanaka*[1], Mari Ushikubo[2], Takashi Kato[3], Keisuke Izumi[2], Kumiko Akiya[2], Hisaji Oshima[2]. [1]NAGOYA Rheumatology Clinic, Japan, [2]Tokyo Medical Center, Department of connective Tissue Disease, Japan, [3]National Center for Geriatrics & Gerontology, Japan

Disclosures: Ikuko Tanaka, None

FR0331 **Effects of Romosozumab in Japanese Women With Postmenopausal Osteoporosis: Phase 2 Trial Results**

H Ishibashi*[1], DB Crittenden[2], A Miyauchi[3], C Libanati[4], J Maddox[2], L Chen[2], A Grauer[2]. [1]Ina Hospital, Japan, [2]Amgen Inc., USA, [3]Miyauchi Medical Center, Japan, [4]UCB Pharma, Belgium

Disclosures: H Ishibashi, None

FR0333 **Response Rates for Hip, Femoral Neck and Lumbar Spine BMD are Higher for Patients Treated with Abaloparatide when Compared to Placebo or Teriparatide – Results of the ACTIVE Trial**

Gary Hattersley*[1], Alan Harris[2], Greg Williams[2], D. Black[3], Ming-Yi (Tristan) Hu[2]. [1]Radius Health, United states, [2]Radius Health, USA, [3]UC San Francisco, USA

Disclosures: Gary Hattersley, Radius Health

FR0352 **Inhibition of Osteoclastogenesis and Inflammatory Bone Resorption by Targeting BET Proteins and Epigenetic Regulation**
Kyung-Hyun Park-Min*[1], Elisha Lim[1], Min Joon Lee[1], Sung ho Park[1], Eugenia Giannopoulos[1], Anna Yarillina[1], Marjolein van der Meulen[2], Baohong Zhao[1], Nicholas Smithers[3], Rab Prinjha[4], Lionel Ivashkiv[5]. [1]Hospital for Special Surgery, USA, [2]Cornell University, USA, [3]GSK, United Kingdom, [4]Epinova DPU, United Kingdom, [5]Hosptial for Special Surgery, USA
Disclosures: Kyung-Hyun Park-Min, None

FR0355 **TBS and HbA1c but not BMD are Predictors of Incident Fractures in Type 1 Diabetes**
Thomas Neumann*[1], Martin Keil[2], Gabriele Lehmann[2], Sabine Lodes[2], Bettina Kästner[2], Thomas Lehmann[3], Michael Kiehntopf[4], Didier Hans[5], Olivier Lamy[5], Ulrich-Alfons Müller[2], Gunter Wolf[2], Alexander Sämann[2]. [1]Jena University Hospital, Germany, [2]Jena University Hospital, Department of Internal Medicine III, Germany, [3]Jena University Hospital, Institute of Medical Statistics, Computer Sciences & Documentation, Germany, [4]Jena University Hospital, Institute of Clinical Chemistry & Laboratory Diagnostics, Germany, [5]Lausanne University Hospital, Bone Disease Unit, Switzerland
Disclosures: Thomas Neumann, None

FR0359 **Bisphosphonate Therapy, and the Bone Protection Treatment Care Gap, in Men on Androgen Deprivation Therapy for Non-Metastatic Prostate Cancer**
Lisa-Ann Fraser*. Western University, Canada
Disclosures: Lisa-Ann Fraser, None

FR0361 **ASBMR 2015 Annual Meeting Young Investigator Award**
Fracture Risk Following Bariatric Surgery: A Study Using Healthcare Administrative Databases
Catherine Rousseau*[1], Sonia Jean[2], Philippe Gamache[3], Stefane Lebel[4], Fabrice Mac-Way[5], Laëtitia Michou[5], Claudia Gagnon[6]. [1]Department of Medicine, Laval University; Endocrinology & Nephrology Unit, CHU de Quebec Research Centre, Canada, [2]Institut national de santé publique du Québec; Department of Medicine, Laval University; University of Sherbrooke, Canada, [3]Institut national de santé publique du Québec, Canada, [4]Quebec Heart & Lung Institute, Canada, [5]Endocrinology & Nephrology Unit, CHU de Quebec Research Centre; Department of Medicine, Laval University, Canada, [6]Endocrinology & Nephrology Unit, CHU de Quebec Research Centre; Department of Medicine, Laval University; Institute of Nutrition & Functional Foods, Canada
Disclosures: Catherine Rousseau, None

FR0366 **Sclerostin levels and changes in bone metabolismafter bariatric surgery**
Christian Muschitz*[1], Roland Kocijan[2], Christina Marterer[2], Arastoo Rahbar Nia[2], Gabriela Katharina Muschitz[3], Heinrich Resch[2], Peter Pietschmann[4]. [1]St. Vincent's Hospital, Austria, [2]St. Vincent Hospital Vienna - Medical Department II, Austria, [3]Division of Plastic & Reconstructive Surgery, Department of Surgery, Medical University of Vienna, Austria, [4]Department of Pathophysiology & Allergy Research, Center for Pathophysiology, Infectiology & Immunology, Medical University of Vienna, Austria
Disclosures: Christian Muschitz, None

FR0367 **Strategies for the reduction of loss of bone and body lean mass after bariatric surgery**
Christian Muschitz*[1], Roland Kocijan[2], Judith Haschka[2], Christina Marterer[2], Arastoo Rahbar Nia[2], Gabiela Katharina Muschitz[3], Heinrich Resch[2], Peter Pietschmann[4]. [1]St. Vincent's Hospital, Austria, [2]St. Vincent Hospital – Medical Department II - Academic Teaching Hospital of Medical University of Vienna, Austria, [3]Division of Plastic & Reconstructive Surgery, Department of Surgery, Medical University of Vienna, Austria, [4]Department of Pathophysiology & Allergy Research, Center for Pathophysiology, Infectiology & Immunology, Austria
Disclosures: Christian Muschitz, None

FR0369 **Osteocyte production of PTHrP is necessary for normal osteocyte differentiation and bone remodeling**
Niloufar Ansari*[1], Patricia Ho[1], Jonathan Gooi[2], T John Martin[1], Natalie A Sims[1]. [1]St. Vincent's Institute of Medical Research, Australia, [2]Melbourne Medical School, University of Melbourne, Australia
Disclosures: Niloufar Ansari, None

FR0370 **ASBMR 2015 Annual Meeting Young Investigator Award**
A Complex Set of Distal Enhancers Linked to the Mouse *Tnfsf11* Gene Direct Tissue-specific and Hormone-regulated Expression of RANKL
Melda Onal*, Hillary StJohn, Allison Danielson, Jon Markert, Wesley Pike. university of wisconsin, USA
Disclosures: Melda Onal, None

FR0371 **Deletion of a Distal Enhancer of the *RANKL* Gene Delays the Progression of Atherosclerotic Plaque Calcification in Hypercholesterolemic Mice**
Sohel Shamsuzzaman*, Melda Onal, Hillary St. John , J. Wesley Pike. University of Wisconsin-Madison, USA
Disclosures: Sohel Shamsuzzaman, None

FR0373 **Decreasing Bone Mass in Mice Containing the High-Bone-Mass Mutation LRP5-G171V through the inhibition of Porcupine by LGK974**
Cassandra R. Zylstra-Diegel, Mitchell McDonald*, Bart Williams. Van Andel Research Institute, USA
Disclosures: Mitchell McDonald, None

FR0375 **ASBMR 2015 Annual Meeting Young Investigator Award**
Role of FKBP12 in Signal Transduction by Mutant ALK2 Responsible for Fibrodysplasia Ossificans Progressiva
AIKO MACHIYA*[1], Mai Fujimoto[1], Sho Tsukamoto[2], Mai Kuratani[2], Satoshi Ohte[2], Naoto Suda[3], Takenobu Katagiri[2]. [1]Division of Pathophysiology, Research Center for Genomic Medicine, Saitama Medical University, Division of Orthodontics, Department of Human Development & Fostering, Meikai University School of Dentistry, Japan, [2]Division of Pathophysiology, Research Center for Genomic Medicine, Saitama Medical University, Japan, [3]Division of Orthodontics, Department of Human Development & Fostering, Meikai University School of Dentistry, Japan
Disclosures: AIKO MACHIYA, None

FR0380 **The Clinical and Genetic Spectrum of Low Alkaline Phosphatase in Adults**
Leyre Riancho-Zarrabeitia*[1], María T. García-Unzueta[2], Jair A. Tenorio[3], Juan A. Gómez-Gerique[2], Pablo Lapunzina[3], Jose Riancho[4]. [1]Service of Rheumatology. Hospital UM Valdecilla, Spain, [2]Service of Clinical Analysis. Hospital UM Valdecilla, Spain, [3]Inst. Medical Molecular Genetics, Hospital La Paz., Spain, [4]University of Cantabria, Spain
Disclosures: Leyre Riancho-Zarrabeitia, None

FR0382 **Comparative effectiveness of FGF23 blocking antibodies versus daily or intermittent 1,25 dihydroxyvitamin D as therapies for X-linked hypophosphatemia in mice**
Eva Liu*[1], Adalbert Raimann[2], Daniel Brooks[3], Mary Bouxsein[4], Marie Demay[4]. [1]Brigham & Women's Hospital & Massachusetts General Hospital, USA, [2]Medical University Vienna, Massachusetts General Hospital, Austria, [3]Massachusetts General Hospital, USA, [4]Massachusetts General Hospital, Harvard Medical School, USA
Disclosures: Eva Liu, None

FR0387 **Bone impairment in primary hyperoxaluria (PH): an ultrastructural analysis**
Delphine Farlay*[1], Justine Bacchetta[2], Pierre Cochat[3], Georges Boivin[4]. [1]INSERM, UMR1033; Université De Lyon, France, [2]Service de Néphrologie, Rhumatologie et Dermatologie Pédiatrique, centre de Référence des Maladies Rénales Rares, Hôpital Femme Mère enfant, Bron; INSERM UMR1033, Université de Lyon, France, [3]service de Néphrologie, Rhumatologie et Dermatologie Pédiatriques, Centre de Référence des Maldaies Rénales Rares, Hôpital Femme Mère Enfant, Bron; Université de Lyon, France, [4]INSERM UMR 1033, Université de Lyon, France
Disclosures: Delphine Farlay, None

FR0388 **GORAB missense mutations disrupt RAB6 and ARF5 binding and Golgi targeting**
Uwe Kornak*[1], Johannes Egerer[2], Denise Emmerich[2], Wing Lee Chan[2], Björn Fischer-Zirnsak[2], David Meierhofer[3], Francis A. Barr[4]. [1]Charité-Universitaetsmedizin Berlin, Germany, [2]Institut fuer Medizinische Genetik und Humangenetik, Charité-Universitaetsmedizin Berlin, Germany, [3]Max Planck Institute for Molecular Genetics, Germany, [4]Department of Biochemistry, University of Oxford, United Kingdom
Disclosures: Uwe Kornak, None

FR0389 **Neonatal High Bone Mass With First Mutation Of the NF-κB Complex: Heterozygous *De Novo* Missense (p.Asp512Ser) *RELA* (Rela/p65)**
Anja L Frederiksen[1], Martin Larsen[1], Klaus Brusgaard[1], Deborah V Novack[2], Peter Juel Thiis Knudsen[3], Henrik Daa Schroeder[1], Christina Eckhardt[1], William H McAlister[2], Steven Mumm[2], Morten Frost[1], Michael Whyte*[4]. [1]Odense University Hospital, Denmark, [2]Washington University School of Medicine, USA, [3]University of Southern Denmark, Denmark, [4]Shriners Hospital for Children, USA
Disclosures: Michael Whyte, None

FR0390 **Advancing Muscle Measurement for Sarcopenia Assessment**
Bjoern Buehring*[1], Ellen Fidler[2], Yosuke Yamada[3], Jessie Libber[2], Diane Krueger[2], Shubha Shankaran[4], Gregg Czerwieniec[4], Chancy Fessler[4], William Evans[4], Scott Turner[4], Marc Hellerstein[4], Dale Schoeller[5], Neil Binkley[2]. [1]University of Wisconsin, Madison, USA, [2]Osteoporosis Clinical Research Program, University of Wisconsin - Madison, Madison, USA, USA, [3]National Institute of Health & Nutrition, Japan, [4]KineMed, Inc., USA, [5]Department of Nutritional Sciences, University of Wisconsin-Madison, USA
Disclosures: Bjoern Buehring, Kinemed Inc

FR0392 **Appendicular lean mass index is associated with estimated bone strength at the distal radius and distal tibia in middle-aged and older adults**
Jenna Gibbs*[1], Lora Giangregorio[1], Andy Wong[2], Robert Josse[3], Angela Cheung[4]. [1]University of Waterloo, Canada, [2]University Health Network Osteoporosis Program, Canada, [3]St. Michael's Hospital-University of Toronto, Canada, [4]University Health Network-University of Toronto, Canada
Disclosures: Jenna Gibbs, None

FR0397 **Aging and caloric restriction significantly alter the microRNA cargo of exosomes and microvesicles in the bone marrow microenvironment**
Colleen Davis[1], Amy Dukes[1], Sadanand Fulzele[1], Xingming Shi[1], William Hill[1], Carlos Isales[1], Yutao Liu[1], Mark Hamrick*[2]. [1]Georgia Regents University, USA, [2]Georgia Health Sciences University, USA
Disclosures: Mark Hamrick, None

FR0399 **Identification of Senescent Cells in the Bone Microenvironment: A Key Role for Osteocytes in Skeletal Aging**
Joshua Farr*, David Monroe, Matthew Drake, Daniel Fraser, Tamara Tchkonia, Nathan LeBrasseur, James Kirkland, Sundeep Khosla. Mayo Clinic, USA
Disclosures: Joshua Farr, None

FR0403 **Requirement of nitric oxide in bone development and homeostasis informed by genetic deficiency of argininosuccinate lyase**
Zixue Jin*, Jordan Kho, Monica Grover, Brian Dawson, Ming-Ming Jiang, Yuqing Chen, Terry Bertin, Brendan Lee. Baylor College of Medicine, USA
Disclosures: Zixue Jin, None

FR0404 **ASBMR 2015 Annual Meeting Young Investigator Award**
A transcription factor Zfhx4 functions as a transcriptional platform for Osterix during endochondral ossification
Eriko Nakamura*[1], Kenji Hata[2], Michiko Yoshida[2], Tomohiko Murakami[2], Yoshifumi Takahata[2], Makoto Abe[3], Satoshi Wakisaka[3], Toshiyuki Yoneda[4], Riko Nishimura[5]. [1]Osaka University, Japan, [2]Osaka University Graduate School of Dentistry, Dep Mol Cell Biochemistry, Japan, [3]Osaka University Graduate School of Dentistry, Dep Oral Anat Dev Biol, Japan, [4]Indiana University School of Medicine, USA, [5]Osaka University Graduate School of Dentistry, Japan
Disclosures: Eriko Nakamura, None

FR0405 **AP-1 factor interacts with Sox9 during mammalian chondrocyte hypertrophy**
Xinjun He*[1], Shinsuke Ohba[2], Hironori Hojo[1], Andrew McMahon[1]. [1]University of Southern California, USA, [2]University of Tokyo, Japan
Disclosures: Xinjun He, None

FR0406 **Bardet-Biedl Syndrome 3 Is Involved in the Development of Cranial Base**
Makiri Kawasaki*[1], Tadayoshi Hayata[2], Yayoi Izu[1], Yoichi Ezura[1], Masaki Noda[1]. [1]Department of Molecular Pharmacology, Medical Research Institute, Tokyo Medical & Dental University, Japan, [2]Department of Biological Signaling & Regulation, Faculty of Medicine, Project Office of Ph.D program in Life Science Innovation, Japan
Disclosures: Makiri Kawasaki, None

FR0407 **Bone-anabolic effects of histone methyltransferase EZH2 inhibition**
Amel Dudakovic*[1], Emily Camilleri[1], Fuhua Xu[1], Scott Riester[1], Meghan McGee-Lawrence[2], Elizabeth Bradley[1], Christopher Paradise[1], Roman Thaler[1], Eric Lewallen[1], John Hawse[1], Malayannan Subramaniam[1], David Deyle[1], Noelle Larson[1], David Lewallen[1], Gary Stein[3], Martin Montecino[4], Jennifer Westendorf[1], Andre van Wijnen[1]. [1]Mayo Clinic, USA, [2]Georgia Regents University, USA, [3]University of Vermont Medical School, USA, [4] Universidad Andres Bello, Chile
Disclosures: Amel Dudakovic, None

FR0408 **Deletion of the Prolyl Hydroxylase Domain-containing Protein 2 (PHD2) Gene in Chondrocytes Promotes Endochondral Bone formation by Elevating HIF-1α Signaling**
Shaohong Cheng*[1], Weirong Xing[2], Sheila Pourteymoor[2], Catrina Alarcon[2], Subburaman Mohan[2]. [1]VA Loma Linda Health Care Systems, USA, [2]Jerry L Pettis VA Medical Center, USA
Disclosures: Shaohong Cheng, None

FR0410 **ER Stress Signaling Transducer IRE1a Links ER Stress to Canonical Wnt Signaling in Regulating Postnatal Bone Development and Homeostasis**
Shankar Revu*[1], Kai Liu[1], Konstantinos Verdelis[1], Alejandro Jose Almarza[1], Donna Stolz[2], Hong-Jiao Ouyang[3]. [1]School of Dental Medicine, University of Pittsburgh, USA, [2]School of Medicine, University of Pittsburgh, USA, [3]University of Pittsburgh, USA
Disclosures: Shankar Revu, None

FR0411 **Matrix vesicle-mediated initiation of skeletal mineralization depends on PHOSPHO1 and PiT-1 function**
Manisha Yadav*[1], Massimo Bottini[2], Pia Kuss[2], Esther Cory[3], Robert Sah[3], Laurent Beck[4], Colin Farquharson[5], Jose Luis Millan[2]. [1]Sanford-Burnham Medical Research Institute, USA, [2]Sanford Children's Health Research Center, Sanford-Burnham Medical Research Institute, USA, [3]Department of Bioengineering, University of California San Diego, USA, [4]Centre for Osteoarticular & Dental Tissue Engineering (LIOAD), Nantes, Cedex, France, France, [5]The Roslin Institute, The University of Edinburgh, Easter Bush, Roslin, Midlothian, EH25 9RG, United Kingdom
Disclosures: Manisha Yadav, None

FR0412 **Newly Identified FGFR2 Isoform Modulates FGF10-FGFR Signaling During Osteochondrogenesis**
Kazuko Kagawa*[1], Hirotaka Yoshioka[2], Saki Okita[3], Koh-ichi Kuremoto[1], Yuichiro Takei[2], Tomoko Minamizaki[2], Kotaro Tanimoto[3], Kazuhiro Tsuga[1], Yuji Yoshiko[2]. [1]Department of Advanced Prosthodontics, Hiroshima University Institute of Biomedical & Health Sciences, Japan, [2]Department of Calcified Tissue Biology, Hiroshima University Institute of Biomedical & Health Sciences, Japan, [3]Department of Orthodontics & Craniofacial Developmental Biology, Hiroshima University Institute of Biomedical & Health Sciences, Japan
Disclosures: Kazuko Kagawa, None

FR0413 **Sex-related Differences in the Axial Skeletal Development of Newborns and Infants**
Skorn Ponrartana[1], Patricia Aggabao[1], Naga Dharmavaram[2], Carissa Fisher[1], Tishya Wren[1], Vicente Gilsanz*[3]. [1]Children's Hospital Los Angeles, Keck School of Medicine, University of Southern California, USA, [2]Children's Hospital Los Angeles, Keck Schoool of Medicine, University of Southern California, USA, [3]Children's Hospital Los Angeles, USA
Disclosures: Vicente Gilsanz, None

FR0414 **Suppression of Autophagy by Postnatal FIP200 Deletion Compromises Cortical Bone Development with Minimal Effect on Trabecular Bone Development**
Li Wang*[1], Fei Liu[2]. [1]University of Michigan, USA, [2]University of Michigan School of Dentistry, USA
Disclosures: Li Wang, None

FR0415 **The role of Wnt signal modulator, sFRP4, in bone formation and metabolism**
Ryuma Haraguchi*[1], Riko Kitazawa[2], Yuuki Imai[2], Sohei Kitazawa[2]. [1]Ehime University Graduate School of Medicine, Japan, [2]Ehime university, Japan
Disclosures: Ryuma Haraguchi, None

FR0416 **TrkA Signaling by Sensory Nerves is Required for Skeletal Development and Repair**
Ryan Tomlinson*[1], Zhi Li[1], Qian Zhang[1], Labchan Rajbhandari[1], Arun Venkatesan[1], David Ginty[2], Thomas Clemens[1]. [1]Johns Hopkins University, USA, [2]Harvard University, USA
Disclosures: Ryan Tomlinson, None

YOUNG INVESTIGATOR, DIVERSE MEMBER AND NEW MEMBER RECEPTION

Sponsored by the ASBMR Membership Engagement and Education Committee, Young Investigator Subcommittee, and Diversity Subcommittee.

5:30 pm - 7:00 pm **Washington State Convention Center**
Discovery Hall - Hall 4BC

The ASBMR Membership Engagement and Education Committee, Young Investigator and Diversity Subcommittee members will be in attendance for this meet-and-greet networking event, which promotes networking among young investigators, diverse members, and ASBMR leadership. This reception will be held concurrently with the Welcome Reception and the Plenary Poster Session in the Young Investigator Lounge in the Discovery Hall.

YOUNG INVESTIGATOR NETWORKING HOUR

Sponsored by the ASBMR Membership Engagement and Education Committee and Young Investigator Subcommittee.

7:15 pm - 8:00 pm **Sheraton Seattle**
Grand Ballroom A

Young Investigators who wish to continue building connections with peers in a fun and informal setting are invited to attend this event. Sign up to attend when you register for the meeting.

RARE BONE DISEASE WORKING GROUP

Supported by educational grants from Alexion Pharmaceuticals,Ultragenyx Pharmaceutical and Horizon Pharma

7:15 pm - 9:45 pm **Washington State Convention Center**
Room 608-609

Chairs:
Roy Morello, Ph.D., University of Arkansas (USA)
Frank Rauch, M.D., Shriners Hospitals for Children, Montreal (Canada)

This evening program is designed as a training program geared towards young and mid-career investigators and senior investigators new to the rare bone disease field. The newly formed Brittle Bone Disorders Consortium, part of the NIH Rare Diseases Clinical Research Network, with its partners, are working to provide opportunities like this to help accelerate research in the field of rare bone disease.

7:15 pm **Opening Remarks and Dinner**

7:40 pm **Modeling Rare Bone Disease in Animals (Mainly Mice)**
Charles O'Brien, Ph.D., University of Arkansas (USA)

8:10 pm **Bone Histomorphometry in Humans and Mice**
Frank Rauch, M.D., Shriners Hospital for Children, Montreal (Canada)

8:40 pm **Studies of Rare Diseases and Important Statistical Considerations**
Jeffrey Krischer, Ph.D., University of South Florida (USA)

9:10 pm **Panel Discussion on Pre-Clinical Studies: Perspectives from Academia, Industry and the FDA**
Moderator: Brendan Lee, M.D., Ph.D., Baylor College of Medicine (USA)
Participants: Michael Econs, M.D., Indiana University (USA); Michael Whyte, M.D., Shriners Hospitals and Washington University (USA); Theresa Kehoe, M.D. and Gemma Kuijpers Ph.D., FDA (USA); David Thompson, Ph.D., Alexion Pharmaceuticals (USA)

9:40pm **Questions and Concluding Remarks**

Disclosures: Dr. Roy Morello, Nothing to disclose; Dr. Charles O'Brien, Nothing to disclose; Dr. Frank Rauch, Nothing to disclose; Dr. Jeffrey Krischer, Nothing to disclose; Dr. Brendan Lee, Biomarin 5, Retrophin 5; Dr. Michael Econs, HKK 5, Horizon Pharma 2; Dr. Michael Whyte, Alexion 2, 5 Ultragenyx 2, 5 Elsevier 7; Dr. Theresa Kehoe, Nothing to disclose; Dr. Gemma Kuijpers, Nothing to disclose; David Thompson, Alexion 3

ADULT BONE AND MINERAL WORKING GROUP

Supported by educational grants from Radius Health and Amgen

7:15 pm - 10:00 pm **Washington State Convention Center**
Room 606-607

7:15 pm **Opening Remarks and Dinner**

7:30 pm **Finding the PTH-receptor**
Harald Jueppner, M.D., Massachusetts General Hospital (USA)

8:00 pm **A Homozygous [Cys25]PTH(1-84) Mutation That Impairs PTH/PTHrP Receptor Activation Defines a Novel Form of Hypoparathyroidism**
Sihoon Lee, M.D., Gachon University School of Medicine (South Korea)

8:15 pm **A Patient With Marked and Prolonged Rhabdomyolysis-Associated Hypercalcemia**
Melissa Sum, M.D., Columbia University College of Physicians and Surgeons (USA)

8:30 pm **Identifying Incomplete AFF with Single-Energy Femur Exam using Hologic Discovery: Declining Prevalence**
Malachi J. McKenna, M.D., St. Vincent's University Hospital (Ireland)

8:45 pm **Hypophosphatasia: Two Cases Illustrating the Problems Associated with Delayed Diagnosis**
Jay Shapiro, M.D., Kennedy Krieger Institute, Johns Hopkins School of Medicine (USA)

9:00 pm **Familial Tumoral Calcinosis**
Marlene Chakhtoura, M.D., American University of Beirut-Medical Center (Lebanon)

9:15 pm **Comparison of Bone Histomorphometric Findings in Nutritional and Non- Nutritional Osteomalacias**
Pooja Kulkarni, M.D., Henry Ford Bone and Mineral Laboratory (USA)

9:30 pm **Recurrent Tumor-Induced Osteomalacia: Challenges in Long-Term Management**
Jennifer Park-Sigal, M.D., San Francisco General Hospital, UCSF (USA)

9:45 pm **Presentation of the Boy Frame Award**

9:55 pm **Concluding Remarks and Adjournment**

Disclosures: Alan Malabanan - Nothing to Disclose; Natalie Cusano - Nothing to Disclose; Michael Mannstadt - NPS, 5; Harald Jueppner - Nothing to Disclose; Sihoon Lee – Nothing to Disclose; Melissa Sum- Nothing to Disclose; Malachi J McKenna - Nothing to Disclose; Jay Shapiro – Alexion, 8; Marlene Chakhtoura - Nothing to Disclose; Pooja Kulkarni- Nothing to Disclose; Jennifer Park-Sigal- Nothing to Disclose

MUSCLE AND BONE WORKING GROUP

11th Annual Meeting

7:15 pm - 9:30 pm **Washington State Convention Center**
Room 611-612

Chairs:
Dieter Felsenberg, M.D., Ph.D., Charité - Campus Benjamin Franklin (Germany)
Louis-Nicolas Veilleux, Ph.D., Shriners Hospital for Children (Canada)

7:15 pm **Box Dinner**

7:30 pm **Opening Remarks**

7:40 pm **Impact of exercise on neuromuscular function**
Dieter Felsenberg, M.D., Ph.D., Charité - Campus Benjamin Franklin (Germany)

8:20 pm **Investigating muscle, bone and the muscle-bone functional unit in pediatric disorders**
Louis-Nicolas Veilleux, Ph.D., Shriners Hospital for Children (Canada)

8:45 pm **Characterizing musculoskeletal changes of the lower leg in elderly men and women: a 10 year longitudinal pQCT study**
Chantal Kawalilak, MSc, University of Saskatchewan (Canada)

9:05 pm **Neuromuscular stimulation methods and physiological background**
Rainer Rawer, Dr.-Ing., Novotec Medical GmbH (Germany)

9:30 pm **Closing Remarks**
Louis-Nicolas Veilleux, Ph.D., Shriners Hospital for Children (Canada)

Disclosures: Dieter Felsenberg – Nothing to disclose; Louis-Nicolas Villeux– Nothing to disclose; Chantal Kawalilak– Nothing to disclose; Rainer Rawer – Novotec Medical

BONE TURNOVER MARKERS WORKING GROUP

Supported by an educational grant from Roche

7:30 pm - 9:30 pm **Washington State Convention Center**
Room 613-614

Update on Clinical and Biological Interpretation of Bone Turnover Markers

This year, the Working Group meeting will include a review of bone turnover in diabetics and an update on the results of a project pooling individual bone turnover data from multiple trials of anti-fracture treatments. Lastly, there will be a presentation on the status of newer bone biomarkers, such as periostin and micro RNA.

7:30 pm **Welcome and Introductions**
Douglas Bauer, M.D., University of California, San Francisco (USA)
Richard Eastell, M.D., FRCP, FRCPath, FMedSci, University of Sheffield (United Kingdom)

7:35 pm **Bone Turnover and Diabetes: The Paradox of Increased Fracture Risk Despite (or Due to?) Low Bone Turnover**
Sundeep Khosla, M.D., Mayo Clinic College of Medicine (USA)

8:05 pm **Treatment-related Changes in Bone Turnover: The Foundation for NIH Individual Data Pooling Project**
Douglas Bauer, M.D., University of California, San Francisco (USA)

8:45 pm **New and Emerging Markers of Bone Metabolism**
Núria Guañabens, M.D., Hospital Clinic Universitat de Barcelona (Spain)

9:25 pm **Closing Statements**

A light dinner will precede the program

Disclosures: Sundeep Khosla-Nothing to disclose; Nuria Guanabens-Nothing to disclose; Douglas Bauer-Nothing to disclose

Saturday, October 10, 2015

Day-At-A-Glance

Time/Event/Location **All locations in the Washington State Convention Center unless otherwise noted**

ASBMR NETWORKING BREAKFAST

Sponsored by the ASBMR Membership Engagement and Education Committee.

6:45 am - 8:00 am **Washington State Convention Center**
Room 6B

Young Investigators, first-time attendees, and mid-career investigators are invited to join ASBMR leadership, senior investigators, and NIH representatives for an informal networking breakfast. Tables will be marked according to research topics and attendees will be able to sit at a specific table and talk to senior scientists about funding opportunities in that area of research. Tables will range from osteoporosis to rare bone disease and will offer experts from different funding sources ranging from Arthritis UK to the March of Dimes. This breakfast is complimentary for all attendees.

ASBMR REGISTRATION OPEN

7:00 am - 5:00 pm **Washington State Convention Center**
Atrium Lobby - Level 4

POSTERS OPEN

8:00 am - 6:00 pm **Washington State Convention Center**
Discovery Hall - Hall 4BC

ASBMR/ECTS CLINICAL DEBATE – THE DIAGNOSIS OF OSTEOPOROSIS SHOULD BE CHANGED TO INCLUDE PATIENTS AT HIGH FRACTURE RISK RATHER THAN BEING BASED ON A T-SCORE

PRESENTATION OF THE FULLER ALBRIGHT AND GIDEON A. RODAN EXCELLENCE IN MENTORSHIP AWARDS

8:00 am - 9:30 am **Washington State Convention Center**
Hall 4A

Co-Chairs
Felicia Cosman, M.D.
Helen Hayes Hospital, USA
Disclosures: Felicia Cosman, None

Socrates Papapoulos, M.D.
Leiden University Medical Center, The Netherlands
Disclosures: Socrates Papapoulos, None

8:00 am **For the Motion**
Nelson Watts, M.D.
Mercy Health Osteoporosis and Bone Health Services, USA
Disclosures: Nelson Watts, Amgen 15; Amgen 14; Merck 14

8:30 am **Against the Motion**
John Kanis, M.D.
University of Sheffield, United Kingdom
Disclosures: John Kanis, None

DISCOVERY HALL OPEN

9:30 am - 4:30 pm **Washington State Convention Center**
Discovery Hall - Hall 4BC

NETWORKING BREAK

9:30 am - 10:00 am **Washington State Convention Center**
Discovery Hall - Hall 4BC

PLENARY ORALS: OSTEOBLAST ORIGIN AND FUNCTION

10:00 am - 11:30 am **Washington State Convention Center**
Room 6E

Moderators:
Charles O'Brien, Ph.D.
Central Arkansas VA Healthcare System, Univ of Arkansas for Medical Sciences, USA
Disclosures: Charles O'Brien, None

Paola Divieti Pajevic, M.D., Ph.D.
Goldman School of Dental Medicine,Boston University, USA
Disclosures: Paola Divieti Pajevic, None

10:00 am **ASBMR 2015 Most Outstanding Basic Abstract Award**
1021 **Parathyroid hormone administration regulates osteoprogenitor numbers and decreases their differentiation into the adipocytic lineage *in vivo***
Henry M. Kronenberg[1], Noriaki Ono[2], Deepak Balani*[1]. [1]Massachusetts General Hospital & Harvard Medical School, USA, [2]University of Michigan, School of Dentistry, USA
Disclosures: Deepak Balani, None

10:15 am **ASBMR 2015 Annual Meeting Young Investigator Award**
1022 **Peripheral Nerves Provide Essential Cellular Components for Heterotopic Ossification**
Elizabeth Salisbury*, ZaWaunyka Lazard, Eric Beal, Corinne Sonnet, Eleanor Davis, Elizabeth Olmsted-Davis, Alan Davis. Baylor College of Medicine, USA
Disclosures: Elizabeth Salisbury, None

10:30 am **ASBMR 2015 Annual Meeting Young Investigator Award**
1023 **αSMA+ macrophages skewed from hematopoietic stem cells by vitamin D3 initiate myelofibrosis and subsequent osteosclerosis**
Kanako Wakahashi*[1], Kentaro Minagawa[2], Noboru Asada[2], Yuko Kawano[2], Mari Sato[2], Hiroki Kawano[2], Akiko Sada[2], Shigeaki Kato[3], Kotaro Shide[4], Kazuya Shimoda[4], Toshimitsu Matsui[2], Yoshio Katayama[2]. [1]Kobe University Graduate School of Medicine, Japan, [2]Hematology, Kobe University Graduate School of Medicine, Japan, [3]Soma Central Hospital, Japan, [4]Gastroenterology & Hematology, Miyazaki University, Japan
Disclosures: Kanako Wakahashi, None

10:45 am **Bone lining cells are a major source of osteoblasts during bone remodeling**
1024 Brya Matthews*[1], Igor Matic[1], Xi Wang[1], Danka Grcevic[2], Ivo Kalajzic[1]. [1]University of Connecticut Health Center, USA, [2]University of Zagreb, Croatia
Disclosures: Brya Matthews, None

11:00 am **Osteocyte-specific Deletion of Cathepsin K Prevents Increased Bone Turnover, Bone Loss and**
1025 **Bone Fragility during Lactation in Mice**

Sutada Lotinun*[1], Riku Kiviranta[2], Vincent Carpentier[3], Lynn Neff[4], Daniel Brooks[5], Mary Bouxsein[5], Roland Baron[6]. [1]Department of Oral Medicine, Infection & Immunity, Harvard School of Dental Medicine, USA & Department of Physiology & STAR on Craniofacial & Skeletal Disorders, Faculty of Dentistry, Chulalongkorn University, Thailand, [2]Department of Medical Biochemistry & Genetics & Department of Medicine, University of Turku, Finland, [3]Department of Oral Medicine, Infection & Immunity, Harvard School of Dental Medicine, France, [4]Department of Oral Medicine, Infection & Immunity, Harvard School of Dental Medicine, USA, [5]Center for Advanced Orthopedic Studies, Beth Israel Deaconess Medical Center, & Harvard Medical School, USA, [6]Department of Oral Medicine, Infection & Immunity, Harvard School of Dental Medicine & Harvard Medical School, Endocrine Unit, Massachusetts General Hospital, USA

Disclosures: Sutada Lotinun, None

11:15 am **Rho-Pkn3 Pathway Regulates the Bone-resorbing Activity of Osteoclasts under Wnt5a-Ror2**
1026 **Signaling**

Shunsuke Uehara*[1], Hideyuki Mukai[2], Teruhito Yamashita[3], Takashi Nakamura[4], Shigeaki Kato[5], Akira Kikuchi[6], Michiru Nishita[7], Yasuhiro Minami[7], Nobuyuki Udagawa[8], Naoyuki Takahashi[3], Yasuhiro Kobayashi[3]. [1]Matsumoto Dental University, Jp, [2]Biological Research Center, Kobe University, Japan, [3]Institute for Oral Science, Matsumoto Dental University, Japan, [4]Department of Biochemistry & Integrative Medical Biology, School of Medicine, Keio University, Japan, [5]Soma Central Hospital, Japan, [6]Department of Molecular Biology & Biochemistry, Graduate School of Medicine, Osaka University, Japan, [7]Department of Physiology & Cell Biology, Graduate School of Medicine, Kobe University, Japan, [8]Department of Biochemistry, Matsumoto Dental University, Japan

Disclosures: Shunsuke Uehara, None

PLENARY ORALS: TRANSLATIONAL SCIENCE I

10:00 am - 11:30 am **Washington State Convention Center**

Room 6C

Moderators:

Maria Jose Almeida, Ph.D.
Central Arkansas VA Healthcare System, Univ of Arkansas for Medical Sciences, USA
Disclosures: Maria Jose Almeida, None

Keertik Fulzele, M.S.
Massachusetts General Hospital; Harvard Medical School, USA
Disclosures: Keertik Fulzele, None

10:00 am **ASBMR 2015 Most Outstanding Translational Abstract Award**
1027 **Maternal Obesity Programs Senescence Signaling and Glucose Metabolism in Fetal Osteoblastic Cells**

Jin-Ran Chen*[1], Oxana P. Lazarenko[2], Michael L. Blackburn[2], Thomas M. Badger[2], Kartik Shankar[2]. [1]University of Arkansas for Medical Science, Arkansas Children's Nutrition Center, USA, [2]University of Arkansas for Medical Sciences & Arkansas Childrens Nutrition Center, USA

Disclosures: Jin-Ran Chen, None

10:15 am **Roles of Mineralization Heterogeneity and Porosity in the Fracture Resistance of Human**
1028 **Cortical Bone**

Mathilde Granke*[1], Alexander J Makowski[2], Sasidhar Uppuganti[1], Jeffry S Nyman[2]. [1]Vanderbilt University Medical Center, USA, [2]Vanderbilt University Medical Center, VA Tennessee Valley Healthcare System, USA

Disclosures: Mathilde Granke, None

10:30 am **Discovery of PCO371, an orally active small-molecule PTH1R agonist for the treatment of**
1029 **hypoparathyroidism**
Hiroshi Noda*, Eri Joyashiki, Maiko Hoshino, Tomoyuki Watanabe, Yoshikazu Nishimura, Tohru Esaki, Kotaro Ogawa, Masaru Shimizu, Hidetomo Kitamura, Tatsuya Tamura, Haruhiko Sato, Yoshiki Kawabe. Research Division, Chugai Pharmaceutical Co., Ltd., Japan
Disclosures: Hiroshi Noda, Chugai Pharmaceutical Co., Ltd.

10:45 am **ASBMR 2015 Annual Meeting Young Investigator Award**
1030 **Cartilage β-Catenin Signaling Plays a Key Role in the Development of Ankylosing Spondylitis**
Tianqian Hui*, Wanqing Xie, Shan Li, Chundo Oh, Hee-Jeong Im, Di Chen. Rush University Medical Center, USA
Disclosures: Tianqian Hui, None

11:00 am **Reduced osteoclast TGFβ signaling in the aged skeleton impairs the coupling of bone**
1031 **resorption to bone formation through reduced osteoclast Wnt1 expression**
Megan Weivoda*[1], Ming Ruan[1], Christine Hachfeld[1], Larry Pederson[1], Rachel Davey[2], Jeffrey Zajac[2], Jennifer Westendorf[1], Sundeep Khosla[1], Merry Jo Oursler[1]. [1]Mayo Clinic, USA, [2]University of Melbourne, Australia
Disclosures: Megan Weivoda, None

11:15 am **A Hajdu Cheney Mutant Mouse Exhibits Profound Osteopenia**
1032 Ernesto Canalis*[1], Lauren Schilling[2], Kyeong Lee[2], Stefano Zanotti[2]. [1]University of Connecticut Health Center, USA, [2]UConn Health, USA
Disclosures: Ernesto Canalis, None

MEET-THE-PROFESSOR SESSIONS

11:30 am - 12:30 pm **Washington State Convention Center**
Rooms 6A-619

Meet-the-Professor Session: Effects of Glucocorticoids on Bone?
Room 615
This program is supported by an educational grant from Merck & Co., Inc.
Hong Zhou, M.D., Ph.D.
Bone Research Program, ANZAC Research Institute, University of Sydney, Australia
Disclosures: Hong Zhou, None

Meet-the-Professor Session: Hyperparathyroidism: An Update
Room 6A
John Bilezikian, M.D.
Columbia University College of Physicians and Surgeons, USA
Disclosures: John Bilezikian, None

Meet-the-Professor Session: In Vivo Imaging of Bone Cells
Room 616
Masaru Ishii, M.D., Ph.D.
Graduate School of Medicine & Frontier Biosciences, Osaka University, Japan
Disclosures: Masaru Ishii, None

Meet-the-Professor Session: Mouse Models and Their Use in Defining Key Osteoporosis Genes
Room 617
Cheryl Ackert-Bicknell, Ph.D.
University of Rochester, USA
Disclosures: Cheryl Ackert-Bicknell, None

Meet-the-Professor Session: Skeletal Tissue Regeneration and Engineering
Room 618
Frank Luyten, M.D., Ph.D.
University Hospitals KU Leuven, Belgium
Disclosures: Frank Luyten, None

Meet-the-Professor Session: Treating Osteoporosis in the Elderly: Is the Horse Ever Out of the Barn?
Room 619

Susan Greenspan, M.D.
University of Pittsburgh, USA
Disclosures: Susan Greenspan, Lilly, Amgen 13

SMALL WAYS TO UTILIZE BIG DATA IN YOUR RESEARCH

11:30 am - 12:30 pm **Washington State Convention Center**
Room 6B

"Big data" gives us the opportunity to make tremendous strides in the advancement of our scientific knowledge and understanding of the world around us. However, for many, how to get started utilizing big data in our own research is a challenge. Join us for this session to discuss the basics of big data and how your colleagues are using it in exciting translational and clinical applications that are increasing our understanding of musculoskeletal diseases.

Co-Chairs
Fernando Rivadeneira, M.D., Ph.D.
Erasmus University Medical Center, The Netherlands
Disclosures: Fernando Rivadeneira, None

Lynda Bonewald, Ph.D.
University of Missouri - Kansas City, USA
Disclosures: Lynda Bonewald, None

11:30 am Using Big Data to Translate Genetics Into Clinical Practice
Matthew Brown, MBBS, M.D.
University of Queensland, Australia
Disclosures: Matthew Brown, None

12:00 pm Using the Newest Version of the Road Map and ENCODE Data in Genomic Research
Matthew Maurano, Ph.D.
New York University Langone Medical Center, USA
Disclosures: Matthew Maurano, None

UNDERSTANDING NIH CAREER DEVELOPMENT K AWARDS: OPPORTUNITIES AND CHALLENGES

11:30 am - 12:30 pm **Washington State Convention Center**
Room 606-607

Are you a rising star? Attend this session and see how NIH Career Development K Awards and ASBMR can help you succeed!

11:30 am Introduction
Roland Baron, D.D.S., Ph.D.
Harvard School of Medicine and of Dental Medicine, USA
Disclosures: Roland Baron, None

11:40 am K Award Opportunities
Saul Malozowski, M.D., Ph.D., MBA
National Institution of Diabetes and Digestive and Kidney Diseases, USA
Disclosures: Saul Malozowski, None

Joan McGowan, Ph.D.
National Institute of Arthritis, Musculoskeletal and Skin Diseases, USA
Disclosures: Joan McGowan, None

12:10 pm K Award Challenges
Elizabeth Shane, M.D.
Columbia University College of Physicians and Surgeons, USA
Disclosures: Elizabeth Shane, None

Jennifer Westendorf, Ph.D.
Mayo Clinic, USA
Disclosures: Jennifer Westendorf, None

POSTER SESSION I & POSTER TOURS

12:30 pm - 2:30 pm **Washington State Convention Center**
Discovery Hall - Hall 4BC

ADULT METABOLIC BONE DISORDERS: CHRONIC KIDNEY DISEASE – METABOLIC BONE DISORDER

SA0001 **FGF23 metabolism, a new paradigm for chronic kidney disease**
Isabelle Piec*[1], Christopher Washbourne[2], Holly Nicholls[2], Jonathan Tang[2], William D. Fraser[2]. [1]BioAnalytical Facility, University of East Anglia, United Kingdom, [2]University of East Anglia- bioanalytical facility, United Kingdom
Disclosures: Isabelle Piec, None

SA0002 **ASBMR 2015 Annual Meeting Young Investigator Award**
Increased Micro Crack Density in Patients with Low Turnover Renal Osteodystrophy
Logan Burgess*[1], Constance Wood[1], David Pienkowski[1], Hanna Mawad[1], Hartmut Malluche[2]. [1]University of Kentucky, USA, [2]University of Kentucky Medical Center, USA
Disclosures: Logan Burgess, None

SA0003 **Sclerostin and FGF-23 Protein Expression in Bone of Patients With Various Stages of Decline in Kidney Function**
Florence Lima*, Marie-Claude Monier-Faugere, Hanna W. Mawad, Harmut H. Malluche. University of Kentucky, USA
Disclosures: Florence Lima, None

ADULT METABOLIC BONE DISORDERS: HEMATOLOGIC MALIGNANCIES AND BONE

SA0004 **Altered RNA Stability And A Gfi1-Induced Epigenetic Switch Regulate *Runx2* Repression In Multiple Myeloma-Exposed Pre-Osteoblasts**
Juraj Adamik*[1], Wei Zhao[2], Peng Zhang[1], Quanhong Sun[1], G. David Roodman [3], Deborah L. Galson [1]. [1]University of Pittsburgh, USA, [2]Indiana University, USA, [3]Indiana University & Veterans Administration Medical Center, USA
Disclosures: Juraj Adamik, None

SA0005 **TBK1 Plays A Critical Role In Myeloma-Induced Osteoclast Formation**
Quanhong Sun*, Peng Zhang, Juraj Adamik, Deborah Galson. University of Pittsburgh, USA
Disclosures: Quanhong Sun, None

ADULT METABOLIC BONE DISORDERS: OSTEOMALACIA AND VITAMIN D DEFICIENCY

SA0006 **The Relationship between Vitamin D Status and Clinical Outcomes of Patients with Hepatic Cirrhosis**
Edward Marchese*[1], Francine Almeda[2], Isabel Camara[2], Thomas Layden[2], Stephanie Kliethermes[2], William Adams[2], Pauline Camacho[2]. [1]Loyola University Stritch School of Medicine, USA, [2]Loyola University Medical Center, USA
Disclosures: Edward Marchese, None

SA0007 **Tumour-Induced Osteomalacia due to a Gluteal Phosphaturic Mesenchymal Tumour: A Case Report**
Rachel Johnston*[1], Brendan C. Dickson[2], Peter C. Ferguson[2], Ina Radziunas[3], Sandra A. Kim[4]. [1]University of Toronto, Canada, [2]Mount Sinai Hospital, University of Toronto, Canada, [3]Women's College Hospital, Canada, [4]Women's College Hospital, University of Toronto, Canada
Disclosures: Rachel Johnston, None

SA0008 **Unraveling the Vitamin D Paradox in African Americans**
Mageda Mikhail*, John Aloia, Louis Ragolia, Shahidul Islam. Winthrop University Hospital, USA
Disclosures: Mageda Mikhail, None

ADULT METABOLIC BONE DISORDERS: OSTEONECROSIS

SA0009 **Genetic Variants Associated with Bisphosphonate-Associated Osteonecrosis of the Jaw: A Whole-Exome Sequencing Analysis**
Yan Gong*[1], Joseph Katz[2], Alberto Riva[1], Noa Davis[3], Issam Hamadeh[1], Bernadett Bella[4], Janos Kosa[4], Mihaly Vaszilko[5], GIAN ANDREA PELLICCIONI[6], Peter Lakatos[4], Jan Moreb[1], Taimour Langaee[1]. [1]University of Florida, USA, [2]Department of Oral Medicine, College of Dentistry, USA, [3]Micromedic Technologies Ltd, Israel, [4]Semmelweis University Medical School, Hungary, [5]Semmelweis University Dental School, Hungary, [6]University of Bologna, Italy
Disclosures: Yan Gong, None

ADULT METABOLIC BONE DISORDERS: OTHER ADULT METABOLIC BONE DISORDERS

SA0010 **KLF10 is a Critical Mediator of Wnt Signaling in Calcific Aortic Valve Disease**
Nalini M. Rajamannan*[1], John Hawse[2], Malayannan Subramaniam[2]. [1]Mayo Clinic, Rochester MN, USA, [2]Mayo Clinic, USA
Disclosures: Nalini M. Rajamannan, None

SA0011 **The association between vitamin D receptor gene polymorphisms (TaqI and FokI) and micro/macrovascular complications in postmenopausal women with type 2 diabetes**
Juliana Maia de Almeida[1], Andreia Soares Silva[2], Rodrigo Feliciano do Carmo[2], Taciana Belmont[2], Luiz Griz[1], Patrícia Muniz Moura[2], Francisco Bandeira[1], Mirna De Sa*[3]. [1]Division of Endocrinology & Diabetes, Agamenon Magalhães Hospital, University of Pernambuco Medical School, Recife, Brazil, [2]Institute of Biological Sciences, University of Pernambuco Medical School, Recife, Brazil, [3]University of Pernambuco Medical School, Brazil
Disclosures: Mirna De Sa, None

SA0012 **The MicroRNA Signatures in the Patients with Lumbar Disc Herniation**
Lili Chen[1], Xiaoya Zhou[2], Songlin Peng*[3], Shishu Huang[4], Sibylle Grad[5], Mauro Alini[5]. [1]Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences, Peoples republic of china, [2]Center for Human Tissues & Organs Degeneration, Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences, China, [3]Shenzhen People's Hospital, Jinan University School of Medicine, China, [4]State Key Laboratory of Oral Diseases, Sichuan University, China, [5]AO Research Institute Davos Clavadelerstrasse, Switzerland
Disclosures: Songlin Peng, None

ADULT METABOLIC BONE DISORDERS: PARATHYROID DISORDERS

SA0013 **Bone Mineral Density Changes and Fracture Risk in Patients with Asymptomatic Primary Hyperparathyroidism. Systematic Review and Meta-analysis**
Spyridoula Maraka*[1], Naykky Singh Ospina[1], Ana Espinosa De Ycaza[2], Rene Rodriguez Gutierrez[3], Sina Jasmin[4], Michael Gionfriddo[5], Ana Castaneda-Guarderas[5], Alaa Al Nofal[6], Victor Montori[1], Robert Wermers[2]. [1]Mayo Clinic, Division of Endocrinology, Knowledge & Evaluation Research Unit, USA, [2]Mayo Clinic, Division of Endocrinology, USA, [3]Mayo Clinic,Knowledge & Evaluation Research Unit, USA, [4]Endocrinology, Mayo Clinic, [5]Mayo Clinic, Knowledge & Evaluation Research Unit, USA, [6]Mayo Clinic, Division of Pediatric Endocrinology, USA
Disclosures: Spyridoula Maraka, None

SA0014 **Bone Remodeling in Patients With Hypoparathyroidism Treated for 3 Years With Recombinant Human Parathyroid Hormone, rhPTH(1-84), in the Open-Label RACE Study**
Michael Mannstadt*[1], John P. Bilezikian[2], Bart L. Clarke[3], Tamara J. Vokes[4], Mark L. Warren[5], Hjalmar Lagast[6], Dolores M. Shoback[7], Michael A. Levine[8]. [1]Massachusetts General Hospital Harvard Medical School, USA, [2]College of Physicians & Surgeons, Columbia University, New York, NY, USA, [3]Mayo Clinic Division of Endocrinology, Diabetes, Metabolism, & Nutrition, Rochester, MN, USA, [4]University of Chicago Medicine, Chicago, IL, USA, [5]Endocrinology & Metabolism, Physicians East, PA, Greenville, NC, USA, [6]NPS Pharmaceuticals, Inc, Bedminster, NJ, USA, [7]SF Department of Veterans Affairs Medical Center, University of California, San Francisco, San Francisco, CA, USA, [8]Children's Hospital of Philadelphia, Philadelphia, PA, USA
Disclosures: Michael Mannstadt, NPS Pharmaceuticals, Inc

SA0015 **Familial hypocalciuric hypercalcemia and primary hyperparathyroidism: different clinical manifestations in one family with a previously undescribed calcium-sensing receptor gene mutation**
Melissa Sum*[1], Robert Udelsman[2], Tobias Carling[2], Shonni Silverberg[1]. [1]Columbia University Medical Center, Division of Endocrinology, USA, [2]Yale University School of Medicine, Section of Endocrine Surgery, USA
Disclosures: Melissa Sum, None

SA0016 **Intraoperative Parathyroid Hormone Measurement and Outcome Following Parathyroidectomy in Primary Hyperparathyroidism**
Patamaporn Lekprasert*, Catherine Anastasopoulou, Goral Panchal. Einstein Medical Center of Philadelphia, USA
Disclosures: Patamaporn Lekprasert, None

SA0017 **Parathyroid Hormone (PTH) 1-34 Therapy Decreases Urinary Citrate in Hypoparathyroidism**
Rachel Gafni*[1], Craig Langman[2], Lori Guthrie[3], Beth Brillante[1], Robert James[4], Nancy Yovetich[4], Alison Boyce[1], Michael Collins[1]. [1]National Institutes of Health, USA, [2]Northwestern University & the Ann & Robert H Lurie Children's Hospital of Chicago, USA, [3]NIDCR, National Institutes of Health, USA, [4]Rho, Inc, USA
Disclosures: Rachel Gafni, Shire

SA0018 **PTH(1-84) Treatment is Safe and Effective in Hypoparathyroidism for Seven Years**
Mishaela Rubin*, Natalie Cusano, Wen-Wei Fan, Yasmine Delgado, Farnoosh Mahdavi, Juviza Rodriguez, Aline Costa, Donald McMahon, John Bilezikian. Columbia University, USA
Disclosures: Mishaela Rubin, NPS Pharma

SA0019 **Skeletal Microstructure and Estimated Bone Strength in Hypoparathyroidism**
Natalie Cusano*[1], Kyle Nishiyama[1], Chengchen Zhang[1], Mishaela Rubin[1], Donald McMahon[1], X. Edward Guo[2], John Bilezikian[1]. [1]Columbia University College of Physicians & Surgeons, USA, [2]Columbia University Bone Bioengineering Laboratory, Department of Biomedical Engineering, USA
Disclosures: Natalie Cusano, None

BIOMECHANICS AND BONE QUALITY: ASSESSMENT OF BONE QUALITY AND STRENGTH

SA0020 **Age-related changes in 3D bone microstructure are more pronounced in the sub-endplate region than in the central region of human vertebral bodies**
Jesper Thomsen*[1], Ebbe Ebbesen[2], Annemarie Brüel[3]. [1]Aarhus University, Denmark, [2]Department of Biomedicine, University of Aarhus, Denmark, [3]Department of Biomedicine, Aarhus University, Denmark
Disclosures: Jesper Thomsen, None

SA0021 **Application of novel broadband ultrasound transducer in quantifying trabecular bone properties**
Jian Jiao*[1], Xiaofei Li[1], Liangjun Lin[1], Yi-Xian Qin[1], Raffi Sahul[2], Ed Nesvijski[2]. [1]Stony Brook University, USA, [2]TRS Technologies Inc., USA
Disclosures: Jian Jiao, None

SA0022 **Bending Stiffness Predicts Bending Strength More Accurately than Cortical Diameter or Porosity in Cadaveric Human Ulnas**
Gabrielle C. Hausfeld[1], Emily R. Ellerbrock[2], Jennifer M. Neumeyer[2], Tyler C. Beck[2], Maureen A. Dean[2], John R. Cotton[3], Lyn Bowman*[2], Anne Loucks[2]. [1]Honors Tutorial College, Ohio University, USA, [2]Department of Biological Sciences, Ohio University, USA, [3]Department of Mechanical Engineering, Ohio University, USA
Disclosures: Lyn Bowman, None

SA0023 **Contra-Lateral Bone Loss in Post-Menopausal Women After a Distal Radius Fracture: A Two-Year Follow-Up HR-pQCT Study**
Joost De Jong*[1], Frans Heyer[2], Paul Willems[3], Jacobus Arts[3], Martijn Poeze[4], Piet Geusens[5], Bert van Rietbergen[6], Joop van den Bergh[7]. [1]Maastricht University Medical Center, The netherlands, [2]- Department of Surgery & NUTRIM, Maastricht University Medical Center, Maastricht, The Netherlands, , [3]Department of Orthopaedics & CAPRHI, Maastricht University Medical Center, Maastricht, The Netherlands, Netherlands, [4]Department of Surgery, Maastricht University Medical Center, Maastricht, The Netherlands, Netherlands, [5]Department of Rheumatology & CAPRHI, Maastricht University Medical Center, Maastricht, The Netherlands, Netherlands, [6]Faculty of Biomedical Engineering, Eindhoven University of Technology, Eindhoven, The Netherlands, Netherlands, [7]Department of Internal Medicine, Viecuri Medical Center Venlo & Maastricht University Medical Center, The Netherlands, Netherlands
Disclosures: Joost De Jong, None

SA0024 **Determination of Elastic Modulus of Mouse Bones Using Data from BioDent Reference Point Indentation (RPI)**
Ganesh Thiagarajan*[1], Sravan Kola[2], Mark Begonia[2], Mark Dallas[2], Vladimir Dusevich[2], Nuria Lara[2], Mark Johnson[2]. [1]University of Missouri - Kansas City, USA, [2]University of Missouri Kansas City, USA
Disclosures: Ganesh Thiagarajan, None

SA0025 **Does Cortical Bone Loss Preceed Menopause?**
Ashild Bjornerem*[1], Ali Ghasem-Zadeh[2], Roger Zebaze[2], Xiaofang Wang[2], Minh Bui[3], John L Hopper[3], Ego Seeman[2]. [1]UiT The Arctic University of Norway, Norway, [2]Endocrine Centre, Austin Health, Australia, [3]Centre for Epidemiology & Biostatistics, School of Population & Global Health, University of Melbourne, Australia
Disclosures: Ashild Bjornerem, None

SA0026 **Early changes in estimated bone stiffness and serum bone markers predict clinical outcome 2 years after stable distal radius fractures: An HR-pQCT exploratory study**
Frans Heyer*[1], Joost de Jong[2], Paul Willems[3], Chris Arts[3], Martijn Poeze[4], Piet Geusens[5], Bert van Rietbergen[6], Joop van den Bergh[7]. [1]Department of General Surgery & NUTRIM, Maastricht University Medical Center, , [2]Department of Rheumatology & NUTRIM, Maastricht University Medical Center, Netherlands, [3]Department of Orthopaedic Surgery & CAPHRI, Maastricht University Medical Center, Netherlands, [4]Department of General Surgery & NUTRIM, Maastricht University Medical Center, Netherlands, [5]Department of Rheumatology & CAPHRI, Maastricht University Medical Center, Netherlands, [6]Faculty of Biomedical Engineering, Eindhoven University of Technology, Netherlands, [7]Department of Internal Medicine, VieCuri Medical Center Venlo & NUTRIM, Maastricht University Medical Center, Netherlands
Disclosures: Frans Heyer, None

SA0027 **Effect of Intermittent Radiation Exposure in vivo On Tibia Micro-Architecture in OVX Sprague-Dawley Rats Over 3 Months**
Amanda Longo*, Sandra Sacco, Wendy Ward. Brock University, Canada
Disclosures: Amanda Longo, None

SA0028 **Effect of Teriparatide Treatment on Vertebral Strength in Postmenopausal Women with Osteoporosis Assessed Using a Patient-Specific Finite Element Model of the Disc-Vertebra-Disc Unit**
Chuhee Lee[1], Margaret A Paggiosi[1], Eugene V McCloskey[1], Nicola FA Peel[2], Jennifer S Walsh[1], Richard Eastell[1], Lang Yang*[1]. [1]University of Sheffield, United Kingdom, [2]Sheffield Teaching Hospitals NHS Foundation Trust, United Kingdom
Disclosures: Lang Yang, None

SA0029 **Effect of Transforming Growth Factor-Beta Inhibition on the Fracture Resistance of Bone in a Mouse Model of Type 2 Diabetes**
Jeffry Nyman*[1], Stephen O'Brien[2], Sasidhar Uppuganti[3], Amy Creecy[3], Mathilde Granke[3], Paul Voziyan[3], Kuber Sampath[2]. [1]Vanderbilt University Medical Center, USA, [2]Genzyme Research Center, USA, [3]Vanderbilt University, USA
Disclosures: Jeffry Nyman, Genzyme

SA0030 **Effect of Varying Levels of Compositional Heterogeneity on Fracture Resistance in Cortical Bone**
Ani Ural*. Villanova University, USA
Disclosures: Ani Ural, None

SA0031 **FES-Rowing Training Improves Bone Strength of the Paralyzed Legs in a Dose-Dependent Fashion**
Leslie Morse*[1], Can Tan[1], Ricardo Battaglino[2], Rajiv Gupta[1], J.A. Taylor[1]. [1]Harvard Medical School, USA, [2]The Forsyth Institute, USA
Disclosures: Leslie Morse, None

SA0032 **In vivo precision of three HR-pQCT-derived finite element models of the distal radius and tibia in postmenopausal women**
Chantal Kawalilak*, Saija Kontulainen, Morteza Amini, Joel Lanovaz, James D Johnston. University of Saskatchewan, Canada
Disclosures: Chantal Kawalilak, None

SA0033 **Intravertebral Heterogeneity of Lumbar Vertebral Trabecular Bone Density Assessed from in vivo QCT is Weakly Associated with Lumbar Spine TBS Measured by DXA**
Fjola Johannesdottir*[1], Arunima Awale[2], Paul Fein[3], Brett Allaire[4], Robert R. McLean[5], Kerry E. Broe[2], Elizabeth J. Samelson[5], Douglas P. Kiel[5], Elise Morgan[3], Mary L. Bouxsein [6]. [1]University of Cambridge, United Kingdom, [2]Institute for Aging Research, Hebrew SeniorLife, USA, [3]Boston University, USA, [4]Beth Israel Deaconess Medical Center, USA, [5]Hebrew SeniorLife Institute for Aging Research & Harvard Medical School, USA, [6]Beth Israel Deaconess Medical Center, Harvard Medical School, USA
Disclosures: Fjola Johannesdottir, None

SA0034 **ASBMR 2015 Annual Meeting Young Investigator Award**
Losing Trabecular Plate and Rod Number in Wrist Fractures
Bin Zhou*[1], Will Smith[2], Ji Wang[3], Yue Yu[3], Kyle Nishiyama[4], Emily Stein[4], Elizabeth Shane[4], X.Edward Guo[3]. [1]Columbia University, USA, [2]Biomedical Engineering, Columbia University, USA, [3]Biomedical Engineering Department, Columbia University, USA, [4]Department of Medicine, Columbia University, USA
Disclosures: Bin Zhou, None

SA0035 **Nanomechanical Properties of Human Bone with Varying Continuous Bisphosphonate Treatment Durations**
David Pienkowski*[1], Constance L. Wood[2], Hartmut H. Malluche[3]. [1]University of Kentucky, USA, [2]Department of Statistics, University of Kentucky, USA, [3]Nephrology: Bone & Mineral Metabolism, USA
Disclosures: David Pienkowski, None

SA0036 **Withdrawn**

SA0037 **Rate of Change of Cortical Mass with Age over the Femoral Surface**
Graham Treece*[1], Andrew Gee[1], Carol Tonkin[2], Kenneth Poole[1]. [1]University of Cambridge, United Kingdom, [2]Nova Scotia, Canada, Canada
Disclosures: Graham Treece, None

SA0038 **Sensitivity of Imaging Biomarkers for Detecting Postmenopausal Bone Loss**
Wenli Sun*[1], Chamith Rajapakse[1], Mahdieh Bashoor-Zadeh[1], Jeremy Magland[1], Mona Al Mukaddam[2], Rhiannon Miller[2], Elizabeth A. Kobe[2], MICHELLE SLINGER [2], Peter J. Snyder[1], Felix W. Wehrli[1]. [1]University of Pennsylvania, USA, [2]UPenn, USA
Disclosures: Wenli Sun, None

SA0039 **Variation in Cortical Bone Tissue Composition and Mechanical Properties show Significant Genetic Effects**
Daniel Nicolella*[1], Ellen Quillen[2], Arthur Nicholls[1], Don Moravits[1], Jennifer Harris[2], Shayna Levine[2], Travis Eliason[1], Matt Allen[3], Jeff Nyman[4], Todd Bredbenner[1], Lorena Havill[2]. [1]Southwest Research Institute, USA, [2]Texas Biomedical Research Institute, USA, [3]Indiana University, USA, [4]Vanderbilt University, USA
Disclosures: Daniel Nicolella, None

BIOMECHANICS AND BONE QUALITY: DISUSE OSTEOPOROSIS – ANIMAL MODELS

SA0040 **ESR1 and ESR2 Exert Opposing Influence on Bone's Susceptibility to Unloading**
Jeyantt Srinivas Sankaran*[1], Manasvi Varshney[1], Leah-Rae Donahue[2], Stefan Judex[1]. [1]Stony Brook University, USA, [2]The Jackson Laboratory, USA
Disclosures: Jeyantt Srinivas Sankaran, None

BIOMECHANICS AND BONE QUALITY: GENERAL

SA0041 **Multiscale characterization of material properties of cortical tissue from patients with atypical femoral fractures**
Ashley Lloyd*[1], Bernd Gludovatz[2], Christoph Riedel[3], Emma Luengo[1], Joseph Lane[4], Robert Ritchie[5], Björn Busse[3], Eve Donnelly[1]. [1]Cornell University, USA, [2]Lawrence Berkeley National Laboratory, USA, [3]University Medical Center Hamburg-Eppendorf, Germany, [4]Hospital for Special Surgery, USA, [5]University of California, Berkeley, USA
Disclosures: Ashley Lloyd, None

SA0042 **Osteocyte Lacunar Characteristics as a Function of Genotype and Age in Bone Tissue**
Valerian Peterson[1], Brad Hugenroth[1], Brett Rosauer[1], Diane Cullen[1], Mohammed Akhter*[2]. [1]Creighton University, USA, [2]Creighton University Osteoporosis Research Center, USA
Disclosures: Mohammed Akhter, None

SA0043 **Unloading conditions negatively affects bone homeostasis via endothelial-osteoblast-osteoclast interactions in vitro and in vivo**
Vimal Veeriah*[1], Mattia Capulli[2], Angelo Zanniti[2], Nadia Rucci[2], Anna Teti[2]. [1]Researcher, Italy, [2]University of L'Aquila, Italy
Disclosures: Vimal Veeriah, None

BIOMECHANICS AND BONE QUALITY: MECHANICAL LOADING EFFECTS IN INTACT ANIMALS

SA0044 **Effects of 1 Month Spaceflight and 8 Days Recovery on Bone Structural and Quality Properties of Mice**
Maude Gerbaix*[1], Vasily Gnyubkin [2], Delphine Farlay [3], Hélène Follet[3], Patrick Ammann[4], Norbert Laroche[2], Boris Shenkman[5], Guillemette Gauquelin-Koch[6], Laurence Vico[2]. [1]INSERM U1059, Biologie du Tissu Osseux, Université de Lyon, , [2]INSERM U1059, Biologie du Tissu Osseux, Université de Lyon, France, [3]UMR-U1033-INSERM, Université de Lyon, France, [4]Hôpitaux Universitaires de Genève (HUG), Switzerland, [5]Institute for Biomedical Problems, Russian Academy of Sciences, Russia, [6]Centre National d'Etudes Spatiales, France
Disclosures: Maude Gerbaix, None

BIOMECHANICS AND PHYSICAL ACTIVITY: PHYSICAL ACTIVITY AND EXERCISE

SA0045 **Does premenarcheal gymnastics training benefit bone structural strength at the proximal femur after long-term retirement?**
Marta Erlandson*[1], Stefan Jackowski[2], Adam Baxter-Jones[1]. [1]University of Saskatchewan, Canada, [2]University of Saskatchewan & Pivotal Therapeutics Inc, Canada
Disclosures: Marta Erlandson, None

SA0046 **Effect of Exercise Modality during Weight Loss on Bone Mineral Density in Overweight and Obese, Older Adults**
Kristen Beavers*[1], Daniel Beavers[2], Sarah Martin[1], Anthony Marsh[1], Mary Lyles[2], Leon Lenchik[2], Barbara Nicklas[2]. [1]Wake Forest University, USA, [2]Wake Forest School of Medicine, USA
Disclosures: Kristen Beavers, None

SA0047 **Higher Levels of Habitual Physical Activity Results in Region-specific Gains in Cortical Mass Distribution in Pre-pubertal Boys, but not Girls**
Rachel L Duckham*[1], Timo Rantalainen[1], Gaele Ducher[1], Briony Hill[2], Richard M Telford[3], Rohan D Telford[4], Robin M Daly[2]. [1]Centre for Physical Activity & Nutrition Research, Deakin University, Australia, [2]Centre for Physical Activity & Nutrition Research. Deakin University, Australia, [3]Centre for Research & Action in Public Health, University of Canberra, Australia, [4]Medical School, College of Medicine, Biology & Environment, Australian National University, Canberra, Australia
Disclosures: Rachel L Duckham, None

SA0048 **Serum Sclerostin Decreases Following 12 Months of Resistance- or Jump-training in Men with Low Bone Mass**
Pam Hinton*, Peggy Nigh, John Thyfault. University of Missouri, USA
Disclosures: Pam Hinton, None

BONE ACQUISITION AND PEDIATRIC BONE DISORDERS: ASSESSMENT OF BONE DISEASE IN CHILDREN

SA0049 **Spinal Bone Texture Assessed by Trabecular Bone Score (TBS) in Adolescent Girls with Anorexia Nervosa**
Catherine Gordon*[1], Abigail Donaldson[2], Henry Feldman[3], Jennifer O'Donnell[4], Geetha Gopalakrishnan[5]. [1]Hasbro Children's Hospital & Brown University, USA, [2]Division of Adolescent Medicine, Hasbro Children's Hospital & Alpert Medical School of Brown University, USA, [3]Clinical Research Center, Boston Children's Hospital, USA, [4]Division of Adolescent Medicine, Hasbro Children's Hospital, USA, [5]Division of Endocrinology, Women & Infant's Hospital, USA
Disclosures: Catherine Gordon, None

SA0050 **Weight Percentile is an Effective Predictor of Osteoporosis in Patients with Cerebral Palsy. A Cross Sectional Study Analyzed by Simulation and Data-mining Approaches**
Abdulhafez Selim[1], Abeer Hegazy*[2]. [1]Center for Chronic Disorders of Aging, PCOM, USA, [2]Dammam Medical Complex Rehab Center, Saudi arabia
Disclosures: Abeer Hegazy, None

BONE ACQUISITION AND PEDIATRIC BONE DISORDERS: BONE DEVELOPMENT AND BONE MASS ACCRUAL

SA0051 **Greater Bone Accrual Occurs in African American Youth Before and After Puberty Compared to Euro-American Youth**
Laura Armas*[1], Patrice Watson[1], Vicente Gilsanz[2], Thomas Hangartner[3], Heidi J. Kalkwarf Kalkwarf[4], Sharon Oberfield[5], John Shepherd[6], Karen K. Winer[7], Babette Zemel[8], Joan M. Lappe[1]. [1]Creighton University, USA, [2]Children's Hospital Los Angeles, USA, [3]Wright State University, USA, [4]Cincinnati Children's Hospital Medical Center, USA, [5]Columbia University, USA, [6]University of California at San Francisco, USA, [7]Eunice Kennedy Shriver National Institute of Child Health & Human Development, USA, [8]Children's Hospital of Philadelphia, USA
Disclosures: Laura Armas, None

SA0052 **Maternal Gestational Vitamin D Supplementation and Offspring Bone Mass: A Multicentre Randomised, Double-Blind, Placebo-Controlled Trial (MAVIDOS)**

Cyrus Cooper*[1], Nicholas Harvey[1], Nicholas J Bishop[2], Stephen Kennedy[3], Aris T Papageorghiou[3], Robert Fraser[4], Saurabh V Gandhi[4], Stefania D'Angelo[1], Sarah R Crozier[1], Rebecca J Moon[1], Nigel K Arden[5], Elaine M Dennison[1], Keith M Godfrey[1], Hazel M Inskip[1], Inez Schoenmakers[6], Ann Prentice[6], Zulf Mughal[7], Richard Eastell[8], David M Reid[9], Kassim Javaid[5], Nicholas Harvey[1]. [1]MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, [2]Academic Unit of Child Health, Sheffield Children's Hospital, University of Sheffield, United Kingdom, [3]Nuffield Department of Obstetrics & Gynaecology, John Radcliffe Hospital, University of Oxford, United Kingdom, [4]Sheffield Hospitals NHS Trust (University of Sheffield), United Kingdom, [5]Oxford NIHR Musculoskeletal Biomedical Research Unit, Nuffield Department of Orthopaedics, Rheumatology & Musculoskeletal Sciences, The Botnar Research Centre, University of Oxford, United Kingdom, [6]MRC Human Nutrition Research, Elsie Widdowson Laboratory, United Kingdom, [7]Central Manchester University Hospitals, United Kingdom, [8]Academic Unit of Bone Metabolism, University of Sheffield, United Kingdom, [9]School of Medicine & Dentistry, Medical School, University of Aberdeen, United Kingdom

Disclosures: Cyrus Cooper, None

SA0053 **The Effect of Insulin Resistance on the Cortical Bone-IGF-I Relationship in Children**

Joseph Kindler*[1], Norman Pollock[2], Emma Laing[1], Kathleen Hill Gallant[3], Stuart Warden[4], Connie Weaver[3], Munro Peacock[5], Carlos Isales[2], Richard Lewis[1]. [1]The University of Georgia, USA, [2]Georgia Regents University, USA, [3]Purdue University, USA, [4]Indiana University, USA, [5]Indiana University School of Medicine, USA

Disclosures: Joseph Kindler, None

BONE ACQUISITION AND PEDIATRIC BONE DISORDERS: BONE LOSS IN PEDIATRICS

SA0054 **Decreased bone mass in perinatally HIV-infected school-aged South African children on antiretrovirals**

Stephen Arpadi*[1], Stephanie Shiau[1], Renate Strehlau[2], Francoise Pinillos[2], Faeezah Patel[2], Louise Kuhn[1], Ashraf Coovadia[2], Sarah Ramteke[1], Jonathan Kaufman[3], Michael Yin[1]. [1]Columbia University Medical Center, USA, [2]University of the Witwatersrand, South africa, [3]Mount Sinai School of Medicine, USA

Disclosures: Stephen Arpadi, None

SA0055 **Growth, Body Mass Index, Bone Health And Ambulatory Status Of Boys With Duchenne Muscular Dystrophy (DMD) Treated With Daily Versus Intermittent Oral Glucocorticoid Regimen**

Nicola Crabtree*[1], Raja Padidela[2], Nicholas Shaw[1], Wolfgang Hogler[1], Helen Roper[3], Imelda Hughes[2], Judith Adams[4], Anjali Daniel[2], Zulf Mughal[2]. [1]Birmingham Children's Hospital, United Kingdom, [2]Royal Manchester Children's Hospital, United Kingdom, [3]Heart of England Hospital, United Kingdom, [4]Manchester Royal Infirmary, United Kingdom

Disclosures: Nicola Crabtree, None

BONE MARROW MICROENVIRONMENT AND NICHES: STEM CELL NICHES

SA0056 **Maintenance on a Low Calcium Diet Results in an Osteocyte-Mediated Reduction of Long-Term Hematopoietic Stem Cell Engraftment**

Benjamin Frisch*[1], Alexandra Goodman[1], Olga Bromberg[1], Xiaolin Tu[2], Teresita Bellido[2], Laura Calvi[1]. [1]University of Rochester School of Medicine & Dentistry, USA, [2]Indiana University Department of Anatomy & Cell Biology, USA

Disclosures: Benjamin Frisch, None

BONE MARROW MICROENVIRONMENT AND NICHES: BONE AND HEMATOPOIESIS

SA0057 **EphB/ephrin-B interactions regulate stromal cell fate determination and bone marrow support**
Stan Gronthos*[1], Thao Nguyen[2], Louise Purton[3], Koichi Matsuo[4], Agnes Arthur[5]. [1]University of Adelaide, Au, [2]University of Adelaide, Australia, [3]St. Vincent's Institute of Medical Research, Australia, [4]School of Medicine Keio University, Japan, [5]School of Medical Sciences, Australia
Disclosures: Stan Gronthos, None

SA0058 **Inhibition of FGF-23 Signaling Ameliorates Anemia in a Mouse Model of Chronic Kidney Disease**
Despina Sitara[1], Lindsay Coe*[2], Regina Goetz[2], Moosa Mohammadi[2], Stefano Rivella[3]. [1]New York University College of Dentistry, USA, [2]New York University, USA, [3]Weill Cornell Medical College, USA
Disclosures: Lindsay Coe, None

SA0059 **Megakaryocytes: Regulators of Bone Mass and Hematopoiesis**
Marta Alvarez*, LinLin Xu, Evan Himes, Brahmananda Chitteti, Ying-Hua Cheng, Andrew Engle, David Olivos, Paul Childress, Edward Srour, Melissa Kacena. Indiana University School of Medicine, USA
Disclosures: Marta Alvarez, None

SA0060 **Osteoblast Fibronectin Stimulates Myelopoiesis and Affects the Behavior of Myeloid-Derived Cells *In Vivo***
Stephanie Rossnagl*[1], Sabrina Kraft[1], Eva Altrock[1], Carla Sens[1], Katrin Rau[1], Verena Klemis[1], Inaam Nakchbandi[2]. [1]University of Heidelberg & Max-Planck Institute of Biochemistry, Germany, [2]Max-Planck Institute of Biochemistry & University of Heidelberg, Germany
Disclosures: Stephanie Rossnagl, None

SA0061 **Radiation Injury Links Mineral Homeostasis to Hematopoietic Stem Cell Niche Activation**
Corey Hoffman*, Mark LaMere, Alexandra Goodman, Brandon Zaffuto, Benjamin Frisch, Laura Calvi. University of Rochester, USA
Disclosures: Corey Hoffman, None

BONE MARROW MICROENVIRONMENT AND NICHES: BONE AND VASCULATURE

SA0062 **Phosphate Restriction Leads to Low Bone Mass and Impaired Marrow Vasculature**
Frank Ko*[1], Beth Bragdon[2], Amira Hussein[2], Louis Gerstenfeld[2], Marie Demay[1]. [1]Massachusetts General Hospital, USA, [2]Boston University School of Medicine, USA
Disclosures: Frank Ko, None

BONE MARROW MICROENVIRONMENT AND NICHES: GENERAL

SA0063 **NELL-1 induces Expansion of Sca-1+ Mesenchymal Stem Cell Population for Bone Formation**
Aaron James*[1], Jia Shen[2], Greg Asatrian[2], Swati Shrestha[2], Ben Wu[3], Xinli Zhang[2], Kang Ting[2], Chia Soo[4]. [1]University of California, Los Angeles, USA, [2]Division of Growth & Development & Section of Orthodontics, School of Dentistry, USA, [3]Department of Bioengineering, School of Engineering, USA, [4]UCLA Division of Plastic Surgery & Department of Orthopaedic Surgery & the Orthopaedic Hospital Research Center, University of California, Los Angeles, USA
Disclosures: Aaron James, None

BONE TUMORS AND METASTASIS: BONE TUMOR MICROENVIRONMENT

SA0064 **Aromatase Inhibitor-Induced Bone Loss Causes Muscle Weakness and Increased Progression of ER-Negative Breast Cancer in Bone in a Murine Model**
Laura Wright*[1], David Waning[1], Ahmed Harhash[1], Khalid Mohammad[1], Andrew Marks[2], Theresa Guise[1]. [1]Indiana University, USA, [2]Columbia University, USA
Disclosures: Laura Wright, None

SA0065 **Ectopic Production of FGF23 in Tumor-Induced Osteomalacia is Mediated by HIF-1α**
Qian Zhang*[1], Michele Doucet[2], Ryan Tomlinson[2], Xiaobin Han[3], Darryl Quarles[3], Michael Collins[4], Thomas Clemens[2]. [1]Johns Hopkins University, USA, [2]Department of orthopaedic surgery, Johns Hopkins University, USA, [3]University of Tennessee Health Science Center, USA, [4]NATIONAL INSTITUTES OF HEALTH, USA
Disclosures: Qian Zhang, None

SA0066 **N-cadherin in Osteolineage Cells Modulates the Tumor Environment**
Francesca Fontana*[1], Jacqueline Kading[2], Jingyu Xiang [3], Marcus Watkins[4], Katherine Weilbaecher [3], Roberto Civitelli [4]. [1]Bone & Mineral Diseases, USA, [2]Division of Bone & Mineral Diseases, Washington University School of Medicine in St Louis, USA, [3]Division of Molecular Oncology, Washington University School of Medicine, USA, [4]Division of Bone & Mineral Diseases, Washington University School of Medicine, USA
Disclosures: Francesca Fontana, None

SA0067 **Pivotal role of TAK-1 in tumor growth and bone destruction in myeloma: therapeutic impact of TAK-1 inhibition**
Jumpei Teramachi*[1], Masahiro Hiasa[2], Asuka Oda[2], Hirofumi Tenshin[2], Ryota Amachi[2], Takeshi Harada[2], Shingen Nakamura[2], Hirokazu Miki[3], Isturo Endo[2], Tatsuji Haneji[2], Toshio Matsumoto[2], Masahiro Abe[2]. [1]The University of Tokushima, Japan, [2]Tokushima University, Japan, [3]Tokushima University Hospital, Japan
Disclosures: Jumpei Teramachi, None

SA0068 **Sympathetic Activation Alters the Bone Vasculature: Implication for Osteotropic Breast Cancer Metastasis**
Patrick Mulcrone*[1], J. Preston Campbell[1], Ana Lia Anbinder[2], Florent Elefteriou[1]. [1]Vanderbilt University, USA, [2]Universidade Estadual Paulista Campus de Sao Jose dos Campos, Brazil
Disclosures: Patrick Mulcrone, None

SA0069 **The anti-diabetic drug Metformin reduces tumour burden and osteolytic bone disease in Multiple Myeloma in vivo**
Siobhan Webb*, Rosie Butler, Amanda Bacon, Ann Snaith, Sarah Gooding, Jessica Whitburn, Claire Edwards. University of Oxford, United Kingdom
Disclosures: Siobhan Webb, None

SA0070 **Up-regulation of the pH sensor TRPV1 in myeloma cells and their adaption to an acidic microenvironment**
Ryota Amachi*[1], Masahiro Hiasa[2], Jumpei Teramachi[3], Asuka Oda[4], Hirofumi Tenshin[2], Keiichiro Watanabe[5], Shingen Nakamura[4], Hirokazu Miki[4], Kumiko Kagawa[4], Shiro Fujii[4], Endo Itsuro[4], Eiji Tanaka[5], Toshio Matsumoto[6], Masahiro Abe[4]. [1]University of Tokushima, Japan, [2]Department of Biomaterials & Bioengineering, Institute of Biomedical Sciences, Tokushima University Graduate School, Japan, [3]Department of Histology & Oral Histology, Institute of Biomedical Sciences, Tokushima University Graduate School, Japan, [4]Department of hematology, endocrinology & metabolism, Institute of Biomedical Sciences, Tokushima University Graduate School, Japan, [5]Department of Orthodontics & Dentofacial Orthopedics, Institute of Biomedical Sciences, Tokushima University Graduate School, Japan, [6]Fujii Memorial Institute of Medical Sciences, Tokushima University, Japan
Disclosures: Ryota Amachi, None

BONE TUMORS AND METASTASIS: GENERAL

SA0071 **ELISA measurement of circulating periostin in animal models of bone loss or bone formation, and identification of circulating and tissue-specific associated forms of periostin**
Evelyne Gineyts[1], Nicolas Bonnet[2], Cindy Bertholon[1], Aurélie Pagnon-Minot[3], Olivier Borel[1], Daniel Hartmann[3], Roland Chapurlat[4], Serge Ferrari[2], Patrick Garnero[1], Philippe Clezardin[1], Jean-Charles Rousseau*[1]. [1]INSERM UMR 1033, Lyon, France, [2]University Geneva Hospital (HUG), Faculty of Medicine (UNIGE), Department of Internal Medicine Specialties, Service of Bone Diseases, Geneva, Switzerland, [3]Novotec, France, [4]INSERM UMR 1033 & Hospices Civils de Lyon, Lyon, France
Disclosures: Jean-Charles Rousseau, None

SA0072 **Long-term Safety of Denosumab Through Greater than 48 Doses in Giant Cell Tumor Patients**
Susan Bukata*[1], Madhuri Sudan[2], William Mendanha[3], Neal Chawla[3], Kamalesh Sankhala[3], Sant Chawla[3]. [1]UCLA, USA, [2]Department of Epidemiology, UCLA School of Public Health, USA, [3]Sarcoma Oncology Center, USA
Disclosures: Susan Bukata, amgen; amgen

SA0073 **Loss of the Vitamin D Receptor Promotes the Metastatic Potential of Human Breast Cancer Cells to Bone**
Konstantin Horas*[1], Yu Zheng[2], Shu-Oi Chow[2], Colette Fong-Yee[2], Colin Dunstan[2], Hong Zhou[2], Markus Seibel[2]. [1]ANZAC Research Institute, The University of Sydney, Australia, [2]ANZAC Research Institute, Australia
Disclosures: Konstantin Horas, None

SA0074 **Osteoclast TGF-β signaling-mediated basic-FGF promotes breast cancer bone metastasis**
Xiangqi Meng*[1], Alexandra Vander Ark[1], Priscilla Lee[1], Galen Hostetter[1], Neil A. Bhowmick[2], Lynn M. Matrisian[3], Bart O. Williams[1], Cindy K. Miranti[1], xiaohong li[1]. [1]Van Andel Institute, USA, [2]Cedars Sinai Medical Center, USA, [3]Pancreatic Cancer Action Network, USA
Disclosures: Xiangqi Meng, None

CHONDROCYTES AND CARTILAGE MATRIX: ARTICULAR CARTILAGE

SA0075 **A novel p53 isoform-dependent accelerated aging that causes osteoarthritis in mice**
Yasuhiko Kawakami*, Robyn Leary, Keianna Vogel, Hiroko Kawakami, Anindya Bagchi. University of Minnesota, USA
Disclosures: Yasuhiko Kawakami, None

SA0076 **Cartilage repair ability of scaffold-free tissue engineered construct(TEC) derived from osteoarthritis(OA) and rheumatoid arthritis(RA) patients' synovial mesenchymal stem cells(SMSC)**
Kota Koizumi*, Kosuke Ebina, Makoto Hirao, Takaaki Noguchi, Yukihiko Yasui, Norihiko Sugita, Hideki Yoshikawa, Norimasa Nakamura. Department of Orthopaedics, Osaka University Hospital, Japan
Disclosures: Kota Koizumi, None

SA0077 **CK2.1, a novel BMP receptor mimetic peptide, induces cartilage formation *in vivo***
Hemanth Akkiraju*[1], Jonathan Avallone[2], Padma Srinivasan[2], Jeremy Bonor[1], Catherine Kirn Safran[1], Anja Nohe[2]. [1]University of Delaware, USA, [2]University of Delaware, Biological Sciences, USA
Disclosures: Hemanth Akkiraju, None

SA0078 **HIF1α/β-catenin interaction prevents cartilage damage by inhibiting *MMP13* expression in mice**
Wafa Bouaziz*[1], Johanna Sigaux[2], Claire-Sophie Devignes[1], Thomas Funck-Brentano[3], Hang-Korng Ea[1], Dominique Modrowski[2], Sylvain Provot[2], Martine Cohen-Solal[1], Eric Haÿ[4]. [1]INSERM U1132 University paris7, France, [2]INSERM U1132, France, [3]AP-HP, France, [4]INSERMU1132 Université Paris 7, France
Disclosures: Wafa Bouaziz, None

SA0079 **Organic Phosphate Regulates Chondrocyte Expression of Extracellular Matrix Genes and Osteocyte Associated Mediators (FGF23, Phex, MEPE) of Mineralization**
Margaret Cooke*, Louis Gerstenfeld. Boston University, USA
Disclosures: Margaret Cooke, None

CHONDROCYTES AND CARTILAGE MATRIX: COLLAGEN AND PROTEINASES

SA0080 **ADAMTS-12 protects against inflammatory arthritis through interacting with and inactivating proinflammatory CTGF**
Jianlu WEI*, Wenyu Fu, Qingyun Tian, Chuanju Liu. Hospital for Joint Diseases of NYU, USA
Disclosures: Jianlu WEI, None

CHONDROCYTES AND CARTILAGE MATRIX: GENERAL

SA0081 **Retinoic Acid Receptor Gamma Agonists Promote Endochondral Ossification And Facilitate Cartilage-to-Bone Transition Together With beta-catenin-Lef/Tcf Signaling**
Kenta Uchibe*[1], Agnese DiRocco[2], Matthew Johnson[3], Sayantani Sinha[2], Colleen Larmour[2], Struan Grant[3], Maurizio Pacifici[2], Motomi Enomoto-Iwamoto[2], Masahiro Iwamoto[2]. [1]Children's Hospital of Philadelphia, Jp, [2]Translational Research Program in Pediatric Orthopaedics, The Children's Hospital of Philadelphia, USA, [3]Divisions of Human Genetics & Endocrinology, The Children's Hospital of Philadelphia, USA
Disclosures: Kenta Uchibe, None

SA0082 **The role of macro-autophagy in cartilage homeostasis**
Andrei Chagin*[1], Karuna Vuppalapati[2], Thibault Bouderlique[2], Phillip Newton[2]. [1]Karolinska Institutet, Sweden, [2]Karolinska Institute, Sweden
Disclosures: Andrei Chagin, None

CHONDROCYTES AND CARTILAGE MATRIX: NORMAL AND ECTOPIC MINERALIZATION

SA0083 **Scleraxis cells contribute to the development of trauma-induced and genetic HO**
Shailesh Agarwal*[1], Shawn Loder[1], Cameron Brownley[1], John Li[1], Hsiao Hsin Sung[1], Laura Mangiavini[1], Ammar Qureshi[2], Kristoffer Sugg[1], Shuli Li[1], Christopher Mendias[1], Nobuhiro Kamiya[3], Bin Zhao[4], Vesa Kaartinen[1], Thomas Davis[2], Jonathan Forsberg[2], Ernistina Schipani[1], Yuji Mishina[1], Benjamin Levi[1]. [1]University of Michigan, USA, [2]Naval Medical Research Center, USA, [3]Tenri University, USA, [4]Albert Einstein College of Medicine, USA
Disclosures: Shailesh Agarwal, None

CHONDROCYTES AND CARTILAGE MATRIX: ORIGIN, DIFFERENTIATION, APOPTOSIS

SA0084 **CNBP controls Chondrocyte Hypertrophy and Hypertrophic Chondrocyte Cell Size by Spatially and Temporally Regulating the Expression of Sox9 and Runx2**
Yun Lu*[1], Wei Chen[2], Guochun Zhu[2], Yi-Ping Li[2]. [1]The University of Alabama At Birmingham, USA, [2]Department of Pathology, University of Alabama at Birmingham, USA
Disclosures: Yun Lu, None

CHONDROCYTES AND CARTILAGE MATRIX: TRANSCRIPTIONAL REGULATION AND GENE EXPRESSION

SA0085 **Histone Deacetylase 3 Controls Extracellular Matrix Remodeling and Proinflammatory Signals in Chondrocytes**
Lomeli Carpio*[1], Elizabeth Bradley[1], Amel Dudakovic[1], Andre van Wijnen[1], Meghan McGee-Lawrence[2], Jennifer Westendorf[1]. [1]Mayo Clinic, USA, [2]Georgia Regents University, USA
Disclosures: Lomeli Carpio, None

SA0086 **PRC2 controls chondrocyte proliferation, differentiation and hypoxic adaptation by suppressing aberrant activation of multiple signaling pathways**
Fatemeh Mirzamohammadi*[1], Garyfallia Papaioannou[2], Erinn Rankin[3], Huanfeng Xie[4], Jennifer Inloes[5], Stuart H Orkin [6], Ernestina Schipani [7], Tatsuya Kobayasi[8]. [1]Massachusetts General Hospital & Harvard Medical School, USA, [2]Massachusetts general hospital & harvad medical school, USA, [3]Stanford cancer institute, USA, [4]Dana-Farber Cancer Institute, USA, [5]Endocrine Unit, Massachusets General Hospital, USA, [6]Boston Children's Hospital & Dana-Farber Cancer Institute, USA, [7]University of Michigan, USA, [8]Endocrine Unit, Massachusetts General Hospital & Harvard Medical School, USA
Disclosures: Fatemeh Mirzamohammadi, None

ENERGY METABOLISM AND BONE: DIABETES AND BONE (ANIMAL MODELS)

SA0087 **Estrogen deficiency exacerbates type 1 diabetes induced bone loss**
Sandra Raehtz*, Nara Parameswaran, Laura McCabe. Michigan State University, USA
Disclosures: Sandra Raehtz, None

SA0088 **Partial pharmacological repression of PPARγ balances energy metabolism and increases bone mass**

Lance Stechschulte[1], P.J. Czernik[2], F. Tausif[1], C.A. Corzo[3], A. Asteian[3], M. Cameron[3], T.M. Kamenecka[3], P.R. Griffin[3], Beata Lecka-Czernik*[1]. [1]Department of Orthopaedic Surgery, Center for Diabetes & Endocrine Research, University of Toledo, College of Medicine & Life Sciences, USA, [2]Micro Tomografix Ltd., USA, [3]Department of Molecular Therapeutics, The Scripps Research Institute, Scripps Florida, USA

Disclosures: Beata Lecka-Czernik, None

SA0089 **PTHrP-derived Peptides Restore Bone Mass and Strength in Diabetic Mice: Additive Effect of Mechanical Loading**

Marta Maycas*[1], Kevin A McAndrews[2], Amy Sato[3], Gretel Pellegrini[3], Drew M Brown[4], Matthew R Allen [3], Lilian LI Plotkin [2], Pedro Esbrit[5], Arancha Gortazar[6], Teresita M Bellido [7]. [1]Anatomy & Cell Biology, Indiana University School of Medicine, USA, [2]Department of Anatomy & Cell Biology, Indiana University School of Medicine; Roudebush Veterans Administration Medical Center, USA, [3]Department of Anatomy & Cell Biology, Indiana University School of Medicine, USA, [4], Department of Anatomy & Cell Biology, Indiana University School of Medicine, USA, [5]Instituto de Investigación Sanitaria (IIS)-Fundación Jiménez Díaz, Universidad Autónoma de Madrid (UAM) & Red Temática de Investigación Cooperativa en Envejecimiento y Fragilidad (RETICEF), Spain, [6]Universidad San Pablo-CEU School of Medicine Madrid Spain, Spain, [7]Department of Anatomy & Cell Biology, Indiana University School of Medicine; Department of Medicine, Division of Endocrinology, Indiana University School of Medicine; Roudebush Veterans Administration Medical Center, USA

Disclosures: Marta Maycas, None

SA0090 **FosB in the ventral hypothalamus prevents the age-related dysregulation of metabolic homeostasis in mice**

Kazusa Sato*[1], Anna Idelevich[1], Glenn Rowe[2], Francesca Gori[1], Roland Baron[1]. [1]Harvard School of Dental Medicine, USA, [2]Cardiovascular Institute, Beth Israel Deaconess Medical Center, Harvard Medical School, USA

Disclosures: Kazusa Sato, None

ENERGY METABOLISM AND BONE: FAT AND BONE

SA0091 **Apolipoprotein E (ApoE) plays a crucial role in maintaining trabecular and cortical bone mass by promoting osteoblastic differentiation via ERK1/2 pathway and suppressing osteoclast differentiation by down-regulation of c-Fos and NFATc1**

Takaaki Noguchi*[1], Kosuke Ebina[2], Makoto Hirao[2], Kota Koizumi[2], Hideki Yoshikawa[2]. [1]Osaka University, Japan, [2]Department of Orthopaedic Surgery, Graduate School of Medicine, Osaka University, Japan

Disclosures: Takaaki Noguchi, None

SA0092 **IGFBP2/FOXC2 interactions: effects on body composition and bone mass**

Victoria Demambro*[1], David Clemmons[2], Beata Lecka-Czernik[3], Clifford Rosen[1]. [1]Maine Medical Center Research Institute, USA, [2]University of North Carolina Chapel Hill, USA, [3]University of Toledo, USA

Disclosures: Victoria Demambro, None

SA0093 **Impaired Bone Accrual during Obesity occurs by a Neuropeptide Y-dependent Mechanism in the Osteoblast**

Natalie Wee*[1], Nikki Lee[2], Ronaldo Enriquez[3], Herbert Herzog[2], Paul Baldock[3]. [1]Skeletal Metabolism, Osteoporosis & Bone Biology Program, Garvan Institute of Medical Research, , [2]Eating Disorders, Neuroscience Program, Garvan Institute of Medical Research, Australia, [3]Skeletal Metabolism, Osteoporosis & Bone Biology Program, Garvan Institute of Medical Research, Australia

Disclosures: Natalie Wee, None

SA0094 **Inability to Generate Bone Marrow Adipocytes Does Not Protect the Skeleton from Disuse-Induced Cancellous Bone Loss in Adult Male Mice**

Jessica Keune*, Adam Branscum, Urszula Iwaniec, Russell Turner. Oregon State University, USA

Disclosures: Jessica Keune, None

SA0095 **Increased G_s Signaling in Osteoblasts Increases Metabolic Activity and Reduces Whole Body Adiposity**
Corey Cain*, Joel Valencia, Kate Jordan , Edward Hsiao. University of California, San Francisco, USA
Disclosures: Corey Cain, None

SA0096 **Mitochondrial Sirtuin-3 Regulates Skeletal Homeostasis**
Linh Ho*[1], Yong Pan[2], Emilie Besnard[3], Theresa M. Roth[4], Yuya Nishida[3], Chia-Lin Tsou[3], ChePing Ng[3], Eric M. Verdin[3], Robert A. Nissenson[4]. [1]UCSF, USA, [2]Edison Pharmaceuticals, 350 North Bernardo Avenue, Mountain View, CA 94043, USA, USA, [3]Gladstone Institutes, University of California San Francisco, San Francisco, CA 94158, USA, USA, [4]Endocrine Research Unit, VA Medical Center & Departments of Medicine & Physiology, University of California San Francisco, San Francisco, CA, USA, USA
Disclosures: Linh Ho, None

SA0097 **Sirt1 Stimulates Browning of Marrow Fat: From Mice To (Wo)men**
Hanna Artsi*[1], Irina Gurt[1], Madi El-Haj[1], Ralph Müller[2], Gisela Kuhn[2], Gal Ben Shalom[1], Rotem Paz[3], Einav Cohen-Kfir[1], Rivka Dresner-Pollak[1]. [1]Hadassah-Hebrew University Medical Center, Israel, [2]ETH Zurich, Institute for Biomechanics, Swaziland, [3]TAU, Dept. of Zoology, Faculty of Life Science., Israel
Disclosures: Hanna Artsi, None

SA0098 **Thyroid Hormone Induces Browning of Bone Marrow Adipose Tissue via Activation of TRβ Signaling**
Richard Lindsey*[1], Sheila Pourteymoor[2], Catrina Alarcon[2], Subburaman Mohan[2]. [1]Loma Linda UniversityVA Loma Linda Healthcare System, USA, [2]VA Loma Linda Healthcare System, USA
Disclosures: Richard Lindsey, None

ENERGY METABOLISM AND BONE: GENERAL

SA0099 **Metabolic Regulation of Osteoclast Differentiation by Hif1α in Human Osteoclastgenesis**
Koichi Murata*, Min Joon Lee, Seyeon Bae, Sehwan Mun, Kyung-Hyun Park-Min, Lionel Ivashkiv. Hospital for Special Surgery, USA
Disclosures: Koichi Murata, None

GENETIC DISORDERS OF THE MUSCULOSKELETAL SYSTEM: ANIMAL MODELS

SA0100 **"Skeletal Alterations in Hyp (C57BL/6J-PhexHyp/J) Mouse Model of X-linked Hypophosphatemia (XLH) in humans"**
Ed Berryman*[1], David Zakur[2], Cedo Bagi[2]. [1]Pfizer Global Research & Development, USA, [2]Pfizer Research & Development, Groton CT, USA
Disclosures: Ed Berryman, Pfizer Inc.

SA0101 **Both phosphate replacement and high fat diet cooperatively improve survival and bone quality in Ebf1-deficient mice**
Jackie Fretz*[1], Tracy Nelson[2], Ben-Hua Sun[2], Rose Webb[2], Nancy Troiano[2], Steven Tommasini[2]. [1]Yale University School of Medicine, USA, [2]Yale School of Medicine, USA
Disclosures: Jackie Fretz, None

SA0102 **Genetic keratin invalidation corrects the altered osteoblast function, bone formation and osteopenia in F508delta-Cftr mice, a murine model of cystic fibrosis**
Carole Le Henaff*[1], Mélanie Faria[2], Aurélie Hatton[2], Danielle Tondelier[2], Caroline Marty[1], Mylène Zarka[1], Kurt Zatloukal[3], Valérie Geoffroy[1], Aleksander Edelman[2], Isabelle Sermet[2], Pierre J. Marie[1]. [1]INSERM UMR-1132 & University Paris Diderot, Sorbonne Paris Cité, France, [2]INSERM U-1151, Faculté de Médecine Paris Descartes, France, [3]Institute of Pathology, Medical University of Graz, Austria
Disclosures: Carole Le Henaff, None

SA0103 **Matrix deposition and mineralization in heterozygous and homozygous mouse embryos with Gly610 to Cys substitution in the triple helical region of the α2(I) collagen chain**
Lynn Mirigian[1], Elena Makareeva[1], Shakib Omari[1], Anna Roberts-Pilgrim[1], Edward Mertz[1], Sergey Leikin*[2]. [1]NICHD, NIH, USA, [2]National Institutes of Health, USA
Disclosures: Sergey Leikin, None

SA0104 **Monitoring of Collagen Replacement in a Transplant Model for Treatment of Osteogenesis Imperfecta Using GFP-Collagen Donor Mice**
Molly Hulbert*[1], Hong Zhao[1], Richard Campos[1], Yixia Xie[1], Michael Grillo[1], Donna Pacicca[2], Charlotte Phillips[3], Sarah Dallas[1]. [1]University of Missouri - Kansas City, USA, [2]Children's Mercy Hospital, Kansas City, USA, [3]University of Missouri, USA
Disclosures: Molly Hulbert, None

SA0105 **MS-275 administration rescues cleidocranial dysplasia (CCD) phenotypes of Runx2+/- mice**
Han-sol Bae*, Won-joon Yoon, Young-dan Cho, Rabia Islam, Hye-rim Shin, Bong-soo Kim, Kyung-mi Woo, Jeong-hwa Baek, Hyun-mo Ryoo. Seoul National University, South korea
Disclosures: Han-sol Bae, None

SA0106 **Osteocyte-specific Overexpression of Human WNT16 Increases both Cortical and Trabecular Bone Density and Improves Bone Strength in Mice**
Imranul Alam*[1], Austin Reilly[1], Charishma Kasipathi[1], Mohammed Alkhouli[1], Rita Gerard-O'Riley[1], Dena Acton[1], Amie Gray[1], Kyung-Eun Lim[2], Alexander Robling[2], Michael Econs[1]. [1]Indiana University School of Medicine, USA, [2]Anatomy & Cell Biology, USA
Disclosures: Imranul Alam, None

SA0107 **PHOSPHO1 is Essential for Normal Bone Fracture Healing**
Mina Morcos*[1], Hadil Al-Jallad[2], Jose Luis Millan[3], Reggie C Hamdy[4], Monzur Murshed[5]. [1]McGill University, Canada, [2]Division of Paediatric Orthopaedic Surgery, Shriners Hospital for Children, Montreal, Canada, [3]Sanford-Burnham Medical Research Institute La Jolla, CA, USA, USA, [4]Division of Paediatric Orthopaedic Surgery, Shriners Hospital for Children, Montreal. Department of Medicine, McGill University, Montreal, QC, Canada, Canada, [5]Department of Molecular Genetics, Shriners Hospital for Children, Montreal. Department of Medicine, McGill University, Montreal, QC, Canada. Faculty of Dentistry, McGill University, Montreal, QC, Canada, Canada
Disclosures: Mina Morcos, None

SA0108 **The Skeletal Phenotype of *Serpinf1*- Null Mice**
Hadil Al-Jallad*[1], Pierre Moffatt[2], Hazem Eimar[3], Faleh Tamimi[3], Marc McKee[3], Frank Rauch[2]. [1]Shriners Hospital for Children, McGill University, Canada, [2]Shriners Hospital for Children, Canada, [3]McGill University, Canada
Disclosures: Hadil Al-Jallad, None

GENETIC DISORDERS OF THE MUSCULOSKELETAL SYSTEM: MONOGENIC BONE DISEASES

SA0109 **Targeted sequencing for monogenic causes of High Bone Mass: Predictions in LRP5 protein structure explain variation in the clinical severity of *LRP5* High Bone Mass**
Celia Gregson*[1], Lawrie Wheeler[2], Sarah Hardcastle[3], Kathryn A Addison[2], Marieke Brugmans[2], Kate Ward[4], Margaret Paggiosi[5], Louise Appleton[6], Jane Turton[7], Michael Stone[7], Joegi Thomas[8], Rohan Agarwal[9], Kenneth Poole[9], Eugene McCloskey[5], Eleanor Williams[10], Alex Bullock[10], George Davey Smith[11], Matthew A Brown [2], Jon H Tobias[3], Emma L Duncan[2]. [1]University of Bristol, United Kingdom, [2]Human Genetics Group, University of Queensland Diamantina Institute, Australia, [3]Musculoskeletal Research Unit, School of Clinical Sciences, University of Bristol, United Kingdom, [4]MRC Human Nutrition Research Unit, Elsie Widdowson Laboratory, United Kingdom, [5]Mellanby Centre for Bone Research, Academic Unit of Bone Metabolism, University of Sheffield, United Kingdom, [6]NIHR Oxford Musculoskeletal Biomedical Research Unit, Nuffield Orthopaedic Centre, United Kingdom, [7]Bone Research Unit, University Hospital Llandough, United Kingdom, [8]James Paget University Hospital Foundation NHS Trust, United Kingdom, [9]Department of Medicine, University of Cambridge, United Kingdom, [10]Structural Genomics Consortium, University of Oxford, United Kingdom, [11]MRC Integrative Epidemiology Unit at the University of Bristol, United Kingdom
Disclosures: Celia Gregson, None

GENETIC DISORDERS OF THE MUSCULOSKELETAL SYSTEM: OTHER DISEASES

SA0110 **Integrating genome-wide association and co-expression network data for novel BMD gene discovery**

Gina Calabrese[1], Larry Mesner[2], Joseph Stains[3], Steven Tommasini[4], Mark Horowitz[4], Clifford Rosen[5], Charles Farber*[2]. [1]University of Virgina, USA, [2]University of Virginia, USA, [3]University of Maryland, USA, [4]Yale, USA, [5]Maine Medical Research Institute, USA

Disclosures: Charles Farber, None

HORMONAL REGULATORS: FGF23 AND OTHER PHOSPHATONINS

SA0111 **A Murine Model with Conditional FGF23 Deletion**

Erica Clinkenbeard*[1], Taryn Cass[2], Julia Hum[2], Matt Allen[3], Teresita Bellido[3], Kenneth White[2]. [1]Indiana University-Purdue University Indianapolis, USA, [2]Department of Medical & Molecular Genetics Indiana University School of Medicine, USA, [3]Department of Anatomy & Cell Biology Indiana University School of Medicine, USA

Disclosures: Erica Clinkenbeard, None

SA0112 **Limb-specific Klotho Expression Is Required for FGF23 Production During Renal Failure**

Jovana Kaludjerovic*[1], Hirotaka Komaba[1], Tadatoshi Sato[1], Takenobu Ishii[1], Hannes Olauson[2], Tobias Larsson[2], Reinhold Erben[3], Beate Lanske[1]. [1]Harvard School of Dental Medicine, USA, [2]Karolinska Institutet, Sweden, [3]University of Veterinary Medicine, Austria

Disclosures: Jovana Kaludjerovic, None

SA0113 **Sustained expression of a soluble form of αKlotho prevents aortic calcification and disease phenotypes during chronic hyperphosphatemia**

Julia Hum*[1], Linda O'Bryan[2], Arun Tatiparthi[3], Robert Johnson[4], Jonathan Wilson[4], Erica Clinkenbeard[5], Taryn Cass[5], Rosamund Smith[2], Kenneth White[5]. [1]Indiana University School of Medicine, USA, [2]Biotechnology Discovery Research, Eli Lilly & Company, USA, [3]Lead Optimization Pharmacology & Toxicology, Covance Laboratories Inc., USA, [4]Investigational Pathology, Eli Lilly & Company, USA, [5]Department of Medical & Molecular Genetics, Indiana University School of Medicine, USA

Disclosures: Julia Hum, None

SA0114 **Tiptoe Walking *(ttw)* Mice, Rodent Spinal Ligamentous Ossification Models, Exhibiting High Serum FGF23 Level**

Ryuichi Watanabe*[1], Takeshi Miyamoto[2], Morio Matsumoto[2], Masaya Nakamura[2]. [1]Keio University School of Medicine, Japan, [2]Department of Orthopaedic Surgery, Keio University School of Medicine, Japan

Disclosures: Ryuichi Watanabe, None

HORMONAL REGULATORS: PARATHYROID HORMONE AND CALCIUM SENSING RECEPTORS

SA0115 **AMG 416 Prevented Cortical Porosity and Preserved Bone Strength in 5/6 Nephrectomized Rats with Established Secondary Hyperparathyroidism**

Longchuan Yu[1], Frank Asuncion[1], Shawn Alexander[1], Kelly Hensley[1], Chun-Ya Han[2], Denise Dwyer[3], Qing-Tian Niu[1], Marina Stolina[1], Charley Dean Jr[1], Michael Ominsky[1], William Richards[1], Xiaodong Li*[1]. [1]Amgen Inc., USA, [2]Amgen. Inc., USA, [3]Amgen. Inc, USA

Disclosures: Xiaodong Li, Amgen Inc.

SA0116 **Continuous Parathyroid Hormone Injection in Mouse Has Differential Effects on Osteoclast Activation in Primary and Secondary Spongiosa**

Nobuhito Nango*[1], Shogo Kubota[1], Wataru Yashiro[2], Atsushi Momose[2], Shizuko Ichinose[3], Koichi Matsuo[4]. [1]Ratoc System Engineering Co., Ltd., Japan, [2]Institute of Multidisciplinary Research for Advanced Materials, Tohoku Univ., Japan, [3]Research Center for Industry Alliances, Tokyo Medical & Dental University, Japan, [4]Laboratory of Cell & Tissue Biology, Keio University School of Medicine, Japan

Disclosures: Nobuhito Nango, None

SA0117 **Continuous PTH Treatment Induces Bone Loss through GαS Signaling in T cells**
Jau-Yi Li*[1], Jerid W. Robinson[2], Abdul Malik Tyagi[2], Jonathan Adams[2], Neal M. Weitzmann[2], Roberto Pacifici[2]. [1]Emory University School of Medicine, USA, [2]Emory University, USA
Disclosures: Jau-Yi Li, None

SA0118 **CRISPR-mediated RUNX2 Deletion Delineates Mechanisms of Gene Expression throughout Osteoblast Differentiation and Mineralization**
Mark Meyer*, Nancy Benkusky, J. Wesley Pike. University of Wisconsin-Madison, USA
Disclosures: Mark Meyer, None

SA0119 **Evaluation of Different Schedules of Teriparatide Injection on Sinus Bone Graft in Rabbit**
Jisun Huh*[1], Ui-Won Jung[2], Kyeong-Mee Park[1], Jin-Sun Jeong[1], Kee-Deog Kim[1], Wonse Park[3]. [1]Department of Advanced General Dentistry, College of Dentistry, Yonsei University, South korea, [2]Department of periodontology, Research Institute for Periodontal Regeneration, College of Dentistry, Yonsei University, South korea, [3]Dental College, Yonsei University, USA
Disclosures: Jisun Huh, None

SA0120 **LRP6 Is Required For PTH-Induced SOST Suppression**
CHANGJUN LI*[1], Liang Xie[2], Xu Cao[2], Mei Wan[2]. [1]Johns Hopkins University School of Medicine, USA, [2]Department of Orthopaedic Surgery, Johns Hopkins University School of Medicine, Baltimore, MD 21205, USA, USA
Disclosures: CHANGJUN LI, None

SA0121 **Sorting Nexin 27 Promotes Rapid Activity-dependent Recycling of the Parathyroid Hormone Receptor**
Jennifer McGarvey*[1], Tatyana Mamonova[1], Shanna Bowman[2], W. Bruce Sneddon[1], Manojkumar Puthenveedu[2], Peter Friedman[1]. [1]University of Pittsburgh, USA, [2]Carnegie Mellon University, USA
Disclosures: Jennifer McGarvey, None

SA0122 **The large variant of the stimulatory G protein alpha-subunit XLαs mediates early postnatal regulation of renal phosphate handling by enhancing IP3/DAG signaling**
Qing He*[1], Yan Zhu[1], Braden Corbin[1], Antonius Plagge[2], Murat Bastepe[1]. [1]Massachusetts General Hospital, USA, [2]University of Liverpool, United Kingdom
Disclosures: Qing He, None

SA0123 **β2-adrenergic Receptor Control of PTH Receptor Signaling**
Jean-Pierre Vilardaga[1], Frederic Jean-Alphonse*[2]. [1]University of Pittsburgh, School of Medicine, USA, [2]University of Pittsburgh, USA
Disclosures: Frederic Jean-Alphonse, None

HORMONAL REGULATORS: SEX HORMONES AND GLUCOCORTICOIDS

SA0124 **Androgen receptor signaling in mesenchymal lineage cells suppresses soluble RANKL production, cancellous osteoclast number, and B lymphopoiesis**
Semahat Serra Ucer*[1], Srividhya Iyer[2], Ha-neui Kim[2], Shoshana M Bartell[2], Aaron D Warren[3], Li Han[2], Julie A Crawford[2], Charles A O'Brien[2], Maria Jose Almeida[2], Stavros C Manolagas[2]. [1]University of Arkansas for Medical Sciences, USA, [2]Center for Osteoporosis & Metabolic Bone Diseases, Central Arkansas Veterans Healthcare System, University of Arkansas for Medical Sciences, USA, [3]Central Arkansas Veterans Healthcare System, University of Arkansas for Medical Sciences, USA
Disclosures: Semahat Serra Ucer, None

SA0125 **Conditional knockout of progesterone receptor in the osteoprogenitor cells, but not in the mature osteoblasts, increases trabecular bone formation**
Zhendong Zhong*[1], Weihua Sun[2], Haiyan Chen[2], Yu-an Lay[2], Nancy Lane[2], Wei Yao[2]. [1]University of California, Davis, USA, [2]Musculoskeletal Research Unit, Department of Medicine, University of California Davis Medical Center, Sacramento, CA 95817, USA., USA
Disclosures: Zhendong Zhong, None

SA0126 **ERα Expression in T Lymphocytes is Dispensable for Estrogenic Effects in Bone**
Karin Gustafsson*[1], Annica Andersson [2], Helen Farman[2], Vikte Lionikaite[2], Petra Henning[2], Jianyao Wu[2], Sara Windahl[2], Merja Nurkkala Karlsson[2], Angelina Bernardi[2], Ulrika Islander[2], Sofia Skrtic[2], Klara Sjögren[2], Claes Ohlsson[2], Marie Lagerquist[2]. [1]University of Gothenburg, Sweden, [2]Centre for Bone & Arthritis Research, Institute of Medicine, University of Gothenburg, Sweden
Disclosures: Karin Gustafsson, None

SA0127 **The role of osteocyte estrogen receptor beta (ERβ) in regulating skeletal growth, aging, and the skeleton's anabolic response to physical stimuli**
Maxime Gallant[1], Haisheng Yang[1], Whitney Bullock[2], Teresita Bellido[3], Russell Main*[1]. [1]Purdue University, USA, [2]Indiana University Purdue University Indianapolis, USA, [3]Indiana University School of Medicine, USA
Disclosures: Russell Main, None

HORMONAL REGULATORS: VITAMIN D AND ANALOGS

SA0128 **Common polymorphism in Vitamin D 25-hydroxylase gene (CYP2R1) abrogates promoter activity and is associated with low serum 25OHD in a Caucasian pediatric cohort**
Jeff Roizen*[1], Alex Casella[2], Jonathan Bradfield[2], Meizan Lai[2], Hakon Hakonarson[2], Michael Levine[2]. [1]The Childrens Hospital of Philadelphia, USA, [2]The Children's Hospital of Philadelphia, USA
Disclosures: Jeff Roizen, None

SA0129 **Conditional Knockout of Osteoblast Vitamin D Receptor and CYP27B1 Implicates Cell-Specific Receptor Signaling but Not Cell-Specific 1,25-dihydroxyvitamin D Production in the Maintenance of Trabecular and Cortical Bone Mass in Male and Female Mice**
Tsui-Hua Chen, Amanda Herberger*, nathan liang, Alfred Li, daniel Bikle, wenhan chang, Dolores Shoback. UCSF, USA
Disclosures: Amanda Herberger, None

SA0130 **Pregnancy and Post-Lactation Recovery Rescue Low Bone Mass and Hypocalcemia in *Cyp27b1* Null Mice That Cannot Make Calcitriol**
Brittany Gillies*[1], Brett A. Tonkin[2], Yue Ma[1], Beth J. Kirby[1], René St-Arnaud[3], Natalie A. Sims[2], Christopher Kovacs[1]. [1]Memorial University of Newfoundland, Canada, [2]St. Vincent's Hospital & University of Melbourne, Australia, [3]Shriner's Hospital & McGill University, Canada
Disclosures: Brittany Gillies, None

MECHANOBIOLOGY: CELLULAR AND MOLECULAR EFFECT OF MECHANICAL LOADING AND UNLOADING

SA0131 **A transcriptomic analysis of cortical versus cancellous bone from mechanically-loaded murine tibiae reveals ERα-dependent differential changes in gene expression**
Natalie Kelly*[1], John Schimenti[1], F Patrick Ross[2], Marjolein van der Meulen[1]. [1]Cornell University, USA, [2]Hospital for Special Surgery, USA
Disclosures: Natalie Kelly, None

SA0132 **Inhibition of BMP 2/4 Signaling Reduces Enhanced Cancellous Bone Response to Mechanical Loading in Female ERα-Deficient Mice**
Katherine Melville[1], Gina Surita[1], Natalie Kelly[1], R Scott Pearsall[2], John Schimenti[1], F Patrick Ross[3], Marjolein Van Der Meulen*[1]. [1]Cornell University, USA, [2]Acceleron Pharma, USA, [3]Hospital for Special Surgery, USA
Disclosures: Marjolein Van Der Meulen, None

SA0133 **Low Magnitude Mechanical Loading Regulates Repair Events in Cortical Bone Defect Healing**
Robert Carrera[1], Vittoria Flamini[2], Benson George[3], Daniel Hunter[3], Bo Liu[3], Gurpreet Singh[3], Jill Helms[3], Philipp Leucht[4], Alesha Castillo*[5]. [1]Department of Bioengineering, Stanford University, USA, [2]Department of Mechanical & Aerospace Engineering, New York University, USA, [3]Department of Surgery, Stanford University School of Medicine, USA, [4]Departments of Orthopaedic Surgery & Cell Biology, New York University School of Medicine, USA, [5]Departments of Mechanical & Aerospace Engineering & Orthopaedic Surgery, New York University, USA
Disclosures: Alesha Castillo, None

SA0134 **mechanical unloading sensitive miR-138 targets MACF1 to regulate bone formation**
Airong Qian*[1], Zhihao Chen[2], Yasir Arfat[2], Lifang Hu[2], Peng Shang[3], Ge Zhang[4]. [1]Northwestern Polytechnical University, Peoples republic of china, [2]Key Laboratory for Space Bioscience & Biotechnology, Institute of Special Environmental Biophysics, School of Life Sciences, Northwestern Polytechnical University, Xi'an 710072, China, China, [3]Key Laboratory for Space Bioscience & Biotechnology, Institute of Special Environmental Biophysics, School of Life Sciences, Northwestern Polytechnical University, China, [4]nstitute for Advancing Translational Medicine in Bone & Joint Diseases, School of Chinese Medicine, Hong Kong Baptist University, Hong Kong, China, China
Disclosures: Airong Qian, None

SA0135 **Pre-exercise through Moderate Treadmill Running Enhances Healing of Wounded Tendons in Aging Rats**
Jianying Zhang*, Ting Yuan, James H-C Wang. University of Pittsburgh School of Medicine, USA
Disclosures: Jianying Zhang, None

SA0136 **ASBMR 2015 Annual Meeting Young Investigator Award**
Preosteoclasts Mediate Bone Modeling by Secretion of PDGF-BB and Induction of $CD31^{hi}Emcn^{hi}$ Vessels
Hui Xie*[1], Zhuying Xia[2], Weicheng Xu[3], Genevieve Brown[4], Mei Wan[3], X. Edward Guo[4], Xu Cao[3]. [1]Johns Hopkins Medical Institution, USA, [2]Xiangya Hospital, Central South University, China, [3]Department of Orthopaedic Surgery, Johns Hopkins University School of Medicine, USA, [4]Department of Biomedical Engineering, Columbia University, USA
Disclosures: Hui Xie, None

SA0137 **Simulated Space Radiation: Murine Skeletal Responses during Recovery and with Mechanical Stimulation**
Yasaman Shirazi-Fard*[1], Ann-Sofie Schreurs[2], Tiffany Truong[2], Candice Tahimic[2], Joshua Alwood[2], Alesha Castillo[3], Ruth Globus[2]. [1]NASA Ames Research Center, Us, [2]NASA Ames Research Center, USA, [3]New York University, USA
Disclosures: Yasaman Shirazi-Fard, None

SA0138 **Sirtuin 1's Role as a Negative Regulator of the Anabolic Response to Mechanotransduction in Mature Osteoblasts**
Elizabeth Rendina-Ruedy*[1], Nicole Fleming[1], Rashmi Pandey[2], Guillame Vignaux[1], Heather Durai[1], Daniel Perrien[3]. [1]Vanderbilt University Medical Center, USA, [2]Vanderbilt University Medical Center, VA Tennessee Valley Healthcare System, USA, [3]VA Tennessee Valley Healthcare System, Vanderbilt University Medical Center, USA
Disclosures: Elizabeth Rendina-Ruedy, None

SA0139 **ASBMR 2015 Annual Meeting Young Investigator Award**
β-catenin deletion in osteocytes does not prevent load-induced bone formation
Kyung Shin Kang*, Alexander Robling. Indiana University, USA
Disclosures: Kyung Shin Kang, None

SA0140 **βcatenin gainoffunction mutation in osteocytes confers protective effects from disuseinduced bone loss**
Whitney Bullock*, Alexander Robling. Indiana University, USA
Disclosures: Whitney Bullock, None

MECHANOBIOLOGY: CELLULAR AND MOLECULAR MECHANOSENSING

SA0141 **Actin Cytoskeletal Structure Influences MSC Lineage through Balanced Activity of LARG GEF and ARHGAP18**
William Thompson*[1], Sherwin Yen[2], Zhihui Xie[2], Gunes Uzer[2], Buer Sen[2], Maya Styner[2], Keith Burridge[2], Janet Rubin[2]. [1]Indiana University, USA, [2]University of North Carolina Department of Medicine, USA
Disclosures: William Thompson, None

SA0142 **Disruption of nucleo-cytoskeletal connectivity increases intranuclear actin and enhances MSC differentiation**
Gunes Uzer*[1], Buer Sen[1], Zhihui Xie[1], William Thompson[2], Guniz Bas[1], Maya Styner[1], Janet Rubin[1]. [1]University of North Carolina, USA, [2]Indiana University, USA
Disclosures: Gunes Uzer, None

SA0143 **Distinct subcellular activation patterns of Src and FAK by interstitial fluid flow and cytokines**
Qiaoqiao Wan*[1], Hiroki Yokota[2], Sungsoo Na[3]. [1]Department of Biomedical Engineering, Purdue University, USA, [2]Department of Biomedical Engineering, Indiana University Purdue University Indianapolis, USA, [3]Indiana University-Purdue University Indianapolis, USA
Disclosures: Qiaoqiao Wan, None

MECHANOBIOLOGY: GENERAL

SA0144 **Diminished Mechanoresponsiveness with Skeletal Maturation occurs via a Sclerostin-Independent Pathway**
Laia Albiol*[1], Annette I. Birkhold[2], David Pflanz[2], Tobias Thiele[2], Ina Kramer[3], Michaela Kneissel[3], Georg N. Duda[2], Sara Checa[2], Bettina M. Willie[2]. [1]Charité – Universitätsmedizin Berlin, Germany, [2]Julius Wolff Institute, Charité Universitätsmedizin, Germany, [3]Novartis Pharma, Switzerland
Disclosures: Laia Albiol, None

SA0145 **Ectopic Tendon Mineralization After Injury Is Progressive, Deteriorates Tendon Biomechanical Properties And Involves BMP Signaling**
Kairui Zhang[1], Shuji Asai[2], Michael Hast[3], Louis Soslowsky[3], Motomi Enomoto-Iwamoto*[1]. [1]Children's Hospital of Philadelphia, USA, [2]Nagoya University, Japan, [3]University of Pennsylvania, USA
Disclosures: Motomi Enomoto-Iwamoto, None

SA0146 **Low Intensity Pulsed Ultrasound Can Promote Stem Cell Proliferation during Fracture Healing but Varied by the Acoustic Wave Patterns**
Yi-Xian Qin[1], Hua Yue*[2], Guoxian Feng[2], Li Huang[2], Jingyu Wang[2], Deyi Zhang[2], Jingbo Liu[2], Kartikey Grover[2]. [1]State University of New York at Stony Brook, USA, [2]Stony Brook University, USA
Disclosures: Hua Yue, None

SA0147 **Withdrawn**

SA0148 **Parathyroid hormone's enhancement of bones' osteogenic response to loading in young mice is lost in the cortical bone of old mice, and reversed in their trabeculae**
Lee Meakin, Henry Todd, Peter Delisser, Alaa Moustafa, Gabriel Galea, Sara Windahl, Lance Lanyon, Joanna Price*. University of Bristol, United Kingdom
Disclosures: Joanna Price, None

SA0149 **Risedronate and Mechanical Loading Have Additive Effects Increasing Bone Mass in Cortical, but Not Cancellous, Bone in Aged Mice**
Peter Delisser*[1], Henry Todd[2], Lee B Meakin[2], Gabriel L Galea[2], Lance E Lanyon[2], Sara H Windahl[3], Joanna S Price[4]. [1]University Of Bristol, United Kingdom, [2]School of Veterinary Sciences, University of Bristol, United Kingdom, [3]Centre for Bone & Arthritis Research, Institute of Medicine, Sahlgrenska Academy, Gothenburg, Sweden & School of Veterinary Sciences, University of Bristol, United Kingdom, [4]chool of Veterinary Sciences, University of Bristol, United Kingdom
Disclosures: Peter Delisser, None

MODULATORS OF BONE REMODELING (ANIMAL MODELS): ANABOLIC FACTORS

SA0150 **A bone-seeking anabolic agent, LLP2A-Ale, prevented and restored glucocorticoid-induced bone loss**
Nancy Lane[1], Yu-An Lay[1], Haley Berka[1], Lorna Ringwood[1], Alexander Kot[1], Haiyan Chen[1], Wei Yao*[2]. [1]University of California at Davis Medical Center, USA, [2]University of California, Davis Medical Center, USA
Disclosures: Wei Yao, None

SA0151 **A Natural Antibody Against Oxidized Phospholipids Causes Bone Anabolism**
Elena Ambrogini*[1], Shuling Wang[2], Xuchu Que[2], Fumihiro Yamaguchi[2], Annick Deloose[1], Kanan Vyas[1], Michela Palmieri[1], Stuart B Berryhill[1], Robert S Weinstein[1], Sotirios Tsimikas[2], Stavros C Manolagas[1], Joseph L Witztum[2], Robert L Jilka[1]. [1]Center for Osteoporosis & Metabolic Bone Diseases, University of Arkansas for Medical Sciences & the Central Arkansas Veterans Healthcare System, USA, [2]Department of Medicine, University of California, San Diego, USA
Disclosures: Elena Ambrogini, None

SA0152 **Activation of Protein Kinase A in Mature Osteoblasts Promotes a Remarkable Bone Anabolic Response**
Liana Tascau[1], Thomas Gardner[1], Hussein Anan[2], Charlie Yongpravat[1], Christopher Cardozo[3], William Bauman[3], Francis Lee[1], Daniel Oh[1], Hesham Tawfeek*[3]. [1]Columbia University, USA, [2]SacredHeart Hospital/Temple University, USA, [3]James J Peters VA Medical Center, USA
Disclosures: Hesham Tawfeek, None

SA0153 **Cbl-PI3 Kinase Interaction Controls Osterix Expression And Regulates Periosteal Proliferation Upon Injury**
Vanessa Scanlon, Bhavita Walia, Jungeun Yu, Peter Maye, Hicham Drissi, Archana Sanjay*. UConn Health Center, USA
Disclosures: Archana Sanjay, None

SA0154 **Effect of LLP2A-Ale on fracture healing in growing mice**
Wei Yao*[1], Yu-An Lay[2], Haiyan Chen[2], Alexander Kot[2], Nancy Lane[2]. [1]University of California, Davis Medical Center, USA, [2]University of California at Davis Medical Center, USA
Disclosures: Wei Yao, None

SA0155 **Effects of Endoxifen, a Selective Estrogen Receptor Modulator, on Bone in Ovary-intact and Ovariectomized Rats**
Anne Gingery*[1], Malayannan Subramaniam[2], Kevin Pitel[2], James N Ingle[2], Matthew P Goetz[2], Russell T Turner[3], Urszula T Iwaniec[3], Thomas C Spelsberg[2], John Hawse[2]. [1]Mayo Clinic School of Medicine, USA, [2]Mayo Clinic, USA, [3]Oregon State University, USA
Disclosures: Anne Gingery, None

SA0156 **Gpr39 deficient mice have increased bone mass during aging as a result of accelerated osteoblast differentiation**
Noam Levaot*[1], Milena Pesic[2], Gail Guterman-Ram[2], Ayelet Orenbuch[2]. [1]Ben-Gurion University of the Negev, Israel, [2]Department of Physiology & Cell Biology, Ben-Gurion University of the Negev, Israel
Disclosures: Noam Levaot, None

SA0157 **Intermittent Parathyroid Hormone Enhances Osseointegration of a Physiologically Loaded Tibial Implant in Ovariectomized Mice**
Xu Yang*[1], Aleksey Dvorzhinskiy[1], Vinicius Ladeira Craveiro[1], Caroline Brial[1], Benjamin Ricciardi[1], F. Patrick Ross[1], Marjolein van der Meulen[2], Mathias Bostrom[1]. [1]Hospital for Special Surgery, USA, [2]Cornell University, USA
Disclosures: Xu Yang, None

SA0158 **Measles Virus Nucleocapsid Protein Expression in Osteoclasts Increases SPHK1/S1P/S1PR3 to Enhance Osteoblast Differentiation in Paget's Disease**
Yuki Nagata*[1], Khalid Mohammad[2], Theresa Guise[2], Laëtitia Michou[3], Jacques P. Brown[3], Jolene J. Windle[4], Noriyoshi Kurihara[5], G. David Roodman[6]. [1]Indiana University-Purdue University Indianapolis, USA, [2]Indiana University, Medicine/Endocrinology, USA, [3]Department of Medicine, Laval University, CHU de Quebec Research Center, Canada, [4]Human & Molecular Genetics, Virginia Commonwealth University, USA, [5]Indiana University, Medicine/Hematology-Oncology, USA, [6]Indiana University, Medicine/Hematology-Oncology, Roudebush VA Medical Center, USA
Disclosures: Yuki Nagata, None

SA0159 **Overexpression of Bmi1 in Mesenchymal Stem Cells Mediates Intracrine Actions of PTHrP in Regulating Skeletal Growth and Development**
Guangpei Chen*[1], Ying Zhang[1], Wanxin Qiao[1], Andrew Karaplis[2], Xiang-Jiao Yang[2], David Goltzman[2], Dengshun Miao[3]. [1]Nanjing Medical University, China, [2]McGill University, Canada, [3]Nanjing Medical University, Peoples republic of china
Disclosures: Guangpei Chen, None

SA0160 **Pyk2-Deletion Enhances Bone Mass through Estrogen Signaling in Osteoblasts and Osteoclasts**
Sumana Posritong*[1], Pierre P. Eleniste[2], Evan R. Himes[2], Melissa A. Kacena[2], Angela Bruzzaniti[1]. [1]Indiana University School of Dentistry, USA, [2]Indiana University School of Medicine, USA
Disclosures: Sumana Posritong, None

SA0161 **ASBMR 2015 Annual Meeting Young Investigator Award**
Skeletal Anabolism By Concurrently Targeting the PTH1R and CaSR
Christian Santa Maria*[1], Alfred Li[2], Zhiqiang Cheng[2], Fuqing Song[2], Dolores Shoback[3], Chia-Ling Tu[2], Wenhan Chang[2]. [1]UCSF, USA, [2]San Francisco Veterans Affairs Medical Center, USA, [3]University of California, San Francisco, USA
Disclosures: Christian Santa Maria, None

SA0162 **The Effects of Systemic Hedgehog Pathway Modulation on Fracture Healing**
Jennifer McKenzie*, Evan Buettmann, Matthew Silva, Michael Gardner. Washington University in St. Louis, USA
Disclosures: Jennifer McKenzie, None

SA0163 **Treatment with Sclerostin Antibody Converts Trabecular Rods into Trabecular Plates in Male Cynomolgus Monkeys**
Jonathan Matheny*[1], Ashley Torres[2], Christopher Hernandez[2]. [1]Sibley School of Mechanical & Aerospace Engineering, Cornell University, United states, [2]Sibley School of Mechanical & Aerospace Engineering, Cornell University, USA
Disclosures: Jonathan Matheny, None

MODULATORS OF BONE REMODELING (ANIMAL MODELS): OTHER AGENTS

SA0164 **Crosstalk between Sensory Neuropeptides Regulating Heterotopic Ossification in Tendon**
Ceren Tuzmen*, Phil Campbell, Lee Weiss. Carnegie Mellon University, USA
Disclosures: Ceren Tuzmen, None

SA0165 **Fluoxetine Affects Bone Remodeling Via Peripheral, Serotonin-Independent, And Central, Serotonin-Dependent, Mechanisms**
Maria J Ortuno Romero*[1], Riccardo Paone[2], J John Mann[3], Patricia Ducy[4]. [1]Columbia University Medical Center, USA, [2]Department of Biotechnological & Applied Clinical Sciences, University of L'Aquila, Italy, [3]Division of Molecular Imaging & Neuropathology, Department of Psychiatry, College of Physicians & Surgeons, Columbia University, USA, [4]Department of Pathology & Cell Biology, College of Physicians & Surgeons, Columbia University, USA
Disclosures: Maria J Ortuno Romero, None

SA0166 **LRP4 in osteoblasts suppresses bone formation and promotes osteoclastogenesis and bone resorption**
Wen-Cheng Xiong*, Lei Xiong. Georgia Regents University, USA
Disclosures: Wen-Cheng Xiong, None

SA0167 **Milk fat globule-epidermal growth factor 8 (MFG-E8) is a novel anti-inflammatory factor in rheumatoid arthritis in mice and men**
Martina Rauner*[1], Elise Albus[2], Kathrin Sinningen[2], Maria Winzer[2], Sylvia Thiele[2], Anke Hannemann[3], Sylvia Grossklaus[4], Triantafyllos Chavakis[4], Mark Udey[5], Lorenz Hofbauer[2]. [1]Medical Faculty of the TU Dresden, Germany, [2]Department of Medicine III, Technische Universität Dresden, Germany, [3]University of Greifswald, Germany, [4]Department of Clinical Pathobiochemistry & Institute for Clinical Chemistry & Laboratory Medicine, Technische Universität Dresden, Germany, [5]Dermatology Branch, Center for Cancer Research, National Cancer Institute, USA
Disclosures: Martina Rauner, None

SA0168 **Tanshinol reverses the impaired bone formation of Glucocorticoid-induced osteoporosis in rats: a role for KLF15**
Liao Cui[1], Yajun Yang*[2], Yanjie Su[2], Yahui Chen[2], Yuyu Liu[2], Tie Wu[2]. [1]Guangdong Medical College, Peoples republic of china, [2]Department of Phamacology, Guangdong Key Laboratory for R & D of Natural Drugs, Guangdong Medical College, China
Disclosures: Yajun Yang, None

MUSCLE BIOLOGY AND BONE: CELLULAR AND MOLECULAR INTERACTIONS

SA0169 **Annexin A5 inhibits bony outgrowth at tendon/ligament insertion sites**
Akemi Shimada*[1], Yoshinori Arai[2], Satoshi Wada[3], Hisashi Ideno[4], Taichi Kamiunten[3], Kazuhisa Nakashima[4], Koichiro Komatsu[4], Teruhito Yamashita[5], Yoichi Ezura[6], Norio Amizuka[7], Ernst Pöschl [8], Bent Brachvogel[9], Yoshiki Nakamura[3], Akira Nifuji[4]. [1]Tsurumi University School of Dental Medicine, Japan, [2]Nihon University, School of Dentistry, Japan, Japan, [3]Department of Orthodontics, Tsurumi University School of Dental Medicine, Japan, [4]Department of Pharmacology, Tsurumi University School of Dental Medicine, Japan, [5]Division of Hard Tissue Research, Institute for Oral Science, Matsumoto Dental University, Japan, [6]Department of Molecular Pharmacology, Medical Research Institute, Tokyo Medical & Dental University, Japan, [7]Department of Developmental Biology of Hard Tissue, Division of Oral Health Science, Graduate School of Dental Medicine, Hokkaido University, Japan, [8]School of Biological Sciences, University of East Anglia, Norwich Research Park, Norwich, United Kingdom, [9]Experimental Neonatology, Department of Pediatrics & Adolescent Medicine, Center for Biochemistry, Medical Faculty, University of Cologne, Germany
Disclosures: Akemi Shimada, None

SA0170 **Fusion Induced Hypertrophy of Skeletal Muscle Is Modulated By Pin1 through the Smad3 Pathway**
Rabia Islam*, Won-joon Yoon, Young-dan Cho, Woo-Jin Kim, Han-sol Bae, Hye-rim Shin, Bong-soo kim, Kyung Mi Woo, Jeong-Hwa Baek, Hyun-Mo Ryoo . Seoul National University, School of Dentistry, Department of Molecular Genetics, South korea
Disclosures: Rabia Islam, None

SA0171 **Histone 3 lysine 9 methyltransferase G9a is essential for the growth and differentiation of tenocytes**
Satoshi Wada*[1], Hisashi Ideno[2], Akemi Shimada[2], Taichi Kamiunten[1], Satoshi Wada[1], Kazuhisa Nakashima[2], Satoshi Wada[3], Satoshi Wada[4], Akira Nifuji[2]. [1]Department of Orthodontics, Tsurumi University School of Dental Medicine, Japan, [2]Department of Pharmacology, Tsurumi University School of Dental Medicine, Japan, [3]Graduate School of Bioscience & Biotechnology, Tokyo Institute of Technology, Japan, [4]The Institute of Enzyme Research, The University of Tokushima, Japan
Disclosures: Satoshi Wada, None

SA0172 **Identification of Muscle-derived Mesenchymal Stem Cells in Traumatic Heterotopic Ossification**
Zijun Zhang*[1], Reed Michell[2], Lew Schon[2]. [1]Union Memorial Hospital, USA, [2]MedStar Union Memorial Hospital, USA
Disclosures: Zijun Zhang, None

SA0173 **Therapeutic Potential of Myostatin (GDF8) in Protecting Immobilization-Induced Muscle Atrophy at an Adult Stage**
Toshimi Tando*, Takeshi Miyamoto, Morio Matsumoto, Masaya Nakamura. Department of Orthopedic Surgery, Keio University School of Medicine, Japan
Disclosures: Toshimi Tando, None

MUSCLE BIOLOGY AND BONE: GENERAL

SA0174 **Increased Glycolytic Fast-twitch Skeletal Muscle Growth in Mice has Beneficial Effects on Both Loaded and Non-loaded Skeletal Sites**
Joshua Farr*[1], Glenda Evans[1], Thomas White[1], Daniel Fraser[1], Kenneth Walsh[2], Sundeep Khosla[1], Nathan LeBrasseur[1]. [1]Mayo Clinic, USA, [2]Boston University, USA
Disclosures: Joshua Farr, None

OSTEOARTHRITIS AND OTHER JOINT DISORDERS: ANKYLOSING SPONDYLITIS AND SPONDYLOARTHRITIS

SA0175 **Window of Opportunity: Circulating Osteoblast Precursors Were Decreased afterInfliximab Therapy in Patients with Ankylosing Spondylitis**
Seong-Ryul Kwon*[1], WON PARK[1], MIN-JUNG SON[1], MIE-JIN LIM[2], KYOUNG-HEE JUNG[2], SHIN-GOO PARK[3]. [1]INHA University Hospital, South korea, [2]Rheumatism Center, INHA University Hospital, South korea, [3]Department of Occupation & Environmental Medicine, INHA University Hospital, South korea
Disclosures: Seong-Ryul Kwon, Celltrion company, Korea, Republic of

OSTEOARTHRITIS AND OTHER JOINT DISORDERS: GENERAL

SA0176 **Evaluation of Vitamin D Levels in Women with Carpal Tunnel Syndrome**
Hyun Sik Gong*[1], Seung Hoo Lee[2]. [1]Seoul National University Bundang Hospital, South korea, [2]Seoul National University, South korea
Disclosures: Hyun Sik Gong, None

SA0177 **Free Fatty Acid Induced Insulin Resistance in Human Synoviocytes: A Potential Link Between Obesity and Osteoarthritis**
Eric Schott*[1], Daisuke Hamada[2], Robert Maynard[3], Michael Zuscik[3], Robert Mooney[4]. [1]University of Rochester Medical Center, USA, [2]Department of Orthopedics, Tokushima University Hospital, Japan, [3]Center for Musculoskeletal Research, University of Rochester Medical Center, USA, [4]Department of Pathology, University of Rochester Medical Center, USA
Disclosures: Eric Schott, None

SA0178 **Quantifying the Progression of Preclinical Osteoarthritis as an Organ Disease Using Co-Registered Analysis in Five Tissues (CRAFTs)**
Joseph Temple*[1], Tieshi Li[2], Alessandra Esposito[2], Anna Spagnoli[2]. [1]University of North Carolina at Chapel Hill, USA, [2]Department of Pediatrics, Rush University Medical Center, USA
Disclosures: Joseph Temple, None

SA0179 **Therapeutic effects of a novel FGFR1 inhibitor on osteoarthritis**
Yangli Xie*[1], Wei Xu[2], Siru Zhou[2], Zuqiang Wang[2], Junlan Huang[2], Xianding Sun[2], Wanling Jiang[2], Xiaolan Du[2], Lin Chen[2]. [1]Third Military Medical University, Peoples republic of china, [2]Center of Bone Metabolism & Repair, Department of Rehabilitation Medicine, State Key Laboratory of Trauma, Burns & Combined Injury, Trauma Center, Institute of Surgery Research, Daping Hospital, Third Military Medical University, China
Disclosures: Yangli Xie, None

OSTEOARTHRITIS AND OTHER JOINT DISORDERS: RHEUMATOID ARTHRITIS AND INFLAMMATORY ARTHRITIS

SA0180 **Favorable Effects of anti TNF Therapy on Bone Turnover in Peripheral Blood Despite Inadequate Response of Inflammatory Markers in Seropositive RA Patients**
Mie Jin Lim*[1], Won Park[2], Seong Ryul Kwon[2], Kyung Hee Jung[2]. [1]Inha University Hospital, South korea, [2]Inha Univeristy Hospital, South korea
Disclosures: Mie Jin Lim, None

OSTEOBLASTS – MATRIX PROTEINS AND FUNCTION: ADHESION, MOTILITY AND CELL-CELL COMMUNICATION

SA0181 **Communication of Cyclic AMP by Connexin43 Gap Junctions Influences Osteoblast Signaling and Gene Expression**
Aditi Gupta*, Hidayah Anderson, Margaret Ren, Joseph Stains. University of Maryland School of Medicine, USA
Disclosures: Aditi Gupta, None

SA0182 **Intravital imaging of coupling between osteoblasts and osteoclasts by using multiphoton microscopy**
Masayuki Furuya*[1], Junichi Kikuta[2], Hiroki Mizuno[2], Shigeto Seno[3], Hiroki Maeda[4], Kazuya Kikuchi[4], Hideo Matsuda[3], Hideki Yoshikawa[5], Masaru Ishii[2]. [1]Osaka university, Japan, [2]Department of Immunology & Cell Biology, Graduate School of Medicine & Frontier Biosciences, Osaka University, Japan, [3]Department of Bioinformatic Engineering Graduate school of Information Science & Technology, Osaka University, Japan, [4]Department of Material & Life Sciences, Graduate School of Engneering, Osaka University, Japan, [5]Department of Orthopaedics, Graduate School of Medicine, Osaka University, Japan
Disclosures: Masayuki Furuya, None

SA0183 **Matrix Vesicles Mediate the Cell-to-Cell Transmission of MicroRNA-125b as an Inhibitor of Osteoclastic Bone Resorption**
Yuichiro Takei*[1], Yuko Nakao[2], Tomoko Minamizaki[1], Yasumasa Irie[2], Faisal Ahmed[2], Hirotaka Yoshioka[1], Shumpei Niida[3], Kotaro Tanimoto[1], Yuji Yoshiko[1]. [1]Hiroshima University Institute of Biomedical & Health Sciences, Japan, [2]Hiroshima University Graduate School of Biomedical & Health Sciences, Japan, [3]Biobank, National Center of Geriatrics & Gerontology, Japan
Disclosures: Yuichiro Takei, None

SA0184 **New Insight into Collagen Assembly Dynamics in Osteoblasts by Live Cell Imaging**
Michael Grillo*[1], LeAnn Tiede-Lewis[2], Lora McCormick[1], Charlotte Phillips[3], Hong Zhao[1], Sarah Dallas[1]. [1]University of Missouri - Kansas City, USA, [2]Univerity of Missouri-Kansas City, USA, [3]Univeristy of Missouri - Columbia, USA
Disclosures: Michael Grillo, None

SA0185 **Structure-Function Analysis of Connexins as Active Regulators of Signal Transduction in Osteoblasts**
Megan Moorer*[1], Carla Hebert[2], Joseph Stains[2]. [1]student, USA, [2]UMB, USA
Disclosures: Megan Moorer, None

OSTEOBLASTS – MATRIX PROTEINS AND FUNCTION: BONE FORMATION MECHANISMS

SA0186 **A Novel Role of miR-150 in Bone Homeostasis**
Fouad Moussa*[1], Gregory Sondag[1], Thomas Mbimba[1], Kimberly Novak[2], Scott McDermott[3], Fayez Safadi[2]. [1]Kent State University, USA, [2]NEOMED, USA, [3]SUMMA Health System, USA
Disclosures: Fouad Moussa, None

SA0187 **Alternative NF-κB as a Regulator of Osteogenesis**
Jennifer Davis*[1], Deborah Novack[2]. [1]Washington University in St. Louis, USA, [2]Washington University School of Medicine, USA
Disclosures: Jennifer Davis, None

SA0188 **Collagen production of osteoblasts revealed by ultra-high voltage electron microscopy**
Rumiko Hosaki-Takamiya[1], Mana Hashimoto[1], Tomoyo Tanaka[1], Takashi Yamashiro[2], Hiroshi Kamioka*[3]. [1]Department of Orthodontics, Okayama University Graduate School of Medicine, Dentistry, & Pharmaceutical Sciences, Japan, [2]Department of Orthodontics & Dentofacial Orthopedics, Graduate School of Dentistry, Osaka University, Japan, [3]Okayama University Graduate School of Medicine, Dentistry, & Pharmaceutical Sc, Jp
Disclosures: Hiroshi Kamioka, None

SA0189 **Double knockout of CLC3 and CLC5 in murine osteoblasts eliminates all mineralization**
Quitterie C. Larrouture*[1], Deborah J. Nelson[2], Paul H. Schlesinger [3], Peter A. Friedman[4], Irina Tourkova[5], Li Liu[6], Harry Blair[7]. [1]Department of Pathology University of Pittsburgh, USA, [2]Dept of Neurobiology, Pharmacology & Physiology, University of Chicago, USA, [3]Department of Cell Biology, Washington University, USA, [4]Department of Pharmacology & Chemical Biology, University of Pittsburgh, USA, [5]Department of Pathology, University of Pittsburgh, & Pittsburgh Veteran's Affairs Medical Center, USA, [6]Department of Pathology, University of Pittsburgh, USA, [7]University of Pittsburgh, USA
Disclosures: Quitterie C. Larrouture, None

SA0190 **Multi-Modal High-Content Imaging Reveals Relationships Between Cell Signaling and Mineralization in Zebrafish**
Claire Watson*, Edith Gardiner, Werner Kaminsky, Ronald Kwon. University of Washington, USA
Disclosures: Claire Watson, None

SA0191 **Regulation of matrix mineralization and bone vascularization by pigment epithelium-derived factor (PEDF)**
Heeseog Kang*, Joan C. Marini. NIH/NICHD, USA
Disclosures: Heeseog Kang, None

SA0192 **TGF-β1 Induces TRAF3 Autophagic Degradation leading to GSK-3β-induced β-catenin Inactivation and Inhibition of Osteoblast Differentiation**
Jinbo Li*[1], Zhenqiang Yao[2], Lianping Xing[2], Brendan F. Boyce[2]. [1]University of Rochester Medical Center, USA, [2]U of Rochester Medical Center, USA
Disclosures: Jinbo Li, None

OSTEOBLASTS – MATRIX PROTEINS AND FUNCTION: HORMONAL AND LOCAL REGULATION

SA0193 **ASBMR 2015 Annual Meeting Young Investigator Award**
Loss of galectin-3 leads to retention of bone mass in aging female mice
Kevin Maupin*[1], Kevin Weaver[2], Carol Flegler[3], Stanley Flegler[3], Tao Yang[2], John Wang[3], Bart Williams[2]. [1]Van Andel Institute Graduate School, USA, [2]Van Andel Research Institute, USA, [3]Michigan State University, USA
Disclosures: Kevin Maupin, None

SA0194 **microRNA Regulation of Circadian Rhythm in the Osteoblastic Lineage**
Spenser Smith*[1], Neha S. Dole[2], Tiziana Franceschetti[2], Anne M. Delany[2]. [1]University of Connecticut Health Center, USA, [2]UConn Health, USA
Disclosures: Spenser Smith, None

SA0195 **Osteoblast-specific deletion of Sclerostin rescues ovariectomy-induced bone loss, in adult female mice, but does not significantly improve bone parameters in adult males**
Cristal Yee*[1], Nicole Collette[1], Deepa K. Murugesh[1], Aris N. Economides[2], Alexander G. Robling[3], Gabriela G. Loots[4]. [1]Lawrence Livermore National Laboratories, USA, [2]Regeneron Pharmaceuticals, USA, [3]Indiana University, USA, [4]Lawrence Livermore National Laboratory, USA
Disclosures: Cristal Yee, None

SA0196 **Serum Amyloid A3: A Novel Means by Which Preosteoclasts Inhibit the Anabolic Effects of PTH**
Shilpa Choudhary*, Sui-Pok Yee, Renata Rydzik, Estus Thomas, Douglas Adams, Joseph Lorenzo, Carol Pilbeam. University of Connecticut Health Center, USA
Disclosures: Shilpa Choudhary, None

OSTEOBLASTS – MATRIX PROTEINS AND FUNCTION: SIGNAL TRANSDUCTION AND TRANSCRIPTIONAL REGULATION

SA0197 **Constitutive Activation of NF-κB, Mimicking Inflammation, Inhibits Osteoblast Function by Inducing Glycolysis and mTORC2**
Gaurav Swarnkar*[1], Tim (Hung-Po) Chen[1], Gabriel Mbalaviele[1], Yousef Abu-Amer[2]. [1]Washington University School of Medicine, USA, [2]Washington University in St. Louis School of Medicine, USA
Disclosures: Gaurav Swarnkar, None

SA0198 **Effects of Osteoblast-Specific Gαs Over-Expression on Skeletal Development using a Transgenic Mouse Model**
Lucia Zhang*[1], Kim Sugamori[1], Colin Claridge[1], Ariana Dela Cruz[1], Marc Grynpas[2], Jane Mitchell[3]. [1]University of Toronto, Canada, [2]Lunenfeld-Tanenbaum Research Institute of Mount Sinai Hospital, Canada, [3]Department of Pharmacology & Toxicology, University of Toronto, Canada
Disclosures: Lucia Zhang, None

SA0199 **Promotion of osteoblast differentiation and nodule formation through Ucma as a direct transcriptional target of Runx2 and Osterix**
Yeon-Ju Lee*[1], Seung-Yoon Park[2], So-Jeong Lee[1], Eun-Hye Lee[1], Soon-Young Kim[1], Je-Yong Choi[3], Yeo Hyang Kim[4], Jung-Eun Kim[5]. [1]Dept. of Molecular Medicine, CMRI, BK21 Plus KNU, Kyungpook National University School of Medicine, South korea, [2]Dept. of Biochemistry, School of Medicine, Dongguk University, South korea, [3]Dept. of Biochemistry & Cell Biology, CMRI, BK21 Plus KNU, Kyungpook National University School of Medicine, South korea, [4]Dept. of Pediatrics, Kyungpook National University Hospital, South korea, [5]Kyungpook National University School of Medicine, South korea
Disclosures: Yeon-Ju Lee, None

SA0200 **Runx2 Gene Deletion in Odontoblast Fails to Disrupt Dentin Synthesis**
Mitra Adhami*[1], John C. Clarke[1], Haiyan Chen[1], Harunur Rashid[1], Kayla King[1], Mohammad Hassan[1], Yang Yang[2], Amjad Javed[3]. [1]School of Dentistry, University of Alabama at Birmingham, USA, [2]Department of Pathology, University of Alabama at Birmingham, USA, [3]University of Alabama at Birmingham, USA
Disclosures: Mitra Adhami, None

OSTEOBLASTS - ORIGIN AND CELL FATE: CELL CYCLE AND APOPTOSIS

SA0201 **Oxidativestress-induced apoptotic insults to rat osteoblasts is attenuated by nitricoxide pretreatment via GATA-5-involved regulation of *Bcl-X_L*gene expression and protein translocation**
Ruei-Ming Chen*[1], Gong-Jhe Wu[2], Yi-Ling Lin[1]. [1]Taipei Medical University, Taiwan, [2]Taipei Medical University Hospital, Taiwan
Disclosures: Ruei-Ming Chen, None

OSTEOBLASTS - ORIGIN AND CELL FATE: REGULATION OF DIFFERENTIATION

SA0202 **Dividing Growth Plate Chondrocytes Transdifferentiate into Osteoblasts and Provide a Major Source of De Novo Osteoblasts throughout Postnatal Growth in Mice**
Patrick Aghajanian*[1], Shaohong Cheng[1], Catrina Alarcon[1], Subburaman Mohan[2]. [1]Jerry L Pettis VA Medical Center, USA, [2]Jerry L. Pettis Memorial VA Medical Center, USA
Disclosures: Patrick Aghajanian, None

SA0203 **Histone H2B Monoubiquitination is Required for Bone Development**
Zeynab Najafova*[1], Peng Liu[2], Dominik Saul[3], Hiroaki Saito[4], Wanhua Xie[5], Simon Baumgart[5], Ahmed Mansouri[6], Eric Hesse[4], Stephan Sehmisch[3], Jan Tuckermann[2], Steven A. Johnsen[5]. [1]University Medical Center Goettingen, Germany, [2]Institute for General Zoology & Endocrinology, University of Ulm, Germany, [3]Department of Trauma Surgery & Orthopedics, University Medical Center Goettingen, Germany, [4]Department of Trauma-, Hand- & Reconstructive Surgery, University Medical Center Hamburg, Germany, [5]Clinic for General, Visceral & Pediatric Surgery, University Medical Center Goettingen, Germany, [6]Max Planck Institute for Biophysical Chemistry, Molecular Cell Differentiation Group, Germany
Disclosures: Zeynab Najafova, None

SA0204 **miR-322 and Its Target Protein Tob2 Modulate Osterix mRNA Stability**
Beatriz Gámez Molina*, Edgardo Rodríguez-Carballo, Francesc Ventura . University of Barcelona, Spain
Disclosures: Beatriz Gámez Molina, None

SA0205 **Osteoblast-derived FGF9 Regulates Skeletal Homeostasis**
Liping Wang*[1], Marcia Abbot[2], Theresa Roth[3], Linh Ho[3], Lalita Wattanachanya[3], Rebecca Hayden[3], Robert Nissenson[4]. [1]VA Medical Center, San Francisco, USA, [2]Endocrine Unit, San Francisco VA Medical Center, Canada, [3]Endocrine Unit, San Francisco VA Medical Center, USA, [4]Endocrine Unit, San Francisco VA Medical Center; Department of Medicine & Physiology, University of California, USA
Disclosures: Liping Wang, None

OSTEOBLASTS - ORIGIN AND CELL FATE: STEMS CELLS AND PROGENITORS

SA0206 **Ablation of a mitochondrial stress sensor, cyclophilinD, increases osteogenicity of MSCs and reduces bone degeneration**
Roman Eliseev*, Jerry Madukwe. University of Rochester, USA
Disclosures: Roman Eliseev, None

SA0207 **Identification of a Subpopulation of Periosteal and Endosteal Prx-1-Expressing Cells in Postnatal Long Bones and Their Contribution to Fracture Repair**
Alessandra Esposito*[1], Ye Ping[2], Tieshi Li[3], Joe Temple[3], Anna Spagnoli[3]. [1]Rush University Medical School, USA, [2]UNC of Chapel Hill, USA, [3]Rush University Medical Center, USA
Disclosures: Alessandra Esposito, None

SA0208 **Large-scale Bone Regeneration by Cells Intermediate between Chondrocytes and Osteocytes**
Gage Crump*, Sandeep Paul, Simone Schindler, Sofia Bougioukli, Jay Lieberman, Francesca Mariani. University of Southern California, USA
Disclosures: Gage Crump, None

SA0209 **Mesenchymal Progenitors Promote Vasculogenesis to Initiate the Formation of Secondary Ossification Center in the Epiphyseal Cartilage**
Wei Tong*[1], Motomi Enomoto-Iwamoto[2], Haoruo Jia[3], Ling Qin[3]. [1]Perelman school of medicine, USA, [2]Department of Surgery, The Children's Hospital of Philadelphia, USA, [3]Department of Orthopaedic Surgery, University of Pennsylvania, USA
Disclosures: Wei Tong, None

SA0210 **Notch Signaling Mediates Skeletal Sex Differences**
Stefano Zanotti*[1], Ernesto Canalis[2]. [1]UConn Health, USA, [2]University of Connecticut Health Center, USA
Disclosures: Stefano Zanotti, None

OSTEOCLASTS - FUNCTION: BONE RESORPTION MECHANISMS

SA0211 **A Novel Interferon Regulatory Factor-8 (IRF8) Mutation is Associated with Osteoclast-Mediated Idiopathic Tooth Root Resorption**
Vivek Thumbigere Math*[1], Brian Foster[2], Anthony Neely[3], Hiroaki Yoshii[4], Keiko Ozato[4], Martha Somerman[2]. [1]National Institutes of Health, USA, [2]National Institute of Arthritis & Musculoskeletal & Skin Diseases (NIAMS), USA, [3]University of Detroit-Mercy School of Dentistry, USA, [4]National Institute of Child Health & Human Development, USA
Disclosures: Vivek Thumbigere Math, None

SA0212 **Osteoclastic miR-214 targets PTEN to increase bone resorption**
Jin Liu*[1], Li Defang[2], Baosheng Guo[3], Lei Dang[3], Aiping Lu[3], Ge Zhang[3]. [1]Hong kong, [2]Institute for Advancing Translational Medicine in Bone & Joint Diseases, Hong Kong Baptist University, [3]Institute for Advancing Translational Medicine in Bone & Joint Diseases, Hong Kong Baptist University, Hong kong
Disclosures: Jin Liu, None

SA0213 **Ostm1 expression in mature osteoclasts is both necessary and sufficient to prevent osteopetrosis**
Jean Vacher*[1], Monica Pata[2], Marie Solange Mutabaruka[2]. [1]Institut De Recherches Cliniques De Montréal, Canada, [2]IRCM, Canada
Disclosures: Jean Vacher, None

SA0214 **Regulation of Osteoclasts by Scavenger Receptor-A**
Larry Suva[1], Nisreen Akel*[2], Jessica Webber[3], Sean Parham[4], Diarra Williams[4], Frances Swain[4], Dana Gaddy[4], Steven Post[3]. [1]University of Arkansas for Medical Sciences, USA, [2]UAMS Orthopaedic Surgery, USA, [3]UAMS Department of Pathology, USA, [4]UAMS Department of Orthopaedic Surgery, USA
Disclosures: Nisreen Akel, None

SA0215 **The deletion of *Hdac4* in osteoblasts influences both catabolic and anabolic effects in bone**
Teruyo Nakatani*[1], Tiffany Chen[2], Eric Olson[3], Nicola Partridge[2]. [1]New York University College of Dentistry, USA, USA, [2]New York University College of Dentistry, USA, [3]University of Texas Southwestern Medical Center, USA
Disclosures: Teruyo Nakatani, None

SA0216 **The effects of GPR43 allosteric agonist on bone**
Myeongmo Kang[1], Namhee Kim[1], HeeJin Nam[1], Seong Hwan Kim[2], Dongdong Zhang[1], Bo Mi Park[3], YuMie Rhee[1], Sung-Kil Lim[3], ChuHyun Bae*[4]. [1]Yonsei Univ., Sinchon-dong, Seodaemun-gu, Seoul, Korea, South korea, [2]Korea Research Institute of Chemical Technology, South korea, [3]Brain Korea 21 PLUS Project for Medical Science, Yonsei University, Seoul, Republic of Korea, South korea, [4]Brain Korea 21 PLUS Project for Medical Science, Yonsei University, Seoul, Republic of Korea, USA
Disclosures: ChuHyun Bae, None

OSTEOCLASTS - FUNCTION: SIGNAL TRANSDUCTION

SA0217 **Conditional abrogation of Atm in osteoclasts leads to reduced bone mass in mice**
Toru Hirozane*, Takahide Tohmonda, Masaki Yoda, Yoshiaki Toyama, Morio Matsumoto, Hideo Morioka, Keisuke Horiuchi, Masaya Nakamura. Keio University School of Medicine, Japan
Disclosures: Toru Hirozane, None

SA0218 **Correlating RANK Ligand/RANK Binding Kinetics with Osteoclast Formation and Function**
Julia Warren*[1], Steve Teitelbaum[2], Wei Zou[2], Nidhi Rohatgi[2], Corinne Decker[2], Christopher Nelson[2], Daved Fremont[2]. [1]Washington University in St. Louis School of Medicine, USA, [2]Washington University in Saint Louis, USA
Disclosures: Julia Warren, None

SA0219 **Estrogen regulates the activity of avian medullary bone osteoclasts through Eph/ephrin signaling**
Shinji Hiyama*[1], Ki-ichi Nakamori[2], Mineo Watanabe[1], Takashi Uchida[1]. [1]Hiroshima University Institute of Biomedical & Health Sciences, Japan, [2]Hiroshima University, Japan
Disclosures: Shinji Hiyama, None

SA0220 **Lnk Deficiency leads to TPO-Mediated Osteoclastogenesis and Increased Bone Mass Phenotype**
David Olivos*[1], Ying-Hua Cheng[2], Marta Alvarez[2], Adam Hooker[2], Wendy Ciovacco[3], Brahmananda Chitteti[4], Pierre Eleniste[5], Mark Horowitz[6], Edward Srour[4], Angela Bruzzaniti[5], Robyn Fuchs[7], Melissa Kacena[8]. [1]Department of Orthopaedic Surgery, Indiana University School of Medicine; Department of Microbiology & Immunology, Indiana University School of Medicine, USA, [2]Department of Orthopaedic Surgery, Indiana University School of Medicine, USA, [3]Department of Orthopaedic Surgery, Indiana University School of Medicine; Department of Orthopedics & Rehabilitation, Yale University School of Medicine, USA, [4]Department of Medicine, Indiana University School of Medicine, USA, [5]Department of Oral Biology, Indiana University School of Dentistry, USA, [6]Department of Orthopaedics & Rehabilitation, Yale University School of Medicine, USA, [7]Department of Physical Therapy, Indiana University School of Health & Rehabilitation Sciences, USA, [8]Department of Orthopaedic Surgery, Indiana University School of Medicine; Department of Orthopaedics & Rehabilitation, Yale University School of Medicine, USA
Disclosures: David Olivos, None

SA0221 **Sirtuin1 (Sirt1) activation suppresses osteoclastogenesis by deacetylating FoxOs**
Ha-Neui Kim*[1], Li Han[2], Srividhya Iyer[1], Serra Ucer[2], Aaron Warren[2], Haibo Zhao[2], Rafael de Cabo[3], Charles O'Brien[2], Stavros Manolagas[2], Maria Almeida[2]. [1]Univ. Arkansas for Medical Sciences, Central Arkansas VA Healthcare System, USA, [2]University of Arkansas for Medical Sciences & the Central Arkansas Veterans Healthcare System, USA, [3]National Institute on Aging, USA
Disclosures: Ha-Neui Kim, None

OSTEOCLASTS - FUNCTION: TRANSCRIPTIONAL REGULATION AND GENE EXPRESSION

SA0222 **A Transmembrane Osteoclastic Protein-Tyrosine Phosphatase (PTP-oc), a Positive Regulator of Osteoclast Activity, Is Regulated Post-transcriptionally in part by *miR17* in Osteoclastic Cells**

Matilda Sheng*[1], Virginia Stiffel[2], Mehran Amoui[2], Kin-Hing William Lau[2]. [1]Jerry L. Pettis Memorial VA Medical Center & Loma Linda University, USA, [2]Jerry L. Pettis Memorial VA Medical Center, USA

Disclosures: Matilda Sheng, None

SA0223 **Alternative NF-κB Regulates RANKL-induced Osteoclast Differentiation and Mitochondrial Biogenesis via Independent Mechanisms**

Rong Zeng*, Roberta Faccio, Deborah Novack. Washington University in St. Louis, USA

Disclosures: Rong Zeng, None

SA0224 **C/EBPα mediates osteoclast differentiation through SOX4 downregulation and promotes osteoclast activity by inducing cell survival**

Joel Jules*, Wei Chen, Yi-Ping Li. University of Alabama at Birmingham, USA

Disclosures: Joel Jules, None

SA0225 **Function of novel splicing variant of receptor activator of NF-κB**

Riko Kitazawa*[1], Ryuma Haraguchi[2], Yosuke Mizuno[3], Yasuhiro Kobayashi[4], Sohei Kitazawa[2]. [1]Ehime University, Japan, [2]Department of Molecular Pathology, Ehime University Graduate School of Medicine, Japan, [3]Department of Diagnostic Pathology, Ehime University Hospital, Japan, [4]Institute of Oral Science, Matsumoto Dental University, Japan

Disclosures: Riko Kitazawa, None

OSTEOCLASTS - ORIGIN AND CELL FATE: APOPTOSIS

SA0226 **Loss of PARP1 Poly-ADP-ribosylating Function is Necessary for Osteoclast Differentiation**

Chao Qu*[1], Chun Wang[1], Gaurav Swarnkar[1], Jacqueline Kading[1], Michael Hottiger[2], Yousef Abu-Amer[1], Roberto Civitelli[1], Gabriel Mbalaviele[3]. [1]Washington University School of Medicine, USA, [2]University of Zurich, Switzerland, [3]Washington University in St. Louis School of Medicine, USA

Disclosures: Chao Qu, None

SA0227 **MKP-1 Regulates LPS-Induced Osteoclastogenesis by Regulating TRAIL Function**

Michael Valerio*, Keith Kirkwood. Medical University of South Carolina, USA

Disclosures: Michael Valerio, None

OSTEOCLASTS - ORIGIN AND CELL FATE: GENERAL

SA0228 **Lineage Tracing of Cathepsin-K in Bone and Other Tissues**

Farzin Takyar*[1], Ryan Berry[2], Lynda Bonewald[3], John J Wysolmerski[4], Mark C Horowitz[2]. [1]Yale University, School of Medicine, USA, [2]Department of Orthopaedics & Rehabilitation, Yale School of Medicine, USA, [3]School of Dentistry, University of Missouri-Kansas City, USA, [4]Section of Endocrinology & Metabolism, Yale School of Medicine, USA

Disclosures: Farzin Takyar, None

SA0229 **Nitric Oxide Pathway is Involved in the Intensity-Dependent Biphasic Effects of Static Magnetic Fields on Osteoclastogenesis**

Ting Huyan*[1], Jian Zhang[2], Dandan Dong[2], Jingbao Li[2], Huiyun Xu[2], Zhouqi Yang[2], Peng Shang[2]. [1]Key Laboratory for Space Bioscience & Biotechnology, Peoples republic of china, [2]Key Laboratory for Space Bioscience & Biotechnology, Institute of Special Environmental Biophysics, School of Life Sciences, Northwestern Polytechnical University, China

Disclosures: Ting Huyan, None

SA0230 **STAT5 is a key transcription factor for IL-3-mediated inhibition of RANKL-induced osteoclastogenesis**
Semun Seong*[1], Jongwon Lee[2], Jung Ha Kim[2], Kabsun Kim[2], Inyoung Kim[2], Lothar Hennighausen[3], Nacksung Kim[2]. [1]Chonnam National University Medical School, South korea, [2]Department of Pharmacology, Medical Research Center for Gene Regulation, Chonnam National University Medical School, South korea, [3]Laboratory of Genetics & Physiology, National Institute of Diabetes & Digestive & Kidney Diseases, National Institutes of Health, USA
Disclosures: Semun Seong, None

OSTEOCYTES: BONE REMODELING REGULATION

SA0231 **Analysis of an in Vitro Reconstitution System of Bone Cell Network by Two-Photon Microscopy**
Atsuhiko Hikita*[1], Tadahiro Iimura[2], Yusuke Oshima[2], Shin Yamamoto[2], Takeshi Imamura[2]. [1]Graduate School of Medicine, The University of Tokyo, Japan, [2]Ehime University, Japan
Disclosures: Atsuhiko Hikita, None

SA0232 **Characterization of a New Cre Model Targeting Osteocytes**
Delphine Maurel*[1], Mark L Johnson[2], Stephen E Harris[3], Marie A Harris[3], Lynda F Bonewald[2]. [1]Department of Oral & Craniofacial Sciences, USA, [2]Oral & Craniofacial Sciences, USA, [3]UT Health Science Center at San Antonio, USA
Disclosures: Delphine Maurel, None

SA0233 **Gene Expression and Local in vivo Environment (LivE) Imaging of Osteocyte Subpopulations in trabecular mouse bone**
Andreas Truessel*[1], Felicitas Flohr[2], Gisela Kuhn[2], Ralph Müller[2]. [1]ETH Zurich, Switzerland, [2]ETH Zurich, Institute for Biomechanics, Switzerland
Disclosures: Andreas Truessel, None

SA0234 **Histological examination on osteocytes and their lacunae after PTH administration or during lactation of mice fed with calcium deficient diet**
Hiromi Hongo*[1], Muneteru Sasaki[2], Masami Saito[3], Nobuyuki Udagawa[4], Norio Amizuka[5]. [1]Hokkaido University, Japan, [2]Division of Oral Implantology, Nagasaki University, Japan, [3]Bruker AXS K. K., Japan, [4]Department of Biochemistry, Matsumoto Dental University, Japan, [5]Departments of Developmental Biology of Hard Tissue, Graduate School of Dental Medicine, Hokkaido University, Japan
Disclosures: Hiromi Hongo, None

SA0235 **The treatment of human monocytes with the anti-microbial peptide LL-37 produces a novel bone forming cells with large inclusion bodies of LL-37**
Zhifang Zhang*, Keith Le, Deirdre La Placa, John E. Shively. City of hope, USA
Disclosures: Zhifang Zhang, None

OSTEOCYTES: ORIGIN, CELL CYCLE AND APOPTOSIS

SA0236 **Reduction in microRNA21 promotes apoptosis and increases RANKL in osteocytes: a mechanism for enhanced resorption in the absence of Cx43 in osteoblastic cells and with aging**
Hannah Davis*[1], Emily Atkinson[1], Julia Harris[1], Rafael Pacheco-Costa[2], Arancha Gortazar[3], Mircea Ivan[1], Angela Bruzzaniti[4], Teresita Bellido[1], Lilian Plotkin[1]. [1]Indiana University School of Medicine, USA, [2]Federal University of Sao Paulo School of Medicine, Brazil, [3]San Pablo-CEU University School of Medicine, Spain, [4]Indiana University School of Dentistry, USA
Disclosures: Hannah Davis, None

OSTEOCYTES: PARACRINE AND ENDOCRINE FUNCTION

SA0237 **Bone microarchitecture anomalies and vascular expression of osteocytes markers in low serum parathormone CKD rats with vascular calcification**
Sarah-Kim Bisson[1], Roth-Visal Roth[2], Sylvain Picard[2], Richard Larivière[2], Mohsen Agharazii[2], Fabrice Mac-Way*[3]. [1]CHU de Québec Research Center, l'Hôtel-Dieu de Québec Hospital, Laval University, Quebec, CANADA, Canada, [2]CHU de Québec Research Center, l'Hôtel-Dieu de Québec Hospital, Division of Nephrology, Department of Medicine, Laval University, Quebec, CANADA, Canada, [3]CHU de Québec Research Center, l'Hôtel-Dieu de Québec Hospital, Division of Nephrology, Faculty & Department of Medicine, Laval University, Quebec, CANADA, Canada
Disclosures: Fabrice Mac-Way, None

SA0238 **EphrinB2 acts differently in osteoblasts and osteocytes to control bone strength and matrix composition**
Christina Vrahnas*[1], Ingrid Poulton[2], Huynh Nguyen [3], Mark Forwood[3], Keith Bambery[4], Mark Tobin[4], T John Martin[2], Natalie A Sims[2]. [1]St. Vincent's Institute, Australia, [2]St. Vincent's Institute of Medical Research, Australia, [3]Griffith University, Australia, [4]Australian Synchrotron, Australia
Disclosures: Christina Vrahnas, None

SA0239 **FGF9 Potently Induces Dmp1 Expression and Early Osteocyte Markers in a Cell Model of Osteocyte Differentiation**
Lora McCormick*, Kun Wang, LeAnn Tiede-Lewis, Hong Zhao, Yixia Xie, Lynda Bonewald, Dallas Sarah. University of Missouri-Kansas City, USA
Disclosures: Lora McCormick, None

SA0240 **Sclerostin enhances adipocyte differentiation in 3T3-L1 preadipocytes**
Mayumi Ukita*[1], Taihiko Yamaguchi[1], Masato Tamura[2]. [1]Crown & Bridge Prosthodontics, Graduate School of Dental Medicine, Hokkaido University, Japan, [2]Biochemistry & Molecular Biology, Graduate School of Dental Medicine, Hokkaido University, Japan
Disclosures: Mayumi Ukita, None

OSTEOPOROSIS - ASSESSMENT: BIOCHEMICAL TESTS

SA0241 **Biochemical markers of bone turnover and distal radial fracture in men: MR F study**
Michael Prediger [1], Birgit Hanusch [2], Roger Francis[3], Stephen Tuck[2], Harish Datta*[4]. [1]Blood Sciences,Tthe newcastle upon tyne hospitals nhs foundation trust, United Kingdom, [2]Musculoskeletal Research Group, Institute of Cellular Medicine, Newcastle University, United Kingdom, [3]Institute for Ageing & Health, Newcastle University, United Kingdom, [4]Newcastle University, United Kingdom
Disclosures: Harish Datta, None

SA0242 **Bone and serum manganese content in osteoporotic and normal subjects with hip replacement**
Werner Maurer-Ertl[1], Joerg Friesenbichler[1], Ulrike Pirker-Frühauf[1], Michael Maier[1], Doris Wagner[1], Thomas Pieber[1], Andreas Leithner[1], Astrid Fahrleitner-Pammer*[1], Karin Amrein[2]. [1]Medical University of Graz, Austria, [2]Medical University of Graz, Division for Endocrinology & Metabolism, Austria
Disclosures: Astrid Fahrleitner-Pammer, None

SA0243 **Determinants of Serum FGF23 and Sclerostin in Elderly Hospitalized Individuals**
Luigi Gennari*[1], Claudio Vitali[2], Stefano Rotatori[3], Daniela Merlotti[4], Gualberto Gussoni[5], Daniele Diacinti[6], Luigi Sinigaglia[7], Antonella Valerio[5], Aurora Patti[8], Maria Stella Campagna[8], Maria Beatrice Franci[8], Barbara Lucani[8], Stefano Gonnelli[8], Ranuccio Nuti[8]. [1]University of Siena, Italy, [2]Internal Medicine, Hospital of Piombino, Livorno, Italy, Italy, [3] Department of Medicine Surgery & Neurosciences University of Siena, Italy, [4]Division of Genetics & Cell Biology , San Raffaele Scientific Institute; Department of Medicine, Surgery & Neurosciences University of Siena, Italy, [5]FADOI Foundation, Research Department, Italy, [6]Section of Osteoporosis & Musculoskeletal Diseases, Department of Radiological,Oncological & Anatomical-Pathological Sciences, University "La Sapienza", Italy, [7]Rheumatology, "G. Pini" Institute, Italy, [8]Department of Medicine Surgery & Neurosciences University of Siena, Italy
Disclosures: Luigi Gennari, None

SA0244 **Examining phospholipids interference in LC-ESI-MS/MS measurements of 25-hydroxyvitamin D in long term storage samples**
Jonathan Tang*[1], Holly Nicholls[2], Milka Budnik-Zawilska[2], John Dutton[2], Isabelle Piec[2], Chris Washbourne[2], William Fraser[2]. [1]University of East Anglia, Norwich, UK, United Kingdom, [2]University of East Anglia, United Kingdom
Disclosures: Jonathan Tang, None

SA0245 **Performance of a Novel Automated TRACP 5b Immunoassay in Renal Disease Patients**
Jussi Halleen*[1], Jani Salmivaara[2], Henna Ek[2], Tiina Lehto[3], Tommi Vaskivuo[3]. [1]Pharmatest Services Ltd, Finland, [2]Valirx Finland Ltd, Finland, [3]NordLab Oulu, Finland
Disclosures: Jussi Halleen, IDS Ltd

SA0246 **To measure or not to measure? Vitamin D and parathyroid hormone in patients with clinical risk factors for osteoporosis**
Oliver Bock*[1], Silke Nicklisch[1], Christiane Weinberg[2], Ute Dostmann[1]. [1]Promedio - Integrated Medicine, Germany, [2]German Osteoporosis Screening Center, Germany
Disclosures: Oliver Bock, Promedio - Integrated Medicine

OSTEOPOROSIS - ASSESSMENT: BONE QUALITY

SA0247 **Bisphosphonate Associated Femur Fractures Treated with Teriparatide**
Michelle Lalinde*[1], Deborah Aggers[1], Tina Savage[1], Ed McCarthy[2], Paul Miller[3]. [1]Colorado Center for Bone Research, USA, [2]John Hopkins University, USA, [3]Colorado Center for Bone Research, United states
Disclosures: Michelle Lalinde, None

SA0248 **Improved Risk Assessment Using Lumbar Spine Trabecular Bone Score (TBS) to Adjust Fracture Probability: The Manitoba BMD Cohort**
William Leslie*[1], Helena Johansson[2], Anders Oden[2], Eugene MCloskey[2], Didier Hans[3], John Kanis[2]. [1]University of Manitoba, Canada, [2]University of Sheffield Medical School, United Kingdom, [3]Lausanne University Hospital, Switzerland
Disclosures: William Leslie, None

SA0249 **Standardized Training For HR-pQCT Scan Positioning Reduces Inter-Operator Precision Errors: The MrOS Multicenter Study Experience**
SERENA BONARETTI*[1], NICOLAS VILAYPHIOU[2], ANDREW YU[3], MARGARET HOLETS[4], KYLE NISHIYAMA[5], DANMEI LIU[6], STEPHANIE BOUTROY[7], ALI GHASEM-ZADEH[8], STEVEN K. BOYD[9], Roland Chapurlat[7], HEATHER MCKAY[6], ELIZABETH SHANE[5], MARY L. BOUXSEIN[10], THOMAS F. LANG[3], SUNDEEP KHOSLA[4], PEGGY M. CAWTHON[11], DENNIS M. BLACK[12], SHARMILA MAJUMDAR[3], ERIC S. ORWOLL[13], ANDREW J. BURGHARDT[3]. [1]University of California, San Francisco, USA, [2]Scanco Medical AG, Brüttisellen, Switzerland, [3]Department of Radiology & Biomedical Imaging, University of California, San Francisco, CA, USA, [4]Division of Endocrinology, Metabolism & Nutrition, Department of Internal Medicine, College of Medicine, Mayo Clinic, Rochester, MN, USA, [5]Division of Endocrinology, Department of Medicine, Columbia University Medical Center, New York, NY, USA, [6]University of British Columbia, Vancouver, BC, Canada, [7]INSERM UMR 1033, Université de Lyon, France, [8]Department of Medicine, Austin Health, University of Melbourne, Melbourne, Australia, [9]Department of Radiology, Cumming School of Medicine, University of Calgary, Calgary, Alberta, Canada, [10]Center for Advanced Orthopaedic Studies, Beth Israel Deaconess Medical Center, Boston, MA, USA, [11]San Francisco Coordinating Center, California Pacific Medical Center Research Institute, San Francisco, CA, USA, [12]Department of Epidemiology & Biostatistics, University of California, San Francisco, CA, USA, [13]Division of Endocrinology, Bone & Mineral Unit, Oregon Health & Science University, Portland, OR, USA
Disclosures: SERENA BONARETTI, None

SA0250 **Vertebral strength index calculated by finite element method using bone material properties of non-diabetes subjects does not reflect the bone fragility of the patients with type 2 diabetes mellitus**
Masahiro Yamamoto*, Nobuaki Kiyohara, Noriko Nakata, Toshitsugu Sugimoto. Shimane University Faculty of Medicine, Japan
Disclosures: Masahiro Yamamoto, None

OSTEOPOROSIS - ASSESSMENT: DXA

SA0251 **A Method to Assess Bone Mineral in the Mandible Using the Norland DXA System**
Jingmei Wang*[1], MinMin An[2], Fan Yang[2], Shao Yang Guan[2], Lei Liu[2], Wei Zhang[2], Tom Victor Sanchez[3]. [1]Bone Health Division, Norland at Swissray, China, [2]Wuhu Second People's Hospital in Anhui Province, Wannan Medical College, China, [3]Bone Health Division, Norland at Swissray, USA
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SA0252 **Contribution of Lumbar Spine BMD to Fracture risk in individuals with T-score discordance**
Dunia Alarkawi*, Dana Bliuc, Tuan Nguyen, John Eisman, Jacqueline Center. Garvan Institute of Medical Research, Australia
Disclosures: Dunia Alarkawi, None

SA0253 **Correlation of albumin/globulin ratio (A/G ratio) with forearm bone mineral density in women above 50 years of age**
Kayoko Furukawa*, Kunitaka Menuki, Yukichi Zenke, Yoshiaki Yamanaka, Hideyuki Hirasawa, Takafumi Tajima, Akinori Sakai. Department of Orthopaedic Surgery, University of Occupational & Environmental Health, Japan
Disclosures: Kayoko Furukawa, None

SA0254 **Net Reclassification Improvement with FRAX Versus a Simpler Risk Assessment System: More is More**
William Leslie*[1], Suzanne Morin[2], Sumit Majumdar[3], Lisa Lix[1], Helena Johansson[4], Anders Oden[4], Eugene MCloskey[4], John Kanis[4]. [1]University of Manitoba, Canada, [2]McGill University, Canada, [3]University of Alberta, Canada, [4]University of Sheffield Medical School, United Kingdom
Disclosures: William Leslie, None

OSTEOPOROSIS - ASSESSMENT: OTHER IMAGING TECHNIQUES

SA0255 **Clinical Applicability of TBS in Individuals with Small Bone Sizes and Low Bone Mineral Density by DXA: A Case Report**
Bruno Camargos[1], Nathalia Gomes[2], Pedro Alvarenga*[3], Caroline Silva[3], Milena Leite[3], Barbara Silva[4], Angelica Tiburcio[5]. [1]Mater Dei Hospital, Brazil, [2]Santa Casa de Belo Horizonte, Brazil, [3]UNI-BH, Brazil, [4]Federal University of Minas Gerais, Brazil, Brazil, [5]Santa Casa Hospital, Brazil
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SA0256 **Distal radius cortical microstructure and calculated strength predict incident fractures independently of FRAX in postmenopausal women**
Emmanuel Biver*[1], Claire Durosier[2], Andrea Trombetti[2], Thierry Chevalley[2], Bert van Rietbergen[3], Rene Rizzoli[2], Serge Ferrari[2]. [1]Geneva University Hospitals & Faculty of Medicine, Switzerland, [2]Division of Bone Diseases, Geneva University Hospitals & Faculty of Medicine, Switzerland, [3]Department of Biomedical Engineering, Eindhoven University of Technology, Netherlands
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SA0257 **High Rates of Prevalent Fracture in Bone Phenotypes Identified by Cluster Analysis of High Resolution Peripheral Quantitative Computed Tomography Parameters**
Mark Edwards*[1], Danielle Robinson[2], Camille Parsons[2], Kate Ward[3], Cyrus Cooper[2], Elaine Dennison[2]. [1]MRC Lifecourse Epidemiology Unit, University of Southampton., United Kingdom, [2]MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, [3]MRC Human Nutrition Research, United Kingdom
Disclosures: Mark Edwards, None

SA0258 **Influence of vertebral fractures severity and pelvic parameters on global spinal balance in osteoporotic patients**
Jacques Fechtenbaum[1], Adrien Etcheto[1], Sami Kolta[1], Antoine Feydy[2], Christian Roux[3], Karine Briot*[3]. [1]Cochin Hospital, rheumatology Department, France, [2]Cochin Hospital, radiology Department, France, [3]Paris Descartes University, Cochin hospital, Rheumatology Hospital, France
Disclosures: Karine Briot, None

SA0259 **Nano-CT Analysis of Osteocyte Anomalies in Klotho-deficient Mice**
Tomoko Minamizaki*[1], Kaoru Sakurai[2], Hirotaka Yoshioka[3], Yuichiro Takei[3], Katsuyuki Kozai[4], Yuji Yoshiko[3]. [1]Hiroshima University Institute of Biomedical & Health Sciences, Japan, [2]Department of Pediatric Dentistry, Hiroshima University Graduate School of Biomedical Sciences, Japan, [3]Department of Calcified Tissue Biology, Hiroshima University Institute of Biomedical & Health Sciences, Japan, [4]Department of Pediatric Dentistry, Hiroshima University Institute of Biomedical & Health Sciences, Japan
Disclosures: Tomoko Minamizaki, None

SA0260 **Racial and Ethnic Differences in Bone Structure in Young Adult Women and Men**
Kristy Nicks*[1], Joshua N. Farr[2], Elizabeth J. Atkinson[2], Louise K. McCready[2], Sundeep Khosla[2]. [1]Mayo Clinic, Us, [2]Mayo Clinic, USA
Disclosures: Kristy Nicks, None

SA0261 **Statistical Shape and Appearance Models and Statistical Parameter Mapping for Hip Fracture Discrimination: Not Better Than BMD or Less Robust**
Oleg Museyko[1], Valérie Bousson[2], Jean-Denis Laredo[2], Judith Adams[3], Andreas Friedberger[4], Klaus Engelke*[5]. [1]Inst of Med Physics, Univ of Erlangen, Germany, [2]Service de Radiologie OstéoArticulaire, Hôpital Lariboisière, France, [3]Clinical Radiology, The Royal Infirmary, Univ. of Manchester, United Kingdom, [4]Inst of Med Physics, Univ. of Erlangen, Germany, [5]University of Erlangen, Germany
Disclosures: Klaus Engelke, None

SA0262 **VITamin D and OmegA-3 TriaL (VITAL) bone health study: Clinical factors associated with Trabecular Bone Score in women and men**
Anna Ross*[1], Amy Yue[1], Nancy Cook[2], JoAnn Manson[2], Julie Buring[2], Trisha Copeland[3], Cindy Yu[1], Meryl Leboff[4]. [1]Brigham & Women's Hospital, Endocrinology, Diabetes & Hypertension Division, USA, [2]Brigham & Women's Hospital, Division of Preventive Medicine, Professor of Medicine, Harvard Medical School, USA, [3]Brigham & Women's Hospital, Division of Preventive Medicine, USA, [4]Brigham & Women's HospitalProfessor of Medicine, Harvard Medical School, USA
Disclosures: Anna Ross, None

OSTEOPOROSIS - EPIDEMIOLOGY: GENETIC STUDIES

SA0263 **A Preliminary Genome-Wide Association Study with Bone Mineral Density in Mexican Mestizo Postmenopausal Women**
Marisela Villalobos-Comparan[1], Rogelio Jimenez-Ortega[2], Alma Parra-Torres[2], Anahi Gonzalez-Mercado[3], Manuel Castillejos Lopez[4], Zacarias Jimenez-Salas[5], Manuel Quiterio[6], Sandra Romero-Hidalgo[1], Bertha Ibarra[7], Jorge Salmeron[8], Rafael Velazquez-Cruz*[9]. [1]Consorcio de Genómica Computacional, Instituto Nacional de Medicina Genomica, Mexico, [2]Consorcio Genomica del Metabolismo Oseo, Instituto Nacional de Medicina Genomica, Mexico, [3]Doctorado en Genética Humana, CUCS, Universidad de Guadalajara, Mexico, [4]Unidad de Vigilancia Epidemiológica Hospitalaria, Instituto Nacional de Enfermedades Respiratorias, Mexico, [5]Facultad de Salud Publica y Nutrición, Universidad Autonoma de Nuevo Leon, Mexico, [6] Centro de Investigación en Salud Poblacional, Instituto Nacional de Salud Publica, Mexico, [7] Instituto de Genética Humana "Enrique Corona Rivera". CUCS, Universidad de Guadalajara, Mexico, [8] Centro de Investigación en Salud Poblacional,Instituto Nacional de Salud Publica, Mexico, [9]Instituto Nacional de Medicina Genomica, Mexico
Disclosures: Rafael Velazquez-Cruz, None

SA0264 **Exploring the *FLJ42280* Genomic Region to Identify Genetic Variants Associated with Osteoporosis**
Neus Roca-Ayats[1], Marina Gerousi[1], Nuria Martinez-Gil[1], Esteban Czwan[2], Roser Urreizti[1], Natalia Garcia-Giralt[3], Guillem Pascual[1], Leonardo Mellibovsky[3], Xavier Nogues[3], Adolfo Diez-Perez[3], Daniel Grinberg[4], Susana Balcells*[1]. [1]Dept. Genetics, Fac. Biology, University of Barcelona, CIBERER, IBUB, Spain, [2]Roche Diagnostics Deutschland GmbH, Germany, [3]URFOA, IMIM, RETICEF, Parc de Salut Mar, Spain, [4]The University of Barcelona, Spain
Disclosures: Susana Balcells, None

SA0265 **ASBMR 2015 Annual Meeting Young Investigator Award**
Genome-wide association study of bone mineral density, content and area measured at the axial and appendicular skeleton identifies four novel loci and suggests a possible reason why genetic loci are associated with bone mineral density at some sites but not others
John Kemp*[1], Carolina Medina-Gomez[2], Alessandra Chesi[3], Carol Wang[4], Joel Eriksson[5], Nicole M. Warrington[6], Vincent W.V. Jaddoe[7], Babette S. Zemel[8], Kun Zhu[9], Liesbeth Vandenput[5], Beate St. Pourcain[10], Nicholas J. Timpson[11], André G. Uitterlinden[2], John Walsh[9], Stephen Lye[12], Mattias Lorentzon[5], George Davey-Smith[11], Claes Ohlsson[5], Craig Pennell[4], Struan F.A. Grant[13], Jonathan H. Tobias[14], Fernando Rivadeneira[2], David M. Evans[15]. [1]MRC Centre for Causal Analyses in Translational Epidemiology, Australia, [2]Department of Internal Medicine, The Generation R Study Group, Department of Epidemiology, Erasmus University Medical Center, Rotterdam, The Netherlands & Netherlands Genomics Initiative (NGI)-sponsored Netherlands Consortium for Healthy Aging (NCHA), Netherlands, [3]Division of Human Genetics, The Children's Hospital of Philadelphia, Philadelphia, PA, USA, [4]School of Women's & Infants' Health, The University of Western Australia, Perth, Australia, [5]Centre for Bone & Arthritis Research, Department of Internal Medicine & Clinical Nutrition, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden, [6]University of Queensland Diamantina Institute, Translational Research Institute, Brisbane, Queensland, Australia, [7]The Generation R Study Group, Department of Epidemiology & Department of Paediatrics, Erasmus University Medical Center, Rotterdam, Netherlands, [8]Department of Pediatrics, Perelman School of Medicine,University of Pennsylvania, Philadelphia, PA, USA & Division of Gastroenterology, Hepatology & Nutrition, The Children's Hospital of Philadelphia, Philadelphia, PA, USA, [9]Department of Endocrinology & Diabetes, Sir Charles Gairdner Hospital & School of Medicine & Pharmacology, The University of Western Australia, Perth, Australia, [10]MRC Integrative Epidemiology Unit, School of Oral & Dental Sciences & School of Experimental Psychology, University of Bristol, Bristol, United Kingdom, [11]MRC Integrative Epidemiology Unit, University of Bristol, Bristol, United Kingdom, [12]Samuel Lunenfeld Research Institute, Mount Sinai Hospital, Toronto, Canada, [13]Division of Human Genetics & Endocrinology, The Children's Hospital of Philadelphia, Philadelphia, PA, USA & Department of Pediatrics, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, USA, [14]School of Clinical Sciences, University of Bristol, Bristol, United Kingdom, [15]University of Queensland Diamantina Institute, Translational Research Institute, Brisbane, Queensland, Australia & MRC Integrative Epidemiology Unit, University of Bristol, Bristol, United Kingdom
Disclosures: John Kemp, None

SA0266 **Multiple GWAS-Implicated Adult Height Loci Operate in the Context of Pediatric Bone Mineral Density and Content Determination**
Alessandra Chesi*[1], Jonathan Mitchell[2], Kevin Basile[3], Shana McCormack[3], Sani Roy[3], Heidi Kalkwarf[4], Joan Lappe[5], Vicente Gilsanz[6], Sharon Oberfield[7], John Shepherd[8], Andrea Kelly[3], Babette Zemel[3], Struan Grant[9]. [1]Children's Hospital of Philadelphia, USA, [2]University of Pennsylvania, USA, [3]Children's Hospital of Philadelphia, USA, [4]Cincinnati Children's Hospital Medical Center, USA, [5]Creighton University School of Medicine, USA, [6]University of Southern California, USA, [7]Columbia University Medical Center, USA, [8]University of California, USA, [9]Children's Hospital of Philadelphia / University of Pennsylvania, USA
Disclosures: Alessandra Chesi, None

OSTEOPOROSIS - EPIDEMIOLOGY: BONE MINERAL DENSITY

SA0267 **Decline in Vertebral Strength and Bone Mineral Density in Men and Women over the Year Post Hip Fracture**
Denise Orwig*[1], David Kopperdahl[2], Tony Keaveny[3], Rasheeda Johnson[4], Jay Magaziner[4], Marc Hochberg[4]. [1]University of Maryland, Baltimore, USA, [2]O.N. Diagnostics, USA, [3]University of California Berkeley, USA, [4]University of Maryland School of Medicine, USA
Disclosures: Denise Orwig, None

SA0268 **Delineating the relationship between leptin, fat mass, and bone mineral density: A mediation analysis**
Lan T Ho Pham*[1], Thai Q Lai[2], Tuan V Nguyen[3]. [1]Ton Duc Thang University, Vietnam, [2]Department of Rheumatology, People's Hospital 115, Vietnam, Vietnam, [3]Garvan Institute of Medical Research; School of Public Health & Community Medicine, UNSW Australia; University of Technology Sydney, Australia, Australia
Disclosures: Lan T Ho Pham, None

SA0269 **Rural First Nations Women Over Age 60 Years Have Lower Distal Forearm Bone Density for Age in Association with Low Vitamin D Status**
Hope Weiler*[1], Kurtis Sarafin[2], William Leslie[3]. [1]McGill University, Canada, [2]Health Canada, Canada, [3]College of Medicine, University of Manitoba, Canada
Disclosures: Hope Weiler, None

OSTEOPOROSIS - EPIDEMIOLOGY: ENVIRONMENTAL AND LIFESTYLE FACTORS

SA0270 **Longitudinal assessment of health-related quality of life in osteoporosis – data from the Canadian Multicentre Osteoporosis Study (CaMos)**
Claudie Berger*[1], Wilma M. Hopman[2], Lisa Langsetmo[3], Lawrence Joseph[4], Suzanne N Morin[4], Tanveer Towheed[2], Tassos Anastassiades[2], Jonathan D. Adachi[5], David A. Hanley[6], Jerilynn C. Prior[7], Goltzman David[4]. [1]CaMos, McGill, Canada, [2]Queen's University, Canada, [3]MUHC-RI, McGill Universitry, Canada, [4]McGill University, Canada, [5]McMaster University, Canada, [6]University of Calgary, Canada, [7]University of British Columbia, Canada
Disclosures: Claudie Berger, None

SA0271 **Osteoporosis Prevention: Where are the barriers to improvement in patients and doctors?**
Blandine Merle*[1], Julie Haesebaert[2], Christian Dupraz[3], Marie Aussedat[3], Loïc Barraud[3], Amélie Bedouet[3], Cyril Motteau[3], Virginie Simon[3], Anne-Marie Schott[4], Marie Flori[3]. [1]INSERM, France, [2]pôle IMER, Hospices Civils de Lyon, France, [3]Université Claude Bernard Lyon, France, [4]Hospices Civils de Lyon, France
Disclosures: Blandine Merle, None

OSTEOPOROSIS - EPIDEMIOLOGY: FALLS AND FRACTURES

SA0272 **A Prospective Study of Diuretic Use and Risk of Vertebral Fractures in Women**
Julie Paik*[1], Harold N Rosen[2], Catherine M Gordon[3], Gary C Curhan[1]. [1]Brigham & Women's Hospital, Harvard Medical School, USA, [2]Beth Israel Deaconess Medical Center, USA, [3]Hasbro Children's Hospital, Alpert Medical School of Brown University, USA
Disclosures: Julie Paik, None

SA0273 **Can FRAX Predict Falls in Older Women?**
Shreyasee Amin*, Elizabeth Atkinson, Sara Achenbach, Jeremy Crenshaw, Kenton Kaufman, Sundeep Khosla, L. Joseph Melton. Mayo Clinic, USA
Disclosures: Shreyasee Amin, None

SA0274 **Decreased serum albumin level and renal function are the risk for mortality after newly diagnosed vertebral fracture (VFx) in Japanese subjects**
Akiko Kuwabara*[1], Kiyoshi Tanaka[2], Tetsuo Nakano[3]. [1]Department of Health & Nutrition, Osaka Shoin Women's University, Japan, [2]Kyoto Women's University, Japan, [3]Department of Orthopaedic Surgery, Tamana Central Hospital, Japan
Disclosures: Akiko Kuwabara, None

SA0275 **Glucose Metabolism Status Is Not Associated With a Recent History of Falls, Recurrent Falls or Fractures – The Maastricht Study**

Ellis Waard*[1], Annemarie Koster[2], Tom Melai[3], Tineke van Geel[4], Ronald Henry[5], Miranda Schram[5], Pieter Dagnelie[6], Carla van der Kallen[5], Simone Sep[5], Coen Stehouwer[5], Nicolaas Schaper[7], Hans Savelberg[3], Piet Geusens[8], Joop van den Bergh[9]. [1]NUTRIM School for Nutrition & Translational Research in Metabolism, Maastricht University, Department of Internal Medicine, Subdivision of Rheumatology, Maastricht, , [2]Maastricht University, Department of Social Medicine, Maastricht, Netherlands & CAPHRI School for Public Health & Primary Care, Maastricht University, Maastricht, Netherlands, [3]NUTRIM School for Nutrition & Translational Research in Metabolism, Maastricht University, Department of Human Movement Science, Maastricht, Netherlands, [4]NUTRIM School for Nutrition & Translational Research in Metabolism/ CAPHRI School for Public Health & Primary Care, Maastricht University, Department of Family Medicine, Maastricht, Netherlands, [5]Maastricht University Medical Centre, Department of Internal Medicine, Maastricht, Netherlands & CARIM School for Cardiovascular diseases, Maastricht University, Maastricht, Netherlands, [6]CARIM School for Cardiovascular diseases/CAPHRI School for Public Health & Primary Care, Maastricht University, Maastricht, Netherlands & Maastricht University, Department of Epidemiology, Maastricht, Netherlands, [7]Maastricht University Medical Centre, Department of Internal Medicine, Maastricht, Netherlands & CARIM School for Cardiovascular diseases/CAPHRI School for Public Health & Primary Care, Maastricht University, Maastricht, Netherlands, [8]CAPHRI School for Public Health & Primary Care, Maastricht University Medical Centre, Department of Internal Medicine, Subdivision of Rheumatology, Maastricht, Netherlands, [9]VieCuri Medical Centre, Department of Internal Medicine, Subdivision of Endocrinology, Venlo, Netherlands & NUTRIM, Maastricht University Medical Centre, Department of Internal Medicine, Subdivision of Rheumatology, Maastricht, Netherlands

Disclosures: Ellis Waard, None

SA0276 **High subcutaneous fat measured by DXA is associated with higher fracture risk in older men - the STRAMBO study**

Pawel Szulc*[1], François Duboeuf[2], Roland Chapurlat[2]. [1]INSERM UMR 1033, University of Lyon, Hopital E. Herriot, Pavillon F, France, [2]INSERM UMR 1033, University of Lyon, Hôpital Edouard Herriot, France

Disclosures: Pawel Szulc, None

SA0277 **How Do Hip Fracture Rates in Long-term Care Compare with the Community?**

Courtney Kennedy*[1], Alexandra Papaioannou[1], George Ioannidis[1], Ruth Croxford[2], Cathy Cameron[3], Sara Mursleen[1], Jonathan Adachi[1], Susan Jaglal[3]. [1]McMaster University, Canada, [2]Institute for Clinical Evaluative Sciences, Canada, [3]University of Toronto, Canada

Disclosures: Courtney Kennedy, None

SA0278 **Humeral fractures in south-eastern Australia: epidemiology and risk factors**

Kara Holloway*[1], Gosia Bucki-Smith[2], Amelia Morse[2], Sharon Brennan-Olsen[2], Mark Kotowicz[2], David Moloney[2], Elizabeth Timney[2], Amelia Dobbins[2], Julie Pasco[2]. [1]Barwon Health, Australia, [2]School of Medicine, Deakin University, Australia

Disclosures: Kara Holloway, None

SA0279 **Impact of osteonecrosis of the jaw on osteoporosis treatment in Japan: results of a questionnaire-based survey by the Adequate Treatment of Osteoporosis (A-TOP) research group**

Akira Taguchi*[1], Masataka Shiraki[2], Mayumi Tsukiyama[3], Teruhiko Miyazaki[3], Satoshi Soen[4], Hiroaki Ohta[5], Toshitaka Nakamura[6], Hajime Orimo[7]. [1]Matsumoto Dental University, Japan, [2]Research Institute & Practice for Involutional Diseases, Japan, [3]Public Health Research Foundation, Japan, [4]Department of Orthopaedic Surgery & Rheumatology, Nara Hospital, Kinki University School of Medicine, Japan, [5]Department of Clinical Medical Research Center, International University of Health & Welfare, Women's Medical Center of Sanno Medical Center, Japan, [6]National Center for Global Health & Medicine, Jpn, [7]Japan Osteoporosis Foundation, Japan

Disclosures: Akira Taguchi, Ono; Asahi Kasei

SA0280 **Low blood pressure cut points for fall injuries in community-dwelling elderly: the Health, Aging and Body Composition Study**
Naoko Sagawa*[1], Zachary A. Marcum[2], Robert M. Boudreau[1], Joseph T. Hanlon[1], Steven M. Albert[1], Suzanne Satterfield[3], Ann V. Schwartz[4], Aaron I. Vinik[5], Jane A. Cauley[1], Tamara B. Harris[6], Anne B. Newman[1], Elsa Strotmeyer[1]. [1]University of Pittsburgh, USA, [2]University of Washington, USA, [3]University of Tennessee Health Science Center, USA, [4]University of California, San Francisco, USA, [5]Eastern Virginia Medical School, USA, [6]National Institute on Aging, USA
Disclosures: Naoko Sagawa, None

SA0281 **Personality, Falls and Fractures: The Women's Health Initiative Observational Study (WHI-OS)**
Jane Cauley*[1], Stephen Smagula[2], Kathleen Hovey[3], Jean Wactawski-Wende2[3], Carolyn Crandall[4], Meryl LeBoff[5], Christopher Andrews[6], Wenjun Li[7], Mathilda Coday[8], Maryan Sattari[9], Hilary Tindle[10]. [1]University of Pittsburgh Graduate School of Public Health, USA, [2]University of Pittsburgh, USA, [3]State University of NY at Buffalo, USA, [4]University of California, USA, [5]Brigham & Women's Hospital, USA, [6]University of Michigan, USA, [7]University of Massachusetts Medical School, USA, [8]The University of Tennessee Health Science Center, USA, [9]University of Florida, USA, [10]Vanderbilt University, USA
Disclosures: Jane Cauley, None

SA0282 **Predictors of Imminent Fracture Risk in Women Aged 65 Years with Osteoporosis**
Derek Weycker*[1], Rich Barron[2], Alex Kartashov[3], John Edelsberg[4], Barry Crittenden[2], Andreas Grauer[2]. [1]Policy Analysis Inc. (PAI), USA, [2]Amgen Inc., USA, [3]Policy Analysis Inc., USA, [4]Policy Analysis, USA
Disclosures: Derek Weycker, Amgen Inc.

SA0283 **Recurrent major osteoporotic fracture in older men: the Osteoporotic Fractures in Men Study**
Carrie Nielson*[1], Elizabeth Hooker[1], Jodi Lapidus[1], Lynn Marshall[1], Peggy Cawthon[2], Margaret Lee Gourlay[3], Douglas Bauer[4], Jane Cauley[5], Kristine Ensrud[6], Nancy Lane[7], Eric Orwoll[1]. [1]Oregon Health & Science University, USA, [2]California Pacific Medical Center, USA, [3]University of North Carolina, USA, [4]University of California, San Francisco, USA, [5]University of Pittsburgh, USA, [6]University of Minnesota, USA, [7]University of California, Davis, USA
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SA0284 **Serum phosphate levels are associated with fracture risk: the Rotterdam Study**
Natalia Campos*[1], Nadia Koek[2], Bram C van der Eerden[3], Fernando Rivadeneira[4], Albert Hofman[5], Johannes van Leeuwen[3], André G Uitterlinden[3], M Carola Zillikens[3]. [1]Erasmus MC, The netherlands, [2]Department of Internal Medicine, Erasmus Medical Center, Netherlands, [3]Department of Internal Medicine Erasmus Medical Center, Netherlands, [4]Department of Internal Medicine, Netherlands, [5]Department of Epidemiology, Erasmus Medical Center, Netherlands
Disclosures: Natalia Campos, None

OSTEOPOROSIS - EPIDEMIOLOGY: RISK FACTORS

SA0285 **Bone turnover status in older Hispanic women with type 2 diabetes: preliminary data from the Cameron County Hispanic Cohort in Texas**
Nahid Rianon*[1], Scott Smith[2], Matthew Hnatow[3], Susan Fisher-Hoch[4], Joseph Mccormick[5], Catherine Ambrose[6]. [1]UTHealth The University of Texas Medical School at Houston, USA, [2]NASA, USA, [3]Univeristy of Texas Medical School at Houston, USA, [4]University of Texas School of Public health, Brownsville Regional Campus, USA, [5]University of Texas School of Public Health Brownsville Regional Campus, USA, [6]University of Texas Medical School at Houston, USA
Disclosures: Nahid Rianon, None

SA0286 **Circulating Sclerostin Level in the Elderly with and without Hip Fracture: A Prospective Case-Control Study**

JI WAN Kim*[1], Jai Hyung Park[2], Seong-eun Byun[3], Jae Suk Chang[4]. [1]Haeundae Paik Hospital, Inje University, South korea, [2]Orthopaedic Surgery, Kangbuk Samsung Hospital, Sungkyunkwan University, South korea, [3]Orthopaedic Surgery, CHA Bundang Medical Center, CHA university, South korea, [4]Orthopaedic Surgery, Asan Medical Center, University of Ulsan, South korea

Disclosures: JI WAN Kim, None

SA0287 **Comparison of Vertebral Density, Structure, Strength, and Fracture Rate between Hong Kong Chinese and US Caucasian Older Men**

Jian Shen*[1], Lynn Marshall[2], Carrie Nielson[3], David Lee [4], Tony Keaveny[4], Jodi Lapidus [5], Dennis Black[6], Jane Cauley [7], Anthony Kwok [8], Timothy Kwok [8], John Schousboe [9], Eric Orwoll [3]. [1]Oregon Health & Science University, USA, [2]Department of Orthopedics & Rehabilitation, Oregon Health & Science University, USA, [3]Department of Medicine, Bone & Mineral Unit, Oregon Health & Science University, USA, [4]O.N. Diagnostics, USA, [5]Division of Biostatistics, the Department of Public Health & Preventive Medicine, Oregon Health & Science University, USA, [6]Department of Epidemiology & Biostatistics, University of California San Francisco, USA, [7]Department of Epidemiology, Graduate School of Public Health, University of Pittsburgh, USA, [8]Jockey Club Centre for Osteoporosis Care & Control, & Department of Medicine & Therapeutics, Chinese University, Hong kong, [9]University of Minnesota, USA

Disclosures: Jian Shen, None

SA0288 **Insulin Resistance and Composite Indices of Femoral Neck Strength in Asians: the Fourth Korea National Health and Nutrition Examination Survey (KNHANES IV)**

Seong Hee Ahn*, Hyeonmok Kim, Beom-Jun Kim, Seung Hun Lee, Woo Je Lee, Jung-Min Koh. Asan Medical Center, University of Ulsan College of Medicine, South korea

Disclosures: Seong Hee Ahn, None

SA0289 **Mortality risk following incident low-trauma osteoporotic fracture and subsequent fracture: 15- year prospective data from the Canadian Multicentre Osteoporosis Study (CaMOS)**

Thach Tran*[1], Dana Bliuc[1], Dunia Alarkawi[1], Tuan Nguyen[1], John Eisman[1], Lisa Langsetmo[2], Jerilynn C Prior[3], Robert G Josse[4], Stephanie M Kaiser[5], Christopher S Kovacs[6], Claudie Berger[2], David Goltzman[2], David A Hanley[7], Jonathan Adachi[8], Teneke van Geel[9], Piet Geusens[9], Joop van den Bergh[9], Jacqueline Center[1]. [1]Garvan Institute of Medical Research, Australia, [2]McGill University, Canada, [3]University of British Columbia, Canada, [4]University of Toronto, Canada, [5]Dalhousie University, Canada, [6]Memorial University, Canada, [7]University of Calgary, Canada, [8]McMaster University, Canada, [9]Maastricht University, Netherlands

Disclosures: Thach Tran, None

SA0290 **Osteoporosis Treatment is Associated with Better Post-fracture Survival: A 15-Year Prospective Study from Canadian Multicentre Osteoporosis Study**

Dana Bliuc*[1], Thach Tran[1], Dunia Alarkawi[1], Tuan Nguyen[1], John Eisman[1], Claudie Berger[2], Lisa Langsetmo[2], David Hanley[3], David Goltzman[2], Jerilynn Prior[4], Robert Josse[5], Stephanie Kaiser[6], Christopher Kovacs[7], Rick Adachi[8], Tineke van Geel[9], Piet Geusens[10], Joop Van Den Bergh[10], Jacqueline Center[1]. [1]Garvan Institute of Medical Research, Australia, [2]McGill University Health Center, Canada, [3]University of Calgary, Canada, [4]University of British Columbia, Canada, [5]Toronto CaMOS Center, Canada, [6]Halifax CaMOS Center, Canada, [7]St John's CaMOS Center, Canada, [8]Hamilton CaMOS Center, Canada, [9]Maastricht University, Netherlands, [10]Maastricht University Medical Center, Netherlands

Disclosures: Dana Bliuc, None

OSTEOPOROSIS - HEALTH CARE DELIVERY: GENERAL

SA0291 **A Multi-Sector Public-Private Partnership Working Together to Improve America's Bone Health**

Debbie Zeldow[1], David Lee*[2]. [1]National Bone Health Alliance, USA, [2]NBHA, USA

Disclosures: David Lee, None

SA0292 **Awareness and Reasons for Lack of Post-Fracture Osteoporosis Therapy: A Survey of Post-Menopausal Women**
Denise Boudreau[1], Onchee Yu[2], Akhila Balasubramanian[3], Jane Grafton[2], Jackie Saint-Johnson[2], Hiedi Wirtz[3], Andreas Grauer[3], Barry Crittenden[3], Delia Scholes*[4]. [1]Group Health Research Institute, Wake island, [2]Group Health Research Institute, USA, [3]Amgen Inc., USA, [4]Group Health CooperativeGroup Health Research Institute, USA
Disclosures: Delia Scholes, Amgen

SA0293 **In-Hospital Assessment and Management of Falls in the Elderly**
Anna O'Connor*[1], Monidipa Dasgupta[2], Lisa-Ann Fraser[2]. [1]Schulich School of Medicine & Dentistry, University of Western Ontario, Canada, [2]University of Western Ontario, Canada
Disclosures: Anna O'Connor, None

SA0294 **Miami Veterans Health Administration Fracture Prevention Program**
Violet Lagari*[1], Andreina Rojas[2], Silvina Levis[2], Zeina Hannoush[2], Marilu Jurado[2], Daisy Acevedo[2], Ngina Muigai[2]. [1]University of Miami, USA, [2]University of Miami School of Medicine & Miami VA Health System, USA
Disclosures: Violet Lagari, None

SA0295 **Osteoporosis-Related Knowledge, Self-Efficacy and Health Beliefs Among Chinese Breast Cancer Survivors**
Evelyn Hsieh*[1], Qin Wang[2], Liana Fraenkel[1], Elizabeth Bradley[3], Weibo Xia[4], Karl Insogna[1], Jennifer Smith[5], Youlin Qiao[2], Pin Zhang[2]. [1]Yale School of Medicine, USA, [2]Cancer Institute & Hospital, Chinese Academy of Medical Sciences, China, [3]Yale School of Public Health, USA, [4]Peking Union Medical College Hospital, China, [5]UNC Gillings School of Public Health, USA
Disclosures: Evelyn Hsieh, None

SA0296 **Real-World Clinical and Economic Outcomes In Daily Teriparatide Patients in Japan**
Russel Burge[1], Masayo Sato*[2], Tomoko Sugihara[3]. [1]Eli Lilly & Company, USA, [2]Eli Lilly Japan K.K., Japan, [3]Inventiv Health Clinical, USA
Disclosures: Masayo Sato, Eli Lill and Company

SA0297 **Reasons for Patient Non-Adherence to Recommended Osteoporosis Pharmacotherapy**
Sylvie Hall*[1], Stephanie Edmonds[2], Yiyue Lou[3], Peter Cram[4], Douglas Roblin[5], Kenneth Saag[6], Fredric Wolinsky[7]. [1]University of Iowa Hospitals & Clinics, USA, [2]University of Iowa Carver College of Medicine, USA, [3]University of Iowa College of Public Health, USA, [4]University of Toronto, Canada, [5]Kaiser Permanente, USA, [6]University of Alabama at Birmingham, USA, [7]Univeristy of Iowa College of Public Health, USA
Disclosures: Sylvie Hall, None

SA0298 **Relationship between Gastrointestinal Events and Compliance with Osteoporosis Therapy: An administrative claims analysis of US Managed Care Population**
Ankita Modi*[1], Shiva Sajjan[2]. [1]Merck & Co., Inc., USA, [2]Merck & Company, USA
Disclosures: Ankita Modi, Merck and Company

SA0299 **Safety concerns and treatment monitoring among senior Chinese orthopedists in the management of osteoporotic fracture: a nationwide survey in China**
Pan Wei, Li Senyuan*, Man Yi, Liu Xun. Novartis, China
Disclosures: Li Senyuan, Novartis

SA0300 **Semi-Automated Radiology Report Screening to Facilitate a Fracture Liaison Service**
Agnes Zak*[1], Ronilda Lacson[2], Sara Lee[1], Ramin Khorasani[2], Daniel Solomon[3]. [1]Brigham & Women's Hospital, USA, [2]Center for Evidence-Based Imaging, USA, [3]Harvard Medical School, USA
Disclosures: Agnes Zak, None

SA0301 **Serum calcium levels required for the increase in bone mineral density by the combination therapy of bisphosphonate and active vitamin D3 analog for the treatment of osteoporosis**
Mayuko Kinoshita*[1], Muneaki Ishijima[2], Haruka Kaneko[2], Lui Liz[3], Ryo Sadatsuki[2], Shinnnosuke Hada[2], Aniwar Yusp[2], Hidetoshi Nojiri[4], Yuko Sakamoto[5], Kazuo Kaneko[2]. [1]Juntendo University, Japan, [2]Department of Orthopaedics & Motor Organ, Juntendo University Graduate School of Medicine, Japan, [3]Sportology Center, Juntendo University Graduate School of Medicine, Japan, [4]Department of Orthopaedics, Juntendo Tokyo Koto Geriatric Medical Center, Tokyo, Japan, [5]Department of Orthopaedics, Juntendo Nerima Hospital, Japan
Disclosures: Mayuko Kinoshita, None

OSTEOPOROSIS - HEALTH CARE DELIVERY: HEALTH ECONOMICS

SA0302 **Hospitalizations for Osteoporosis-Related Fractures: Economic Costs and Clinical Outcomes**
Derek Weycker[1], Xiaoyan Li[2], Rich Barron[2], Rebecca Bornheimer[1], Alex Kartashov[1], David Chandler*[2]. [1]Policy Analysis Inc. (PAI), USA, [2]Amgen Inc., USA
Disclosures: David Chandler, Amgen Inc.

OSTEOPOROSIS - HEALTH CARE DELIVERY: OUTCOME STUDIES

SA0303 **More Evidence of a Broken Post-Fracture Care Process: A Call for a Fracture Liaison Service**
Daniel Solomon*[1], Chih-Chin Liu[2], Mitch Harris[2]. [1]Harvard Medical School, USA, [2]Brigham & Women's Hospital, USA
Disclosures: Daniel Solomon, None

OSTEOPOROSIS - NUTRITION AND DIETARY SUPPLEMENTS: CALCIUM

SA0304 **Differential effect of dietary calcium intake on bone mineral density according to body size in older adults**
Kyoung Min Kim*[1], Dong Hwa Lee[1], Soo Lim[1], Sung Hee Choi[1], Jae Hoon Moon[1], Jung Hee Kim[2], Sang Wan Kim[3], Hak Chul Jang[1], Chan Soo Shin[2]. [1]Seoul National University Bundang Hospital, South korea, [2]Seoul National University Hospital, South korea, [3]Borame Hospital & Seoul National University College of Medicine, South korea
Disclosures: Kyoung Min Kim, None

SA0305 **Single Nucleotide Polymorphisms Are Associated with Circulating Bone Biomarkers in Young Adults undergoing Initial Military Training**
Erin Gaffney-Stomberg*[1], Anna Shcherbina[2], Darrell Ricke[3], Martha Petrovick[2], Laura Lutz [4], Thomas Cropper[5], Sonya Cable [6], James McClung[4]. [1]USARIEM, USA, [2]Massachusetts Institute for Technology Lincoln Laboratory, USA, [3]Massachusetts Institute for Technology Lincoln Laboratory, Lexington, MA 02420, USA, [4]US Army Research Institute of Environmental Medicine, USA, [5]Lackland Air Force Base, USA, [6]Initial Military Training Center of Excellence, USA
Disclosures: Erin Gaffney-Stomberg, None

SA0306 **The Low Calcium Intake in Postmenopausal Women in the Czech Republic**
Vaclav Vyskocil*[1], Frantisek Senk Senk[2], Pavel Novosad[3], Olga Ruzickova[4], Barbora Skyvarova[2]. [1]Center for Metabolic Bone Diseases, Czech republic, [2]Osteocenter Regional Hospital, Czech republic, [3]Osteology Academy, Czech republic, [4]Institut of Reseach Revmatology, Czech republic
Disclosures: Vaclav Vyskocil, None

OSTEOPOROSIS - NUTRITION AND DIETARY SUPPLEMENTS: GENERAL

SA0307 **Association of the Dietary Inflammatory Index, Bone Mineral Density and Risk of Fracture in Postmenopausal Women**
Tonya Orchard*[1], Vedat Yildiz[1], Susan Steck[2], James Hebert[2], Rebecca Jackson[1]. [1]Ohio State University, USA, [2]University of South Carolina, USA
Disclosures: Tonya Orchard, None

SA0308 **Comparative Study of Net Calcium Absorption of Two Different Pharmaceutical Formulations of Calcium Carbonate in Posmenopausal Women**
Silvina Mastaglia*[1], Dana Watson[2], Julia Somoza [3], Roxana Gainotti[4], Graciela Brito[2], Beatriz Oliveri [5]. [1]Laboratorio De Enfermedades Metabólicas Oseas, CONICET-UBA, Argentina, [2]Laboratorio de Enfermedades Metabólicas Óseas(INIGEM), CONICET-UBA, Argentina, [3]Laboratorio de Enfermedades Metabólicas Óseas (INIGEM) CONICET-UBA, Argentina, [4]Mautalen, Salud e Investigación., Argentina, [5]Laboratorio de Enfermedades Metabólicas Óseas(INIGEM), CONICET-UBA, Argentina
Disclosures: Silvina Mastaglia, None

SA0309 **Prevention of osteoporotic fractures by black tea consumption**
Richard Prince*[1], Gael Myers[2], Jonathan Hodgson[3]. [1]Sir Charles Gairdner Hospital, Australia, [2]Curtin University, School of Public Health, Australia, [3]University of Western Australia, School of Medicine & Pharmacology, Australia
Disclosures: Richard Prince, None

SA0310 **The Effect of Vitamin K1 and Vitamin D on Muscle Composition and Muscle Function: the ECKO RCT**
Andy Kin On Wong*[1], Maryam Hamidi[2], Lianne Tile[2], George Tomlinson[3], Hanxian Hu[2], Judy Scher[2], Yuna Lee[4], Lilian Thompson[3], Reinhold Veith[5], Robert Josse[4], Sophie Jamal[3], Gillian Hawker[6], Angela M. Cheung[2]. [1]University Health NetworkMcMaster University, Ca, [2]UHN, Canada, [3]University of Toronto, Canada, [4]St. Michael's Hospital, Canada, [5]Mount Sinai Hospital, Canada, [6]Women's College Hospital, Canada
Disclosures: Andy Kin On Wong, None

OSTEOPOROSIS - NUTRITION AND DIETARY SUPPLEMENTS: VITAMIN D

SA0311 **Does Vitamin D Metabolism Differ by Race? Evaluation of Vitamin D Metabolites in American Indians and Caucasian Americans Prior to and Following Vitamin D_3 Supplementation**
Neil Binkley*[1], Ellen Fidler[2], Gretta Borchardt[3], Diane Krueger[2]. [1]University of Wisconsin, Madison, USA, [2]University of Wisconsin, USA, [3]University of Wisconsin, United states
Disclosures: Neil Binkley, None

SA0312 **The Association between Maternal and Fetal 25OHD and Infant Size and Adiposity at Birth, 6 Months and 2 Years of Age**
Mary Horan[1], Jean Donnelly[1], Malachi McKenna*[2], Brenda Crosbie[2], Mark Kilbane[2], Fionnuala McAuliffe[1]. [1]National Maternity Hospital, Ireland, [2]St. Vincent's University Hospital, Ireland
Disclosures: Malachi McKenna, None

OSTEOPOROSIS - PATHOPHYSIOLOGY: BONE MODELING AND REMODELING

SA0313 **Systemic trabecular bone loss following femoral fracture in mice**
Armaun Emami[1], Chrisoula Skouritakis[2], Clare Yellowley[2], David Fyhrie[1], Blaine Christiansen*[3]. [1]UC Davis Medical Center, USA, [2]UC Davis, USA, [3]University of California - Davis Medical Center, USA
Disclosures: Blaine Christiansen, None

OSTEOPOROSIS - PATHOPHYSIOLOGY: GENERAL

SA0314 **ASBMR 2015 Annual Meeting Young Investigator Award**
A neuronal action of Sirtuin 1 Suppresses Bone Mass in young and aging mice
Na Luo*[1], Ioanna Mosialou[1], Aruna Kode[1], Mattia Capulli[2], Stavroula Kousteni[1]. [1]Columbia University Medical Center, USA, [2]University of L'Aquila, Italy
Disclosures: Na Luo, None

SA0315 **Icariin Exerts Anabolic Effects on Osteoblasts via Rapid Estrogen Receptor α Signaling Pathways**
Man-Sau Wong*[1], Ming-Xian Ho[2], Ling-Ping Zhou[2]. [1]Hong Kong Polytechnic University, Hong kong, [2]The Hong Kong Polytechnic University, Hong kong
Disclosures: Man-Sau Wong, None

SA0316 **Withdrawn**

SA0317 **RANKL Inhibition Reverses the Effects of Ovariectomy and IL-10 Deficiency on Bone Composition in a Mouse Animal Model**

Eleftherios Paschalis*[1], Klaus Klaushofer[2], Sonja Gamsjaeger[2], Norbert Hassler[2], Hamad Alzoman[3], Dimitris Tatakis[4]. [1]Ludwig Boltzmann Institute for Osteology, Austria, [2]Ludwig Boltzmann Institute of Osteology at the Hanusch Hospital of WGKK & AUVA Trauma Center Meidling, 1st Medical Dept., Austria, [3]Division of Periodontics College of Dentistry , King Saud University, Saudi arabia, [4]Division of Periodontology, College of Dentistry, The Ohio State University, USA

Disclosures: Eleftherios Paschalis, None

SA0318 **Sexual Dimorphism in the Metabolic Response to Glucocorticoids – The Role of the Osteoblast**

Sylvia Gasparini*[1], Holger Henneicke[2], Sarah Kim[2], Lee Thai[2], Hong Zhou[2], Markus Seibel[3]. [1]Bone Research Program, ANZAC Research Institute, The University of Sydney, Sydney, NSW, Australia, Australia, [2]Bone Research Program, ANZAC Research Institute, The University of Sydney, Sydney, NSW, Australia, [3]Department of Endocrinology & Metabolism, Concord Hospital, The University of Sydney, Sydney, NSW, Australia

Disclosures: Sylvia Gasparini, None

OSTEOPOROSIS - PATHOPHYSIOLOGY: GLUCOCORTICOIDS AND OTHER DRUGS

SA0319 **Glucocorticoids attenuate bone formation independently of FoxOs**

Srividhya Iyer*[1], Elena Ambrogini[2], Li Han[2], Shoshana Bartell[2], Ha-Neui Kim[3], Aaron Warren[2], Julie Crawford[2], Stuart Berryhill[2], Stavros Manolagas[2], Maria Almeida[2]. [1]Central Arkansas VA Healthcare System, Univ of Arkansas for Medical Sciences, USA, [2]Center for Osteoporosis & Metabolic Bone Diseases, Central Arkansas Veterans Healthcare System, University of Arkansas for Medical Sciences, USA, USA, [3]Center for Osteoporosis & Metabolic Bone Diseases, University of Arkansas for Medical Sciences, USA, USA

Disclosures: Srividhya Iyer, None

SA0320 **Sost/sclerostin deficiency protects the murine skeleton from glucocorticoid-induced bone loss by inhibiting bone resorption**

Amy Sato*, Meloney Cregor, Jasmine Tzeggai, Kevin McAndrews, Jesus Delgado-Calle, Alexander G. Robling, Lilian I. Plotkin, Teresita Bellido. Indiana University School of Medicine, USA

Disclosures: Amy Sato, None

OSTEOPOROSIS - PATHOPHYSIOLOGY: SEX HORMONES AND CALCIOTROPIC HORMONES

SA0321 **NR2C2 gene regulated osteoblasts bone formation activity through mir34a TGIF signaling pathway**

Eric Beier*[1], Hsin-chu Ho[2], Shen-chin Hsu[3], John Holz[4], Tzong-Jen Sheu[5], I-Hui Su[6], Edward puzas[5]. [1]Rutgers, USA, [2]Wan-Chuan Clinics, Fangliao General Hospital, Taiwan, [3]Chung Shan Medical University Hospital Dept of Pharmacy, Taiwan, [4]D'Youville College Department of Math & Natural Sciences, USA, [5]University of Rochester, USA, [6]Fangliao General Hospita, Taiwan

Disclosures: Eric Beier, None

OSTEOPOROSIS - SECONDARY CAUSES: DRUGS, OTHER THAN GLUCOCORTICOIDS

SA0322 **Effect of angiotensin-converting enzyme inhibitor on the fracture resistance of bone in mouse model of type 1 diabetes**

Amy Creecy*[1], Sasidhar Uppuganti[1], Clay Bunn[2], Gael Cockrell[3], Elizabeth Wahl[3], Mallikarjuna Rettiganti[3], John Fowlkes[2], Jeffry Nyman[4], Kathryn Thrailkill[2]. [1]Vanderbilt University, USA, [2]University of Kentucky, USA, [3]University of Arkansas for Medical Sciences, USA, [4]Vanderbilt University Medical Center, USA

Disclosures: Amy Creecy, None

SA0323 **Skeletal Health in Healthy Postmenopausal Women Treated with Exemestane for the Primary Prevention of Breast Cancer: 3-year data from the nested bone strength substudy of the MAP.3 trial (MAP3BSS)**

Miranda Boggild*[1], Lianne Tile [1], George Tomlinson[1], Natasha Gakhal[2], Sandhya Pruthi[3], John Robbins[4], Shail Rawal [1], Sharmila Majumdar[5], Sundeep Khosla[3], James Ingle[3], Harriet Richardson[6], Paul Goss[7], Angela Cheung[1]. [1]University of Toronto, Canada, [2]Women's College Hospital, Canada, [3]Mayo Clinic, USA, [4]UC Davis Health System, USA, [5]UCSF University of California, San Francisco, USA, [6]Queen's University, Canada, [7]Harvard University, USA

Disclosures: Miranda Boggild, None

OSTEOPOROSIS - SECONDARY CAUSES: GLUCOCORTICOIDS

SA0324 **Bone Health in Glucocorticoid-Treated Men and Women**

Edward Leib[1], Renaud Winzenrieth*[2]. [1]University of Vermont, USA, [2]Med-Imaps, France

Disclosures: Renaud Winzenrieth, None

SA0325 **Does a specific bone pattern exist in patient suffering from Cushing's disease?**

Amandine Boisson*[1], Renaud Winzenrieth[2], Antoine Tabarin[3], Thierry Schaeverbeke[1], Nadia Mehsen-Cetre[1]. [1]Rheumatology department, CHU Pellegrin, France, [2]R&D department, Med-Imaps, France, [3]Endocrinology Department, France

Disclosures: Amandine Boisson, None

SA0326 **Endogenous Cortisol Levels Are Positively Correlated to Adrenal Androgens But Negatively to Total Testosterone and Estradiol Whereas Exogenous Glucocorticoids Suppress Both Adrenal and Gonadal Steroid Hormones in Elderly Men**

Anna Nilsson*[1], Claes Ohlsson[2], Mattias Lorentzon[2], Liesbeth Vandenput[2], Magnus Karlsson[3], Ulf Lerner[2], Östen Ljunggren[4], Dan Mellström[2]. [1]Sahlgrenska University Hospital, Sweden, [2]Center for Bone & Arthritis Research, Department of Internal Medicine & Clinical Nutrition, at the Institute of Medicine, Sahlgrenska Academy, Gothenburg University, Sweden, [3]Clinical & Molecular Osteoporosis Research Unit Department of Clinical Sciences & Orthopaedic Surgery Lund University, Skåne University Hospital, Sweden, [4]Department of Medical Sciences, University of Uppsala, Uppsala, Sweden, Sweden

Disclosures: Anna Nilsson, None

SA0327 **Effects of Denosmab on vertebral fractures in patients with Glucocorticoid-Induced Osteoporosis**

Ikuko Tanaka*[1], Mari Ushikubo[2], Takashi Kato[3], Keisuke Izumi[2], Kumiko Akiya[2], Hisaji Oshima[2]. [1]NAGOYA Rheumatology Clinic, Japan, [2]Tokyo Medical Center, Department of connective Tissue Disease, Japan, [3]National Center for Geriatrics & Gerontology, Japan

Disclosures: Ikuko Tanaka, None

SA0328 **Longitudinal Cohort Study of Once Weekly Teriparatide in Glucocorticoid-Induced Osteoporosis in Japanese Patients**

Ikuko Tanaka*[1], Mari Ushikubo[2], Takashi Kato[3], Keisuke Izumi[2], Kumiko Akiya[2], Hisaji Oshima[2]. [1]NAGOYA Rheumatology Clinic, Japan, [2]Tokyo Medical Center, Department of connective Tissue Disease, Japan, [3]National Center for Geriatrics & Gerontology, Japan

Disclosures: Ikuko Tanaka, None

SA0329 **Role of Trabecular Bone Structure Analysis in Glucocorticoid-Induced Osteporosis**

Ikuko Tanaka*[1], Mari Ushikubo[2], Takashi Kato[3], Keisuke Izumi[2], Kumiko Akiya[2], Hisaji Oshima[2]. [1]NAGOYA Rheumatology Clinic, Japan, [2]Tokyo Medical Center, Department of connective Tissue Disease, Japan, [3]National Center for Geriatrics & Gerontology, Japan

Disclosures: Ikuko Tanaka, None

SA0330 **Anabolism versus Antiresorption (AVA Study): A Comparison of the Mechanism of Action (MOA) of Teriparatide (TPTD) and Denosumab (DMAb) in Postmenopausal Women with Osteoporosis Using Quadruple Fluorochrome Labeled Bone Histomorphometry**

David Dempster*[1], Hua Zhou[1], Robert Recker[2], Jacques P. Brown[3], Christopher Recknor[4], E. Michael Lewiecki[5], Paul Miller[6], Sudhaker Rao[7], David Kendler[8], John Krege[9], Jahangir Alam[9], Kathleen Taylor[10], Boris Janos[11], Valerie Ruff[10]. [1]Regional Bone Center, Helen Hayes Hospital, USA, [2]School of Medicine, Creighton University, USA, [3]Groupe de Recherche en Maladies Osseuses, Laval University, Canada, [4]United Osteoporosis Centers, USA, [5]New Mexico Clinical Research & Osteoporosis Center, USA, [6]Colorado Center for Bone Research, United states, [7]Bone & Mineral Research Laboratory, Henry Ford Health System, USA, [8]Prohealth Clinical Research, Canada, [9]Eli Lilly & Company, USA, [10]Lilly USA, LLC, USA, [11]Eli Lilly Canada Inc., Canada

Disclosures: David Dempster, Merck; Amgen; Eli Lilly and Company

SA0331 **Effects of Romosozumab in Japanese Women With Postmenopausal Osteoporosis: Phase 2 Trial Results**

H Ishibashi*[1], DB Crittenden[2], A Miyauchi[3], C Libanati[4], J Maddox[2], L Chen[2], A Grauer[2]. [1]Ina Hospital, Japan, [2]Amgen Inc., USA, [3]Miyauchi Medical Center, Japan, [4]UCB Pharma, Belgium

Disclosures: H Ishibashi, None

SA0332 **Incidence of Clinical Fracture in Osteoporosis Patients with Daily Teriparatide in the Japan Fracture Observational Study (JFOS): Interim Report**

Saeko Fujiwara*[1], Ryoichi Takayanagi[2], Masayo Sato[3], Mika Tsujimoto[3], Takanori Yamamoto[3], Hiroyuki Enomoto[3], Satoshi Soen[4]. [1]Health Management & Promotion Center, Hiroshima Atomic Bomb Casualty Council, Japan, [2]Department of Medicine & Bioregulatory Science, Graduate School of Medical Sciences, Kyushu University, Japan, [3]Medicines Development Unit Japan, Eli Lilly Japan K.K., Japan, [4]Department of Orthopaedic Surgery & Rheumatology, Nara Hospital, Kinki University Faculty of Medicine, Japan

Disclosures: Saeko Fujiwara, None

SA0333 **Response Rates for Hip, Femoral Neck and Lumbar Spine BMD are Higher for Patients Treated with Abaloparatide when Compared to Placebo or Teriparatide – Results of the ACTIVE Trial**

Gary Hattersley*[1], Alan Harris[2], Greg Williams[2], D. Black[3], Ming-Yi (Tristan) Hu[2]. [1]Radius Health, United states, [2]Radius Health, USA, [3]UC San Francisco, USA

Disclosures: Gary Hattersley, Radius Health

SA0334 **Time course of disassociation of bone formation signals with bone mass and bone strength in sclerostin antibody treated ovariectomized rats**

Yanfei Ma*, Qianqiang Zeng, Matthew Hamang, Mary D Adrian, Jonathan Lucchesi, Sarah E Raines , Stuart A Kuhstoss, Victor Obungu, Henry U Bryant, Venkatesh Krishnan. Eli Lilly & Company, USA

Disclosures: Yanfei Ma, Eli Lilly and Company

SA0335 **Transdermal Delivery of Abaloparatide: Optimization of the Pharmacokinetic Profile in Cynomologus Monkeys**

Hila Bahar*[1], Daniel Dohmeier[2], Joan Moseman[2], Ying Zhing[2], Alan Harris[1], Ken Brown[2], Gary Hattersley[3]. [1]Radius Health, USA, [2]3M Drug Delivery Systems, USA, [3]Radius Health, United states

Disclosures: Hila Bahar, Radius Health

SA0336 **A Revisit to Safety Evaluation of Calcium/Phosphate Metabolism in A 12-Month, Randomized, Controlled Study on Alendronate/Vitamin D_3 versus Calcitriol in Chinese Osteoporotic Women**

Zhen Lin Zhang[1], Er Yuan Liao[2], Wei Bo Xia[3], Hua Lin[4], Qun Cheng[5], Li Wang[6], Yong Qiang Hao[7], De Cai Chen[8], Hai Tang[9], Yong De Peng[10], Li You[10], Liang He[11], Zhao Heng Hu[12], Chun Li Song[13], Fang Wei[14], Jue Wang[14], Lei Zhang[14], Arthur Santora*[15]. [1]Shanghai Sixth People's Hospital, Shanghai Jiaotong University, China, [2]The Second Xiangya Hospital, Central South University, China, [3]Peking Union Medical College Hospital, China, [4]Nanjing Drum Tower Hospital, China, [5]Huadong Hospital Affiliated to Fudan University, China, [6]Tianjin Hospital, China, [7]Shanghai Ninth People's Hospital, China, [8]West China Hospital, West China School of Medicine, Sichuan University, China, [9]Beijing Friendship Hospital, Capital Medical University, China, [10]Shanghai First People's Hospital, China, [11]Beijing Jishuitan Hospital, China, [12]Peking University People's Hospital, China, [13]Peking University Third Hospital, China, [14]Global Medical Affairs, Merck Sharp & Dohme China, China, [15]Merck Research Laboratories, Rahway, NJ, USA, USA

Disclosures: Arthur Santora, Merck; Merck

SA0337 **Bone Mineral Density Response Rates with Teriparatide, Denosumab, or Both: a Responder Analysis of the DATA Study**

Paul Wallace[1], Alexander Uihlein[2], Sherri-Ann Burnett-Bowie[1], Robert Neer[1], Benjamin Leder[1], Joy Tsai*[1]. [1]Massachusetts General Hospital, USA, [2]Northwestern University, USA

Disclosures: Joy Tsai, None

SA0338 **Withdrawn**

SA0339 **Design of the Foundation for NIH Bone Quality Project: Pooled individual-level measurements of BMD, bone strength, and bone turnover as surrogates for fracture risk reduction**

Douglas Bauer*[1], Jean L. Hietpas[1], Mary Bouxsein[2], Richard Eastell[3], Charles McCulloch[1], Anne DePapp[4], Andreas Grauer[5], Ursula Klause[6], Bruce H. Mitlak[7], Bruce Schneider[8], Sanya Fanous-Whitaker[9], Steven R. Cummings[10], Dennis Black[1]. [1]University of California, San Francisco, USA, [2]Harvard Medical School, USA, [3]University of Sheffield, United Kingdom, [4]Merck & Co., Inc., Kenilworth, NJ, USA, USA, [5]Amgen Inc., USA, [6]Roche Diagnostics Corporation, Indianapolis, USA, [7]Eli Lilly & Co., USA, [8]Food & Drug Administration, USA, [9]Foundation for the National Institutes of Health, USA, [10]San Francisco Coordinating Center, California Pacific Medical Center, USA

Disclosures: Douglas Bauer, None

SA0340 **Determinants of Change in Bone Mineral Density during Bisphosphonate Holiday**

Li Hao Richie Xu*[1], Beverley Adams-Huet[1], John Poindexter[1], Naim Maalouf[2]. [1]UT Southwestern Medical Center, USA, [2]University of Texas Southwestern Medical Center, Dallas, USA

Disclosures: Li Hao Richie Xu, None

SA0341 **Effect of Denosumab on BMD Outcomes in Persistent Patients in a Prospective Observational Study**

David Kendler*[1], Stuart Silverman[2], E Siris[3], Jacques P. Brown[4], DT Gold[5], EM Lewiecki[6], C Simonelli[7], G Quinn[8], S Yue[9], B Stolshek[9], C Recknor[10]. [1]University of British Columbia, Canada, [2]Cedars-Sinai Medical Center, UCLA School of Medicine, & OMC Clinical Research Center, USA, [3]Columbia University Medical Center, USA, [4]Laval University & CHU de Québec (CHUL) Research Centre, Canada, [5]Duke University Medical Center, USA, [6]New Mexico Clinical Research & Osteoporosis Center & University of New Mexico School of Medicine, USA, [7]Health East Osteoporosis Care, USA, [8]Sarnia Statistics Ltd, United Kingdom, [9]Amgen Inc., USA, [10]United Osteoporosis Centers, USA

Disclosures: David Kendler, Pfizer, Merck, Lilly, Amgen; Lilly, Amgen, GSK; Amgen, Lilly, AstraZeneca, Astellas

SA0342 **Effect of Glucocorticoid, Bisphosphonate Therapy and Disease Activity on Metacarpal Shaft Morphology: A Longitudinal pQCT Study**
Inna galli-Lysak[1], Harald M Bonel[2], Peter M Villiger[1], Daniel Aeberli*[3]. [1]Dept. of Rheumatology, Immunology & Allergology University of Bern, Inselspital, Switzerland, [2]Institute for Diagnostic, Interventional & Paediatric Radiology, University of Bern, Inselspital, Switzerland, [3]Dept. of Rheumatology, Immunology & Allergology University Hospital, Switzerland
Disclosures: Daniel Aeberli, None

SA0343 **Fractures during Bisphosphonate Drug Holidays**
Brittany Bindon*[1], Cara Clure[2], Neelam Balasubramanian[3], William Adams[3], Stephanie Kliethermes[3], Jasmin Sandhu[3], Pauline Camacho[4]. [1]Loyola University, USA, [2]Loyola University Chicago Stritch School of Medicine, USA, [3]Loyola University Medical Center, USA, [4]Loyola University Osteoporosis & Metabolic Bone Disease Center, USA
Disclosures: Brittany Bindon, None

SA0344 **Increased femoral cortical thickness in patients with atypical femur fractures; the Quebec Registry for Atypical Femur Fractures**
Suzanne Morin*[1], Thomas Moser[2], Benoit Godbout[3], Etienne Belzile[4], Michelle Wall[5], Laetitia Michou[6], Louis-Georges Sainte-Marie[2], Jacques A de Guise[7], Jacques P. Brown[6]. [1]McGill University, Canada, [2]Université de Montréal, Canada, [3]Centre de Recherche du CHUM, Canada, [4]Université Laval, Canada, [5]McGill University Health Center Research Institute, Canada, [6]Centre de recherche du CHU de Québec, Canada, [7]Centre de recherche CHUM, Canada
Disclosures: Suzanne Morin, Amgen; Merck; Amgen; Eli Lilly

SA0345 **Molecular investigations of bone quality from osteoporotic women treated with Alendronate or Strontium Ranelate after 12 months**
Guillaume Falgayrac*[1], Bernard Cortet[2], Cecile Olejnik[3], Guillaume Penel[3]. [1]PMOI EA4490, France, [2]Service de Rhumatologie, Hôpital Roger Salengro, CHRU de Lille, France, [3]PMOI (Physiopathologie des Maladies Osseuses et Inflammatoires), EA4490, Faculté de Chirurgie Dentaire, University of Lille, Health & Law, France
Disclosures: Guillaume Falgayrac, None

SA0346 **Response to Denosumab in Patients attending a Specialist Bone Clinic**
Triona McNicholas*[1], Breffni Drumm[2], Patrick O'Donoghue[2], Georgina Steen[2], Kevin McCarroll[2], JB Walsh[2], James Mahon[2], Rosaleen Lannon[2]. [1]St James's Hospital, Dublin, Ireland, Ireland, [2]Bone Health Unit, St James's Hospital, Ireland
Disclosures: Triona McNicholas, None

SA0347 **Short-term functional recovery between immediate- and delayed bisphosphonate treatment in patients with femoral neck fractures: a randomized controlled trial**
Aasis Unnanuntana, Panai Laohaprasitiporn*, Atthakorn Jarusriwanna, Wachirapan Narktang. Siriraj Hospital, Thailand
Disclosures: Panai Laohaprasitiporn, None

SA0348 **Skeletal-site Heterogeneity in the Association Between Bisphosphonate Use and Incident Non-vertebral Fracture**
Lisa Langsetmo*[1], Claudie Berger[2], David Goltzman[3], Suzanne Morin[3], David Hanley[4], Stephanie Kaiser[5], Jerilynn Prior[6], Brian Lentle[6], Millan Patel[6], Nancy Kreiger[7], Sophie Jamal[7], Robert Josse[7], Jacques P. Brown[8], Jonathan Adachi[9], Alexandra Papaioannou[9], Kenneth Davison[10], Wojciech Olszynski[11], Christopher Kovacs[12], William Leslie[13], Tassos Anastassiades[14], Tanveer Towheed[14]. [1]Canadian Multicenter Osteoporosis Study, Canada, [2]Canadian Multicentre Osteoporosis Study, Canada, [3]McGill University, Canada, [4]University of Calgary, Canada, [5]Dalhousie University, Canada, [6]University of British Columbia, Canada, [7]University of Toronto, Canada, [8]University of Laval, Canada, [9]McMaster University, Canada, [10]University of Victoria, Canada, [11]University of Saskatchewan, Canada, [12]Memorial University, Canada, [13]University of Manitoba, Canada, [14]Queen's University, Canada
Disclosures: Lisa Langsetmo, None

SA0349 **Surgical treatment following Atypical Femur Fractures and functional outcomes: the Quebec Atypical Femur Fracture Registry**
Prism Schneider*[1], Edward Harvey[2], Michelle Wall[2], Etienne Belzile[3], Jacques P Brown[4], Suzanne Morin[1]. [1]McGill University, Canada, [2]McGill University Health Center Research Institute, Canada, [3]Université Laval, Canada, [4]Centre de recherche CHU de Quebec, Canada
Disclosures: Prism Schneider, None

SA0350 **The Bone-Protective Effects of a Novel Selective Estrogen Receptor Modulator (SERM) pERD in Ovariectomized Rats**
Jukka Morko*[1], Carsten Möller[2], ZhiQi Peng[1], Jukka Vääräniemi[1], Katja M Fagerlund[1], Tiina A Suutari[1], Jenni Bernoulli[1], Jukka P Rissanen[1], Andrea Wagenfeld[2], Arndt Schmitz[2], Jussi Halleen[1]. [1]Pharmatest Services Ltd, Finland, [2]Bayer Pharma AG, Germany
Disclosures: Jukka Morko, Pharmatest Services Ltd, Employee

SA0351 **Why Do Bisphosphonates Compromise Bone Formation?**
Pia Jensen*[1], Thomas Levin Andersen[2], Pascale Chavassieux[3], Jean-Paul Roux[3], Jean-Marie Dealissé[2]. [1]Vejle Hospital, Denmark, [2]Department of Clinical Cell Biology, Vejle Hospital, Denmark, [3]INSERM Unité 1003, Université de Lyon, France
Disclosures: Pia Jensen, None

OSTEOPOROSIS - TREATMENT: OTHER THERAPEUTIC AGENTS

SA0352 **Inhibition of Osteoclastogenesis and Inflammatory Bone Resorption by Targeting BET Proteins and Epigenetic Regulation**
Kyung-Hyun Park-Min*[1], Elisha Lim[1], Min Joon Lee[1], Sung ho Park[1], Eugenia Giannopoulos[1], Anna Yarillina[1], Marjolein van der Meulen[2], Baohong Zhao[1], Nicholas Smithers[3], Rab Prinjha[4], Lionel Ivashkiv[5]. [1]Hospital for Special Surgery, USA, [2]Cornell University, USA, [3]GSK, United Kingdom, [4]Epinova DPU, United Kingdom, [5]Hosptial for Special Surgery, USA
Disclosures: Kyung-Hyun Park-Min, None

OSTEOPOROSIS IN SPECIAL POPULATIONS: DIABETES

SA0353 **Risk of hip fracture increases with diabetes mellitus (DM): Results from the Kailun cohort in China**
Shivani Sahni*[1], Katherine Tucker[2], Chunpeng Ji[3], Junjuan Li[3], Shouling Wu[3], Xiang Gao[4]. [1]Hebrew SeniorLife, Institute for Aging Research & Harvard Medical School, USA, [2]University of Massachusetts, Lowell, MA, USA, [3]Kailun Hospital, China, [4]The Pennsylvania State University, USA
Disclosures: Shivani Sahni, PAI, Inc.; General Mills Bell Institute of Health and Nutrition

SA0354 **Serum Sclerostin Levels in Liver Transplantation Patients at Risk of New-Onset Diabetes Mellitus: Response to Oral Glucose Tolerance Test**
Guillermo Martinez Diaz-Guerra*[1], Gonzalo Allo[2], Mercedes Aramendi[2], Sonsoles Guadalix[2], Soledad Librizzi[2], David Lora[2], Carlos Jiménez[2], Federico Hawkins[2]. [1]University Hospital 12 Octubre, Spain, [2]University Hospital 12 de Octubre, Spain
Disclosures: Guillermo Martinez Diaz-Guerra, None

SA0355 **TBS and HbA1c but not BMD are Predictors of Incident Fractures in Type 1 Diabetes**
Thomas Neumann*[1], Martin Keil[2], Gabriele Lehmann[2], Sabine Lodes[2], Bettina Kästner[2], Thomas Lehmann[3], Michael Kiehntopf[4], Didier Hans[5], Olivier Lamy[5], Ulrich-Alfons Müller[2], Gunter Wolf[2], Alexander Sämann[2]. [1]Jena University Hospital, Germany, [2]Jena University Hospital, Department of Internal Medicine III, Germany, [3]Jena University Hospital, Institute of Medical Statistics, Computer Sciences & Documentation, Germany, [4]Jena University Hospital, Institute of Clinical Chemistry & Laboratory Diagnostics, Germany, [5]Lausanne University Hospital, Bone Disease Unit, Switzerland
Disclosures: Thomas Neumann, None

SA0356 **The better performance of TBS in the prediction of vertebral fractures in postmenopausal diabetic women compared to BMD or FRAX score**
Yong Jun Choi*, Insun Song, Yoon-Sok Chung. Ajou University School of Medicine, South korea
Disclosures: Yong Jun Choi, None

OSTEOPOROSIS IN SPECIAL POPULATIONS: MOBILITY DISORDERS, DISUSE OSTEOPOROSIS

SA0357 **BMD and TBS status in adult patients suffering from Polio**

D Grados Canovas[1], Silvana Di Gregorio[2], Luis Del Rio*[2], E Bonel[2], Manuel Garcia[2], Renaud Winzenrieth[3]. [1]Departament of Reumatology, Hospital San Rafael, Spain, [2]Cetir Grup Mèdic, Spain, [3]R&D department, Med-Imaps, France

Disclosures: Luis Del Rio, None

SA0358 **Risk Factors For The Development Of Osteoporosis After Spinal Cord Injury. A 12-Month Follow-up Study**

Laia Gifre*[1], Joan Vidal[2], Josep Lluís Carrasco[3], Africa Muxi[4], Enric Portell[2], Ana Monegal[5], Núria Guañabens[5], Pilar Peris[5]. [1]Hospital Clinic Barcelona, Spain, [2]Guttmann Neurorehabilitation Institute. Universitat Autònoma de Barcelona, Spain, [3]Public Health Department, University of Barcelona, Spain, [4]Nuclear Medicine Department. Hospital Clínic of Barcelona, Spain, [5]Rheumatology Department, Hospital Clinic of Barcelona, Spain

Disclosures: Laia Gifre, None

OSTEOPOROSIS IN SPECIAL POPULATIONS: OTHER POPULATIONS

SA0359 **Bisphosphonate Therapy, and the Bone Protection Treatment Care Gap, in Men on Androgen Deprivation Therapy for Non-Metastatic Prostate Cancer**

Lisa-Ann Fraser*. Western University, Canada

Disclosures: Lisa-Ann Fraser, None

SA0360 **Compromised Trabecular Microstructure in Young Adults with Cystic Fibrosis**

Melissa Putman[1], Logan Greenblatt*[2], Padrig Tuck[2], Ahmet Uluer[3], Leonard Sicilian[4], Allen Lapey[5], Catherine M. Gordon[6], Mary Bouxsein[7], Joel Finkelstein[2]. [1]Massachusetts General HospitalChildren's Hospital Boston, USA, [2]Massachusetts General Hospital, Endocrine Unit, USA, [3]Boston Children's Hospital, Division of Respiratory Diseases, USA, [4]Massachusetts General Hospital, Pulmonary Division, USA, [5]Massachusetts General Hospital, Pediatric Pulmonary Division, USA, [6]Hasbro Children's Hospital, Divisions of Adolescent Medicine & Endocrinology, USA, [7]Massachusetts General Hospital, USA

Disclosures: Logan Greenblatt, None

SA0361 **ASBMR 2015 Annual Meeting Young Investigator Award**
Fracture Risk Following Bariatric Surgery: A Study Using Healthcare Administrative Databases

Catherine Rousseau*[1], Sonia Jean[2], Philippe Gamache[3], Stefane Lebel[4], Fabrice Mac-Way[5], Laëtitia Michou[5], Claudia Gagnon[6]. [1]Department of Medicine, Laval University; Endocrinology & Nephrology Unit, CHU de Quebec Research Centre, Canada, [2]Institut national de santé publique du Québec; Department of Medicine, Laval University; University of Sherbrooke, Canada, [3]Institut national de santé publique du Québec, Canada, [4]Quebec Heart & Lung Institute, Canada, [5]Endocrinology & Nephrology Unit, CHU de Quebec Research Centre; Department of Medicine, Laval University, Canada, [6]Endocrinology & Nephrology Unit, CHU de Quebec Research Centre; Department of Medicine, Laval University; Institute of Nutrition & Functional Foods, Canada

Disclosures: Catherine Rousseau, None

SA0362 **Inflammatory focal bone destruction in femoral heads with end-stage hemophilic arthropathy: A study on clinic samples with micro-CT and histologic analyses**

Shanxing Zhang*[1], Hongting Jin[2], Peijian Tong[3]. [1]Zhejiang Chinese Medical University, Peoples republic of china, [2]Institute of Orthopaedics & Traumatology of Zhejiang Province, China, [3]Department of Orthopaedics Surgery, the First Affiliated Hospital of Zhejiang Chinese Medical University, China

Disclosures: Shanxing Zhang, None

SA0363 **Microarchitectural and Biomechanical Effects of PTH Excess due to Primary or Renal Secondary Hyperparathyroidism**

Emily Stein*[1], Thomas Nickolas[1], Kyle Nishiyama[1], Donald McMahon[1], Nientara Anderson[1], Anna Kepley[1], X. Edward Guo[2], Shonni Silverberg[1], Elizabeth Shane[1]. [1]Columbia University College of Physicians & Surgeons, USA, [2]Columbia University, USA

Disclosures: Emily Stein, None

SA0364 **Prevalence of low bone mineral density, osteopenia, osteoporosis and its associated risk factors in female ballet dancers**

Tânia Amorim*[1], Lygeri Dimitriou[2], George Metsios[3], Matthew Wyon[3], Alan Nevill[3], Andreas Flouris[4], José Maia[5], José Carlos Machado[5], Franklim Marques[5], Nuno Adubeiro[6], Luísa Nogueira[6], Kerry Matthews[3], Yiannis Koutedakis[7]. [1] University of Wolverhampton, UK; University of Porto, Portugal, United Kingdom, [2]University of Middlesex, United Kingdom, [3]University of Wolverhampton, United Kingdom, [4]University of Thessaly, Greece, [5]University of Porto, Portugal, [6]Polytechnic Institute of Porto, Portugal, [7]University of Thessaly; University of Wolverhampton, Greece

Disclosures: Tânia Amorim, None

SA0365 **Prevalence of Morphometric Vertebral Fracture in Brazilian Women with Human Immunodeficiency Virus (HIV) Infection**

Érico Carvalho[1], Francisco Bandeira*[2], Zoraya Barros[1], Demócrito Filho[3], Heloisa Melo[4], Maria de Fátima Albuquerque[5], Ulisses Montarroyos[6], Ricardo Ximenes [7]. [1]Serviço de Infectologia, Universidade de Pernambuco, Recife, Pernambuco, Brasil., Brazil, [2]University of Pernambuco, Brazil, [3]Departamento de Medicina Clínica, Universidade de Pernambuco, Recife, Pernambuco, Brasil., Brazil, [4]Departamento de Medicina Clínica, Universidade de Pernambuco, Recife, Pernambuco, Brasil.Departamento de Medicina Tropical, Universidade Federal de Pernambuco, Recife, Pernambuco, Brasil., Brazil, [5]Serviço de Endocrinologia, Hospital Agamenon Magalhães, Recife, Pernambuco, Brasil, Brazil, [6]Departamento de Medicina Tropical, Universidade Federal de Pernambuco, Recife, Pernambuco, Brasil., Brazil, [7]Departamento de Medicina Clínica, Universidade de Pernambuco, Recife, Pernambuco, Brasil.Departamento de Medicina Tropical, Universidade Federal de Pernambuco, Recife, Pernambuco, Brasil, Brazil

Disclosures: Francisco Bandeira, None

SA0366 **Sclerostin levels and changes in bone metabolismafter bariatric surgery**

Christian Muschitz*[1], Roland Kocijan[2], Christina Marterer[2], Arastoo Rahbar Nia[2], Gabriela Katharina Muschitz[3], Heinrich Resch[2], Peter Pietschmann[4]. [1]St. Vincent's Hospital, Austria, [2]St. Vincent Hospital Vienna - Medical Department II, Austria, [3]Division of Plastic & Reconstructive Surgery, Department of Surgery, Medical University of Vienna, Austria, [4]Department of Pathophysiology & Allergy Research, Center for Pathophysiology, Infectiology & Immunology, Medical University of Vienna, Austria

Disclosures: Christian Muschitz, None

SA0367 **Strategies for the reduction of loss of bone and body lean mass after bariatric surgery**

Christian Muschitz*[1], Roland Kocijan[2], Judith Haschka[2], Christina Marterer[2], Arastoo Rahbar Nia[2], Gabiela Katharina Muschitz[3], Heinrich Resch[2], Peter Pietschmann[4]. [1]St. Vincent's Hospital, Austria, [2]St. Vincent Hospital – Medical Department II - Academic Teaching Hospital of Medical University of Vienna, Austria, [3]Division of Plastic & Reconstructive Surgery, Department of Surgery, Medical University of Vienna, Austria, [4]Department of Pathophysiology & Allergy Research, Center for Pathophysiology, Infectiology & Immunology, Austria

Disclosures: Christian Muschitz, None

PARACRINE REGULATORS: CYTOKINES AND IMMUNOMODULATORS

SA0368 **B Cells Contribute to Bone Erosion in Rheumatoid Arthritis by Directly Inhibiting Osteoblast Differentiation**

Wen Sun*, Nida Meednu, Hengwei Zhang, Xing Li, Teresa Owen, Alex Rosenberg, Brendan Boyce, Jennifer Anolik, Lianping Xing. University of Rochester Medical Center, USA

Disclosures: Wen Sun, None

PARACRINE REGULATORS: PTHRP AND OTHER PARACRINE REGULATORS

SA0369 **Osteocyte production of PTHrP is necessary for normal osteocyte differentiation and bone remodeling**

Niloufar Ansari*[1], Patricia Ho[1], Jonathan Gooi[2], T John Martin[1], Natalie A Sims[1]. [1]St. Vincent's Institute of Medical Research, Australia, [2]Melbourne Medical School, University of Melbourne, Australia

Disclosures: Niloufar Ansari, None

PARACRINE REGULATORS: RANK, RANKL AND OPG

SA0370 **ASBMR 2015 Annual Meeting Young Investigator Award**
A Complex Set of Distal Enhancers Linked to the Mouse *Tnfsf11* Gene Direct Tissue-specific and Hormone-regulated Expression of RANKL
Melda Onal*, Hillary StJohn, Allison Danielson, Jon Markert, Wesley Pike. university of wisconsin, USA
Disclosures: Melda Onal, None

SA0371 **Deletion of a Distal Enhancer of the *RANKL* Gene Delays the Progression of Atherosclerotic Plaque Calcification in Hypercholesterolemic Mice**
Sohel Shamsuzzaman*, Melda Onal, Hillary St. John , J. Wesley Pike. University of Wisconsin-Madison, USA
Disclosures: Sohel Shamsuzzaman, None

SA0372 **Essential Role of RANKL Expressed in Chondrocytes in Endochondral Ossification**
Patrick Aghajanian*, Shaohong Cheng, Weirong Xing, Heather Watt, Catrina Alarcon, Sheila Pourteymoor, Subburaman Mohan. Jerry L. Pettis Memorial VA Medical Center, USA
Disclosures: Patrick Aghajanian, None

PARACRINE REGULATORS: WNT SIGNALING

SA0373 **Decreasing Bone Mass in Mice Containing the High-Bone-Mass Mutation LRP5-G171V through the inhibition of Porcupine by LGK974**
Cassandra R. Zylstra-Diegel, Mitchell McDonald*, Bart Williams. Van Andel Research Institute, USA
Disclosures: Mitchell McDonald, None

RARE BONE DISEASES: FIBROUS DYSPLASIA

SA0374 **Mutations preventing regulated exon skipping of a receptor tyrosine kinase cause a developmental disorder of osteogenesis**
Peter Kannu*[1], Ben Alman[2], Stephen Robertson[3], Carol Wise[4], Haemish Crawford[5], Lori Karol[6], Mary Gray[3], Rebekah Jobling[2], Linda Vi[2], Heather Whetstone[2], Raymond Poon[2], Angela Weng[2], Gino Sommers[2], Christian Marshall[2], Lucie Dupuis[2], Andrew Howard[2]. [1]Hospital for Sick ChildrenToronto, Canada, [2]Hospital for Sick Children, Canada, [3]University of Otago, New zealand, [4]Texas Scottish Rite Hospital for Child, USA, [5]Starship Chldren's Hospital, New zealand, [6]Texas Scottish Rite Hospital for Children, USA
Disclosures: Peter Kannu, Hospital for Sick Children

SA0375 **ASBMR 2015 Annual Meeting Young Investigator Award**
Role of FKBP12 in Signal Transduction by Mutant ALK2 Responsible for Fibrodysplasia Ossificans Progressiva
AIKO MACHIYA*[1], Mai Fujimoto[1], Sho Tsukamoto[2], Mai Kuratani[2], Satoshi Ohte[2], Naoto Suda[3], Takenobu Katagiri[2]. [1]Division of Pathophysiology, Research Center for Genomic Medicine, Saitama Medical University, Division of Orthodontics, Department of Human Development & Fostering, Meikai University School of Dentistry, Japan, [2]Division of Pathophysiology, Research Center for Genomic Medicine, Saitama Medical University, Japan, [3]Division of Orthodontics, Department of Human Development & Fostering, Meikai University School of Dentistry, Japan
Disclosures: AIKO MACHIYA, None

RARE BONE DISEASES: HYPOPHOSPHATASIA

SA0376 **A Longitudinal, Prospective, Long-Term Registry of Patients with Hypophosphatasia**
Lothar Seefried*[1], Wolfgang Högler[2], Craig Langman[3], Agnès Linglart[4], Etienne Mornet[5], Keiichi Ozono[6], Cheryl Rockman-Greenberg[7], Camille Bedrosian[8], Kenji P Fujita[8], Alex Cole[8], Priya Kishnani[9]. [1]University of Würzburg, Germany, [2]Birmingham Children's Hospital, United Kingdom, [3]Northwestern University & Lurie Children's Hospital, USA, [4]Paris-Sud University, APHP & INSERM U1169, France, [5]Centre Hospitalier de Versailles, France, [6]Osaka University, Graduate School of Medicine, Japan, [7]University of Manitoba, Canada, [8]Alexion Pharmaceuticals, USA, [9]Duke University Medical Center, USA
Disclosures: Lothar Seefried, Honoraria from Alexion Pharmaceuticals

SA0377 **A novel frameshift mutation c.1362_1399del38 (p.Gly456Alafs330) in exon 12 of the ALPL gene in two siblings and their previously undiagnosed mother with hypophosphatasia: a case report**
Cedric Ng*, Pisit Pitukcheewanont. Children's Hospital, Los Angeles, USA
Disclosures: Cedric Ng, None

SA0378 **Hypophosphatasia: Natural History Study Of 101 Children From Inpatient Investigations Over 25 Years At A Single Research Center**
Michael Whyte*[1], Deborah Wenkert[1], William H McAlister[2], Karen E Mack[1], Fan Zhang[1]. [1]Center for Metabolic Bone Disease & Molecular Research Shriners Hospitals for Children - St Louis, USA, [2]Department of Pediatric Radiology, Mallinckrodt Institute of Radiology at St. Louis Children's Hospital, Washington University School of Medicine, USA
Disclosures: Michael Whyte, None

SA0379 **Pseudohypophosphatasia: Mutation Identification And 46-Year Follow-Up Of The Original Patient**
Katherine Madson*[1], Sabrina S Gill[2], Steven Mumm[3], Michael Whyte[1]. [1]Center for Metabolic Bone Disease & Molecular Research, Shriners Hospitals for Children - St Louis, USA, [2]Division of Endocrinology, University of British Columbia, Canada, [3]Division of Bone & Mineral Diseases, Washington University School of Medicine, USA
Disclosures: Katherine Madson, None

SA0380 **The Clinical and Genetic Spectrum of Low Alkaline Phosphatase in Adults**
Leyre Riancho-Zarrabeitia*[1], María T. García-Unzueta[2], Jair A. Tenorio[3], Juan A. Gómez-Gerique[2], Pablo Lapunzina[3], Jose Riancho[4]. [1]Service of Rheumatology. Hospital UM Valdecilla, Spain, [2]Service of Clinical Analysis. Hospital UM Valdecilla, Spain, [3]Inst. Medical Molecular Genetics, Hospital La Paz., Spain, [4]University of Cantabria, Spain
Disclosures: Leyre Riancho-Zarrabeitia, None

RARE BONE DISEASES: HYPOPHOSPHATEMIC RICKETS

SA0381 **Accumulation of osteopontin in the absence of PHEX decreases *NaPT2A* expression**
Nilana Barros*[1], Gabrielly Chiarantin[2], Raquel Neves[2], Adriana K Carmona[2], Marc McKee[3]. [1]Federal University of Sao Paulo, Brazil, [2]UNIFESP, Brazil, [3]McGill University, Canada
Disclosures: Nilana Barros, None

SA0382 **Comparative effectiveness of FGF23 blocking antibodies versus daily or intermittent 1,25 dihydroxyvitamin D as therapies for X-linked hypophosphatemia in mice**
Eva Liu*[1], Adalbert Raimann[2], Daniel Brooks[3], Mary Bouxsein[4], Marie Demay[4]. [1]Brigham & Women's Hospital & Massachusetts General Hospital, USA, [2]Medical University Vienna, Massachusetts General Hospital, Austria, [3]Massachusetts General Hospital, USA, [4]Massachusetts General Hospital, Harvard Medical School, USA
Disclosures: Eva Liu, None

RARE BONE DISEASES: OSTEOGENESIS IMPERFECTA

SA0383 **Osteogenesis Imperfecta in Sweden - Genetic Epidemiology, Prevalence and Genotype-phenotype Correlations**
Katarina Lindahl*[1], Eva Åström[2], Carl-Johan Rubin[3], Giedre Grigelioniene[4], Barbro Malmgren[5], Östen Ljunggren[6], Andreas Kindmark[6]. [1]Endocrinology, Sweden, [2]Department of Women's & Children's Health Karolinska Institutet & Neuropediatric Unit Astrid Lindgren's Children's Hospital at Karolinska University Hospital Stockholm Sweden, Sweden, [3]Department of Medical Biochemistry & Microbiology, Uppsala University, Sweden, [4]Department of Molecular Medicine & Surgery, Karolinska Institutet, Stockholm, Sweden, Sweden, [5]Department of Clinical Science, Intervention & Technology, Division of Paediatrics, Karolinska University Hospital, Huddinge, Sweden & Department of Dental Medicine, Division of Pediatric Dentistry, Karolinska Institutet, Huddinge, Sweden, Sweden, [6]Department of Medical Sciences, Uppsala University, Sweden
Disclosures: Katarina Lindahl, None

SA0384 **Raloxifene reduces skeletal fractures in homozygous OIM male mice**
Alycia Berman*[1], Drew Brown[2], Zachary Bart[3], Erin McNerny[3], Jason Organ[2], Chris Newman[2], Matthew Allen[2], Joseph Wallace[3]. [1]Indiana University - Purdue University Indianapolis, USA, [2]Indiana University School of Medicine, USA, [3]Indiana University Purdue University Indianapolis, USA
Disclosures: Alycia Berman, None

SA0385 **The Effectiveness of Bisphosphonate Treatment in Osteogenesis Imperfecta on Bone Biomarkers and Fracture Rates**
Jay Shapiro*[1], Evelise Brizola[2], Adutu Kantipuly[3]. [1]Kennedy Krieger Institute, Johns Hopkins, USA, [2]Kennedy Krieger Institute, USA, [3]Johns Hopkins School of Public Health, USA
Disclosures: Jay Shapiro, None

RARE BONE DISEASES: OTHER RARE BONE DISEASES

SA0386 **An overview of the etiology, clinical manifestations, management strategies and complications of hypoparathyroidism**
Tayyab Khan*[1], Hamid Syed[2], Aliya Khan[2]. [1]Department of Medicine, Western University, Canada, [2]McMaster University, Canada
Disclosures: Tayyab Khan, None

SA0387 **Bone impairment in primary hyperoxaluria (PH): an ultrastructural analysis**
Delphine Farlay*[1], Justine Bacchetta[2], Pierre Cochat[3], Georges Boivin[4]. [1]INSERM, UMR1033; Université De Lyon, France, [2]Service de Néphrologie, Rhumatologie et Dermatologie Pédiatrique, centre de Référence des Maladies Rénales Rares, Hôpital Femme Mère enfant, Bron; INSERM UMR1033, Université de Lyon, France, [3]service de Néphrologie, Rhumatologie et Dermatologie Pédiatriques, Centre de Référence des Maldaies Rénales Rares, Hôpital Femme Mère Enfant, Bron; Université de Lyon, France, [4]INSERM UMR 1033, Université de Lyon, France
Disclosures: Delphine Farlay, None

SA0388 **GORAB missense mutations disrupt RAB6 and ARF5 binding and Golgi targeting**
Uwe Kornak*[1], Johannes Egerer[2], Denise Emmerich[2], Wing Lee Chan[2], Björn Fischer-Zirnsak[2], David Meierhofer[3], Francis A. Barr[4]. [1]Charité-Universitaetsmedizin Berlin, Germany, [2]Institut fuer Medizinische Genetik und Humangenetik, Charité-Universitaetsmedizin Berlin, Germany, [3]Max Planck Institute for Molecular Genetics, Germany, [4]Department of Biochemistry, University of Oxford, United Kingdom
Disclosures: Uwe Kornak, None

SA0389 **Neonatal High Bone Mass With First Mutation Of the NF-κB Complex: Heterozygous *De Novo* Missense (p.Asp512Ser) *RELA* (Rela/p65)**
Anja L Frederiksen[1], Martin Larsen[1], Klaus Brusgaard[1], Deborah V Novack[2], Peter Juel Thiis Knudsen[3], Henrik Daa Schroeder[1], Christina Eckhardt[1], William H McAlister[2], Steven Mumm
[2], Morten
Frost [1], Michael Whyte*[4]. [1]Odense University Hospital, Denmark, [2]Washington University School of Medicine, USA, [3]University of Southern Denmark, Denmark, [4]Shriners Hospital for Children, USA
Disclosures: Michael Whyte, None

SARCOPENIA, MUSCLE AND BONE (CLINICAL): GENERAL

SA0390 **Advancing Muscle Measurement for Sarcopenia Assessment**
Bjoern Buehring*[1], Ellen Fidler[2], Yosuke Yamada[3], Jessie Libber[2], Diane Krueger[2], Shubha Shankaran[4], Gregg Czerwieniec[4], Chancy Fessler[4], William Evans[4], Scott Turner[4], Marc Hellerstein[4], Dale Schoeller[5], Neil Binkley[2]. [1]University of Wisconsin, Madison, USA, [2]Osteoporosis Clinical Research Program, University of Wisconsin - Madison, Madison, USA, USA, [3]National Institute of Health & Nutrition, Japan, [4]KineMed, Inc., USA, [5]Department of Nutritional Sciences, University of Wisconsin-Madison, USA
Disclosures: Bjoern Buehring, Kinemed Inc

SA0391 **Appendicular Lean Mass and Anxiety Disorders: A Potential Regulatory Role for Skeletal Muscle on Brain Function**
Julie Pasco*[1], Mark Kotowicz[2], Sharon Brennan-Olsen[1], Kara Holloway[1], Felice Jacka[1], Michael Berk[1], Shae Quirk[1], Amanda Stuart[1], Lana Williams[1]. [1]Deakin University, Australia, [2]Deakin University & Barwon Health, Australia
Disclosures: Julie Pasco, None

SA0392 **Appendicular lean mass index is associated with estimated bone strength at the distal radius and distal tibia in middle-aged and older adults**
Jenna Gibbs*[1], Lora Giangregorio[1], Andy Wong[2], Robert Josse[3], Angela Cheung[4]. [1]University of Waterloo, Canada, [2]University Health Network Osteoporosis Program, Canada, [3]St. Michael's Hospital-University of Toronto, Canada, [4]University Health Network-University of Toronto, Canada
Disclosures: Jenna Gibbs, None

SA0393 **Body compositions differently affect bone mineral density in men and women throughout the lifespan : the Korean National Health and Nutrition Examination Survey (KNHANES) 2008-2011**
Yoo Mee Kim*, Yoo Mee Kim, Yoo Mee Kim, Yoo Mee Kim, Yoo Mee Kim. Department of Internal Medicine, Catholic Kwandong University College of Medicine, International St. Mary's Hospital, South korea
Disclosures: Yoo Mee Kim, None

SA0394 **Characteristics of Regional Bone Mineral Density and Soft Tissue Composition in Japanese Elderly Women with Sarcopenia**
Shinjiro Takata*. Tokushima National Hospital,National Hospital Organization, Japan
Disclosures: Shinjiro Takata, None

SA0395 **Physical exercise may prevent sarcopenia in elderly women**
Samu Sjöblom*, Juha Suuronen, Toni Rikkonen, Risto Honkanen, Heikki Kröger, Joonas Sirola. University of Eastern Finland, Finland
Disclosures: Samu Sjöblom, None

SA0396 **Vitamin D Status and Muscle Strength among Ethnic Minorities Residing in Northeast Scotland**
Nor Aini Jamil[1], Stuart Gray[2], William Fraser[3], Helen Macdonald*[2]. [1]University of Aberdeen & Universiti Kebangsaan Malaysia, United Kingdom, [2]University of Aberdeen, United Kingdom, [3]University of East Anglia, United Kingdom
Disclosures: Helen Macdonald, None

SKELETAL AGING: CELLULAR AND MOLECULAR MECHANISMS

SA0397 **Aging and caloric restriction significantly alter the microRNA cargo of exosomes and microvesicles in the bone marrow microenvironment**
Colleen Davis[1], Amy Dukes[1], Sadanand Fulzele[1], Xingming Shi[1], William Hill[1], Carlos Isales[1], Yutao Liu[1], Mark Hamrick*[2]. [1]Georgia Regents University, USA, [2]Georgia Health Sciences University, USA
Disclosures: Mark Hamrick, None

SA0398 **Fracture Repair and Effects of Aging on Macrophages at the Fracture Callus**
Mary Nakamura*[1], Erene Niemi [2], Yang Frank[3], Ted Miclau [3], Ralph Marcucio[3]. [1]University of California, San Francisco/San Francisco VA Medical Center, USA, [2]UCSF/SFVAMC, USA, [3]Orthopaedic Trauma Institute, SFGH, UCSF, USA
Disclosures: Mary Nakamura, None

SA0399 **Identification of Senescent Cells in the Bone Microenvironment: A Key Role for Osteocytes in Skeletal Aging**
Joshua Farr*, David Monroe, Matthew Drake, Daniel Fraser, Tamara Tchkonia, Nathan LeBrasseur, James Kirkland, Sundeep Khosla. Mayo Clinic, USA
Disclosures: Joshua Farr, None

SA0400 **Restraining mitochondrial H_2O_2 generation in cells of the mesenchymal lineage abrogates the adverse effects of aging on the murine skeleton**
Maria Almeida*[1], Serra Semahat Ucer[1], Srividhya Iyer[2], Ha-Neui Kim[1], Li Han[1], Christine Rutlen[1], Shoshana Bartell[1], Aaron Warren[1], Julie Crawford[1], Robert Jilka[1], Stavros Manolagas[1]. [1]Center for Osteoporosis & Metabolic Bone Diseases, Central Arkansas Veterans Healthcare System, University of Arkansas for Medical Sciences, USA, USA, [2]Center for Osteoporosis & Metabolic Bone Diseases, Central Arkansas VA Healthcare System, Univ of Arkansas for Medical Sciences, USA
Disclosures: Maria Almeida, None

SA0401 **Synergistic Effects of Metformin and Sitagliptin on Mesenchymal Stem Cells Maintenance and Differentiation During Aging**
Sudharsan Periyasamy-Thandavan*[1], Sadanand Fulzele[2], Alexandra Aguilar-Pérez[3], Maribeth Johnson[4], Mark Hamrick[3], Carlos Isales[5], William Hill[3]. [1]Georgia Regents University & Charlie Norwood VAMC, USA, [2]Department of Orthopaedic Surgery, Georgia Regents University, USA, [3]Department of Cellular Biology & Anatomy, Georgia Regents University, USA, [4]Department of Biostatistics, Georgia Regents University, USA, [5]Department of Neuroscience & Regenerative Medicine, Georgia Regents University, USA
Disclosures: Sudharsan Periyasamy-Thandavan, None

SKELETAL DEVELOPMENT: BONE MODELING

SA0402 **Measurement of Fluoride in Rat and Monkey Urine**
Florence Poitout-Belissent, Luc Huard, Rana Samadfam, Melanie Felx, Jeffrey McCartney, Susan Smith*. Charles River Laboratories, Canada
Disclosures: Susan Smith, None

SA0403 **Requirement of nitric oxide in bone development and homeostasis informed by genetic deficiency of argininosuccinate lyase**
Zixue Jin*, Jordan Kho, Monica Grover, Brian Dawson, Ming-Ming Jiang, Yuqing Chen, Terry Bertin, Brendan Lee. Baylor College of Medicine, USA
Disclosures: Zixue Jin, None

SKELETAL DEVELOPMENT: GROWTH AND DEVELOPMENT

SA0404 **ASBMR 2015 Annual Meeting Young Investigator Award**
A transcription factor Zfhx4 functions as a transcriptional platform for Osterix during endochondral ossification
Eriko Nakamura*[1], Kenji Hata[2], Michiko Yoshida[2], Tomohiko Murakami[2], Yoshifumi Takahata[2], Makoto Abe[3], Satoshi Wakisaka[3], Toshiyuki Yoneda[4], Riko Nishimura[5]. [1]Osaka University, Japan, [2]Osaka University Graduate School of Dentistry, Dep Mol Cell Biochemistry, Japan, [3]Osaka University Graduate School of Dentistry, Dep Oral Anat Dev Biol, Japan, [4]Indiana University School of Medicine, USA, [5]Osaka University Graduate School of Dentistry, Japan
Disclosures: Eriko Nakamura, None

SA0405 **AP-1 factor interacts with Sox9 during mammalian chondrocyte hypertrophy**
Xinjun He*[1], Shinsuke Ohba[2], Hironori Hojo[1], Andrew McMahon[1]. [1]University of Southern California, USA, [2]University of Tokyo, Japan
Disclosures: Xinjun He, None

SA0406 **Bardet-Biedl Syndrome 3 Is Involved in the Development of Cranial Base**
Makiri Kawasaki*[1], Tadayoshi Hayata[2], Yayoi Izu[1], Yoichi Ezura[1], Masaki Noda[1]. [1]Department of Molecular Pharmacology, Medical Research Institute, Tokyo Medical & Dental University, Japan, [2]Department of Biological Signaling & Regulation, Faculty of Medicine, Project Office of Ph.D program in Life Science Innovation, Japan
Disclosures: Makiri Kawasaki, None

SA0407 **Bone-anabolic effects of histone methyltransferase EZH2 inhibition**
Amel Dudakovic*[1], Emily Camilleri[1], Fuhua Xu[1], Scott Riester[1], Meghan McGee-Lawrence[2], Elizabeth Bradley[1], Christopher Paradise[1], Roman Thaler[1], Eric Lewallen[1], John Hawse[1], Malayannan Subramaniam[1], David Deyle[1], Noelle Larson[1], David Lewallen[1], Gary Stein[3], Martin Montecino[4], Jennifer Westendorf[1], Andre van Wijnen[1]. [1]Mayo Clinic, USA, [2]Georgia Regents University, USA, [3]University of Vermont Medical School, USA, [4] Universidad Andres Bello, Chile
Disclosures: Amel Dudakovic, None

SA0408 **Deletion of the Prolyl Hydroxylase Domain-containing Protein 2 (PHD2) Gene in Chondrocytes Promotes Endochondral Bone formation by Elevating HIF-1α Signaling**
Shaohong Cheng*[1], Weirong Xing[2], Sheila Pourteymoor[2], Catrina Alarcon[2], Subburaman Mohan[2]. [1]VA Loma Linda Health Care Systems, USA, [2]Jerry L Pettis VA Medical Center, USA
Disclosures: Shaohong Cheng, None

SA0409 **Diet Derived Phenolic Acid Regulates Bone Accretion and Senescence Signaling**
Jin-Ran Chen*[1], Oxana P. Lazarenko[2], Michael L. Blackburn[2], Thomas M. Badger[2]. [1]University of Arkansas for Medical Science, Arkansas Children's Nutrition Center, USA, [2]University of Arkansas for Medical Sciences & Arkansas Childrens Nutrition Center, USA
Disclosures: Jin-Ran Chen, None

SA0410 **ER Stress Signaling Transducer IRE1a Links ER Stress to Canonical Wnt Signaling in Regulating Postnatal Bone Development and Homeostasis**
Shankar Revu*[1], Kai Liu[1], Konstantinos Verdelis[1], Alejandro Jose Almarza[1], Donna Stolz[2], Hong-Jiao Ouyang[3]. [1]School of Dental Medicine, University of Pittsburgh, USA, [2]School of Medicine, University of Pittsburgh, USA, [3]University of Pittsburgh, USA
Disclosures: Shankar Revu, None

SA0411 **Matrix vesicle-mediated initiation of skeletal mineralization depends on PHOSPHO1 and PiT-1 function**
Manisha Yadav*[1], Massimo Bottini[2], Pia Kuss[2], Esther Cory[3], Robert Sah[3], Laurent Beck[4], Colin Farquharson[5], Jose Luis Millan[2]. [1]Sanford-Burnham Medical Research Institute, USA, [2]Sanford Children's Health Research Center, Sanford-Burnham Medical Research Institute, USA, [3]Department of Bioengineering, University of California San Diego, USA, [4]Centre for Osteoarticular & Dental Tissue Engineering (LIOAD), Nantes, Cedex, France, France, [5]The Roslin Institute, The University of Edinburgh, Easter Bush, Roslin, Midlothian, EH25 9RG, United Kingdom
Disclosures: Manisha Yadav, None

SA0412 **Newly Identified FGFR2 Isoform Modulates FGF10-FGFR Signaling During Osteochondrogenesis**
Kazuko Kagawa*[1], Hirotaka Yoshioka[2], Saki Okita[3], Koh-ichi Kuremoto[1], Yuichiro Takei[2], Tomoko Minamizaki[2], Kotaro Tanimoto[3], Kazuhiro Tsuga[1], Yuji Yoshiko[2]. [1]Department of Advanced Prosthodontics, Hiroshima University Institute of Biomedical & Health Sciences, Japan, [2]Department of Calcified Tissue Biology, Hiroshima University Institute of Biomedical & Health Sciences, Japan, [3]Department of Orthodontics & Craniofacial Developmental Biology, Hiroshima University Institute of Biomedical & Health Sciences, Japan
Disclosures: Kazuko Kagawa, None

SA0413 **Sex-related Differences in the Axial Skeletal Development of Newborns and Infants**
Skorn Ponrartana[1], Patricia Aggabao[1], Naga Dharmavaram[2], Carissa Fisher[1], Tishya Wren[1], Vicente Gilsanz*[3]. [1]Children's Hospital Los Angeles, Keck School of Medicine, University of Southern California, USA, [2]Children's Hospital Los Angeles, Keck Schoool of Medicine, University of Southern California, USA, [3]Children's Hospital Los Angeles, USA
Disclosures: Vicente Gilsanz, None

SA0414 **Suppression of Autophagy by Postnatal FIP200 Deletion Compromises Cortical Bone Development with Minimal Effect on Trabecular Bone Development**
Li Wang*[1], Fei Liu[2]. [1]University of Michigan, USA, [2]University of Michigan School of Dentistry, USA
Disclosures: Li Wang, None

SA0415 **The role of Wnt signal modulator, sFRP4, in bone formation and metabolism**
Ryuma Haraguchi*[1], Riko Kitazawa[2], Yuuki Imai[2], Sohei Kitazawa[2]. [1]Ehime University Graduate School of Medicine, Japan, [2]Ehime university, Japan
Disclosures: Ryuma Haraguchi, None

SA0416 **TrkA Signaling by Sensory Nerves is Required for Skeletal Development and Repair**
Ryan Tomlinson*[1], Zhi Li[1], Qian Zhang[1], Labchan Rajbhandari[1], Arun Venkatesan[1], David Ginty[2], Thomas Clemens[1]. [1]Johns Hopkins University, USA, [2]Harvard University, USA
Disclosures: Ryan Tomlinson, None

LATE-BREAKING POSTER SESSION I

12:30 pm - 2:30 pm **Washington State Convention Center**
Discovery Hall - Hall 4BC

LB-SA0001 **Marrow Adiposity is Associated With Low Bone Turnover and Sclerostin Levels in Peritoneal Dialysis Patients**
Fellype Barreto[1], Carolina Moreira*[2], Rodrigo de Oliveira[3], Luciene dos Reis[4], Vanda Jorgetti[4], Aluizio Carvalho[5], Rosa Moyses[6]. [1]Pontifícia Universidade Católica do Paraná; Laboratorio P.R.O, Fundaçao Pro Renal, Brazil, [2]Federal University of Parana, Brazil, [3]Universidade Federal do Rio Grande do Norte, Brazil, [4]Universidade de São Paulo, Brazil, [5]Universidade Federal de São Paulo, [6]Universidade de Sao Paulo, Universidade Nove de Julho, Brazil
Disclosures: Carolina Moreira, None

LB-SA0002 **Treatment of Autosomal Dominant Hypocalcemia with the Calcilytic NPSP795**
Mary Ramnitz*[1], Rachel Gafni[2], Beth Brillante[2], Lori Guthrie[2], David Gash[3], Jeffrey Gelb[3], Eva Krusinska[3], Sarah Brennan[4], Daniela Riccardi[4], Mohd Ezuan Bin Khayat[5], Donald Ward[5], Edward Nemeth[6], Ralf Rosskamp[3], Michael Collins[2]. [1]National Institutes of Health, USA, [2]Skeletal Clinical Studies Unit, Craniofacial & Skeletal Diseases Branch (CSDB), National Institute of Dental & Craniofacial Research (NIDCR), National Institutes of Health (NIH), USA, [3]NPS Pharmaceuticals, Inc., USA, [4]School of Biosciences, Cardiff University, USA, [5]Faculty of Life Sciences, University of Manchester, USA, [6]MetisMedica, USA
Disclosures: Mary Ramnitz, NPS Pharmaceuticals, Inc.

LB-SA0003 **Effect of Density on the Creep Response of Human Cortical Bone**
Gavriel Feuer*[1], Mariane Espitalie[1], Subrata Saha[1]. [1]SUNY Downstate, USA
Disclosures: Gavriel Feuer, None

LB-SA0004 **Repeated Scanning of Mouse Hind Limbs Using In Vivo Micro-Computed Tomography Does Not Alter Bone Structure and Muscle Contractile Function in CD-1 Mice**
Sandra Sacco*[1], Caitlin Saint[2], William Gittings[1], Amanda Longo[1], Jordan Bunda[1], Rene Vandenboom[1], Phil Salmon[3], Wendy Ward[4]. [1]Department of Kinesiology, Faculty of Applied Health Sciences, Brock University; Centre for Bone & Muscle Health, Brock University, [2]Department of Health Sciences, Faculty of Applied Health Sciences, Brock University; Centre for Bone & Muscle Health, Brock University, [3]Bruker-MicroCT, [4]Department of Kinesiology, Faculty of Applied Health Sciences, Brock University; Department of Health Sciences, Faculty of Applied Health Sciences, Brock University; Centre for Bone & Muscle Health, Brock University
Disclosures: Sandra Sacco, None

LB-SA0005 **Three-dimensional analysis of chin bone for secondary bone graft with beta- TCP in unilateral cleft patients**
Kazuaki Miyagawa*[1], Sachie Hiroishi[2], Yutaka Matsushita[2], Susumu Tanaka[2], Mikihiko Kogo[2]. [1]Osaka University Graduate School of Dentistry, Japan, [2]Osaka University Graduate School of Dentistry, Japan
Disclosures: Kazuaki Miyagawa, None

LB-SA0006 **Early developmental effects of Bisphenol-A (BPA) on bone structure and function are sex dependent**
Karl Jepsen[1], Lauren Smith*[2], Martha Susiarjo [3], Marisa Bartolomei[3]. [1]University of Michigan, USA, [2]The University of Michigan, USA, [3]University of Pennsylvania Perelman School of Medicine, USA
Disclosures: Lauren Smith, None

LB-SA0007 **Bone-specific underdevelopment of trabecular bone microarchitecture in ambulatory children with mild cerebral palsy**
Daniel Whitney*[1], Harshvardhan Singh[1], Freeman Miller[2], Keri DiAlessandro[2], Nancy Lennon[2], Christopher Modlesky[1]. [1]University of Delaware, USA, [2]AI duPont Hospital for Children, USA
Disclosures: Daniel Whitney, None

LB-SA0008 **Simulating Tumor Induced Bone Disease using a population dynamic model**
Ushashi Dadwal*[1], Mathilde Granke[2], Junhwan Jeon[3], Alyssa Merkel[4], Peter Cummings[5], Julie Sterling[4], Scott Guelcher[5]. [1]Vanderbilt Center for Bone Biology, Vanderbilt University Medical Center, USA, [2]Department of Orthopeadics, USA, [3]Vanderbilt University, USA, [4]Department of Medicine, USA, [5]Deparment of Chemical & Biomolecular Engineering, USA
Disclosures: Ushashi Dadwal, None

LB-SA0009 **Validation of Marrow Fat Quantification using HRpQCT: A Pilot Study**
Tiffiny Butler*[1], Joshua Johnson [1], Karen Troy [1]. [1]Worcester Polytechnic Institute, USA
Disclosures: Tiffiny Butler, None

LB-SA0010 **Zoledronic Acid: A Novel Treatment for Langerhans Cell Histiocytosis Bone Lesions in Children**
Karine Bourdet, Melissa Fiscaletti*, Anne-Sophie Carret, Sophie Turpin, Nathalie Alos. University of Montreal, Canada
Disclosures: Melissa Fiscaletti, None

LB-SA0011 **Inhibition of epigenetic factor Dnmt3b within articular chondrocytes coordinates cellular metabolic response during the development of osteoarthritis**
Jie Shen*[1], Cuicui Wang[2], Jason Myers[3], John Ashton[3], Audrey McAlinden[2], Regis O'Keefe[2]. [1]Washington University in St Louis, USA, [2]Washington University in St Louis, USA, [3]University of Rochester, USA
Disclosures: Jie Shen, None

LB-SA0012 **Bone marrow adipocytes selectively resist lipolysis in response to fasting and β-adrenergic stimulation**
Erica Scheller*[1], William Cawthorn[2], Brian Learman[3], Brent Wu[4], Lindsay Andersen[3], Hoai An Pham[3], Shaima Khandaker[3], Aaron Burr[3], Sebastian Parlee[3], Becky Simon[3], Hiroyuki Mori[3], Adam Bree[3], Benjamin Schell[3], Ormond MacDougald[3]. [1]University of Michigan, USA, [2]University of Edinburgh, United Kingdom, [3]University of Michigan, USA, [4]University of Illinois, USA
Disclosures: Erica Scheller, None

LB-SA0013 **Novel Metabolic Pathways Controlled by Metformin in Diabetic Mouse Bone Marrow**
Yuqi Guo[1], Xin Li[1]*. [1]NYU
Disclosures: Yuqi Guo, None

LB-SA0014 **Tibial Geomorphometry Indicate Stronger Bones in *mdx* Mice at 10 and 20 Weeks of Age**
Caitlin Saint*[1], Maral Zibamanzarmofrad[2], Sandra Sacco[2], William Gittings[2], Rene Vandenboom[2], Wendy Ward[2], Paul LeBlanc[2]. [1]Canada, [2]Brock University
Disclosures: Caitlin Saint, None

LB-SA0015 **LIAISON XL Assay for the Measurement & Monitoring of Active Vitamin D Analogs**
Frank Blocki*[1], Greg Olson[2], John Wall[2], Jeremy Seeman[2], Fabrizio Bonelli[2], J.Ruth Wu-Wong[3]. [1]DiaSorin Incorporated, USA, [2]DiaSorin Inc, USA, [3]VidaSym, USA
Disclosures: Frank Blocki, DiaSorin Inc

LB-SA0016 **Timing of Indomethacin Administration Causes Differential PGE_2 Response in Fluid Shear Stress Stimulated MLO-Y4 Cells**
Cheryl Druchok*[1], Lidan You[2], Gregory Wohl[3]. [1]McMaster University, Canada, [2]Department of Mechanical & Industrial Engineering, Institute of Biomaterials & Biomedical Engineering, University of Toronto, Canada, [3]Department of Mechanical Engineering, McMaster School of Biomedical Engineering, McMaster University, Canada
Disclosures: Cheryl Druchok, None

LB-SA0017 **Reversal of *Sost* Deficiency-Induced Sclerosing Bone Gain by Inhibition of Wnt Ligand Secretion**
Ina Kramer*[1], Sabine Guth-Gundel[2], Christine Halleux[2], Shea Carter[2], Jun Liu[3], Jennifer L. Harris[3], Michaela Kneissel[2]. [1]Novartis Institutes for Biomedical Research, Switzerland, [2]Musculoskeletal Disease Area, Novartis Institutes for BioMedical Research, Switzerland, [3]Genomics Institute of the Novartis Research Foundation, Switzerland
Disclosures: Ina Kramer, Novartis Pharma AG

LB-SA0018 **Conditional Deletion of Protein Kinase D1 in Osteoprogenitor Cells Results in Decreased Osteogenesis *in vitro* and Decreased Bone Mineral Density *in vivo***
Wendy Bollag*[1], Vivek Choudhary[1], Qing Zhong[2], Kehong Ding[2], Jianrui Xu[2], Lakiea Bailey[2], Maribeth Johnson[2], Yun Su[2], Meghan McGee-Lawrence[2], Xingming Shi[2], Carlos Isales[3]. [1]Charlie Norwood VA Medical Center & Georgia Regents University, USA, [2]Georgia Regents University, USA
Disclosures: Wendy Bollag, None

LB-SA0019 **Performance evaluation of the first fully automated immunoassay for Sclerostin detection and measurement**
Jennifer Woodley*[1], Frank Blocki[1], Kim Hilgers[1], Christa Klatt[1], Pete Voth[1], John Wall[1], Greg Olson[1], James Wassenberg[1], Fabrizio Bonelli[1]. [1]DiaSorin
Disclosures: Jennifer Woodley, None

LB-SA0020 **A Novel Bone Graft with an Osteoinductive Surface: Fortigen has rhBMP-2-like characteristics in vitro**
Helen Newman*[1], Larry Shimp[2]. [1]VTS & Progenica Therapeutics, [2]Progenica Therapeutics & CaP Biomaterials
Disclosures: Helen Newman, None

LB-SA0021 **Increased bone mass and biomechanical properties in mice deficient for FIAT (Factor Inhibiting ATF4-mediated Transcription)**
Bahareh Hekmatnejad*[1], Vionnie W.C. Yu[2], Vice Mandic[2], Martin Pellicelli[1], Alice Arabian[2], Rene St-Arnaud[3]. [1]Dept of Human Genetics, McGill University, Canada, [2]Shriners Hospitals for Children - Canada, [3]Shriners Hospital for Children & McGill University, Canada
Disclosures: Bahareh Hekmatnejad, None

LB-SA0022 **Insulin Receptor Substrate 1 Time-dependently Regulates Bone Formation by Controlling Collagen I Alpha 2 Expression Through miR-342**
Hou-De Zhou*[1], Yue Guo[2], Chen-Yi Tang[2], Xiao-Fei Man[2], She-Wen Tan[2], Hao-Neng Tang[2], Fang Wang[2], Jun Tang[2], Ci-La Zhou[2]. [1]The 2nd Xiangya Hospital of Central South University, China, [2]Institute of Endocrinology & Metabolism, the Second Xiangya Hospital of Central South University, China
Disclosures: Hou-De Zhou, None

LB-SA0023 **Loss of the nutrient sensor Tas1R3 leads to reduced bone resorption**
Michael Eaton[1], Jordan Newby[2], Maggie Plattes[3], Hannah Foster[3], Brian Dewar[3], Eric Wauson[4], Jon Arthur[5], Jonathan Lowery*[5]. [1]Department of Biomedical Science, Marian University College of Osteopathic Medicine, [2]Department of Biomedical Science, Marian University College of Osteopathic Medicine & Department of Biology, Freed-Hardeman University, [3]Department of Biology, Taylor University, [4]Department of Physiology & Pharmacology, [5]Department of Biomedical Science
Disclosures: Jonathan Lowery, None

LB-SA0024 **Cellular senescence phenotype attributes trigger of bone remodeling to monocyte recruitment**
Insun Song*, Yong Jun Choi, Yoon-Sok Chung. Ajou University School of Medicine, South Korea
Disclosures: Insun Song, None

LB-SA0025 **Transgene expression by Dmp1 promoter fragments occurs in various ogans**
Hiroaki Saito*[1], Hanna Taipaleenmäki[2], Ahmed Al-Jazzar[3], Andreas Gasser[1], Behzad Javaheri[3], Cheryl Scudamore[3], Teresita Bellido [4], Andrew A Pitsillides[3], Eric Hesse[1]. [1]Heisenberg-Group for Molecular Skeletal Biology, Department of Trauma, Hand & Reconstructive Surgery, University Medical Center Hamburg-Eppendorf, Germany, [2]University Medical Center Hamburg-Eppendorf, Germany, [3]Comparative Biomedical Sciences, The Royal Veterinary College, [4]Department of Anatomy & Cell Biology, Indiana University School of Medicine, USA
Disclosures: Hiroaki Saito, None

LB-SA0026 **Defined Sets of Transcription Factors Induce the Expression of Functional Sclerostin in Human Dermal Fibroblasts and Its Expression Responds to Parathyroid Hormone, Hypoxia and Prostaglandin E2.**
Makoto Fujiwara*[1], Wei Wang[2], Taichi Kitaoka[2], Takuo Kubota[2], Yasuji Kitabatake[2], Noriyuki Namba[3], Toshimi Michigami[4], Keiichi Ozono[2]. [1]Osaka University graduate school of medicine, Japan, [2]Department of Pediatrics, Osaka University Graduate School of Medicine, Japan, [3]Department of Pediatrics,Osaka University Graduate School of Medicine, [4]Department of Bone & Mineral Research, Osaka Medical Center & Research Institute for Maternal & Child Health, Japan
Disclosures: Makoto Fujiwara, None

LB-SA0027 **Bone Turnover Markers in Young Women**
Emma Callegari*[1], Alexandra Gorelik[2], Nicola Reavley[1], Suzanne M. Garland[3], Cherie Chiang[4], John D. Wark[5]. [1]The University of Melbourne, Grattan St, Melbourne, Victoria, Australia, [2]Melbourne EpiCentre, Royal Melbourne Hospital, University of Melbourne, Parkville, Victoria, Australia, [3]The University of Melbourne, Grattan St, Melbourne, Victoria, Australia; Murdoch Childrens Research Institute, Melbourne, Victoria, Australia; Royal Women's Hospital, Parkville, Melbourne, Victoria, Australia, [4]Melbourne Health Shared Pathology Services, Royal Melbourne Hospital, Parkville, Melbourne, Victoria, Australia, [5]The University of Melbourne, Grattan St, Melbourne, Victoria, Australia; Bone & Mineral Medicine, Royal Melbourne Hospital, Parkville, Victoria, Australia
Disclosures: Emma Callegari, None

LB-SA0028 **Bone Microstructure Identifies Women Without Osteoporosis Suffering Fragility Fractures: the prospective OFELY study**
Stephanie Boutroy*[1], Roger Zebaze[2], Elisabeth Sornay-Rendu[3], Ego Seeman[2], Roland Chapurlat[3]. [1]INSERM UMR1033 & Université de Lyon, France, [2]Depts. Medicine & Endocrinology, Austin Health, University of Melbourne, & Straxcorp, [3]INSERM UMR1033 & Université de Lyon, France
Disclosures: Stephanie Boutroy, None

LB-SA0029 **Digital X-ray radiogrammetry in the Study of Osteoporotic Fractures: Comparison to dual energy X-ray absorptiometry and FRAX**
Johan Kalvesten*[1], Lily Y Lui[2], Torkel B Brismar[3], Steven R Cummings[2]. [1]Linköping UniversitySectra, Sweden, [2]San Francisco Coordinating Center, California Pacific Medical Center, San Francisco, CA, USA, [3]Karolinska Institutet, Department for Clinical Science, Intervention & Technology, Division of Radiology, Karolinska University Hospital, Sweden
Disclosures: Johan Kalvesten, Sectra AB

LB-SA0030 **Low Bone Mass Density Is Associated with Tooth Loss in Postmenopausal Women: A Nationwide Representative Study**
Jeong Gyu Lee*. Pusan National University Hospital
Disclosures: Jeong Gyu Lee, None

LB-SA0031 **Relation between decreased IL-18BP levels and risk of osteoporosis in post menopausal osteoporotic patients: Role of IL-18BP in preventing bone loss by positively regulating Treg/ Th17 balance**
Mohd Nizam Mansoori*[1], Priyanka Shukla [1], Abdul Malik[1], Kamini Srivastava[1], Manisha Kakaji[2], Karam bir Kumar[2], Manisha Dixit[1], Jyoti Kureel[1], Sushil Kumar Gupta[2], Divya Singh[1]. [1]CDRI, [2]SGPGI
Disclosures: Mohd Nizam Mansoori, None

LB-SA0032 **Imminent Risk of Fracture after Fracture**
Helena Johansson[1], Kristin Siggeirsdottir[2], Nicholas Harvey[3], Anders Odén[4], Vilmundur Gudnason[5], Eugene McCloskey[4], Gunnar Sigurdsson[2], John Kanis*[4]. [1]Centre for Metabolic Bone Diseases, University of Sheffield Medical School, Sweden, [2]Icelandic Heart Association, [3]MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, [4]Centre for Metabolic Bone Diseases, University of Sheffield, [5]Icelandic Heart Association, Kopavogur, University of Iceland
Disclosures: John Kanis, None

LB-SA0033 **Clinically effective PKPD in Post-Menopausal Women after Transdermal hPTH(1-34) Delivery**
Bobby Singh*, Vaeling Miller[1]. [1]Corium
Disclosures: Bobby Singh, None

LB-SA0034 **National Observational Study of Subtrochanteric, Femoral Shaft and Hip Fractures in New Alendronate Users 1996 to 2003.**
Bo Abrahamsen*[1], Daniel Prieto-Alhambra[2], Pia Eiken[3], Richard Eastell[4]. [1]University of Southern Denmark, Denmark, [2]Oxford NIHR Musculoskeletal Biomedical Research Unit, Nuffield Department of Orthopaedics, [3]Hillerød Hospital, [4]Academic Unit of Bone Metabolism, The University of Sheffield
Disclosures: Bo Abrahamsen, None

LB-SA0035 **Striking Response of Tumor-Induced Osteomalacia to the FGFR Inhibitor NVP-BGJ398**
Michael Collins*[1], Clemens Bergwitz[2], Gabriella Aitcheson[1], Jenny Blau[1], Alison Boyce[1], Rachel Gafni[3], Lori Guthrie[1], Flora Miranda[4], Eric Slosberg[4], Diana Graus Porta[5], Christine Hopmann[6], Karim Welaya[6], Randi Isaacs[5], Carole Miller[6]. [1]National Institutes of Health, USA, [2]Yale School of Medicine, USA, [3]National Institutes of Health, USA, [4]Novartis Pharmaceuticals, [5]Novartis Institutes for BioMedical Research, [6]Saint Agnes Cancer Center
Disclosures: Michael Collins, None

LB-SA0036 **M-CSF is a potential target for Gorham-Stout disease, a disease characterized by lymphatic vessel invasion of bone marrow and massive osteolysis**
Lianping Xing*, Wensheng Wang, Mengmeng Wang, Li Xing, Sun Wen, Brendan Boyce. University of Rochester, USA
Disclosures: Lianping XingNone

LB-SA0037 ***Enterococcus faecalis*** **attenuates both osteoclastogenesis and osteoblastogenesis**
Ok-Jin Park*[1], Jiseon Kim[2], Jihyun Yang[3], Cheol-Heui Yun[2], Seung Hyun Han[2]. [1]Seoul National University School of Dentistry, South korea, [2]Seoul National University, South Korea, [3]Korea Research Institute of Bioscience & Biotechnology
Disclosures: Ok-Jin Park, None

CONCURRENT ORALS: NEW INSIGHTS IN BONE FORMATION

2:30 pm - 4:00 pm **Washington State Convention Center**

Room 6A

Moderators:
Nathan Pavlos, Ph.D.
University of Western Australia, Australia
Disclosures: Nathan Pavlos, None

Anne Delany, Ph.D.
University of Connecticut Health Center, USA
Disclosures: Anne Delany, None

2:30 pm 1033 **Decreased cancellous bone mass in a murine model of type 1 diabetes is caused by cell autonomous effects of FoxOs in committed osteoblast precursors and their descendants**
Srividhya Iyer*[1], Li Han[2], Serra Semahat Ucer[2], Ha-Neui Kim[2], Aaron Warren[2], Julie Crawford[2], John Fowlkes[3], Stavros Manolagas[2], Maria Almeida[2]. [1]Central Arkansas VA Healthcare System, Univ of Arkansas for Medical Sciences, USA, [2]Center for Osteoporosis & Metabolic Bone Diseases, Central Arkansas Veterans Healthcare System, University of Arkansas for Medical Sciences, USA, USA, [3]Barnstable Brown Diabetes & Obesity Center, University of Kentucky College of Medicine, UK Healthcare, USA
Disclosures: Srividhya Iyer, None

2:45 pm 1034 **ASBMR 2015 Annual Meeting Young Investigator Award**
Protein Phosphatase 5 (PP5) conveys negative effect of rosiglitazone on bone by inversely regulating PPARγ and Runx2 activities
Lance Stechschulte*[1], Piotr J. Czernik[2], Edwin R. Sanchez[3], Beata Lecka-Czernik[1]. [1]Department Orthopaedic Surgery, Center for Diabetes & Endocrine Research, University of Toledo, College of Medicine & Life Sciences, USA, [2]Micro Tomografix Ltd., USA, [3]Department of Physiology & Pharmacology, Center for Diabetes & Endocrine Research, University of Toledo, College of Medicine & Life Sciences, USA
Disclosures: Lance Stechschulte, None

3:00 pm 1035 **Hydrogen Sulfide Is a Novel Regulator Of Bone Formation Implicated In The Bone Loss Induced by Estrogen Deficiency**
Francesco Grassi*[1], Abdul Malik Tyagi[2], Jonathan Adams[2], Lindsey D. Walker[2], Jau-Yi Li[2], John W Calvert[3], Laura Gambari[4], Gina Lisignoli[4], Jerid Robinson[2], Roberto Pacifici[5]. [1]Istituti Ortopedici Rizzoli, Italy, [2]Division of Endocrinology, Metabolism, & Lipids, Emory University, USA, [3]Cardiothoracic Research Laboratory, Department of Surgery, Emory University, USA, [4]Lab di Immunoreumatologia e Rigenerazione Tissutale, Istituto Ortopedico Rizzoli, Italy, [5]Division of Endocrinology, Metabolism, & Lipids, Immunology & Molecular Pathogenesis Program, Emory University, USA
Disclosures: Francesco Grassi, None

3:15 pm 1036 **ASBMR 2015 Annual Meeting Young Investigator Award**
FGFR3 Modulates Fracture Repair by Controlling the Balance of Intramembranous and Endochondral Bone Formation
Simon Kelley*[1], Chunying Yu[2], Heather Whetstone[2], Benjamin Alman[3]. [1]The Hospital for Sick Children, Toronto, Ontario, Canada, Canada, [2]The Hospital for Sick Children, Canada, [3]Duke University, USA
Disclosures: Simon Kelley, None

3:30 pm 1037 **ASBMR 2015 Annual Meeting Young Investigator Award**
Intermittent PTH Alleviates Abnormalities of Bone Tissue Heterogeneity Associated with Prolonged Bisphosphonate Treatment by Inducing Substantial New Bone Formation
Allison Altman*[1], Yong-Hoon Jeong[2], Wei-Ju Tseng[1], Chantal de Bakker[1], Ling Qin[1], Lin Han[3], Do-Gyoon Kim[2], X. Sherry Liu[1]. [1]University of Pennsylvania, USA, [2]Ohio State University, USA, [3]Drexel University, USA
Disclosures: Allison Altman, None

3:45 pm **ASBMR 2015 Annual Meeting Young Investigator Award**
1038 **Genome-wide analysis of DNA methylation identifies a novel locus associated with bone mineral density**
John Morris*[1], Pei-Chien Tsai[2], Fei Gao[3], Vincenzo Forgetta[4], Yudong Xia[3], Celia Greenwood[1], Elin Grundberg[1], Tim Spector[2], Jun Wang[3], Jordana Bell[2], Brent Richards[1]. [1]McGill University, Canada, [2]King's College London, United Kingdom, [3]BGI-Shenzhen, China, [4]Lady Davis Institute for Medical Research, Canada
Disclosures: John Morris, None

CONCURRENT ORALS: OSTEOCLASTS I

2:30 pm - 4:00 pm **Washington State Convention Center**
Room 6C

Moderators:
Yihong Wan, Ph.D., M.S.
University of Texas Southwestern Medical Center, USA
Disclosures: Yihong Wan, None

Yousef Abu-Amer, Ph.D.
Washington University in St. Louis School of Medicine, USA
Disclosures: Yousef Abu-Amer, None

2:30 pm **Def6 restrains osteoclastogenesis and inflammatory bone resorption**
1039 Nikolaus Binder[1], F. Patrick Ross[1], Christine Miller[1], Lionel B. Ivashkiv[1], Georg Schett[2], Alessandra Pernis[1], Steven R. Goldring[1], Baohong Zhao*[1]. [1]Hospital for Special Surgery, USA, [2]University of Erlangen-Nuremberg, Germany
Disclosures: Baohong Zhao, None

2:45 pm **ASBMR 2015 Annual Meeting Young Investigator Award**
1040 **Gna13 gain-of-function to protect mice from inflammatory bone loss in rheumatoid arthritis through inhibiting AKT activity in osteoclasts**
Mengrui Wu*[1], Wei Chen[2], Yun Lu[2], Guochun Zhu[2], Liang Hao[2], Yi-Ping Li[2]. [1]The University of Alabama at Birmingham, USA, [2]UAB, USA
Disclosures: Mengrui Wu, None

3:00 pm **The translational repressor Musashi-2 promotes osteoclastogenesis by regulating Numb/Notch**
1041 **signaling**
Toshifumi Fujiwara*[1], Shiqiao Ye[1], Haibo Zhao[2]. [1]Center for Osteoporosis & Metabolic Bone Diseases, Division of Endocrinology & Metabolism, Department of Internal Medicine, University of Arkansas for Medical Sciences & the Central Arkansas Veterans Healthcare System, USA, [2]Central Arkansas VA Healthcare System, Univ of Arkansas for Medical Sciences, USA
Disclosures: Toshifumi Fujiwara, None

3:15 pm **ASBMR 2015 Annual Meeting Young Investigator Award**
1042 **Osteoclast-derived exosomal miR-214 inhibits osteoblastic bone formation**
Li Defang*[1], Jin Liu[2], Baosheng Guo[2], Chao Liang[2], Lei Dang[2], Aiping Lu[2], Ge Zhang[2]. [1]Institute for Advancing Translational Medicine in Bone & Joint Diseases, School of Chinese Medicine, Hong Kong Baptist University, Hong Kong SAR, , [2]Institute for Advancing Translational Medicine in Bone & Joint Diseases, School of Chinese Medicine, Hong Kong Baptist University, Hong Kong SAR, China
Disclosures: Li Defang, None

3:30 pm **Osteoclast lineage cells are a crucial source of Wnt proteins in load-induced bone modeling**
1043 Megan Weivoda*[1], Ming Ruan[1], Christine Hachfeld[1], Larry Pederson[1], Jean Vacher[2], Richard Lang[3], Bart Williams[4], Jennifer Westendorf[1], Sundeep Khosla[1], Merry Jo Oursler[1]. [1]Mayo Clinic, USA, [2]IRCM, Canada, [3]Cincinatti Childrens, USA, [4]Van Andel Institute, USA
Disclosures: Megan Weivoda, None

3:45 pm **ASBMR 2015 Annual Meeting Young Investigator Award**
1044 **RANKL/OPG double deficient medaka unveils the decision system for the bone resorption site in a whole-body**
Masahiro Chatani*[1], Yoshiro Takano[2], Takeshi Todo[3], Akira Kudo[1]. [1]Tokyo Institute of Technology, Japan, [2]Tokyo Medical & Dental University, Japan, [3]Osaka University, Japan
Disclosures: Masahiro Chatani, None

CONCURRENT ORALS: OSTEOCYTES

2:30 pm - 4:00 pm **Washington State Convention Center**
Room 6B

Moderators:
Alexander Robling, Ph.D.
Indiana University, USA
Disclosures: Alexander Robling, None

Sarah Dallas, Ph.D.
University of Missouri - Kansas City, USA
Disclosures: Sarah Dallas, None

2:30 pm **ASBMR 2015 Annual Meeting Young Investigator Award**
1045 **The MicroRNA miR-23a Cluster Regulates the Differentiation of Osteoblasts into Osteocytes**
Huan-Chang Zeng*, Yangjin Bae, Yuqing Chen, Terry Bertin, Brian Dawson, Elda Munivez, Jianning Tao, Brendan Lee. Baylor College of medicine, USA
Disclosures: Huan-Chang Zeng, None

2:45 pm **Class IIa HDACs are required for PTH-mediated suppression of SOST in osteocytes**
1046 Marc Wein*[1], Elizabeth Williams[2], Nicolas Govea[2], Shigeki Nishimori[2], Kenichi Nagano[3], Daniel Brooks[2], Roland Baron[3], Mary Bouxsein[2], Paola Divieti-Pajevic[2], Henry Kronenberg[2]. [1]Massachusetts General Hospital, USA, [2]MGH Endocrine Unit, USA, [3]Harvard School of Dental Medicine, USA
Disclosures: Marc Wein, None

3:00 pm **SOST Downregulates Notch Signaling and Reverses the Effects of Notch in Osteocytes**
1047 Stefano Zanotti*[1], Lauren Schilling[1], Ernesto Canalis[2]. [1]UConn Health, USA, [2]University of Connecticut Health Center, USA
Disclosures: Stefano Zanotti, None

3:15 pm **Targeted Disruption of BMP Signaling Through Type IA Receptor (BMPRIA) in Osteocyte**
1048 **Suppresses SOST and RANKL, Leading to a Dramatic Increase in Bone Density and Mechanical Strength**
Nobuhiro Kamiya*[1], Harry Kim[2]. [1]Tenri University, Japan, [2]Texas Scottish Rite Hospital for Children, USA
Disclosures: Nobuhiro Kamiya, None

3:30 pm **ASBMR 2015 Annual Meeting Young Investigator Award**
1049 **CYR61 Regulates Bone Turnover Through Inhibiting Sclerostin Expression and Angiogenesis in Osteocytes**
Gexin Zhao*[1], Chinmay Bhoot[2], Karen Lyons[2]. [1]UCLA Department of Orthopaedic Surgery, USA, [2]University of California, Los Angeles, USA
Disclosures: Gexin Zhao, None

3:45 pm **ASBMR 2015 Annual Meeting Young Investigator Award**
1050 **Osteocyte-specific HIF-1alpha Signaling Regulates Bone Mass and Protects Mice From Osteoporotic Bone Loss**
Steve Stegen*[1], Ingrid Stockmans[1], Karen Moermans[1], Peter Carmeliet[2], Geert Carmeliet[1]. [1]Laboratory of Clinical & Experimental Endocrinology, KU Leuven, Belgium, [2]Angiogenesis & Neurovascular Link, Vesalius Research Center, VIB, & Angiogenesis & Neurovascular Link, Vesalius Research Center, KU Leuven, Belgium
Disclosures: Steve Stegen, None

CONCURRENT ORALS: OSTEOPOROSIS THERAPY AND MANAGEMENT

2:30 pm - 4:00 pm **Washington State Convention Center**
Hall 4A

Moderators:
Jorge Malouf II, M.D.
Hospital de la Santa Creu i Sant Pau, Spain
Disclosures: Jorge Malouf, None

Lynn Kohlmeier, M.D.
Spokane Osteoporosis, USA
Disclosures: Lynn Kohlmeier, None

2:30 pm **Vitamin K2 treatment prevents postmenopausal bone loss and microarchitectural deterioration**
1051 **of trabecular bone**
Sofie Roenn*, Torben Harsloef, Steen Boenloekke Pedersen, Bente Langdahl. Department of Endocrinology & Internal Medicine, Aarhus University Hospital, THG, Denmark
Disclosures: Sofie Roenn, None

2:45 pm **ASBMR 2015 Annual Meeting Young Investigator Award**
1052 **Bone's Material Composition and Microstructure are Compromised in Women Sustaining Atypical Femoral Fractures During Antiresorptive Therapy**
Cherie Chiang*[1], Ego Seeman[2], Ali Ghasem Zadeh[2], Sandra Iuliano[2], Peter Ebeling[3], Hanh Nguyen[3], Roger Zebaze[2]. [1]Austin Health, Australia, [2]Austin Health, University of Melbourne, Australia, [3]Monash Medical Centre, Monash University, Australia
Disclosures: Cherie Chiang, None

3:00 pm **Effects of Abaloparatide on Major Osteoporotic Fracture Incidence in Postmenopausal**
1053 **Women with Osteoporosis - Results of the Phase 3 ACTIVE Trial**
Lorraine Fitzpatrick*[4], Greg Williams[1], Willard Dere[2], Alan Harris[1], Ming-Yi (Tristan) Hu[1], Kate Banks[1], Gary Hattersley[3]. [1]Radius Health, USA, [2]U of Utah Medical Center, USA, [3]Radius Health, United states, [4]GlaxoSmith Kline Pharmaceuticals, USA
Disclosures: Lorraine Fitzpatrick, Radius Health

3:15 pm **Effects of Denosumab on Bone Matrix Mineralization: Results From the Phase 3 FREEDOM**
1054 **Trial**
David Dempster*[1], Jacques P Brown[2], Susan Yue[3], Delphine Farlay[4], Sebastien Rizzo[4], Jenny Song[3], Andrea Wang[3], Rachel B Wagman[3], Georges Boivin[4]. [1]Columbia University & Helen Hayes Hospital, USA, [2]Laval University & CHU de Quebec-(CHUL) Research Centre, Canada, [3]Amgen Inc., USA, [4]INSERM UMR 1033, Université de Lyon, France
Disclosures: David Dempster, Eli Lilly, Amgen; Eli Lilly, Merck, Amgen; Eli Lilly

3:30 pm **Effect of Denosumab (DMAB) and Teriparatide (TPTD) Transitions on Peripheral Bone**
1055 **Mineral Density (BMD) and Microarchitecture: The DATA-Switch HR-pQCT Study**
Joy Tsai*[1], Alexander Uihlein[2], Sherri-Ann Burnett-Bowie[1], Robert Neer[1], Padrig Tuck[1], Paul Wallace[1], Mary Bouxsein[3], Benjamin Leder[1]. [1]Massachusetts General Hospital, USA, [2]Northwestern University, USA, [3]Beth Israel Deaconess Medical Center, USA
Disclosures: Joy Tsai, None

3:45 pm **Effect of Odanacatib on Bone Density and Estimated Bone Strength in Postmenopausal**
1056 **Women: a CT-Based Sub-study of the Phase 3 Long-Term Odanacatib Fracture Trial (LOFT)**
Bente Langdahl*[1], Tobias DeVilliers[2], Tony Keaveny[3], Klaus Engelke[4], Harry Genant[5], Shabana Ather[6], Hilde Giezek[6], Antonio Lombardi[6], Albert Leung[7], Anne de Papp[6]. [1]Aarhus University Hospital, Denmark, [2]Mediclinic Panorama & Department of Obstetrics & Gynaecology, University of Stellenbosch, South africa, [3]University of California & O.N. Diagnostics, USA, [4]Bioclinica-Synarc Germany, Germany, [5]University of California, USA, [6]Merck & Co., Inc., USA, [7]Formerly Merck & Co., Inc., USA
Disclosures: Bente Langdahl, Amgen, Lilly, Merck; Lilly, Novo Nordisk, Orkla; Amgen, Lilly, Merck, UCB

NETWORKING BREAK

4:00 pm - 4:30 pm **Washington State Convention Center**
Discovery Hall - Hall 4BC

CONCURRENT ORALS: CARTILAGE AND OSTEOARTHRITIS

4:30 pm - 6:00 pm **Washington State Convention Center**
Room 6C

Moderators:
Martine Cohen-Solal, M.D.
Centre Viggo Petersen, France
Disclosures: Martine Cohen-Solal, None

Matthew Hilton, Ph.D.
Duke University School of Medicine, USA
Disclosures: Matthew Hilton, None

4:30 pm **Analysis of Signaling Downstream of PTHrP in Chondrocytes through Genetic Manipulation**
1057 Shigeki Nishimori*, Marc N. Wein, Henry M. Kronenberg. Massachusetts General Hospital, USA
Disclosures: Shigeki Nishimori, None

4:45 pm **Distinct modes of Sox9 action in transcriptional regulation of the developing mammalian**
1058 **chondrocyte**
Shinsuke Ohba*[1], Xinjun He[2], Hironori Hojo[2], Andrew P. McMahon[2]. [1]The University of Tokyo, Japan, [2]W.M. Keck School of Medicine of the University of Southern California, USA
Disclosures: Shinsuke Ohba, None

5:00 pm **ASBMR 2015 Annual Meeting Young Investigator Award**
1059 **Epidermal Growth Factor Receptor (EGFR) Signaling Is Critical for Maintaining Articular Cartilage and Preventing Osteoarthritis Progression**
Haoruo Jia*[1], Basak Doyran[2], Wei Tong[1], Xianrong Zhang[3], Motomi Enomoto-Iwamoto[4], Lin Han[2], Ling Qin[1]. [1]Department of Orthopaedic Surgery, School of Medicine, University of Pennsylvania, USA, [2]School of Biomedical Engineering, Science & Health Systems, Drexel University, USA, [3]Department of Physiology, School of Basic Medical Sciences, Wuhan University, China, [4]Department of Surgery, The Children's Hospital of Philadelphia, USA
Disclosures: Haoruo Jia, None

5:15 pm 1060 **Phlpp1 Deletion Increases Fgf18 Expression and Protects Against Post-Traumatic Osteoarthritis**
Elizabeth Bradley*[1], Lomeli Carpio[1], Derek Amanatullah[1], Sanjeev Kakar[1], Lauren Ta[1], Alexandra Newton[2], Jennifer Westendorf[1]. [1]Mayo Clinic, USA, [2]University of California, USA
Disclosures: Elizabeth Bradley, None

5:30 pm 1061 **ASBMR 2015 Annual Meeting Young Investigator Award**
The Role of Fibroblast Growth Factor 2 Isoforms in Osteoarthritis
Patience Meo Burt*[1], Marja Hurley[2], Thomas Doetschman[3]. [1]University of Connecticut Health Center, USA, [2]UCONN Health, USA, [3]University of Arizona, USA
Disclosures: Patience Meo Burt, None

5:45 pm 1062 **Sost Protects Mouse Joints from Post Traumatic Mediated Cartilage Degradation by Inhibiting MMP-Activity**
Jiun Chiun Chang*[1], Blaine A. Christiansen[2], Nicole Collette[3], Aimy Sebastian[4], Deepa K. Murugesh[3], Sarah Hatsell[5], Aris N. Economides[5], Craig D. Blanchette[3], Gabriela G. Loots[3]. [1]University of California, Merced, USA, [2]UC Davis Medical Center, USA, [3]Lawrence Livermore National Laboratories, USA, [4]University of California Merced, USA, [5]Regeneron Pharmaceuticals, USA
Disclosures: Jiun Chiun Chang, None

CONCURRENT ORALS: FRACTURE RISK AND FRAGILITY

4:30 pm - 6:00 pm **Washington State Convention Center**
Room 6B

Moderators:
Patricia Clark, M.D., Ph.D.
Laboratorios Clinicos De Puebla, Mexico
Disclosures: Patricia Clark, None

Thierry Chevalley, M.D.
University Hospitals of Geneva Division of Bone Diseases, Switzerland
Disclosures: Thierry Chevalley, None

4:30 pm 1063 **Increasing Pediatric Wrist Fracture Rates May Have Major Implications for Future Adult Fracture Burden**
Daniel Jerrhag[1], Martin Englund[2], Ingmar Petersson[3], Lennart Landin[1], Magnus Karlsson[1], Bjorn Rosengren*[1]. [1]Skåne University Hospital Malmö, Lund University, Sweden, [2]Clinical Epidemiology Unit, Orthopaedics, Clinical Sciences Lund, Lund University; Epidemiology & Register Centre South, Skåne University Hospital Lund, Sweden, Sweden, [3]Orthopaedics, Clinical Sciences Lund, Lund University; Epidemiology & Register Centre South, Skåne University Hospital Lund, Sweden, Sweden
Disclosures: Bjorn Rosengren, None

4:45 pm 1064 **ASBMR 2015 Annual Meeting Young Investigator Award**
Increased Physical Activity in Childhood Reduces Fracture Risk - an 8-Year Intervention Study in 3 534 Children
Marcus Coster*[1], Jesper Fritz[2], Jan-Ake Nilsson[2], Magnus Dencker[2], Bjorn Rosengren[2], Magnus Karlsson[2]. [1]M.D., Sweden, [2]Lunds Universitet, Sweden
Disclosures: Marcus Coster, None

5:00 pm 1065 **Are Psychiatric Illnesses and the Medications Used to Treat Them FRAX-Independent Risk Factors? The Manitoba BMD Cohort**
William Leslie*[1], James Bolton[1], Suzanne Morin[2], Sumit Majumdar[3], Lisa M. Lix[1], Helena Johansson[4], Anders Oden[4], Eugene MCloskey[4], John Kanis[4], Jitender Sareen[1]. [1]University of Manitoba, Canada, [2]McGill University, Canada, [3]University of Alberta, Canada, [4]University of Sheffield Medical School, United Kingdom
Disclosures: William Leslie, None

5:15 pm **Predicting Imminent Risk for Fracture in Patients With Osteoporosis Using Commercially**
1066 **Insured Claims Data**
Machaon Bonafede*[1], N Shi[1], R Barron[2], X Li[2], DB Crittenden[2], D Chandler[2]. [1]Truven Health Analytics, USA, [2]Amgen Inc., USA
Disclosures: Machaon Bonafede, Truven Health Analytics, Amgen

5:30 pm **Vertebral Fracture Risk in Diabetic Elderly Men: The MrOS Study**
1067 Nicola Napoli*[1], Ann Schwartz[2], Anne Schafer[2], Peggy Cawthon[3], Neeta Parimi[2], Joseph M. Zmuda[4], Eric S. Orwoll[5], Andrew R. Hoffman[6], Elsa Strotmeyer[4], Elizabeth Barrett-Connor[7], Dennis M. Black[2]. [1]University Campus Bio-Medico di Roma, Italy, [2]University of California San Francisco, USA, [3]California Pacific Medical Center Research Institute, USA, [4]University of Pittsburg, USA, [5]Oregon Health & Science University, USA, [6]Stanford School of Medicine, USA, [7]University of California San Diego, USA
Disclosures: Nicola Napoli, None

5:45 pm **The Burden of Osteoporosis Is Set to Increase Worldwide: Secular Trends in High Fracture**
1068 **Probability 2010-2040**
Anders Odén[1], Eugene McCloskey[1], John Kanis[1], Nicholas Harvey*[2], Helena Johansson[1]. [1]Centre for Metabolic Diseases, University of Sheffield, United Kingdom, [2]MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom
Disclosures: Nicholas Harvey, None

CONCURRENT ORALS: METABOLIC BONE DISEASES

4:30 pm - 6:00 pm **Washington State Convention Center**
Room 6E

Moderators:
Suzanne Jan De Beur, M.D.
Johns Hopkins University, USA
Disclosures: Suzanne Jan De Beur, None

Christian Muschitz, M.D.
St. Vincent's Hospital, Austria
Disclosures: Christian Muschitz, None

4:30 pm **ASBMR 2015 Annual Meeting Young Investigator Award**
1069 **Intensive bisphosphonate therapy aimed at normalising bone turnover in Paget's disease increases the risk of fractures and requirement for orthopaedic procedures: The PRISM-EZ trial**
Adrian Tan*[1], Jemma Hudson[2], William Fraser[3], Peter Selby[4], Graeme MacLennan[2], Stuart Ralston[1]. [1]University of Edinburgh, United Kingdom, [2]University of Aberdeen, United Kingdom, [3]University of East Anglia, United Kingdom, [4]University of Manchester, United Kingdom
Disclosures: Adrian Tan, None

4:45 pm **Extended Conventional Therapy in Adult Patients with X-linked Hypophosphatemia: Effects**
1070 **on Enthesopathy and Dentition**
Jessica Connor*[1], Elizabeth Olear[1], Lee Katz[1], Suher Baker[2], Raghbir Kaur[2], Christine Simpson[1], John Sterpka[1], Jane Zhang[3], Robert Dubrow[1], Karl Insogna[1], Thomas Carpenter[4]. [1]Yale University, USA, [2]Yale-New Haven Hospital, USA, [3]Veterans Affairs Connecticut Health Care System, USA, [4]Yale University School of Medicine, USA
Disclosures: Jessica Connor, None

5:00 pm **Asfotase alfa: Sustained Efficacy and Tolerability in Children with Hypophosphatasia Treated**
1071 **for 5 Years**
Cheryl Rockman-Greenberg*[1], Katherine Madson[2], Amy Reeves[2], Scott Moseley[3], Tatjana Odrljin[3], Michael Whyte[2]. [1]University of Manitoba, Canada, [2]Shriners Hospital for Children, USA, [3]Alexion Pharmaceuticals, USA
Disclosures: Cheryl Rockman-Greenberg, Honoraria and travel support from Alexion Pharmaceuticals

5:15 pm **Type I Collagen C-Propeptide Cleavage Site Mutations: Bone Fragility with High Bone Mass**
1072 Tim Cundy*[1], Chumei Li[2], Shehla Mohammed[3], Emma Duncan[4], Aideen McInerney-Leo[4], Paul Roschger[5], Klaus Klaushofer[5], Peter Byers[6]. [1]Faculty of Medical & Health Sciences University of Auckland, New zealand, [2]McMaster University, Canada, [3]Guys Hospital, United Kingdom, [4]University of Queensland, Australia, [5]Ludwig Boltzmann-Institut für Osteologie, Austria, [6]University of Washington, USA
Disclosures: Tim Cundy, None

5:30 pm **Change in Fracture Risk After Bariatric Surgery from a Pattern Associated with Obesity to a**
1073 **Pattern Typical of Osteoporosis: A Study Using Healthcare Administrative Databases**
Catherine Rousseau*[1], Sonia Jean[2], Philippe Gamache[3], Stefane Lebel[4], Fabrice Mac-Way[1], Laëtitia Michou[1], Claudia Gagnon[5]. [1]Endocrinology & Nephrology Unit, CHU de Quebec Research Centre; Department of Medicine, Laval University, Canada, [2]Institut national de santé publique du Québec; Department of Medicine, Laval University; University of Sherbrooke, Canada, [3]Institut national de santé publique du Québec, Canada, [4]Quebec Heart & Lung Institute, Canada, [5]Endocrinology & Nephrology Unit, CHU de Quebec Research Centre; Department of Medicine, Laval University; Institute of Nutrition & Functional Foods, Canada
Disclosures: Catherine Rousseau, None

5:45 pm **Natural History and Prognostic Factors of Fibrous Dysplasia of Bone in a Modern Cohort of**
1074 **372 Patients The Francedys Study**
Johanna Benhamou[1], Deborah Gensburger[2], Claude Maessien[3], Roland Chapurlat*[2]. [1]Université de Lyon, France, [2]INSERM UMR 1033, France, [3]APHP, France
Disclosures: Roland Chapurlat, None

CONCURRENT ORALS: SKELETAL AGING

4:30 pm - 6:00 pm **Washington State Convention Center**
Room 6A

Moderators:
Edith Gardiner, Ph.D.
University of Washington, USA
Disclosures: Edith Gardiner, None

James Edwards, Ph.D.
University of Oxford, United Kingdom
Disclosures: James Edwards, None

4:30 pm **ASBMR 2015 Annual Meeting Young Investigator Award**
1075 **H_2O_2 generated in the mitochondria of osteoclasts is required for the loss of cortical bone mass caused by estrogen or androgen deficiency, but not aging**
Semahat Serra Ucer*[1], Srividhya Iyer[2], Li Han[2], Shoshana M Bartell[1], Aaron D Warren[1], Julie A Crawford[2], Christine Rutlen[2], Robert L Jilka[2], Maria Jose Almeida[2], Stavros C Manolagas[2]. [1]Central Arkansas Veterans Healthcare System, University of Arkansas for Medical Sciences, USA, [2]Center for Osteoporosis & Metabolic Bone Diseases, Central Arkansas Veterans Healthcare System, University of Arkansas for Medical Sciences, USA
Disclosures: Semahat Serra Ucer, None

4:45 pm **A Spontaneous Mutation in Dock7 Results in Extreme Age-Related Loss of Trabecular Bone**
1076 **and Sympathetic Nervous System-Related Bone Loss**
Phuong T Le*[1], Kathleen Bishop[2], Katherine J Motyl[1], Daniel J Brooks[3], Kenichi Nagano[4], Roland Baron[5], Mary L Bouxsein[3], Clifford J Rosen[1]. [1]Maine Medical Center, USA, [2]Maine Medical Center Research Institute, USA, [3]Beth Israel Deaconess Medical Center, Harvard Medical School, USA, [4]Harvard School of Dental Medicine, USA, [5]Harvard School of Medicine & of Dental Medicine, USA
Disclosures: Phuong T Le, None

5:00 pm **Velcade Enhances Fracture Repair in Aged Mice by targeting Mesenchymal Stem Cells**
1077 Hengwei Zhang*[1], Xing Li[2], Michael Zuscik[2], Brendan Boyce[2], lianping xing[2]. [1]Univeristy of Rochester, USA, [2]University of Rochester, USA
Disclosures: Hengwei Zhang, None

5:15 pm **SIRT6 Deficiency Culminates in Low-Turnover Osteopenia**
1078 Toshifumi Sugatani*[1], Olga Agapova[2], Hartmut Malluche[3], Keith Hruska[2]. [1]Washington University in St. Louis School of Medicine, USA, [2]Washington University School of Medicine, USA, [3]University of Kentucky, USA
Disclosures: Toshifumi Sugatani, None

5:30 pm **Overexpression of Sirt1 in Mesenchymal Stem Cells Stimulates Skeletal Growth and**
1079 **Osteoblastic Bone Formation**
Quanquan Yan*[1], Qian Zhang[1], Jianliang Jin[1], Dengshun Miao[2]. [1]Nanjing Medical University, China, [2]Nanjing Medical University, Peoples republic of china
Disclosures: Quanquan Yan, None

5:45 pm **Discovery of MicroRNAs in Synovium in Regulating Inflammation Leading to Bone Erosion**
1080 **in Rheumatoid Arthritis**
Yukiko Maeda*[1], Nicholas Farina[2], Melissa Matzelle[3], Paul Fanning[3], Jane Lian[4], Ellen Gravallese[3]. [1]University of Massachusetts Medical School, Us, [2]Department of Biochemistry, University of Vermont, USA, [3]University of Massachusetts Medical School, USA, [4]University of Vermont, USA
Disclosures: Yukiko Maeda, None

CLINICAL EVENING – CURRENT ISSUES IN OSTEOPOROSIS

This program is supported by educational grants from Amgen, Inc., Lilly and Radius Health.

6:30 pm - 8:30 pm **Washington State Convention Center**
Room 606-609

Space is limited and available on a first-come, first-served basis. Attendees must be registered for the ASBMR 2015 Annual Meeting.

Co-Chairs
Marjorie Luckey, M.D.
Barnabas Health Osteoporosis Center, USA
Disclosures: Marjorie Luckey, Eli Lilly 14; Amgen 14; NPS 14

Steven Harris, M.D.
University of California, San Francisco, USA
Disclosures: Steven Harris, None

6:30 pm **Dinner**

7:00 pm **The Resurrection of Estrogen in the Prevention of Fractures**
Tobias Johannes De Villers, MBChB
Panorama Hospital, South Africa
Disclosures: Tobias Johannes De Villers, Abbott 15; Adcock Ingram 14; Pfizer 15; Bayer 15; Merck 15

7:30 pm **Optimizing Combined and Sequential Anabolic and Anti-remodeling Therapy in Postmenopausal Osteoporosis**
Benjamin Leder, M.D.
Massachusetts General Hospital, Harvard Medical School, USA
Disclosures: Benjamin Leder, Amgne/Lilly 14; Amgen 13; Radius 14; Merck 14; Lilly 13

8:00 pm **Goal-Directed Therapy for Osteoporosis**
Felicia Cosman, M.D.
Helen Hayes Hospital, USA
Disclosures: Felicia Cosman, Amgen 14; Merck 14; Eli Lilly 14; Amgen 13; Radius 14; Eli Lilly 15; Eli Lilly 13; Amgen 15

PRECLINICAL SCIENCE EVENING – BONE CELLS: FROM GENETIC MANIPULATION TO THE EPIGENOME

6:30 pm - 8:30 pm **Washington State Convention Center**
Room 6A

Space is limited and available on a first-come, first-served basis. Attendees must be registered for the ASBMR 2015 Annual Meeting.

Co-Chairs
Angela Bruzzaniti, Ph.D.
Indiana University School of Dentistry, USA
Disclosures: Angela Bruzzaniti, None

Ivo Kalajzic, M.D., Ph.D.
University of Connecticut Health Center, USA
Disclosures: Ivo Kalajzic, None

6:30 pm **Reception**

7:00 pm **Use of the Cre-lox System to Study Cells of the Osteoblasts Lineage In Vivo**
Henry Kronenberg, M.D.
Massachusetts General Hospital, USA
Disclosures: Henry Kronenberg, None

7:30 pm **Epigenetics in Bone**
Andre Van Wijnen, Ph.D.
Mayo Clinic, USA
Disclosures: Andre Van Wijnen, None

8:00 pm **Engaging the Public Epigenomic Resources**
Ting Wang, Ph.D.
Washington University in St. Louis, USA
Disclosures: Ting Wang, None

ASBMR NETWORKING EVENT: SEATTLE ROCKS!

8:30 pm - 11:30 pm **Sheraton Seattle**
Grand Ballroom

Join us for a fun night of drinks and dancing as we embrace the Seattle music scene. Admission is included with Annual Meeting registration.

Sunday, October 11, 2015

Day-At-A-Glance

Time/Event/Location **All locations in the Washington State Convention Center unless otherwise noted**

ASBMR REGISTRATION OPEN

7:30 am - 5:00 pm **Washington State Convention Center**
Atrium Lobby - Level 4

POSTERS OPEN

8:00 am - 6:00 pm **Washington State Convention Center**
Discovery Hall - Hall 4BC

LOUIS V. AVIOLI LECTURE

PRESENTATION OF THE LOUIS V. AVIOLI, FREDERIC C. BARTTER, AND PAULA STERN ACHIEVEMENT AWARDS

8:00 am - 9:30 am **Washington State Convention Center**
Hall 4A

8:00 am **Hypophosphatasia: The Journey to Treatment**
Michael Whyte, M.D.
Shriners Hospital for Children and Washington University in St. Louis, USA
Disclosures: Michael Whyte, Alexion Pharmaceuticals, Cheshire, CT 13

NETWORKING BREAK

9:30 am - 10:00 am **Washington State Convention Center**
Discovery Hall - Hall 4BC

DISCOVERY HALL OPEN

9:30 am - 4:30 pm **Washington State Convention Center**
Discovery Hall - Hall 4BC

PLENARY ORALS: TRANSLATIONAL SCIENCE II

10:00 am - 11:30 am **Washington State Convention Center**
Room 6E

Moderators:
Jeffry Nyman, Ph.D.
Vanderbilt University Medical Center, USA
Disclosures: Jeffry Nyman, None

Sara Windahl, Ph.D.
Center for Bone and Arthritis Research, Sahlgrenska Academy, Sweden
Disclosures: Sara Windahl, None

10:00 am **Selective Antagonism of Beta 2 Adrenergic Receptor Enhances Periosteal Anabolic Response**
1081 **to Mechanical Stimulation in Aged Mice**
Sundar Srinivasan, DeWayne Threet, Philippe Huber, Brandon Ausk, Leah Worton, Ronald Kwon, Steve Bain, Ted Gross, Edith Gardiner*. University of Washington, USA
Disclosures: Edith Gardiner, None

10:15 am **PHOSPHO1, a Novel Skeletal Regulator of Energy Metabolism**
1082 Karla Oldknow*[1], Nik Morton[2], Manisha Yadav[3], Carmen Huesa[4], Mathieu Ferron[5], Gerard Karsenty[6], Zohreh Khavandgar[7], Anyonya Guntur [8], Vicky MacRae[9], Monzur Murshed[7], Calvin Vary[10], Clifford Rosen[10], José Luis Millán[3], Colin Farquharson[11]. [1]The Roslin Institute, The University of Edinburgh., United Kingdom, [2]The University of Edinburgh, United Kingdom, [3]Sanford Burnham Medical Reaserch Institute, USA, [4]University of West Scotland, United Kingdom, [5]Institut de recherches cliniques de Montréal (IRCM), Canada, [6]Columbia University Medical Center, USA, [7]McGill, Canada, [8]Maine Medical Center Research Institute, USA, [9]Roslin Institute University of Edinburgh, United Kingdom, [10]Maine Medical Center Research, USA, [11]The Roslin Institute, The University of Edinburgh, United Kingdom
Disclosures: Karla Oldknow, None

10:30 am **Critical Role of Galanin in the Hypothalamic Neuronal Regulation of Bone Density and**
1083 **Energy Expenditure by AP-1 Antagonists**
Anna Idelevich*[1], Kazusa Sato[2], Glenn Rowe[3], Francesca Gori[4], Roland Baron[2]. [1]Harvard University, USA, [2]Harvard Medical School, Harvard School of Dental Medicine, USA, [3]Beth Israel Deaconess Medical Center, USA, [4]Harvard Medical School, Harvard School of Dental Medicine, MGH Endocrine Unit, USA
Disclosures: Anna Idelevich, None

10:45 am **Osteocyte-specific ablation of Pparγ increases bone mass and improves energy metabolism**
1084 Nicolas Bonnet*[1], Mirko Trajkovski[2], Beatrice Desvergne[3], Serge Ferrari[4]. [1]University Geneva Hospital (HUG), Switzerland, [2]Laboratoire des maladies métaboliques, Medical faculty, University of Geneva, Switzerland, [3]Center for integrative Genomics, Faculty of Biology & Medicine, University of Lausanne, Switzerland, [4]Service des Maladies Osseuses, Medical faculty, University of Geneva, Switzerland
Disclosures: Nicolas Bonnet, None

11:00 am **Fibrillin-1 Regulates Skeletal Stem Cells Fate Determination trough Modulation of Local**
1085 **TGFβ**
Silvia Smaldone*[1], Francesco Ramirez[2]. [1]Mount Sinai School of Medicine, USA, [2]Ichan School of Medicine at Mount Sinai, USA
Disclosures: Silvia Smaldone, None

11:15 am **ASBMR 2015 Annual Meeting Young Investigator Award**
1086 **MiR-144 Inhibits Tumor Growth and Metastasis in Osteosarcoma via Targeting ROCK1**
Jing Li*[1], Xiaoling Zhang[2], Kerong Dai[3], Qian Chen[4]. [1]Department of Orthopaedics, Alpert Medical School/Rhode Island Hospital, Brown University, USA, [2]The Key Laboratory of Stem Cell Biology, Institute of Health Sciences, Shanghai Institutes for Biological Sciences, Chinese Academy of Sciences & Shanghai Jiao Tong University School of Medicine, China, [3]Shanghai Key Laboratory of Orthopaedic Implant, Department of Orthopaedic Surgery, Shanghai Ninth People's Hospital, Shanghai Jiao Tong University School of Medicine, China, [4]Brown University School of Medicine, USA
Disclosures: Jing Li, None

PLENARY ORALS: VITAMIN D AND NUTRITION

10:00 am - 11:30 am **Washington State Convention Center**
Hall 4A

Moderators:
Victoria Borba, M.D., Ph.D.
Serviço De Endocrinologia E Metabologia Da Universidade Federal Do Parana, Brazil
Disclosures: Victoria Borba, None

Sue Shapses, Ph.D.
Rutgers University, USA
Disclosures: Sue Shapses, None

10:00 am **Vitamin D Status and Bone Mineralization: A Histomorphometric Analysis**

1087 Neil Binkley*[1], Joan Lappe[2], KM Davies[3], Robert Recker[2]. [1]University of Wisconsin, Madison, USA, [2]Creighton University Osteoporosis Research Center, USA, [3]Creighton University Osteoporosis Research Program, USA

Disclosures: Neil Binkley, None

10:15 am **ASBMR 2015 Most Outstanding Clinical Abstract Award**

1088 **Interactions of Genetic Variants and Vitamin D Intake on Serum Vitamin D Level: A large-Scale Genome-Wide Association Meta-analyses in Caucasians from the SUNLIGHT Consortium**

Yi-Hsiang Hsu*[1], Hugues Aschard[2], Alana Cavadino[3], Alexis Frazier-Wood[4], Brent Richards[5], Carola Zillikens[6], Caroline Hayward[7], Chiao-Feng Lin[8], Ching-Ti Liu[9], David Karasik[8], Denise Houston[10], Diane Berry[11], Elina Hypponen[11], Evropi Theodoratou[12], Guillauime Pare[13], Harry Campbell[12], Jill McDonald[14], Jim Wilson[12], john Todd[15], Karl Michaelsson[16], Klaus Badenhoop[17], Kurt Lohman[18], L. Adrienne Cupples[19], Leo-Pekka Lyytikainen[20], Lina Zgaga[12], Marcus Kleber[21], Maria Timofeeva[22], Marjo-Riitta Jarvelin[23], Mika Kahonen[20], Olli Raitakari[24], Pamela Lutsey[25], Ronald Booij[26], Rui Li[27], Stefan Pilz[28], Steve Kritchevsky[10], Terho Lehtimaki[20], Vera Mikkila[29], Winfried Maerz[30], Thomas Wang[31], Peter Kraft[2], Douglas Kiel[32]. [1]HSL Institute for Aging Research, Harvard Medical School, USA, [2]Dept. Epidemiology, Harvard School of Public Health, USA, [3]Queen Mary, University of London, United Kingdom, [4]Department of Pediatrics, Baylor College of Medicine, USA, [5]McGill University, Jewish General Hospital, Departments of Medicine, Human Genetics, Epidemiology & Biostatistics, Canada, [6]Erasmus Medical Center, Department of Internal Medicine, Netherlands, [7]MRC Human Genetics Unit MRC IGMM, University of Edinburgh Western General Hospital, United Kingdom, [8]Hebrew SeniorLife Institute for Aging Research, USA, [9]Dept. Biostatistics, Boston University, USA, [10]Wake Forest University School of Medicine, USA, [11]Univ. Colleage London Institute of Child Health, United Kingdom, [12]Centre for Population Health Sciences, The University of Edinburgh, College of Medicine & Veterinary Medicine, United Kingdom, [13]McMaster University Clinical Epidemiology & Biostatistics, Canada, [14]Harvard School of Public Health, USA, [15]University of Cambridge, JDRF/WT Diabetes & Inflammation Laboratory, United Kingdom, [16]Department of Surgical Sciences, Uppsala University, Sweden, [17]University of Frankfurt am Main, Germany, [18]Division of Public Health Sciences, Department of Biostatistical Sciences, Wake Forest School of Medicine, USA, [19]Dept. Biostatistics, Boston Univ., USA, [20]School of Medicine, University of Tampere, Finland, [21]Medical Faculty of Mannheim, University of Heidelberg, Germany, [22]The MRC Institute of Genetics & Molecular Medicine at The University of Edinburgh, United Kingdom, [23]Faculty of Medicine, School of Public Health, Imperial College London, United Kingdom, [24]Department of Clinical Physiology, University of Turku, Finland, [25]Epidemiology & Community Health, University of Minnesota, USA, [26]Biomedical Imaging Group, Erasmus Medical Center, Netherlands, [27]Genetic epidemiology, McGill University, Canada, [28]Medical University of Graz, Austria, [29]Division of Nutrition, University of Helsinki, Finland, [30]Synlab Center of Laboratory Diagnostics Heidelberg GmbH, Germany, [31]Division of Cardiovascular Medicine, Vanderbilt University Department of Medicine, USA, [32]Hebrew SeniorLife Institute for Aging Research & Harvard Medical School, USA

Disclosures: Yi-Hsiang Hsu, None

10:30 am **ASBMR 2015 Annual Meeting Young Investigator Award**

1089 **Effects of High Dose Vitamin D Supplementation on Bone metabolism in Pregnant Women with Hypovitaminosis D – a Randomized Controlled Trial**

Gitte Bloch Rasmussen*[1], Leif Mosekilde[2], Tanja Sikjaer[3], Peter Vestergaard[4], Lene Heickendorff[5], Niels Uldbjerg[6], Bente Langdahl[2], Lars Rejnmark[3]. [1]Aarhus Universitetshospital, Denmark, [2]Department of Endocrinology & Internal Medicine, Aarhus University Hospital., Denmark, [3]Department of Endocrinology & Internal Medicine, Aarhus University Hospital, Denmark, [4]Department of Endocrinology, Aalborg University Hospital, Denmark, [5]Department of Clinical Biochemistry, Aarhus University Hospital, Denmark, [6]Department of Obstetrics & Gynecology, Aarhus University Hospital., Denmark

Disclosures: Gitte Bloch Rasmussen, None

10:45 am **A randomized, double-blind, placebo-controlled clinical trial on the treatment of vitamin D**
1090 **insufficiency in postmenopausal women**
Karen Hansen*[1], R. Erin Johnson[2], Kaitlin Chambers[3], Michael G. Johnson[3], Christina C. Lemon[3], Tien Nguyen Thuy Vo[3], Sheeva Marvdashti[3]. [1]University of Wisconsin, Us, [2]St. Lukes Hospital, USA, [3]University of Wisconsin, USA
Disclosures: Karen Hansen, None

11:00 am **A Randomized Trial Investigating Impact of Vitamin D Replacement on Indices of Insulin**
1091 **Resistance in Elderly Overweight Subjects**
Ghada El-Hajj Fuleihan*[1], Rafic Baddoura[2], Georges Halabi[2], Asma Arabi[3], Robert Habib[3], Maya Rahme[3], Singh Ravinder[4], Moustapha Kassem[5], Ziyad Mahfoud[3], Rose Daher[3], Mohamad Kassir[3]. [1]American University of Beirut-Medical Center, Lebanon, [2]Hotel Dieu de France, Lebanon, [3]American University of Beirut, Lebanon, [4]Mayo Clinic, USA, [5]Odense University Hospital, Denmark
Disclosures: Ghada El-Hajj Fuleihan, None

11:15 am **ASBMR 2015 Annual Meeting Young Investigator Award**
1092 **The Effects of a Longer-Term, Low-Protein Diet on Calcium Absorption and Kinetic Measures of Bone Turnover in Young Women**
Jessica Bihuniak*[1], Rebecca Sullivan[2], Tania Huedo-Medina[1], Irina Rosewater[3], Donna Caseria[4], Kimberly O'Brien[5], Jane Kerstetter[1], Karl Insogna[2]. [1]Allied Health Sciences, University of Connecticut, USA, [2]Internal Medicine Endocrinology, Yale University, USA, [3]Internal Medicine Endocrinology,Yale University, USA, [4]Yale New Haven Hospital, USA, [5]Cornell University, USA
Disclosures: Jessica Bihuniak, None

MEET-THE-PROFESSOR SESSIONS

11:30 am - 12:30 pm **Washington State Convention Center**
Rooms 615-620

Meet-the-Professor Session: Drug Holidays: When and How?
Room 6A
Robert Josse, M.D.
St. Michael's Hospital, University of Toronto, Canada
Disclosures: Robert Josse, Amgen 14; Merck 15; Merck 14; Amgen 13; Eli Lilly 14; Amgen 15

Meet-the-Professor Session: Influences on Adaptation to Mechanical Loading
Room 615
Marjolein Van Der Meulen, Ph.D.
Cornell University, USA
Disclosures: Marjolein Van Der Meulen, None

Meet-the-Professor Session: Management of Hypoparathyroidism
Room 616
Dolores Shoback, M.D.
VA Medical Center, USA
Disclosures: Dolores Shoback, None

Meet-the-Professor Session: Neuronal Regulation of Bone
Room 617
Gerard Karsenty, M.D., Ph.D.
Columbia University, USA
Disclosures: Gerard Karsenty, None

Meet-the-Professor Session: Signaling in Bone Remodeling
Room 618
Xu Cao, Ph.D.
Johns Hopkins University, USA
Disclosures: Xu Cao, None

Meet-the-Professor Session: Vitamin D Biology (Mouse Models)
Room 619
Geert Carmeliet, M.D., Ph.D.
Katholieke Universiteit Leuven, Belgium
Disclosures: Geert Carmeliet, None

PUBLICATIONS WORKSHOP: INCREASE YOUR CHANCES OF GETTING PUBLISHED

11:30 am - 12:30 pm **Washington State Convention Center**
Room 606-607

Meet with *JBMR*® Editor-in-Chief Dr. Juliet Compston at this year's Publications Workshop. You'll learn how to improve the quality of your journal manuscripts, what *JBMR*® is looking for and how to increase your chances of getting published. Wiley Senior Marketing Manager Larry Grodsky, Wiley Executive Editor Jinnie Kim, and Wiley Associate Editor Jane Taylor will also update you on maximizing visibility for your paper, navigating the submission process and timeline, and taking advantage of the latest technology. Whether you're a new author considering submitting a paper or a seasoned journal contributor, don't miss this unique opportunity to hear directly from and interact with *JBMR*®'s editor!

REPORT FROM THE ASBMR – ORS TASK FORCE ON CELL-BASED THERAPIES

11:30 am - 12:30 pm **Washington State Convention Center**
Room 6B

The joint ASBMR-Orthopedic Research Society (ORS) Task Force on Cell-based Therapies was convened by the two organizations and charged with 1) recommending a provisional case definition of cell-based therapies, including cell sources and target tissues, so that subsequent studies will report using the same language and avoid ambiguity due to the complexity of the cell preparatory steps; 2) reviewing the current available information, in order to assess what is actually known and what is not known about different cell-based therapies, the cellular sources, and protocols for addressing specific target tissues; 3) reviewing the available non-invasive diagnostic (e.g., biomarkers) and imaging techniques for characterizing the outcome of cell-based therapies; 4) identifying the key questions that the scientific community should address and recommending a research agenda to elucidate the best approaches for cell-based therapy; 5) establishing criteria for assessing potential biological and clinical efficacy and developing guidelines appropriate to the claimed use of each cell-based therapy. At this session the task force will present its preliminary work.

SCIENTIFIC INTEGRITY – ENHANCING THE REPRODUCIBILITY OF RESULTS IN PRECLINICAL STUDIES

11:30 am - 12:30 pm **Washington State Convention Center**
Room 6C

11:30 am Perspective from NIH (via teleconference)
Lawrence Tabak, D.D.S., Ph.D.
National Institutes of Health, USA
Disclosures: Lawrence Tabak, None

11:50 am Perspective from Publishers
Clifford Rosen, M.D., Associate Editor, New England Journal of Medicine
Maine Medical Center, USA
Disclosures: Clifford Rosen, None

12:10 pm Perspective from the Research Community
Henry Kronenberg, M.D.
Massachusetts General Hospital, USA
Disclosures: Henry Kronenberg, None

Stavros Manolagas, M.D., Ph.D.
Central Arkansas VA Healthcare System, University of Arkansas for Medical Sciences, USA
Disclosures: Stavros Manolagas, None

POSTER SESSION II & POSTER TOURS

12:30 pm - 2:30 pm **Washington State Convention Center**

Discovery Hall - Hall 4BC

ADULT METABOLIC BONE DISORDERS: CHRONIC KIDNEY DISEASE – METABOLIC BONE DISORDER

SU0001 **Bone Deficits in Chronic Kidney Disease and the Effect of Renal Transplantation on Mechanical Competence**

Chamith Rajapakse*[1], Wenli Sun[2], Michelle Slinger[1], Elizabeth Kobe[1], Rhiannon Miller[1], Felix Wehrli[1], Mary Leonard[3]. [1]University of Pennsylvania School of Medicine, USA, [2]University of Pennsylvania, USA, [3]Stanford School of Medicine, USA

Disclosures: Chamith Rajapakse, None

SU0002 **Specific microRNA signatures in CKD patients focusing on the risks of calcifications and ROD**

Barbara Obermayer-Pietsch*[1], Matthias Ulbing[1], Alexander Kirsch[2], Schweighofer Natascha[3], Bettina Leber[4], Sandra Lemesch[5], Alexander Rosenkranz[6], Helmut Müller[4], Kathrin Eller[6], Vanessa Stadlbauer[5]. [1]Medical University Graz, Austria, [2]Medical University Graz, Dept. Internal Medicine, Division of Nephrology, Austria, [3]Medical University Graz, Dept. Internal Medicine, Div. Endocrinology & Metabolism, Austria, [4]Medical University Graz, Dept. Surgery, Div. of Transplant Surgery, Austria, [5]Medical University Graz, Dept. Internal Medicine, Div. Gastroenterology, Austria, [6]Medical University Graz, Dept. Internal Medicine, Div. Nephrology, Austria

Disclosures: Barbara Obermayer-Pietsch, None

SU0003 **The Effect of Kidney Disease on Bone Metabolism in Mice may be Modulated by the Initial Bone Characteristics**

Ryan Clark*[1], Chelsea Heveran[2], William Schroeder[1], Moshe Levi[1], Virginia Ferguson[2], Karen King[1]. [1]University of Colorado School of Medicine, USA, [2]University of Colorado Boulder, USA

Disclosures: Ryan Clark, None

SU0004 **The Impact of Arteriovenous Fistula on Bone Density and Structure assessed by HR-pQCT**

Stephanie Boutroy*[1], Justine Bacchetta[2], Solenne Pelletier[3], Cyrille Confavreux[4], Denis Fouque[5], Roland Chapurlat[4]. [1]INSERM UMR1033 & Université de Lyon, France, [2]INSERM UMR1033, Service de Néphrologie et Rhumatologie Pédiatrique, Hôpital Femme Mère Enfant, Université de Lyon, France, [3]INSERM UMR1033, Département de Néphrologie, Hôpital Edouard Herriot, Université de Lyon, France, [4]INSERM UMR1033, Département de Rhumatologie, Hôpital Edouard Herriot, Université de Lyon, France, [5]Département de Néphrologie, Hôpital Edouard Herriot, Université de Lyon, France

Disclosures: Stephanie Boutroy, None

SU0005 **Vertebral Fractures in Patients with End-Stage Renal Disease Undergoing Dialysis**

Jerzy Przedlacki*[1], Paweł Żebrowski[2], Ewa Wojtaszek[2], Mariusz Mieczkowski[2], Agnieszka Grzejszczak[3], Paweł Kulicki[4], Małgorzata Koscielska[4], Maria Kaszyńska[2], Joanna Matuszkiewicz-Rowińska[2]. [1]Medical University of Warsaw, Poland, [2]Chair & Department of Nephrology, Dialysis & Internal Diseases, Medical University of Warsaw, Poland, [3]Chair & Department of Nephrology, Dialysis, & Internal Diseases, Medical University of Warsaw, Poland, [4]Chair & Department of Nephrology, Dialysis & Internal Medicine, Medical University of Warsaw, Poland

Disclosures: Jerzy Przedlacki, None

ADULT METABOLIC BONE DISORDERS: OSTEONECROSIS

SU0006 **Radiation And Hypoxia Cooperatively Suppress Orofacial Mesenchymal Stem Cell Survival**

Pinky Salat[1], Weihua Li[1], Sunday Akintoye*[2]. [1]University of Pennsylvania, USA, [2]University of Pennsylvania School of Dental Medicine, USA

Disclosures: Sunday Akintoye, None

ADULT METABOLIC BONE DISORDERS: OTHER ADULT METABOLIC BONE DISORDERS

SU0007 **Association between Vitamin D deficiency and low HDL levels in Type 2 diabetics with Acute Coronary Syndrome**
Fernando Gondin[1], Maria do Socorro Azevedo[1], Luiz Henrique Griz[2], Arianna Chacon[1], Breno Coimbra[1], Nathália Brito[1], Mirna de Sá*[1], Francisco Bandeira[1]. [1]Division of Endocrinology & Diabetes, Agamenon Magalhães Hospital, University of Pernambuco Medical School, Recife, Brazil, [2]Aluisio Borba Griz & Argentina Maciel Griz, Brazil
Disclosures: Mirna de Sá, None

SU0008 **Determination of Severe Suppression of Bone Turnover in Women with Atypical Femoral Fracture after Long-term Bisphosphonate Treatment**
Shijing Qiu*, George Divine, Saroj Palnitkar, Mahalakshi Honasoge, Sudhaker D Rao. Henry Ford Hospital, USA
Disclosures: Shijing Qiu, None

SU0009 **Effects of Eldecalcitol on Inflammatory Markers in Patients with Rheumatoid Arthritis**
Hayato Kinoshita*[1], Naohisa Miyakoshi[1], Seiya Miyamoto[2], Yuji Kasukawa[1], Yusuke Sugimura[3], Yoichi Shimada[1]. [1]Department of Orthopedic Surgery, Akita University Graduate School of Medicine, Japan, [2]Division of Orthopedic Surgery, Nakadori General Hospital, Jarvis island, [3]Division of Orthopedics, Minamiakita Orthopedic Clinic, Japan
Disclosures: Hayato Kinoshita, None

SU0010 **Indole sulfate as a metabolite in CKD patients regulates low turnover of bone metabolisms through OAT-3 transporter**
Michiko Hirata, Tsukasa Tominari, Masaki Inada, Chisato Miyaura*. Tokyo University of Agriculture & Technology, Japan
Disclosures: Chisato Miyaura, None

ADULT METABOLIC BONE DISORDERS: PAGET'S DISEASE

SU0011 **Exploration of associations between air pollutants and Paget's disease of bone**
Mohamed Saber Numan*[1], Sonia Jean[2], Jeannette Dumont[1], Jacques P. Brown[3], Laetitia Michou[4]. [1]CHU de Québec Research Centre, Canada, [2]Institut national de santé publique du Québec & Department of Medicine, Laval University, Canada, [3]CHU de Québec Research Centre; Department of Medicine, Laval University;Department of Rheumatology, CHU de Québec, Canada, [4]Université Laval, Canada
Disclosures: Mohamed Saber Numan, None

ADULT METABOLIC BONE DISORDERS: PARATHYROID DISORDERS

SU0012 **Association between normocalcemic primary hyperparathyroidism and blood pressure**
Gang Chen[1], Junping Wen*[2]. [1]FuJian Provincial Hospital, Peoples republic of china, [2]FuJian Provincial Hospital, China
Disclosures: Junping Wen, None

SU0013 **Blood pressure and obesity in healthy postmenopausal women relationship whith PTH, retinol, vitamin E and vitamin D endocrine system**
Cristina Navarro Valverde[1], Aura Dulcinea Herrera Martínez*[2], Maria Dolores Luque de Castro[3], Rafael Cuenca-Acebedo[4], María Concepción Muñoz Jiménez[5], José Manuel Quesada Gómez[6]. [1]Unidad de Gestión Clínica de Cardiolgía, HU Virgen de Valme, Spain, [2]Unidad de Gestión Clínica de Endocrinología y Nutrición IMIBIC . Hospital Universitario Reina Sofía, Spain, [3]Departmento de Analítica Química, Annex C-3, Campus of Rabanales, University of Córdoba, Spain, [4]Servicio de Medicina Interna Hospital Alto GuadalquivieSEIOMM RETICEF, Spain, [5]Unidad de Gestión Clínica de Endocrinología y Nutrición. IMIBIC Hospital Universitario Reina Sofía de Córdoba., Spain, [6]Unidad de Gestión Clínica de Endocrinología y Nutrición. IMIBIC. Hospital Universitario Reina Sofía. RETICEF, Spain
Disclosures: Aura Dulcinea Herrera Martínez, None

SU0014 **Brown Tumor of the Femur with Changes after Parathyroidectomy**
Mohammed Almohaya*[1], Mohammed Almehthel[1], Qun Yang[2], Stephen Robertson[3], David Kendler[4]. [1]University of British Columbia, Canada, [2]prohealth research center, Canada, [3]Prohealth clinical research, Canada, [4]Professor University of British Columbia, Canada
Disclosures: Mohammed Almohaya, None

SU0015 **FGF23 in patients with hypoparathyroidism**
Larissa Savi[1], Maicon Lopes[2], Victoria Borba[2], Tatiana Costa[2], Carolina Moreira*[2]. [1]Serviço de Endocrinologia e Metabologia do Hospital de Clínicas da UFPR (SEMPR), Brazil, [2]Serviço de Endocrinologia e Metabologia do Hospital de Clínicas da UFPR (SEMPR), Brazil, Brazil
Disclosures: Carolina Moreira, None

SU0016 **Impaired Trabecular Bone Score (TBS) in patients with primary hyperparathyroidism**
Manuel Munoz-Torres*[1], Rossana Manzanares Cordova[2], Beatriz García Fontana[3], Antonia García Martin[4], Rebeca Reyes García[4], Rafael Nieto Serrano[5], Sonia Morales Santana[3], Fernando Escobar Jimenez[4]. [1]Hospital Universitario San Cecilio, Spain, [2]Endocrinoly Unit. Hospital Universitario San Cecilio, Spain, [3]RETICEF. Hospital Universitario San Cecilio, Spain, [4]Endocrinology Unit. Hospital Universitario San Cecilio, Spain, [5]Nuclear Medicine Unit. Hospital Universitario San Cecilio, Spain
Disclosures: Manuel Munoz-Torres, None

SU0017 **Protein Expressions of $GABA_B$ receptor 1 and Vitamin D Receptor Are Decreased in Human Parathyroid Adenoma**
A Ram Hong*[1], Jiyeon Lee[2], Jihyun Lee[3], Young A Kim[4], Hye Sook Min[4], Jung Hee Kim[2], Chan Soo Shin[2], Sang Wan Kim[2]. [1]Seoul National University Hospital, South korea, [2]Department of Internal Medicine, Seoul National University College of Medicine, South korea, [3]Department of Internal Medicine, Seoul National University College of Medicine, South Korea, South korea, [4]Department of Pathology, Seoul National University College of Medicine, South korea
Disclosures: A Ram Hong, None

ADULT METABOLIC BONE DISORDERS: PARATHYROID DISORDERS***

SU0018 **Recombinant Human Parathyroid Hormone (rhPTH [1–84]) Therapy in Hypoparathyroidism and Improvement in Quality of Life**
Tamara Vokes*[1], Michael Mannstadt[2], Michael A. Levine[3], Bart L. Clarke[4], John P. Bilezikian[5], Hjalmar Lagast[6], Dolores M. Shoback[7]. [1]University of Chicago, USA, [2]Massachusetts General Hospital & Harvard Medical School, Boston, MA, USA, [3]Children's Hospital of Philadelphia, Philadelphia, PA, USA, [4]Mayo Clinic Division of Endocrinology, Diabetes, Metabolism, & Nutrition, Rochester, MN, USA, [5]College of Physicians & Surgeons, Columbia University, New York, NY, USA, [6]NPS Pharmaceuticals, Inc., Bedminster, NJ, USA, [7]SF Department of Veterans Affairs Medical Center, University of California, San Francisco, CA, USA
Disclosures: Tamara Vokes, NPS Pharmaceuticals, Inc.

ADULT METABOLIC BONE DISORDERS: PARATHYROID DISORDERS

SU0019 **Surgery versus no Surgery: What works best for the kidneys in Primary Hyperparathyroidism? A retrospective study on a multi-ethnic patient population**
Donovan Tay*[1], Joan Khoo[2], Manju Chandran[3]. [1]Singapore General Hospital, Singapore, [2]Changi General Hospital, Singapore, [3]Osteoporosis & Bone Metabolism Unit Department of Endocrinology Singapore General Hospital, Singapore
Disclosures: Donovan Tay, None

SU0020 **Vitamin D Deficiency and Insufficiency in Primary Hyperparathyroidism: Effects on the Volumetric BMD and Bone Strength at the Lumbar Spine**
Marcella Walker[1], Elaine Cong[1], Melissa Sum*[1], Isra Saeed[2], James Lee[1], Anna Kepley[1], Chengchen Zhang[1], Thomas Lang[2], Shonni Silverberg[1]. [1]Columbia University, USA, [2]University of California at San Francisco, USA
Disclosures: Melissa Sum, None

BIOMECHANICS AND BONE QUALITY: ASSESSMENT OF BONE QUALITY AND STRENGTH

SU0021 **3D Atlas-based Modeling of the Spine using MDCT images for Detecting Local Density Variations in an Age-matched Cohort**
Alexander Valentinitsch*[1], Stefano Trebeschi[1], Eva Alarcón[1], Thomas Baum[1], Cristian Lorenz[2], Jan S. Bauer[1]. [1]Klinikum rechts der Isar, Technische Universität München, Germany, [2]Philips Research Hamburg, Germany
Disclosures: Alexander Valentinitsch, None

SU0022 **Bone quality of ovariectomized rats after combination therapy with bisphosphonate and eldecalcitol**
Hiromi Kimura-Suda*[1], Teppei Ito[1], Hirotaka Wagatsuma[2], Tetsuo Yano[2], Daisuke Inoue[3]. [1]Chitose Institute of Science & Technology, Japan, [2]Ajinomoto Pharmaceuticals Co., Ltd., Japan, [3]Teikyo University School of Medicine, Japan
Disclosures: Hiromi Kimura-Suda, Ajinomoto Pharmaceuticals Co., Ltd.

SU0023 **Characterization of Collagen Fiber Orientation in Bone with Chronic Kidney Disease Using FTIR Imaging**
Teppei Ito*[1], Kyosuke Kanazawa[2], Yuya Kanehira[1], Hiromi Kimura-Suda[1]. [1]Chitose Institute of Science & Technology, Japan, [2]Chitose Institute of Science & Technolory, Japan
Disclosures: Teppei Ito, None

SU0024 **Cortical Bone Thickness Measurements from CT in the Presence of Metalwork**
Tristan Whitmarsh, Graham Treece*, Andrew Gee, Kenneth Poole. University of Cambridge, United Kingdom
Disclosures: Graham Treece, None

SU0025 **Development of a strongly simplified method for determination of bone quality within joint near regions of long bones**
Volker Kuhn*[1], Spaska Kovacheva[2], Nikola Ivanovic[1], Wolfgang Recheis[1]. [1]Medical University Innsbruck, Austria, [2]University of Applied Sciences Wiener Neustadt, Austria
Disclosures: Volker Kuhn, None

SU0026 **Effect of Teriparatide Treatment on Trabecular Microstructure in Postmenopausal Women with Osteoporosis Assessed with High Resolution Quantitative Computed Tomography**
Daniel J Blackwell[1], Margaret A Paggiosi[1], Eugene V McCloskey[1], Nicola FA Peel[2], Jennifer S Walsh[1], Richard Eastell[1], Lang Yang*[1]. [1]University of Sheffield, United Kingdom, [2]Sheffield Teaching Hospitals NHS Foundation Trust, United Kingdom
Disclosures: Lang Yang, None

SU0027 **Effects of Disuse and Estrogen Deficiency on the Bone Microarchitecture and Biomechanical Properties**
Melise Peres Ueno*, Mário Jefferson Louzada. Unesp, Brazil
Disclosures: Melise Peres Ueno, None

SU0028 **Fibroin particle supported cationic lipid-layers (Fibroplex) as a high efficient intracellular protein delivery system for osteoinductive treatment**
Woo Jin Kim*[1], WON-JOON YOON[2], HYUN-MO RYOO[2]. [1]Seoul National University, South korea, [2]Seoul National University school of dentistry, South korea
Disclosures: Woo Jin Kim, None

SU0029 **From material to structural properties. Density, mass and size**
Arne Hoiseth*[1], Knut Strømsøe[2]. [1]na., Norway, [2]University of Oslo, Norway
Disclosures: Arne Hoiseth, None

SU0030 **Improving Cortical Bone Measurements through the Inclusion of an Endocortical Parameter**
Rose Pearson*[1], Graham Treece[2]. [1]Cambridge University PhD student, United Kingdom, [2]University of Cambridge, United Kingdom
Disclosures: Rose Pearson, None

SU0031 **Investigation of the Effect of Fluoride Ions on the Molecular Interaction between Bone-minerals and Non-collagenous Proteins using Single Molecule Force Spectroscopy**
Soma Biswas*[1], Georg Fantner[2]. [1]École Polytechnique Fédérale de Lausanne (EPFL), Switzerland, [2]EPFL, Switzerland
Disclosures: Soma Biswas, None

SU0032 **Mechanical and biochemical assessment of bone quality in men with type 2 diabetes**
Heather Hunt*[1], Stephen Warner[2], Ashley Torres[1], Jonathan Jo[2], Joseph Lane[2], Christopher Hernandez[1], Eve Donnelly[3]. [1]Cornell University, USA, [2]Hospital for Special Surgery, USA, [3]Cornell Univeristy, USA
Disclosures: Heather Hunt, None

SU0033 **Microstructural and Strength Changes in Trabecular Bone in Patients with Type 2 Diabetes Mellitus**
Merce Giner*[1], M Jose Montoya[2], Cristina Miranda[3], M Angeles Vazquez[2], J Ramon Caeiro[4], David Guede[5], Ramon Perez-Cano[6]. [1]Bone Metabolism Unit, "Virgen Macarena" University Hospital, Spain, [2]University of Seville, Spain, [3]Bone Metabolism Unit, Department of Internal Medicine, ''Virgen Macarena'' University Hospital, Spain, [4]Department of Orthopaedic Surgery, Complexo Hospitalario Universitario de Santiago de Compostela, Spain, [5]Trabeculae , Parque Tecnolóxico de Galicia, 32900 San Cibrao das Viñas, Spain, [6]Bone Metabolism Unit, Department of Internal Medicine, ''Virgen Macarena'' University Hospital university os Seville, Spain
Disclosures: Merce Giner, None

SU0034 **Mineral and collagen maturity in a polygenetic murine model of type 2 diabetes point to complex effects of sustained hyperglycemia on bone tissue composition**
David Diaz*[1], Michelle Chin [1], Dan Weinreb[1], Tarryn Tertulien[1], Ida Adjivon[1], Karen King [2], Eve Donnelly[1]. [1]Cornell University, USA, [2]University of Colorado School of Medicine, USA
Disclosures: David Diaz, None

SU0035 **Removal of Proteoglycans from Bone Matrix Significantly Reduce its *In Situ* Toughness**
Haoran Xu*[1], Yehong Huang[2], Sumin Gu[3], Jean Jiang[3], Xiaodu Wang[4]. [1]Mechanical Engineering, University of Texas at San Antonio, Texas, USA, [2]Biomedical Engineering, University of Texas at San Antonio, Texas, USA, [3]Biochemistry, University of Texas Health Science Center at San Antonio, Texas, USA, [4]Mechanical & Biomedical Engineering, University of Texas at San Antonio, Texa, USA
Disclosures: Haoran Xu, None

SU0036 **Reproduction Differentially Affects Cortical and Trabecular Bone and Alters Cortical Bone Stiffness and Trabecular Structure towards a Male Phenotype**
Chantal De Bakker*[1], Allison R. Altman[1], Connie Li[1], Youwen Yang[1], Chih-Chiang Chang[1], Wei-Ju Tseng[1], Yong-Hoon Jeong[2], Do-Gyoon Kim[2], X. Sherry Liu[1]. [1]University of Pennsylvania, USA, [2]The Ohio State University, USA
Disclosures: Chantal De Bakker, None

SU0037 **The initial slope of the variogram, foundation of the trabecular bone score, does not predict vertebral strength in three distinct biomechanical tests**
Ghislain Maquer*[1], Enrico Dall'Ara[2], Yan Chevalier[3], Yongtao Lu[4], Lang Yang[5], Matthias Krause[6], Richard Eastell[5], Kurt Lippuner[7], Philippe Zysset[8]. [1]Institute for Surgical Technology & Biomechanics, Switzerland, [2]Department of Mechanical Engineering & INSIGNEO Institute for in silico Medicine, University of Sheffield, United Kingdom, [3]Klinikum Großhadern, Orthopaedic Department, Laboratory for Biomechanics & Experimental Orthopaedics, Germany, [4]Institute of Biomechanics, TUHH Hamburg University of Technology, Germany, [5]Academic Unit of Bone Metabolism, Mellanby Centre for Bone Research, University of Sheffield, United Kingdom, [6]Department of osteology & biomechanics, University Medical Center Hamburg-Eppendorf, Germany, [7]Osteoporosis Clinic, Inselspital, University Hospital & University of Bern, Switzerland, [8]Institute for Surgical Technology & Biomechanics, University of Bern, Switzerland
Disclosures: Ghislain Maquer, None

SU0038 **Validation of High-Resolution Peripheral Quantitative Computed Tomography for Measurement of Bone Quality in Monkeys**
Aurore Varela*, Gabrielle Boyd, Susan Smith. Charles River Laboratories, Canada
Disclosures: Aurore Varela, None

BIOMECHANICS AND BONE QUALITY: DISUSE OSTEOPOROSIS – ANIMAL MODELS

SU0039 **Comparison of Alendronate and Zoledronate Effects on Bone Turnover and Mechanical Properties for Two Successive Periods of Simulated Microgravity Unloading**
Scott Lenfest*[1], Harry Hogan[2], Susan Bloomfield[3], Corinne Metzger[3], Jon Elizondo[2], Matthew Allen[4]. [1]Texas A&M University, USA, [2]Texas A&M University Department of Mechanical Engineering, USA, [3]Texas A&M University Department of Health & Kinesiology, USA, [4]Indiana University School of Medicine Department of Anatomy & Cell Biology, USA
Disclosures: Scott Lenfest, None

BIOMECHANICS AND BONE QUALITY: GENERAL

SU0040 **Associations of Fluoride Intake with Adolescents' pQCT-derived Bone Outcome Measures at Age 17**
Reem Oweis*[1], Steven Levy[2], John Warren[2], Julie Eichenberger Gilmore[2], Trudy Burns[2], Punam Saha[2], Kathleen Janz[2], James Torner[2], Elena Letuchy[2], Barbara Broffitt[2]. [1]University of Iowa, Us, [2]The University of Iowa, USA
Disclosures: Reem Oweis, None

SU0041 **Fully Automated Bone Detection, Segmentation, Axis Extraction, Trabecular Labeling, and ASBMR Morphometric Analysis in Small Animal Micro-computed Tomography**
Ali Behrooz[1], Peet Kask[2], Jeff Meganck*[1], Josh Kempner[1], Wael Yared[1]. [1]PerkinElmer, USA, [2]PerkinElmer, Estonia
Disclosures: Jeff Meganck, PerkinElmer

SU0042 **Intrinsic Material Property Differences in Bone Tissue from Fracturing vs Non-fracturing Women**
Severine Vennin[1], Anastasia Desyatova[1], Joseph Turner[1], Robert Recker[2], Mohammed Akhter*[3]. [1]University of Nebraska-Lincoln, USA, [2]creighton University, USA, [3]Creighton University Osteoporosis Research Center, USA
Disclosures: Mohammed Akhter, None

SU0043 **Osteogenesis on Nanoparticulate Mineralized Collagen Scaffolds via Autogenous Activation of the Canonical BMP Receptor Signaling Pathway**
Xiaoyan Ren*[1], David Bischoff[2], Daniel Weisgerber[3], Michael Lewis[4], Victor Tu[5], Dean Yamaguchi[6], Timothy Miller[5], Brendan Harley[7], Justine Lee[5]. [1]Division of Plastic & Reconstructive Surgery, UCLA David Geffen School of Medicine & VA Greater Los Angeles Healthcare System, USA, [2]VA Greater Los Angeles Healthcare System, USA, [3]Department of Chemical & Biomolecular Engineering, Institute for Genomic Biology, University of Illinois at Urbana Champaign, USA, [4]Department of Pathology, VA Greater Los Angeles Healthcare System, USA, [5]Division of Plastic & Reconstructive Surgery, UCLA David Geffen School of Medicine & Division of Plastic & Reconstructive Surgery, VA Greater Los Angeles Healthcare System, USA, [6]VA Greater Los Angeles Healthcare System & UCLA David Geffen School of Medicine, USA, [7]Department of Chemical & Biomolecular Engineering, Institute for Genomic Biology, University of Illinois at Urbana Champaign, USA
Disclosures: Xiaoyan Ren, None

SU0044 **Trabecular bone microdamage, microarchitecture and resorption in whole human vertebrae are regionally distributed and distinctly related to intervertebral disc properties**
Vincent Carpentier*[1], Helen Tsangari[2], Nicola L. Fazzalari[2], Julia S. Kuliwaba[2]. [1]Bone & Joint Research Laboratory, Anatomical Pathology, SA Pathology, France, [2]Bone & Joint Research Laboratory, Anatomical Pathology, SA Pathology, Australia
Disclosures: Vincent Carpentier, None

BIOMECHANICS AND BONE QUALITY: MECHANICAL LOADING EFFECTS IN INTACT ANIMALS

SU0045 **Effects of Hind Limb Unloading on Wild Type and Osteocalcin Knockout Mice**
Patricia Buckendahl*, JAYANTH Vatson, Matthew Flanagan, Aedan Hannah. Rutgers University, USA
Disclosures: Patricia Buckendahl, None

SU0046 **Moderate Elevations in Iron Stores Improves Skeletal Integrity in Mice Even During Disuse**
Corinne Metzger[1], Matthew Allen[2], Scott Lenfest[3], Harry Hogan[3], Nancy D. Turner[4], Sara Zwart[5], Susan A. Bloomfield[3], RIHANA BOKHARI*[3]. [1]Texas A&M University Dept. Health & Kinesiology, USA, [2]Indiana University School of Medicine, USA, [3]Texas A&M University, USA, [4]Texas A&M University Dept. Nutrition & Food Science, USA, [5]NASA Johnson Space Center - Universities Space Research Association, USA
Disclosures: RIHANA BOKHARI, None

BIOMECHANICS AND PHYSICAL ACTIVITY: EFFECT OF LOADING OR UNLOADING IN HUMANS

SU0047 **Physical strenuousness of occupation is risk factor for intervertebral disc degeneration**
Sami Salo*[1], Ville Leinonen[2], Toni Rikkonen[3], Pauli Vainio[4], Jarkko Marttila[4], Risto Honkanen[3], Marjo Tuppurainen[5], Heikki Kröger[6], Joonas Sirola[6]. [1]University of Eastern Finland, Finland, [2]Department of Neurosurgery, Kuopio University Hospital, Kuopio, Finland, Finland, [3]Kuopio Muskuloskeletal Research Unit, KMRU, Surgery, Institute of Clinical Medicine, University of Eastern Finland, Kuopio, Finland, Finland, [4]Department of Radiology, Kuopio University Hospital, Kuopio, Finland, Finland, [5]Department of Obstetrics & Gynecology, Kuopio University Hospital, Finland, Finland, [6]Kuopio Muskuloskeletal Research Unit, KMRU, Surgery, Institute of Clinical Medicine, University of Eastern Finland & Department of Orthopedics, Traumatology & Hand Surgery, Kuopio University Hospital, Finland
Disclosures: Sami Salo, None

BIOMECHANICS AND PHYSICAL ACTIVITY: PHYSICAL ACTIVITY AND EXERCISE

SU0048 **Comparison of Accelerometer Processing Data for Bone-Related Physical Activity Studies: Iowa Bone Development Study**
Shelby Francis, Kathleen Janz*, Elena Letuchy, Rick Paulos, Kristen Metcalf, Trudy Burns, Steven Levy. University of Iowa, USA
Disclosures: Kathleen Janz, None

SU0049 **Current Physical Activity Is Independently Associated with Cortical Bone Size in Older Swedish Women**
Martin Nilsson*[1], Daniel Sundh[2], Dan Mellström[2], Mattias Lorentzon[2]. [1]Centre for Bone & Arthritis Research At the Sahlgrenska Academy, Sweden, [2]Geriatric Medicine, Centre for Bone & Arthritis Research, The Sahlgrenska Academy, University of Gothenburg, Sweden, Sweden
Disclosures: Martin Nilsson, None

SU0050 **The Use of Accelerometers to Measure Lower Limb Loading During Activity: Sampling Rate and Operating Range Considerations**
Christina Ziebart*, Jenna C Gibbs, Iris Levine, Andrew Laing, James Tung, Lora Giangregorio. University of Waterloo, Canada
Disclosures: Christina Ziebart, None

SU0051 **Trabecular Bone Score is Related to Physical Function in Adults**
Diane Krueger*[1], Ellen Fidler[2], Jessie Libber[2], Neil Binkley[2], Bjoern Buehring[2]. [1]University of Wisconsin, Madison, USA, [2]University of Wisconsin, USA
Disclosures: Diane Krueger, None

BONE ACQUISITION AND PEDIATRIC BONE DISORDERS: ASSESSMENT OF BONE DISEASE IN CHILDREN

SU0052 **Bone quality and quantity in Duchenne Muscular Dystrophy patients**
Renaud Winzenrieth*[1], Luis Del Rio[2], Silvana Di Gregorio[2]. [1]Med-imaps, Hôpital X. Arnozan, PTIB, Pessac, France, France, [2]Cetir Group Medic, Spain
Disclosures: Renaud Winzenrieth, Med-Imaps

SU0053 **Evolution of bone quality and quantity in patients suffering from Duchenne Muscular Dystrophy**
Luis Del Rio[1], Silvana Di Gregorio[1], Renaud Winzenrieth*[2]. [1]Cetir Group Medic, Spain, [2]R&D department, Med-Imaps, France
Disclosures: Renaud Winzenrieth, None

SU0054 **Early Bone Deficits Measured by pQCT in the Mucopolysaccharidoses Despite Current Therapies**
Lynda E. Polgreen*[1], Anna Petryk[2], Aaron S. Kelly[2], Lesley Scibora[3], Bradley S. Miller[2], Chester B. Whitley[2], Ellen B. Fung[4]. [1]Los Angeles Biomedical Research Institute at Harbor-UCLA, USA, [2]University of Minnesota, USA, [3]St. Thomas University, USA, [4]UCSF Benioff Children's Hospital Oakland, USA
Disclosures: Lynda E. Polgreen, None

BONE ACQUISITION AND PEDIATRIC BONE DISORDERS: BONE DEVELOPMENT AND BONE MASS ACCRUAL

SU0055 **A Genetic Variant in the Gamma Glutamyl Carboxylase Gene Affects Bone Quality in a Pediatric African American Cohort**
Jacqueline McKesey*[1], Courtney Sprouse[2], Heather Gordish-Dressman[2], Elizabeth Dominic[3], Elizabeth Hedges[3], Zachary Kendrick[4], Michael Liu[4], Leticia Ryan[5], Joseph Devaney[6], Laura Tosi[7]. [1]Georgetown University School of Medicine, USA, [2]Center for Genetic Medicine Children's National Medical Center, USA, [3]The School of Medicine & Health Sciences George Washington University, USA, [4]School of Medicine & Health Sciences George Washington University, USA, [5]John's Hopkins Children's Center, USA, [6]Department of Laboratory Medicine Children's National Medical Center, USA, [7]Department of Orthopaedics & Sports Medicine Children's National Medical Center, USA
Disclosures: Jacqueline McKesey, None

SU0056 **Bone health status and associated factors in the adolescents in Taiwan**
Yi-Chin Lin*[1], Wen-Harn Pan[2]. [1]Chung Shan Medical University, Taiwan, [2]Institute of Biomedical Sciences, Academia Sinica, Taiwan
Disclosures: Yi-Chin Lin, None

SU0057 **Vitamin D levels in Swedish Children Over the Past 30 years**
Diana Swolin-Eide*[1], Bjorn Andersson[2], Per Magnusson[3], kerstin Albertsson-Wikland[4]. [1]Queen Silvia Children's Hospital, Sweden, [2]Department of Pediatrics, The Sahlgrenska Academy at the University of Gothenburg, Sweden, [3]Division of Clinical Chemistry, Linköping University, Sweden, [4]Department of Physiology/Division of Endocrinology, The Sahlgrenska Academy at the University of Gothenburg, Sweden
Disclosures: Diana Swolin-Eide, None

BONE ACQUISITION AND PEDIATRIC BONE DISORDERS: EFFECTS OF BONE ACTIVE DRUGS IN CHILDREN

SU0058 **A Subtronchanteric Femoral Stress Fracture Following Bisphosphonate Treatment in an Adolescent Girl**
Alison Boyce*[1], Michael Collins[2], Laura Tosi[3], Rachel Gafni[4]. [1]National Institutes of Health, USA, [2]CDSB, NIDCR, NIH, USA, [3]Children's National Health System, USA, [4]CSDB, NIDCR, NIH, USA
Disclosures: Alison Boyce, None

SU0059 **Withdrawn**

SU0060 **Differential Behavioral and Skeletal Responses to Methylphenidate in Male and Female**
Sardar Uddin*[1], Lisa Robison[2], Melissa Vitale[2], Junho Lee[2], Michalis Michaelos [2], Jason Gandhi[3], Soyeh Paeng[3], Panayotis Thanos[3], Michael Hadjiargyrou[4], David Komatsu[5]. [1]New York University Medical Center, USA, [2]Department of Psychology, Stony Brook University, Stony Brook, NY, USA, [3]Department of Psychology, Stony Brook University, USA, [4]Department of Life Sciences, New York Institute of Technology, USA, [5]Department of Orthopaedics, Stony Brook University, USA
Disclosures: Sardar Uddin, None

BONE MARROW MICROENVIRONMENT AND NICHES: STEM CELL NICHES

SU0061 **Physiologic PTH Signaling in Osteocytes Restrains Long-Term Hematopoietic Stem Cells in the Niche**
Benjamin Frisch*[1], Alexandra Goodman[1], Olga Bromberg[1], Xiaolin Tu[2], Teresita Bellido[3], Laura Calvi[1]. [1]University of Rochester School of Medicine & Dentistry, USA, [2]University of Indiana Department of Anatomy & Cell Biology, USA, [3]Indiana University Department of Anatomy & Cell Biology, USA
Disclosures: Benjamin Frisch, None

BONE MARROW MICROENVIRONMENT AND NICHES: BONE AND HEMATOPOIESIS

SU0062 **Erythropoietin and bone remodeling**
Sukanya Suresh*[1], Luis Fernandez De Castro Diaz[2], Soumyadeep Dey[3], Pamela Robey[2], Constance Noguchi[3]. [1]Molecular Medicine Branch, Molecular Cell Biology Section, NIDDK, NIH, United states, [2]Skeletal Biology Section, Craniofacial & Skeletal Diseases Branch, NIDCR, NIH, USA, [3]Molecular Medicine Branch, Molecular Cell Biology Section, NIDDK, NIH, USA
Disclosures: Sukanya Suresh, None

BONE MARROW MICROENVIRONMENT AND NICHES: BONE AND VASCULATURE

SU0063 **Bone marrow blood vessels are further away from trabecular bone with age and short-term intermittent PTH 1-34 administration augmented bone perfusion in young Fischer-344 rats**
Rhonda Prisby*, Sophie Guderian, James Cirone, Shaopeng Pei, Liyun Wang, Seungyong Lee. University of Delaware, USA
Disclosures: Rhonda Prisby, None

SU0064 **Short-Term Intermittent PTH (1-34) Administration Augments Skeletal Blood Flow and Perfusion in Mice as Assessed with Fluorescent Microspheres**
SEUNGYONG LEE*, Rhonda Prisby. University of Delaware, USA
Disclosures: SEUNGYONG LEE, None

BONE MARROW MICROENVIRONMENT AND NICHES: GENERAL

SU0065 **Inflammatory Cytokines Cause a Shift in the Haematopoietic Microenvironment Modulating the Development of Osteoclasts**
Nina Ruef*[1], Silvia Dolder[2], Mark Siegrist[2], Deepak Balani[3], Daniel Aeberli[4], Michael Seitz[4], Willy Hofstetter[2]. [1]University of Bern, Switzerland, [2]Bone Biology, Department Clinical Research, University of Bern, Switzerland, [3]Endocrine Unit, Massachusetts General Hospital & Harvard Medical School, USA, [4]Department of Rheumatology, Clinical Immunology & Allergology, Bern University Hospital, Switzerland
Disclosures: Nina Ruef, None

BONE TUMORS AND METASTASIS: BONE TUMOR MICROENVIRONMENT

SU0066 **Hedgehog signaling in jawbone invasion of oral squamous cell carcinoma**
Tsuyoshi Shimo*[1], Kenichi Matsumoto[2], Eriko Aoyama[3], Tatsuo Okui[4], Naito Kurio[2], Akira Sasaki[2]. [1]Okayama University Graduate School of Medicine, Dentistry & Pharmaceutical Sci, Japan, [2]Department of Oral & Maxillofacial Surgery, Okayama University Graduate School of Medicine, Dentistry, & Pharmaceutical Sciences, Japan, [3]Advanced Reseach Center for Oral & Craniofacial Sciences, Okayama University Graduate School of Medicine, Dentistry, & Pharmaceutical Sciences, Japan, [4]Department of Oral & Maxillofacial Surgery, Okayama University Graduate School of Medicine, Dentistry, & Pharmaceutical Sciences, USA
Disclosures: Tsuyoshi Shimo, None

SU0067 **MMP13-induced type I collagen degradation plays a key role in the prostate cancer dependent bone metabolism**
Kenta Watanabe, Michiko Hirata, Chisato Miyaura, Masaki Inada*. Tokyo University of Agriculture & Technology, Japan
Disclosures: Masaki Inada, None

SU0068 **Novel 3D model mimics the physical properties of bone to allow for detailed studies of interactions between tumor and bone**
Ushashi Dadwal[1], Ruijing Guo[2], Alyssa Merkel[3], Shanik Fernando[4], Denise Buenrostro[1], Scott Guelcher[5], Julie Sterling*[6]. [1]Vanderbilt Center for Bone Biology, USA, [2]Vanderbilt University, Department of Chemical & Biomolecular Engineering, USA, [3]Department of Veterans Affairs (TVHS)/ Vanderbilt Center for Bone Biology, USA, [4]Vanderbilt Department of Chemical & Biomolecular Engineering, USA, [5]Vanderbilt University Department of Chemical & Biomolecular Engineering, USA, [6]Department of Veterans Affairs (TVHS)/Vanderbilt University Medical Center, USA
Disclosures: Julie Sterling, None

BONE TUMORS AND METASTASIS: GENERAL

SU0069 **Anti Urokinase Receptor (uPAR) Antibody (ATN-658) Blocks Breast Cancer Growth and Skeletal Metastasis *in vitro* and *in vivo*; Effects which are Potentiated in Combination with Zometa**
Shafaat Rabbani*[1], Ani Arakelian[2], Surabhi Parashar[3], Haseeb Khan[4], Imrana Tanvir[4], Andrew P. Mazar[5]. [1]McGill University, Ca, [2]McGill University Health Centre, Canada, [3]McGill University, Canada, [4]Fatima Memorial Hospital System, Pakistan, [5]Northwestern University, USA
Disclosures: Shafaat Rabbani, None

SU0070 **Effect of Type 1 Diabetes in Prostate Cancer Model**
Sherry Abboud Werner*[1], Kathleen Woodruff[2], Diane Horn[2], Hanes Martha[2], Chung Song[2], Fermin Tio[3], Julie Foley[4], Robert Maronpot[5], Bandana Chatterjee[2]. [1]University of Texas Health Science Center at San Antonio, USA, [2]University of Texas Health Science Center, USA, [3]VA Medical Center, USA, [4]National Institute of Environmental Health Sciences, USA, [5]Maronpot Consulting LLC, USA
Disclosures: Sherry Abboud Werner, None

SU0071 **Low Intensity Mechanical Signals Slow Tumor Progression and Osteolysis in a Murine Model of Multiple Myeloma**
Gabriel Pagnotti*[1], Benjamin J. Adler[1], M. Ete Chan[1], Kenneth R. Shroyer[2], Janet E. Rubin[3], Clinton T. Rubin[1]. [1]Stony Brook University, USA, [2]Stony Brook Medicine, USA, [3]University of North Carolina, Chapel Hill, USA
Disclosures: Gabriel Pagnotti, None

BONE TUMORS AND METASTASIS: MECHANISMS OF BONE METASTASIS

SU0072 **Characterizing Prostate Cancer Bone Metastasis Using Tissue Engineered Matrices**
Annie Chiu*[1], Damian Genetos[2]. [1]Anatomy, Physiology & Cell Biology, School of Veterinary Medicine, UC Davis, United states, [2]Anatomy, Physiology, & Cell Biology, School of Veterinary Medicine, UC Davis, USA
Disclosures: Annie Chiu, None

SU0073 **The tumor suppressor miRs-30-5p family in the control of metastatic bone disease**
Croset Martine*[1], Casina Kan[1], Edith Bonnelye[2], Fransceco Pantano[3], Françoise Descotes[4], Catherine Alix-Panabières[5], Charles Lecellier[6], Saw See Hong[7], Philippe Clézardin[1]. [1]INSERM, UMR_S1033, UFR de médecine Lyon-Est, University of Lyon, France, [2]INSERM, UMR_S1033, UFR de médecine Lyon-Est university of Lyon, France, [3]Medical Oncology Dept.\Translational Oncology Laboratory, Italy, [4]Service de Biochimie Biologie Moléculaire, Hospices Civils de Lyon, France, [5]Department of Cellular & Tissular LCCRH Biopathology of Tumors, University Medical Centre, France, [6]Université Montpellier 1, France, [7]Université Lyon 1, UCBL-INRA-EPHE UMR-754, France
Disclosures: Croset Martine, None

BONE TUMORS AND METASTASIS: THERAPEUTIC TARGETS FOR BONE TUMORS

SU0074 **Effects of ONO-5334, a Cathepsin K Inhibitor, on Bone Volume and Bone Turnover Markers in a Rabbit VX2 Carcinoma Induced Bone Osteolysis Model**
YASUO OCHI*, YASUTOMO NAKANISHI, YASUAKI HASHIMOTO, SATOSHI NISHIKAWA, HIROYUKI YAMADA, HIROSHI MORI, SHINSEI FUJIMURA, MAKOTO TANAKA, KAZUHITO KAWABATA. ONO Pharmaceutical Co., LTD., Japan
Disclosures: YASUO OCHI, None

SU0075 **Elevated and persistent cAMP-Creb1 pathway activation is essential for the maintenance of osteosarcoma**
Mannu Walia*[1], Patricia Ho[2], Alvin Ng[2], Ankita Gupte[2], Alistair M. Chalk[2], T.John Martin[2], Carl Walkley[2]. [1]St Vincents Instute of medical research, Australia, [2]St Vincents Institute of Medical Research, Australia
Disclosures: Mannu Walia, None

SU0076 **Human Breast Cancer Cell Derived PTHrP Reduces Osteoblast Cell Death and Apoptosis Induced by Potential Anticancer Compounds**
Sahiti Chukkapalli[1], Magesh Muthu[2], Arun Rishi[3], Nabanita Datta*[1]. [1]Wayne State University School of Medicine, USA, [2]Karmanos Cancer Institute, USA, [3]Wayne State University, USA
Disclosures: Nabanita Datta, None

CHONDROCYTES AND CARTILAGE MATRIX: ARTICULAR CARTILAGE

SU0077 **Discoidin Receptor 2 is Necessary for In Vitro TMJ Chondrocyte Differentiation While Its Absence is Associated with Aging Related TMJ Degeneration**
Chunxi Ge*[1], Yan Li[2], Hanshi Sun[2], Sunil Kapila[2], Renny Franceschi[2]. [1]Pom Univ of Michigan School of Dentistry, USA, [2]University of Michigan, USA
Disclosures: Chunxi Ge, None

SU0078 **High fat diet compromises articular cartilage thickness relative to body weight, while low intensity mechanical signals protects this relationship, building cartilage relative to body size**
Tee Pamon*, Vincent Bhandal, Mei Lin Chan, Patryk Krzesaj, Clinton Rubin. Stony Brook University, USA
Disclosures: Tee Pamon, None

SU0079 **In Vivo Identification and Induction of Articular Cartilage Stem cells by Inhibiting NF-κB Signaling in osteoarthritis**
Xiaoling Zhang[1], Wenxue Tong*[2], Yiyun Geng[2]. [1]Institute of Health Sciences, Peoples republic of china, [2]The Key Laboratory of Stem Cell Biology, Institute of Health Sciences, Shanghai Jiao Tong University School of Medicine (SJTUSM) & Shanghai Institutes for Biological Sciences (SIBS), Chinese Academy of Sciences (CAS), Shanghai 200025, China, China
Disclosures: Wenxue Tong, None

SU0080 **Male Estrogen Receptor Beta KO mice Develop TMJ Degeneration**
Sunil Wadhwa, Jing chen, Manshan Xu*, Jennifer Robinson, Alina O'Brien, Thomas Choi. Columbia University, USA
Disclosures: Manshan Xu, None

SU0081 **The change of UCHL1/PGP 9.5 expression in initial progressive of rat temporomandibular joint osteoarthritis cartilage induced by unilateral traumatic occlusion**
Di Liu*[1], Xiao Zhao[2], Ping Ji[3]. [1]Shandong University; Shandong Provincial Key Laboratory of Oral Biomedicine, Peoples republic of china, [2]Shandong Provincial Key Laboratory of Oral Biomedicine, China, [3]Shandong University; Shandong Provincial Key Laboratory of Oral Biomedicine, China
Disclosures: Di Liu, None

CHONDROCYTES AND CARTILAGE MATRIX: GENERAL

SU0082 **Smurf2-Deficient Chondrocytes Exhibit Enhanced Chondrogenic Potential**
Henry Huang*, Hong Zhang, David Ayers, Jie Song. University of Massachusetts Medical School, USA
Disclosures: Henry Huang, None

CHONDROCYTES AND CARTILAGE MATRIX: ORIGIN, DIFFERENTIATION, APOPTOSIS

SU0083 **The cell cycle regulation of chondrocyte development**
HIROYUKI INOSE*[1], MASANORI SAITO[2], PHILIPP KALDIS[3], ATSUSHI OKAWA[2]. [1]Tokyo Medical & Dental University, Japan, [2]Department of Orthopedics, Tokyo Medical & Dental University, Japan, [3]Institute of Molecular & Cell Biology, A*STAR, Singapore
Disclosures: HIROYUKI INOSE, None

CHONDROCYTES AND CARTILAGE MATRIX: TRANSCRIPTIONAL REGULATION AND GENE EXPRESSION

SU0084 **Failed Vertebral Bone Formation in Mucopolysaccharidosis VII is Associated with Aberrant Sox9 Regulation and Altered Wnt Signaling**
Sun Peck*[1], Eileen Shore[1], Neil Malhotra[1], George Dodge[1], Margret Casal[1], Maurizio Pacifici[2], Mark Haskins[1], Lachlan Smith[1]. [1]University of Pennsylvania, USA, [2]Children's Hospital of Philadelphia, USA
Disclosures: Sun Peck, None

SU0085 **Regulation of IL36α by TBRII Signaling in Articular Chondrocytes: Potential Role in the Osteoarthritic Process**
Tieshi Li*[1], Joseph temple[2], Alessandra Esposito[2], Arnavaz Hakimiyan[3], Susan Chubinskaya[3], Yiwen Zhao[4], Richard Loeser[4], Daniel Del Gaizo[5], Christopher Olcott[5], Anna Spagnoli[2]. [1]University of North Carolina at Chapel Hill, USA, [2]Department of Pediatrics, Rush University Medical Center, USA, [3]Department of Biochemistry, Rush University Medical Center, USA, [4]Department of Medicine, University of North Carolina at Chapel Hill, USA, [5]Department of Orthopedics, University of North Carolina at Chapel Hill, USA
Disclosures: Tieshi Li, None

SU0086 **Smad3 deficiency leads to mandibular condyle degradation via the Sphingosine 1-phosphate (S1P) /S1P3 signaling axis**
Hiroki Mori*[1], Takashi Izawa[2], Eiji Tanaka[1]. [1]Tokushima University Grad Sch, Japan, [2]University of Tokushima Grad Sch, Japan
Disclosures: Hiroki Mori, None

SU0087 **Transcriptome landscape of Notch signaling reveals novel canonical and non-canonical targets during chondrogenesis**
Yangjin Bae*, Shan Chen, Abbhirami Rajagopal, Feng Wang, Hui Wang, Huan-Chang Zeng, Huan-Chang Zeng, Brian Dawson, Terry Bertin, Rui Chen, Brendan Lee. Baylor College of Medicine, USA
Disclosures: Yangjin Bae, None

ENERGY METABOLISM AND BONE: DIABETES AND BONE (ANIMAL MODELS)

SU0088 **The Effects of Endurance Training and Dietary Methionine Restriction on Energy Metabolism, Bone Histomorphometry and Bone Densitometry in Adult Male Rats**
Tsang-hai Huang*[1], Gene Ables[2], Ming-shi Chang[3], Rong-sen Yang[4]. [1]National Cheng-Kung University, Taiwan, [2]Orentreich Foundation for the Advancement of Science, USA, [3]National Cheng Kung University, Taiwan, [4]National Taiwan University Hospital, Taiwan
Disclosures: Tsang-hai Huang, None

SU0089 **Type I diabetes altered bone cell purinergic mechanosignaling and anabolic bone response to exercise**
Zeynep Seref-Ferlengez*[1], Herb B. Sun[1], Mitchell B. Schaffler[2], Sylvia Suadicani[1], Mia M. Thi[1]. [1]Albert Einstein College of Medicine, USA, [2]City College of New York, USA
Disclosures: Zeynep Seref-Ferlengez, None

SU0090 **VEGF Expression Levels in Human Diabetic and Non-Diabetic Vertebral Bone Tissue**
Roberto Fajardo*[1], Jesus Hernandez[2], Trevor Wait[2], Ammar Saigal[2], Elena Geraymovych[2], Zachary Child[2]. [1]UT Health Science Center, San Antonio, USA, [2]The UT Health Science Center at San Antonio, USA
Disclosures: Roberto Fajardo, None

ENERGY METABOLISM AND BONE: FAT AND BONE

SU0091 **Adiponectin Contributes to Bone Marrow Adipose Tissue Expansion but Not Bone Loss in Calorie Restricted Mice**
Theresa Roth[1], Rebecca Hayden[2], Carolynn Roth[3], Linh Ho*[2], Liping Wang[1], Robert Nissenson[1]. [1]UCSF / VA, USA, [2]UCSF / NCIRE, USA, [3]UCSF, USA
Disclosures: Linh Ho, None

SU0092 **Aging B6 mice are protected from the deleterious effects of calorie restriction on trabecular bone**
Casey Doucette*[1], Mark Horowitz[2], Clifford Rosen[1]. [1]Maine Medical Center Research Institute, USA, [2]Department of Orthopaedics & Rehabilitation, Yale University School of Medicine, USA
Disclosures: Casey Doucette, None

SU0093 **Can Magnetic Resonance Spectroscopy Measure Bone Marrow Adipose Tissue Fraction?**
Ingvild Hogestol*[1], Maziar Shabestari[2], Hanne Gulseth[1], Tom Mala[3], Erik Rud[4], Erik Eriksen[1]. [1]Department of Endocrinology, Morbid Obesity & Preventive Medicine, Medical Clinic at Oslo University Hospital. University of Oslo., Norway, [2]Department of Biomaterials, Institute of Clinical Dentistry., Norway, [3]Department of Endocrinology, Morbid Obesity & Preventive Medicine, Medical Clinic & Department of Gastrointestinal Surgery, Surgical Clinic at Oslo University Hospital., Norway, [4]Department of Radiology & Nuclear Medicine, Oslo University Hospital. University of Oslo., Norway
Disclosures: Ingvild Hogestol, None

SU0094 **Fate Determination and the Bioenergetics of Osteoblastogenesis and Adipogenesis:**
Anyonya Guntur*, Victoria DeMambro, Clifford Rosen. Maine medical center research institute, USA
Disclosures: Anyonya Guntur, None

SU0095 **Increased Osteocalcin Levels and Bone Mineral Content During Rapid Weight Gain Therapy in Anorexia Nervosa Patients**
Bojan Tubic*[1], Cecilia Pettersson[2], Anna Svedlund[3], Heléne Bertéus Forslund[4], Per Magnusson[5], Diana Swolin-Eide[3]. [1]Gothenburg University, Se, [2]Department of Internal Medicine & Clinical Nutrition, Sahlgrenska Academy, Gothenburg University, Sweden, [3]Department of Pediatrics, Institute of Clinical Sciences, The Queen Silvia Children's Hospital, Sahlgrenska Academy, Gothenburg University, Sweden, [4]Department of Internal Medicine & Clinical Nutrition, Sahlgrenska Academy, Gothenburg University, Göteborg, Sweden, [5]Department of Clinical Chemistry & Department of Clinical & Experimental Medicine, Linköping University, Sweden
Disclosures: Bojan Tubic, None

ENERGY METABOLISM AND BONE: GENERAL

SU0096 **Apoe deficiency in osteoblasts leads to a low bone mass phenotype in mice**
Brigitte Müller, Alexander Bartelt , Timo Beil, Till Köhne, Thorsten Schinke, Andreas Niemeier*. University Medical Center Hamburg-Eppendorf, Germany
Disclosures: Andreas Niemeier, None

SU0097 **Estrogen Loss Impairs Osteocyte Mitochondrial Electron Transport Chain Activity (oxidative phosphorylation) In Vivo**
Dorra Frikha-Benayed*[1], Jelena Basta-Plajkic[2], Robert J. Majeska [2], Mitchell B. Schaffler[2]. [1]The City University of New York, USA, [2]CCNY, USA
Disclosures: Dorra Frikha-Benayed, None

SU0098 **NGF-BDNF-Osteocalcin and oxytocin genes interaction in brain, bone, fat stores and reproductive organs**
Claudia Camerino*[1], Maria Cannone[2], Elena Conte[2], Domenico Tricarico[2]. [1]School of Medicine, University of Bari, Italy & University of Cincinnati, USA, [2]Dept. of Pharmacy – Drug Sciences, University of Bari, Italy
Disclosures: Claudia Camerino, None

SU0099 **Peripheral Leptin Stimulates Bone Formation at Very Low Circulating Levels**
Russell T. Turner*, Kenneth Philbrick, Carmen Wong, Amida Kuah, Dawn Olson, Adam Branscum, Urszula Iwaniec. Oregon State University, USA
Disclosures: Russell T. Turner, None

SU0100 **Phosphate Restriction Leads to Global Inhibition of Mitochondrial Oxidative Function in Fracture Healing**
Amira Hussein*[1], Serkalem Demissie[2], Kyle Lybrand[3], Heather Matheny[3], Brenna Hogue[3], Anthony DeGiacomo[3], Louis Gerstenfeld[3]. [1]Boston University School of Medicine, USA, [2]School of Public Health, Boston University, USA, [3]Orthopaedic Surgery, Boston University School of Medicine, USA
Disclosures: Amira Hussein, None

SU0101 **The Phosphate Hypothesis: Thyroid Disease and the Skeleton**
Robert Fredericks*[1], Ilka Nemere[2]. [1]Endocrine Associates, USA, [2]Utah State University, USA
Disclosures: Robert Fredericks, None

SU0102 **Uncontrolled glucose significantly impairs trabecular and cortical micro-architecture and delays bone callus formation in type 1 diabetic rats, which are ameliorated by insulin administration**
Ariane Zamarioli*[1], Maysa Campos[2], Ana Paula Franttini[2], Mariana Butezloff[2], Francisco de Paula[2], José Volpon[2]. [1]School of Medicine of Ribeirao Preto, University of Sao Paulo, Brazil, [2]University of São Paulo, Brazil
Disclosures: Ariane Zamarioli, None

GENETIC DISORDERS OF THE MUSCULOSKELETAL SYSTEM: ANIMAL MODELS

SU0103 **Conserved Dynamics in Genes Associated with Human BMD and Bone Disorders During Zebrafish and Rat Bone Formation**
Leah Worton[1], Arden Chew[1], Claire Watson[1], Edith Gardiner[1], Dobrawa Napierala[2], Amarjit Virdi[3], D. Rick Sumner[3], Cole Trapnell[1], Yi-Hsiang Hsu[4], Ronald Kwon*[1]. [1]University of Washington, USA, [2]University of Alabama at Birmingham, USA, [3]Rush University Medical Center, USA, [4]Harvard Medical School & BROAD Institute of MIT & Harvard, USA
Disclosures: Ronald Kwon, None

SU0104 **Cortical bone phenotypes observed in *Mmp8* and *Prokr1* null mice produced by the Knock Out Mouse Project**
Douglas Adams*[1], Renata Rydzik[1], Li Chen[1], Zhihua Wu[1], Seung-Hyun Hong[1], Gaven Garland[2], Pujan Joshi[1], Caibin Zhang[1], John Sundberg[2], Dong Guk Shin[1], David Rowe[1], Cheryl Ackert-Bicknell[3]. [1]The University of Connecticut, USA, [2]The Jackson Laboratory, USA, [3]University of Rochester, USA
Disclosures: Douglas Adams, None

SU0105 **Exercise Capacity of Mice with Genetically Induced Hypophosphatemia**
Daniel Caballero*[1], Dominik Pesta[2], John Sterpka[1], Ali Nasiri[1], Michael Jurczack[1], Gerald Shulman[3], Clemens Bergwitz[1]. [1]Yale School of Medicine, USA, [2]University of Innsbruck, Austria, [3]Yale School of Medicine/HHMI, USA
Disclosures: Daniel Caballero, None

SU0106 **Identification of sub-populations within Diversity Outbred mice representing differing states of bone turnover**
Cheryl Ackert-Bicknell*[1], Douglas Adams[2], Seung-Hyun Hong[3], Renata Rydzik [3], Li Chen[2], Zhihua Wu[2], Laura Mello[4], Caibin Zhang[2], Shin Dong Guk[2], David Rowe[2]. [1]University of Rochester, USA, [2]The University of Connecticut, USA, [3]University of Connecticut, USA, [4]The Jackson Laboratory, USA
Disclosures: Cheryl Ackert-Bicknell, None

SU0107 **Mouse with substitution of type I collagen 3-hydroxylation site has altered ECM but does not recapitulate the bone dysplasia of types VII/VIII Osteogenesis Imperfecta**
Wayne Cabral*[1], Nadja Fratzl-Zelman[2], Joseph Perosky[3], Adrienne Alimasa[3], Rachel Harris[3], Peter Backlund[4], Paul Roschger[2], Klaus Klaushofer[2], Antonella Forlino[5], Kenneth Kozloff[3], Joan Marini[1]. [1]Bone & Extracellular Matrix Branch, NICHD, NIH, USA, [2]Ludwig Boltzmann Institute of Osteology at Hanusch Hospital of WGKK & AUVA Trauma Centre Meidling, 1st Med. Dept. Hanusch Hospital, Austria, [3]Orthopaedic Research Laboratories, Department of Orthopaedic Surgery, University of Michigan, USA, [4]Biomedical Mass Spectrometry Facility, NICHD, NIH, USA, [5]Department of Molecular Medicine, Biochemistry Unit, University of Pavia, Italy
Disclosures: Wayne Cabral, None

SU0108 **Positive Effects of Pamidronate on Bone and Muscle in a Mouse Model of Duchenne Muscular Dystrophy**
Sung-Hee Yoon*[1], Kim Sugamori[1], Marc Grynpas[2], Jane Mitchell[1]. [1]University of Toronto, Canada, [2]Samuel Lunenfeld Research Institute, Mount Sinai Hospital, Canada
Disclosures: Sung-Hee Yoon, None

SU0109 **Tissue-Nonspecific Alkaline Phosphatase Enzyme Deficient Mice Reveal Cellular Mechanisms Leading to Craniosynostosis in Murine Hypophosphatasia**
Hwa Kyung Nam[1], Jin Liu[1], Cassandra Campbell[1], Manisha Yadav[2], Jose Luis Millan[2], Nan Hatch*[1]. [1]University of Michigan, USA, [2]Sanford Burnham Medical Research Institute, USA
Disclosures: Nan Hatch, None

SU0110 **Towards the identification of the genetic defect underlying the osteopetrosis (op/op) rat**
Eveline Boudin*[1], Hanna Witwicka[2], Geert Vandeweyer[3], Paul Odgren[2], Wim Van Hul[3]. [1]University of Antwerp, Belgium, [2]Department of Cell Biology, University of Massachusetts Medical School, USA, [3]Department of Medical Genetics, University & University Hospital of Antwerp, Belgium
Disclosures: Eveline Boudin, None

SU0111 **V-ATPase *a*3 R740S Mutation Affects Enamel Development in Osteopetrotic Mice**
Lisa Johnson*[1], Bernhard Ganss[1], Celeste Owen[2], Grace Bradley[1], Irina Voronov[1]. [1]University of Toronto, Canada, [2]The Toronto Centre for Phenogenomics, Canada
Disclosures: Lisa Johnson, None

GENETIC DISORDERS OF THE MUSCULOSKELETAL SYSTEM: MONOGENIC BONE DISEASES

SU0112 **Generation of human bone from a subject with osteogenesis imperfecta (OI) using iPSC-induced MSCs**
Xiaonan Xin*[1], Xi Jiang[1], Liping Wang[1], Li Chen[1], Kyle Shin[1], Mark Kronenberg[1], Nathaniel Dyment[1], Jianping Huang[1], Benjamin Lerner[1], Keiichi Fukuda[2], Noemi Fusaki[2], Akihiro Iida[2], Mamoru Hasegawa[2], David Rowe[1], Alexander Lichtler[1]. [1]University of Connecticut Health Center, USA, [2]DNAVEC Corporation, Japan
Disclosures: Xiaonan Xin, None

SU0113 **Serotonin Measured in Platelet Poor Plasma is Normal in OPPG Patients**
Myrto Eliades[1], Sara Schwab*[2], Christine Simpson[3], Karl Insogna[3], Mary Pavlovich[2], Elizabeth Streeten[2]. [1]University of Maryland School of Medicine, Us, [2]University of Maryland School of Medicine, USA, [3]Yale School of Medicine, USA
Disclosures: Sara Schwab, None

GENETIC DISORDERS OF THE MUSCULOSKELETAL SYSTEM: OTHER DISEASES

SU0114 **Characterization of Bone Phenotypes in Sickle Cell Trait and Sickle Cell Disease Mice**
Liping Xiao*[1], Biree Andemariam[1], Pam Taxel[1], William T Zempsky[2], Douglas J Adams[1], Marja Marie Hurley[1]. [1]University of Connecticut Health Center, USA, [2]Connecticut Children's Medical Center, USA
Disclosures: Liping Xiao, None

SU0115 **Reduction of p27 expression correlates with somatic *MEN1* gene mutations in sporadic parathyroid adenomas**
Filomena Cetani*[1], Simona Borsari[2], Elena Pardi[2], Federica Saponaro[2], Liborio Torregrossa[3], Fulvio Basolo[3], Paolo Miccoli[3], Claudio Marcocci[2]. [1]University Hospital of Pisa Endocrine Unit 2, Italy, [2]Department of Clinical & Experimental Medicine University of Pisa, Italy, [3]Department of Surgical, Medical & Molecular Pathology & Critical Area University of Pisa, Italy
Disclosures: Filomena Cetani, None

HORMONAL REGULATORS: CALCITONIN AND OTHER HORMONES

SU0116 **Anti-inflammatory role of Vitamin D in IL-1β-mediated inflammatory chemokine, IL-8 synthesis in Osteoarthritis**
Aparna Maiti*[1], William A Jiranek[2]. [1]Virginia Commonwealth University, USA, [2]Virginia Commonwealth University School Medicine, USA
Disclosures: Aparna Maiti, None

HORMONAL REGULATORS: FGF23 AND OTHER PHOSPHATONINS

SU0117 **Fibroblast growth factor 23 (FGF23) increases cardiac contractility and induces cardiac mechanical alternans which are eliminated by FGFR4 antibody treatment**
Matthew Hendrix*[1], Chelsea Shapland[1], Chad Touchberry[2], Alexander Grabner[3], Christian Faul[3], Michael Wacker[1]. [1]University of Missouri-Kansas City School of Medicine, USA, [2]University of Memphis, USA, [3]University of Miami School of Medicine, USA
Disclosures: Matthew Hendrix, None

SU0118 **Metabolic Acidosis Stimulates MEPE Expression Regulating Fibroblast Growth Factor 23 in Osteoblasts**
Nancy Krieger*[1], Min Ho Kim[2], David Bushinsky[2]. [1]University of Rochester, USA, [2]University of Rochester School of Medicine, USA
Disclosures: Nancy Krieger, None

HORMONAL REGULATORS: PARATHYROID HORMONE AND CALCIUM SENSING RECEPTORS

SU0119 **Ablation of maternal *Gnas* exon Nesp (Nesp$^{m-/p+}$) in mice dramatically reduces Gsα expression in brown adipose tissue**
Olta Tafaj*[1], Harald Juppner[2]. [1]"massachusetts General Hospital, Harvard Medical Sc", USA, [2]MGH, USA
Disclosures: Olta Tafaj, None

SU0120 **Intermittent PTH treatment induces bone anabolism through regulatory T cells**
Mingcan Yu*[1], Lindsey Walker[1], Jerid Robinson[1], Abdul Malik Tyagi[1], Jau-Yi Li[1], Jonathan Adams[1], Richard DiPaolo[2], Roberto Pacifici[3]. [1]Emory University, USA, [2]St. Louis University, USA, [3]Emory University School of Medicine, USA
Disclosures: Mingcan Yu, None

SU0121 **PTEN is a novel mediator of the anti-proliferative effects of (1-34) PTH in osteoblastic cells**
Andrew Sunters[1], Imelda McGonnell[2], Robert Fowkes[2], Gabriel Galea[2], Lance Lanyon[3], Joanna Price*[4]. [1]Royal Veterinary College, United Kingdom, [2]The Royal Veterinary College, United Kingdom, [3]Bristol University, United Kingdom, [4]University of Bristol, Gb
Disclosures: Joanna Price, None

HORMONAL REGULATORS: SEX HORMONES AND GLUCOCORTICOIDS

SU0122 **Dietary Fat Independent of Caloric Intake Impairs Cortical Bone Structure via Glucocorticoid Signaling in Osteoblasts and Osteocytes**
Sarah Kim*[1], Holger Henneicke[2], Sylvia Gasparini[2], Markus Seibel[3], Hong Zhou[2]. [1]ANZAC Research Institute, Australia, [2]Bone Research Program, ANZAC Research Institute, The University of Sydney, Australia, [3]Department of Endocrinology & Metabolism, Concord Hospital, The University of Sydney, Australia
Disclosures: Sarah Kim, None

SU0123 **Estrogens protect against endocortical bone resorption in both female and male mice; likely via ERα-mediated suppression of SDF1/CXCL12 in uncommitted mesenchymal progenitors**
Srividhya Iyer*[1], Serra Semahat Ucer[2], Ha-Neui Kim[2], Li Han[2], Aaron Warren[2], Julie Crawford[2], Maria Almeida[2], Stavros Manolagas[2]. [1]Central Arkansas VA Healthcare System, Univ of Arkansas for Medical Sciences, USA, [2]Center for Osteoporosis & Metabolic Bone Diseases, Central Arkansas Veterans Healthcare System, University of Arkansas for Medical Sciences, USA, USA
Disclosures: Srividhya Iyer, None

SU0124 **Female Mice are Resilient to Glucocorticoid-Induced Bone Loss**
Sylvia Gasparini*[1], Holger Henneicke[2], Sarah Kim[2], Lee Thai[2], Hong Zhou[2], Markus Seibel[3]. [1]ANZAC Research Institute, Australia, [2]Bone Research Program, ANZAC Research Institute, The University of Sydney, Sydney, NSW, Australia, Australia, [3]Department of Endocrinology & Metabolism, Concord Hospital, The University of Sydney, Sydney, NSW, Australia, Australia
Disclosures: Sylvia Gasparini, None

SU0125 **The Adipokines and Estradiol in Relation to Bone Mineral Density and Carotid Atherosclerosis in Postmenopausal Women – The OSTPRE-BBA Study**
Miika Värri*[1], Leo Niskanen[2], Tomi-Pekka Tuomainen[3], Risto Honkanen[4], Heikki Kröger[5], Marjo Tuppurainen[6]. [1]University of Eastern Finland, Finland, [2]Endocrinology, Helsinki University Hospital & University of Helsinki, Finland, [3]Institute of Public Health & Clinical Nutrition, University of Eastern Finland, Finland, [4]Kuopio Musculoskeletal Research Unit (KMRU), Surgery, Institute of Clinical Medicine, University of Eastern Finland, Finland, [5]Department of Orthopaedics, Traumatology & Hand Surgery, Kuopio University Hospital, Finland, [6]Department of Obstetrics & Gynaecology, Kuopio University Hospital, Finland
Disclosures: Miika Värri, None

HORMONAL REGULATORS: VITAMIN D AND ANALOGS

SU0126 **1,25-Dihydroxyvitamin D Induces Vitamin D Receptor-Dependent Large-Scale Changes in mRNA Expression in Human Skeletal Muscle Cells**
Zachary Ryan[1], Theodore Craig[1], Clifford Folmes[2], Xuewei Wang[3], Ian Lanza[4], Niccole Schaible[5], Jeffrey Salisbury[6], K. Sreekumaran Nair[4], Andre Terzic[2], Gary Sieck[7], Rajiv Kumar*[1]. [1]Division of Nephrology & Hypertension, Department of Medicine, USA, [2]Division of Cardiovascular Diseases, Department of Medicine, USA, [3]Division of Biomedical Statistics & Informatics, Department of Health Sciences Research, USA, [4]Division of Endocrinology, Department of Medicine, USA, [5]Mayo Clinic, USA, [6]Department of Biochemistry & Molecular Biology, USA, [7]Department of Physiology, Biophysics & Biomedical Engineering, USA
Disclosures: Rajiv Kumar, None

SU0127 **1,25-Dihydroxyvitamin D_3 Alleviates Inflammatory Bowel Phenotypes in a Genetic Mouse Model with a High Disease Susceptibility**
Sayantani Goswami*[1], Shiyan Yu[1], Juan Flores[1], Sylvia Christakos[2], Nan Gao[1]. [1]Department of Biological Sciences, Rutgers University, USA, [2]Department of Microbiology, Biochemistry & Molecular Genetics, Rutgers University, USA
Disclosures: Sayantani Goswami, None

SU0128 **1,25-Dihydroxyvitamin D_3 treatment of mice infected with M. tuberculosis results in increased pathogen burden**
Kamlesh Bhatt*[1], Sylvia Christakos[2], Padmini Salgame[1]. [1]NJMS-Medicine-Infectious Diseases, Rutgers University, USA, [2]Department of Microbiology, Biochemistry & Molecular Genetics, NJMS, Rutgers University, USA
Disclosures: Kamlesh Bhatt, None

SU0129 **Assessment of 24,25-dihydroxyvitamin D as a Marker of Vitamin D Status in Children**
Selene Bantz*, Christine Simpson, Jane Zhang, Thomas Carpenter. Yale University School of Medicine, USA
Disclosures: Selene Bantz, None

SU0130 **Calcitriol Is Not Required During Fetal Development to Regulate Serum Minerals or Skeletal Development, Although It May Act Through Non-Genomic Pathways to Stimulate Placental Calcium Transport**
Kamal Alhani*[1], Yue Ma[1], Beth J. Kirby[1], René St-Arnaud[2], Christopher Kovacs[1]. [1]Memorial University of Newfoundland, Canada, [2]McGill University, Canada
Disclosures: Kamal Alhani, None

SU0131 **Expression of Vitamin D Receptor in Seminal Vesicle of Cholesterol Formula Mice**
Dong Won Byun*[1], Tae-Hee Kim[2], Hae-Hyeog Lee[2]. [1]Soon Chun Hyang University Seoul Hospital, South korea, [2]Department of Obstetrics & Gynecology, Soonchunhyang University Hospital, South korea
Disclosures: Dong Won Byun, None

SU0132 **MATURE OSTEOBLASTS REGULATE VITAMIN D-MEDIATED BONE RESORPTION DURING GROWTH AND DIETARY CALCIUM/PHOSPHORUS RESTRICTION**
Jackson Ryan[1], Michele Milne[2], Rebecca Sawyer[1], Patrisha Russel[3], Kate Barratt[4], Yolandi Starczak[1], Helen Tsangari[1], Gerald Atkins[5], Howard Morris[1], Rachel Davey[3], Paul Anderson*[6]. [1]University of South Australia, Australia, [2]Univeristy of Melbounre, Australia, [3]University of Melbourne, Australia, [4]University of Soth Austrlaia, Australia, [5]University of Adelaide, Australia, [6]Musculoskeletal Biology Research, University of South Australia, Australia
Disclosures: Paul Anderson, None

SU0133 **The Vitamin D Receptor Interacts with Peroxisome Proliferator-activated Receptor Gamma and Suppresses Target Gene Expression in Keratinocyte Stem Cells**
Vaibhav Saini*[1], Francesca Gori[2], Marie Demay[3]. [1]MGH, Harvard Medical School, USA, [2]Harvard School of Dental Medicine, USA, [3]Massachusetts General Hospital, USA
Disclosures: Vaibhav Saini, None

SU0134 **Vitamin D and Key Regulators of Bone Turnover during Pregnancy**
Bernhard Svejda*[1], Astrid Fahrleitner-Pammer[2]. [1]Gynecologist, At, [2]Departement of Internal Medicine, Medica lUniversity Graz, Austria
Disclosures: Bernhard Svejda, None

SU0135 **Vitamin D deficiency and CYP27B1 abalation in the mammary epithelium accelerates tumor development in male mice carrying the PYmT oncogene**
Jiarong Li*[1], René St-Arnaud [2], Timothy Reinhardt[3], Richard Kremer[4]. [1]McGill University, Canada, [2]Shriners Hospital for Children, Canada, [3]Iowa State University, USA, [4]MUHC, Canada
Disclosures: Jiarong Li, None

MECHANOBIOLOGY: CELLULAR AND MOLECULAR EFFECT OF MECHANICAL LOADING AND UNLOADING

SU0136 **CDKN1a/p21 suppresses osteogenesis and regenerative bone remodeling in an age-dependent manner**
Elizabeth Blaber*[1], Yasaman Shirazi-Fard[2], Eduardo Almeida[2]. [1]NASA Ames Research Center, USA, [2]Space Biosciences Division, NASA Ames Research Center, USA
Disclosures: Elizabeth Blaber, None

SU0137 **Effects of Mechanical Unloading on Skeletal Structure and Properties of Connexin 43 Transgenic Mice**
Huiyun Xu*[1], ruofei liu[2], ruixin yang[2], zhouqi yang[2], sumin gu[3], jean jiang[3], peng shang[4]. [1]Northwestern Polytechnical University, Peoples republic of china, [2]Key Laboratory for Space Biosciences & Biotechnology, School of Life Sciences, Northwestern Polytechnical University, China, [3]Department of Biochemistry, University of Texas Health Science Center at San Antonio, USA, [4]Key Laboratory for Space Biosciences & Biotechnology, School of Life Sciences, Northwestern Polytechnical University, USA
Disclosures: Huiyun Xu, None

SU0138 **Effects of Simulated Microgravity and Hypergravity on the Matrix Mineralization in Osteoblast MC3T3-E1 and Preosteocyte-like Cell MLO-A5**
Zhouqi Yang*[1], Fengtao Hao[2], Dandan Dong[2], Peng Shang[2]. [1]Northwestern Polytechnical University, Peoples republic of china, [2]Key Laboratory for Space Bioscience & Biotechnology, Institute of Special Environmental Biophysics, Faculty of Life Sciences, Northwestern Polytechnical University, China
Disclosures: Zhouqi Yang, None

SU0139 **Elcatonin Prevents Bone Loss due to Skeletal Unloading by Suppressing Bone Resorption with Unloading-Induced High Expression of Calcitonin Receptors in Bone Marrow Cells**
Manabu Tsukamoto*[1], Kunitaka Menuki[2], Teppei Murai[2], Akihisa Hatakeyama[2], Shinichiro Takada[2], Kayoko Furukawa[2], Akinori Sakai[2]. [1]University of Occupational & Environmental Health, Japan, [2]Dept. of orthopaedic surgery, University of occupational & environmental health, Japan
Disclosures: Manabu Tsukamoto, None

SU0140 **Influence of Mechanical Loading on Alignment of Biological Apatite Crystallites and Lacunar-canalicular System in Rabbits**
Muneteru Sasaki*[1], Shinichiro Kuroshima[1], Takayoshi Nakano[2], Takashi Sawase[1]. [1]Nagasaki University, Japan, [2]Osaka University, Japan
Disclosures: Muneteru Sasaki, None

SU0141 **Mechanical Vibration Promotes Proliferation and Differentiation of Cementoblasts and its regulation of Osteogenesis via ERK1/2 Signaling Pathway**
Dawei Liu, Hua Wang*. Marquette University School of Dentistry, USA
Disclosures: Hua Wang, None

MECHANOBIOLOGY: CELLULAR AND MOLECULAR MECHANOSENSING

SU0142 **A novel β3-integrin based mechanosome structure in bone tissue**
Pamela Zuckerman*[1], Robert Majeska[1], Mia Thi[2], Dave Spray[2], Shledon Weinbaum[1], Mitch Schaffler[1]. [1]the City College of New York, USA, [2]Albert Einstein College of Medicine, USA
Disclosures: Pamela Zuckerman, None

SU0143 **Pulsed electromagnetic fields (PEMF) enhance osteoblastic differentiation of human bone marrow stromal cells by activation of microRNA21 expression and the TGF-β signaling pathway**
Zhiming He*[1], Nagarajan Selvamurugan[2], Jawed Siddiqui[1], Teruyo Nakatani[1], Erik Waldorff[3], Nianli Zhang[3], James Ryaby[3], Nicola Partridge[4]. [1]New York University, USA, [2]SRM University, India, [3]Orthofix, Inc., USA, [4]New York University College of Dentistry, USA
Disclosures: Zhiming He, Orthofix, Inc.

SU0144 **Role of P_2R-ER Ca^{2+} Signaling Pathway in Medium Intensity Focused Ultrasound induced Ca^{2+} Oscillations in *In-Situ* Osteocytes**
Minyi Hu*, Jian Jiao, Daniel Gibbons, Yi-Xian Qin. Stony Brook University, USA
Disclosures: Minyi Hu, None

MECHANOBIOLOGY: GENERAL

SU0145 **Effect of mechanical stimulation on the Hedgehog signaling in osteoblast**
Matsumoto Kenichi*[1], Tsuyoshi Shimo[2], Naito Kurio[3], Tatsuo Okui[4], Akira Sasaki[3]. [1]Okayama University Graduate School of Medicine, Dentistry & Pharmaceutical Sciences, Japan, [2]okayama university, Japan, [3]Department of Oral & Maxillofacial Surgery, Okayama University Graduate School of Medicine, Dentistry, & Pharmaceutical Sciences, Japan, [4]Department of Oral & Maxillofacial Surgery, Okayama University Graduate School of Medicine, Dentistry, & Pharmaceutical Sciences, Okayama, USA
Disclosures: Matsumoto Kenichi, None

SU0146 **Withdrawn**

SU0147 **Orthodontic Force-Induced Nociception Stimulates Sympathetic Nervous Signaling Centrally, which Accelerates Tooth Movement through Osteoclast Activation**
Hisataka Kondo*[1], Mayo Kondo[2], Ken Miyazawa[2], Shigemi Goto[2], Akifumi Togari[2]. [1]Aichi-Gakuin University, Japan, [2]Aichi Gakuin University, Japan
Disclosures: Hisataka Kondo, None

SU0148 **Strain Determination in Finite Element Models of the Mouse Forearm under Dynamic Loading**
Mark Begonia*, Mark Dallas, Mark L. Johnson, Ganesh Thiagarajan. University of Missouri-Kansas City, USA
Disclosures: Mark Begonia, None

MODULATORS OF BONE REMODELING (ANIMAL MODELS): ANABOLIC FACTORS

SU0149 **CaMKK2 inhibition enhances bone fracture healing**
Uma Sankar*[1], Justin Williams[2], Mariah Hassert[2], Jianying Liu[2], Yinghua Cheng[2], Alexander Robling[2], Melissa Kacena[2], Yong Li[2]. [1]Indiana University Purdue University Indianapolis, USA, [2]Indiana University School of Medicine, USA
Disclosures: Uma Sankar, None

SU0150 **Effect of intermittent administration of teriparatide (PTH1-34) on BMP induced bone regeneration in a rat critical-sized femoral defect model**
Sadaaki Kanayama*[1], Takashi Kaito[2], Masafumi Kashii[2], Takahiro Makino[2], Tokimitsu Morimoto[2], Masayuki Furuya[2], Kazuma Kitaguchi[2], Yusuke Sakai[2], Hideki Yoshikawa[2]. [1]Osaka University, Japan, [2]Osaka University Graduate School of Medicine, Japan
Disclosures: Sadaaki Kanayama, None

SU0151 **Effects of Sclerostin Antibody in Attenuation of Cortical Bone Loss in Ovariectomized Rats with Concurrent Mechanical Unloading**
Dongye Zhang*[1], Mariana Miranda[1], Minyi Hu[1], Liangjun Lin[1], Xiaodong Li[2], Hua Zhu Ke[3], Yi-Xian Qin[1]. [1]Stony Brook University, USA, [2]Amgen Inc., USA, [3]UCB Pharma, United Kingdom
Disclosures: Dongye Zhang, None

SU0152 **Improving PTH/Raloxifene Combination Osteoporosis Therapy In a Preclinical Model**
Joseph Bidwell*[1], Yu Shao[2], Selene Hernandez-Buquer[3], Paul Childress[4], Drew Brown[3], Yongzheng He[5], Marta Alvarez[6], Feng-chun Yang[7], Stuart Warden[8], Matthew Allen[3]. [1]Indiana University School of Medicine, USA, [2]Medical & Molecular Genetics, Indiana University School of Medicine, USA, [3]Anatomy & Cell Biology, Indiana University School of Medicine, USA, [4]Microbiology & Immunology, USA, [5]Pediatrics Neonatal Basic Research, Indiana University School of Medicine, USA, [6]Orthopaedic Surgery, Indiana University School of Medicine, USA, [7]Biochemistry & Molecular Biology, Miller School of Medicine, University of Miami, USA, [8]Health & Rehabilitation Science, Indiana University School of Medicine, USA
Disclosures: Joseph Bidwell, Eli Lilly

SU0153 **Osteoblastic Monocyte Chemoattractant Protein-1 (MCP-1) Mediates Parathyroid Hormone's Anabolic Actions in Bone: Role of TGF-β Signaling**
Jawed Siddiqui*[1], Joshua Johnson[2], Joseph Tamasi[3], Nicola Partridge[2]. [1]New York University, USA, [2]Department of Basic Science & Craniofacial Biology, New York University College of Dentistry, USA, [3]Bristol-Myers Squibb, USA
Disclosures: Jawed Siddiqui, None

MODULATORS OF BONE REMODELING (ANIMAL MODELS): ANTIRESORPTIVE FACTORS

SU0154 **Bisphosphonate treatment differentially affects bone mechanical properties of mice with robust and slender bone**
Drew Brown*[1], Erin McNerny[1], Jason Organ[1], Chris Newman[1], Karl Jepsen[2], Matthew Allen[1]. [1]Indiana University School of Medicine, USA, [2]University of Michigan, USA
Disclosures: Drew Brown, None

SU0155 **Bortezomib inhibits *P. gingivalis* LPS-induced alveolar bone loss in mice**
Youngkyun Lee*. Kyungpook National University School of Dentistry, South korea
Disclosures: Youngkyun Lee, None

SU0156 **Differential effects of OPG, alendronate and a Cathepsin K inhibitor on load adaptation in mice**
Nicolas Bonnet*[1], Le Duong[2], Serge Ferrari[3]. [1]University Geneva Hospital (HUG), Switzerland, [2]Merck & Co, USA, [3]Service des Maladies Osseuses, Hôpitaux Universitaires, Genève, Switzerland
Disclosures: Nicolas Bonnet, None

SU0157 **Effect of IL-18 on mechanical loading-induced osteoclastogenesis and bone resorption solely, and in synergy with IL-12**
Yumiko Ochi*[1], Hideki Kitaura[2], Keisuke Kimura[2], Masahiko Ishida[2], Haruki Sugisawa[2], Jafari Saeed[2], Akiko Kishikawa[2], Teruko Takano-Yamamoto[2]. [1]Tohoku University, Japan, [2]Division of Orthodontics & Dentofacial Orthopedics, Department of Translational Medicine, Tohoku University Graduate School of Dentistry, Japan
Disclosures: Yumiko Ochi, None

SU0158 **Effects of alendronate and low-intensity pulsed ultrasound therapies on bone mineral density at cancellous osteotomy sites in the proximal tibia of ovariectomized rats**
Chie Sato*[1], Naohisa Miyakoshi[2], Yuji Kasukawa[2], Hayato Kinoshita[2], Kentaro Ouchi[2], Masashi Fujii[2], Tetsuya Kawano[2], Masazumi Suzuki[2], Michio Hongo[2], Yoichi Shimada[2]. [1]Dept. of Orthopedic Surgery, Akita University Graduate School of Medicine, Jp, [2]Dept. of Orthopedic Surgery, Akita University Graduate School of Medicine, Japan
Disclosures: Chie Sato, None

SU0159 **Effects of Long-Term Odanacatib Treatment on Bone Gene Expression in Ovariectomized Adult Rhesus Monkeys: Differentiation from Alendronate**
Eric Muise*[1], Maureen Pickarski[2], Alexei Podtelezhnikov[1], Andrey Loboda[1], Yejun Tan[1], Guanghui Hu[1], John Thompson[1], Le Duong[1]. [1]Merck & Co., Inc, USA, [2]Merck & Co., Inc., USA
Disclosures: Eric Muise, Merck & Co., Inc

SU0160 **Generation and characterization of a humanized cathepsin K mouse model**
Maureen Pickarski*[1], Myung Kyun Shin[2], Michael Gentile[2], Le Duong[2]. [1]Merck & Co., Inc., USA, [2]Merck & Co., Inc, USA
Disclosures: Maureen Pickarski, Merck & Co., Inc

SU0161 **Herbacetin inhibits osteoclast differentiation through downregulating NFATc1 signaling and suppresses bone loss in LPS-induced mouse model**
Yunjo Soh*[1], Liang Li[1], Mahesh Sapkota[1], Se woong Kim[2]. [1]School of Dentistry, Chonbuk National University, South korea, [2]School of Dentistry, Chonbuk Nationl University, South korea
Disclosures: Yunjo Soh, None

MODULATORS OF BONE REMODELING (ANIMAL MODELS): OTHER AGENTS

SU0162 **Compensatory Mechanisms in Mouse Offspring with Inherently Weak Bones Suggest a Genome-by-Environment Interaction *in utero***
Maria Raygorodskaya[1], Arkady Torchinsky[2], Yankel Gabet[2], Chen Shochat[1], Eugene Kobyliansky[2], David Karasik*[1]. [1]Faculty of medicine in the Galilee, Bar Ilan University, Israel, [2]Sackler school of Medicine, Tel Aviv University, Israel
Disclosures: David Karasik, None

SU0163 **Effects of Activin Receptor Type IIB Fusion Protein (ActRIIB-mFc) on Serum Biomarkers and Bone Remodeling in Osteogenesis Imperfecta Model (*oimloim*) Mice**
Young Jeong*[1], Molly Hulbert[2], Mark Dallas[2], Yixia Xie[2], Scott Pearsall[3], Sarah Dallas[4], Charlotte Phillips[5]. [1]University of Missouri, USA, [2]University of Missouri Kansas City, USA, [3]Acceleron Pharma Inc, USA, [4]University of Missorui Kansas City, USA, [5]University of Missouri Columbia, USA
Disclosures: Young Jeong, None

SU0164 **Interplay between the adaptive immune and bone system in fracture healing: Friend or foe?**
Claudia Schlundt*[1], Hanna Schell[1], Hans-Dieter Volk[2], Georg Duda[1], Katharina Schmidt-Bleek[1]. [1]Julius Wolff Institute & Center for Musculoskeletale Surgery; Berlin Brandenburg Center for Regenerative Therapies, Charité-Universitätsmedizin Berlin, Germany, [2]Institute for Medical Immunology; Berlin Brandenburg Center for Regenerative Therapies, Charité-Universitätsmedizin Berlin, Germany
Disclosures: Claudia Schlundt, None

SU0165 **Live imaging of osteoblast-osteoclast coupling in a medaka fish model for osteoporosis**
Christoph Winkler*[1], Tingsheng Yu[1], Manish Dasyani[1], Sudha Sundaram[1], Wen Hui Tan[1], Anita Buettner[1], Ann Huysseune[2], Paul Eckhard Witten[2]. [1]National University of Singapore, Singapore, [2]Ghent University, Belgium
Disclosures: Christoph Winkler, None

SU0166 **Seasonality in Bone Mineralization of Auditory Ossicles and Long Bones in the Primate Macaca fuscata**
Makoto Morikawa[1], Porrawee Pomchote[2], Tadashi Sankai[3], Yuzuru Hamada[2], Koichi Matsuo*[1]. [1]Keio University School of Medicine, Japan, [2]Primate Research Institute, Kyoto University, Japan, [3]National Institute of Biomedical Innovation, Japan
Disclosures: Koichi Matsuo, None

SU0167 **The impact of reducing osteal macrophages and their efferocytotic function on bone turnover and bone mass**
Benjamin Sinder*[1], Amy Koh[1], Megan Michalski[1], Lorenz Hofbauer[2], Hernan Roca[1], Laurie McCauley[1]. [1]University of Michigan, USA, [2]Technische Universität Dresden, Germany
Disclosures: Benjamin Sinder, None

MUSCLE BIOLOGY AND BONE: CELLULAR AND MOLECULAR INTERACTIONS

SU0168 **Active vitamin D possesses beneficial effects on the interaction between muscle and bone**
Ippei Kanazawa*[1], Ken-ichiro Tanaka[1], Toru Yamaguchi[1], Shozo Yano[1], Hiroshi Kaji[2], Toshitsugu Sugimoto[1]. [1]Shimane University Faculty of Medicine, Japan, [2]Kinki University Faculty of Medicine, Japan
Disclosures: Ippei Kanazawa, None

SU0169 **FGF9 is highly expressed in an osteocyte-like "mini-bone" cell line and inhibits C2C12 myogenesis via overexpression of myostatin**
Jian Huang*[1], Jeanha Choi[2], David Robbles[3], Seth Evans[4], Lora McCormick[4], Sarah Dallas[2], Marco Brotto[2]. [1]University of missouri kansas city, USA, [2]University of missouri–kansas city, USA, [3]university of missouri –kansas city, USA, [4]university of missouri—Kansas city, USA
Disclosures: Jian Huang, None

MUSCLE BIOLOGY AND BONE: GENERAL

SU0170 **Acute Marrow Inflammation Induced by Muscle Paralysis Does Not Directly Mediate Rapid Bone Resorption**
Brandon Ausk*, Leah Worton, Ronald Kwon, Sundar Srinivasan, Edith Gardiner, Steven Bain, Ted Gross. University of Washington, USA
Disclosures: Brandon Ausk, None

SU0171 **Exogenous IGF-1 Fails to Increase Muscle Fiber Cross-Sectional Area After Severe Burns**
Lucas Sansevero[1], Amina El Ayadi [2], Yi-Xian Qin[1], Celeste C Finnerty[3], Minyi Hu[4], Sachin Hegde[3], Anesh Prasai [5], Laura Porro[3], Noe Rodriguez[6], David Herndon[3], Gordon Klein*[7]. [1]Department of Bioengineering, State University of New York at Stony Brook, USA, [2]Shriners Hospitals for Children & University of Texas Medical Branch, USA, [3]Shriners Hospital for Children & University of Texas Medical Branch, USA, [4]Department of Bioengineering, State University of NewYork at Stony Brook, USA, [5]Shriners Hospitals for Children, Galveston Texas, USA, [6]Shriners Hospital for Children & Universityo f Texas Medical Branch, USA, [7]University of Texas Medical Branch, USA
Disclosures: Gordon Klein, None

SU0172 **Investigation for the Protecting Effects and Molecular Mechanisms of Exercise on Glucosamine-induced Insulin Resistance in Ovariectomized Rats**
Chung-Hwan Chen*[1], Lin Kang[2], Shih-Tse Chen[3], Tsang-Hai Huang[4]. [1]Kaohsiung Medical University Hospital & Kaohsiung Medical University, Taiwan, [2]National Cheng Kung University Hospital, Taiwan, [3]National Taiwan University Hospital Hsin-Chu Branch, Taiwan, [4]National Cheng-Kung University, Taiwan
Disclosures: Chung-Hwan Chen, None

SU0173 **Vestibular System Is Involved in Changes of Muscle and Bone Induced by Hypergravity in Mice**
Naoyuki Kawao*[1], Hironobu Morita[2], Koji Obata[2], Yukinori Tamura[1], Katsumi Okumoto[3], Hiroshi Kaji[1]. [1]Kinki University Faculty of Medicine, Japan, [2]Gifu University Graduate School of Medicine, Japan, [3]Life Science Research Institute, Kinki University, Japan
Disclosures: Naoyuki Kawao, None

SU0174 **ZIP4 Silencing Improves Bone Loss in Pancreatic Cancer**
Qiang Zhang[1], Xiaotian Sun[2], Jingxuan Yang[3], Hao Ding[1], Catherine Ambrose[4], Xiaohong Bi*[5], Min Li[3]. [1]University of Texas Health Science Center, USA, [2]University of Oklahoma Health Sciences Center, USA, [3]The University of Oklahoma Health Sciences Center, USA, [4]University of Texas Health Science Center at Houston, USA, [5]University of Texas Health Science Center at Houst, USA
Disclosures: Xiaohong Bi, None

OSTEOARTHRITIS AND OTHER JOINT DISORDERS: ANKYLOSING SPONDYLITIS AND SPONDYLOARTHRITIS

SU0175 **Clinical Features and HLA-B loci of Japanese Patients with Ankylosing Spondylitis (2nd report)**
Tsuyoshi Kobashigawa*, Yuki Nanke, Hisashi Yamanaka, Shigeru Kotake. Tokyo Women's Medical University, Japan
Disclosures: Tsuyoshi Kobashigawa, None

OSTEOARTHRITIS AND OTHER JOINT DISORDERS: GENERAL

SU0176 **Epiphyseal Bone, Subchondral Bone Plate and Epiphyseal Trabecular Bone in Surgically and Chemically Induced Rat Models of Osteoarthritis**
Jukka Morko*, ZhiQi Peng, Jukka Vääräniemi, Katja M Fagerlund, Jukka P Rissanen, Jenni Bernoulli, Jussi Halleen. Pharmatest Services Ltd, Finland
Disclosures: Jukka Morko, Pharmatest Services Ltd, Employee

SU0177 **HIGH PREVALENCE OF VARIOUS UPPER LIMB MUSCULOSKELETAL DISORDERS IN KOREAN ORCHARDISTS**

Sang-Hyon Kim*[1], Sang-Il Lee[2], Sang-Heon Lee[3], Young-Il Seo[4], Jinseok Kim[5], Jung Soo Song[6]. [1]Division of Rheumatology, Department of Internal Medicine, Dongsan Medical Center, Keimyung University, Daegu, Republic of Korea, South korea, [2]Division of Rheumatology, Department of Internal Medicine, 2Department of Preventive Medicine, Gyeongsang National University School of Medicine, 3Clinical Research Institute, Gyeongsang National University Hospital, Jinju, Republic of Korea, South korea, [3]Division of Rheumatology, Konkuk University School of Medicine, Seoul, Republic of Korea, South korea, [4]Division of Rheumatology, Hallym University Medical Center, Ahnyang, Republic of Korea, South korea, [5]Department of Internal Medicine, Jeju National University Hospital, Jeju, Republic of Korea, South korea, [6]Division of Rheumatology, Department of Internal Medicine, Chung-Ang University Medical school, Seoul, Republic of Korea, South korea

Disclosures: Sang-Hyon Kim, None

OSTEOARTHRITIS AND OTHER JOINT DISORDERS: RHEUMATOID ARTHRITIS AND INFLAMMATORY ARTHRITIS

SU0178 **Assessment of Notch Activation Status in Bone Cells in Inflammatory Arthritis using Hes1-GFP Reporter Mice**

Wen Sun*[1], Hengwei Zhang[1], Xing Li[1], Brendan Boyce[1], Matthew Hilton[2], Lianping Xing[1]. [1]University of Rochester Medical Center, USA, [2]Duke University School of Medicine, USA

Disclosures: Wen Sun, None

SU0179 **Comparative Study between Denosumab and Minodronate with Eldecalcitol as the Treatment after 2-Year Daily Teriparatide in Osteoporosis in Patients with Rheumatoid Arthritis**

Yuji Hirano*, Shinya Hirabara, Masaaki Isono. Rheumatology, Toyohashi Municipal Hospital, Japan

Disclosures: Yuji Hirano, None

SU0180 **Effects of Monosodium Urate (MSU) Crystals on MLO-Y4 Cell Viability; Is There a Role for Osteocytes in Bone Erosion in Gout?**

Ashika Chhana*, David Musson, Karen Callon, Dorit Naot, Greg Gamble, Jill Cornish, Nicola Dalbeth. University of Auckland, New zealand

Disclosures: Ashika Chhana, None

OSTEOBLASTS – MATRIX PROTEINS AND FUNCTION: ADHESION, MOTILITY AND CELL-CELL COMMUNICATION

SU0181 **Crosstalk Between BMSCs and Regulatory T Cells Through A GILZ/Del-1-Dependent Mechanism**

Nianlan Yang*, Babak Baban, Carlos Isales, Xing-Ming Shi. Georgia Regents University, USA

Disclosures: Nianlan Yang, None

SU0182 **Development and characterization of two polyclonal antibodies directed against human periostin**

Philippe Vergnaud[1], Aurélie Pagnon-Minot[2], Cindy Bertholon[3], Yannick Lhoste[1], Emeric Chassaing[1], Olivier Borel[3], Evelyne Gineyts[3], Tanja Schubert[1], Philippe Clezardin[3], Roland Chapurlat[4], Jean-Charles Rousseau*[3]. [1]BioClinicaLab, Lyon, France, [2]Novotec, France, [3]INSERM UMR 1033, Lyon, France, [4]INSERM UMR 1033 & Hospices Civils de Lyon, Lyon, France

Disclosures: Jean-Charles Rousseau, None

OSTEOBLASTS – MATRIX PROTEINS AND FUNCTION: BONE FORMATION MECHANISMS

SU0183 **A Dynamic Anesthesia System for Long-Term Imaging in the Adult Zebrafish Skeleton**

Brenen Wynd*[1], Karuna Patil[2], Claire Watson[3], George Sanders[2], Ronald Kwon[3]. [1]Department of Orthopaedics & Sports Medicine, USA, [2]Department of Comparative Medicine, University of Washington, USA, [3]Department of Orthopaedics & Sports Medicine, University of Washington, USA

Disclosures: Brenen Wynd, None

SU0184 **Analysis of Osteoactivin in Reamer-Irrigator-Aspirator (RIA) Wastewater as an Osteogenic Factor for Bone Regeneration**
Gregory Sondag[1], Lucas Upperman*[2], Douglas Crowder[1], Derek Klaus[1], Ethan Scott[3], Eric Miller[1], Fayez Safadi[1]. [1]NEOMED, USA, [2]Northeast Ohio Medical University, USA, [3]Rootstown, USA
Disclosures: Lucas Upperman, None

SU0185 **Beta-Aminopropionitrile Treatment Effects on MC3T3-E1 Osteoblast Gene Expression and Type I Collagen Production**
SILVIA CANELON*[1], Joseph Wallace[2]. [1]Bone Biology & Mechanics Lab, USA, [2]Indiana University-Purdue University at Indianapolis, USA
Disclosures: SILVIA CANELON, None

SU0186 **Characterization of Mineralization-Competent Matrix Vesicles During Odontoblast-supported Mineralization**
Sandeep Chaudhary*[1], Maria Kuzynski[1], Morgan Goss[1], Callie Mobley[1], Anne Poliard[2], Odile Kellermann[3], Jose-Luis Millan[4], Dobrawa Napierala[5]. [1]University of Alabama at Birmingham, USA, [2]UFR d'Odontologie Université Paris Descartes 1 rue Maurice Arnoux, France, [3]INSERM UMR-S 1124, Université René Descartes Paris 5, Centre Universitaire des Saints-Pères, France, [4]Sanford Children's Health Research Center, Sanford-Burnham, Medical Research Institute, USA, [5]Oral & Maxillofacial Surgery, Institute of Oral Health Research, School of Dentistry, University of Alabama at Birmingham, USA
Disclosures: Sandeep Chaudhary, None

SU0187 **Withdrawn**

SU0188 **EDA and EDB Containing Fibronectin Stimulate Osteoblast Differentiation by Acting on α4β1 and β3 Integrins Respectively**
Carla Sens*[1], Katrin Rau[1], Verena Klemis[1], Inaam Nakchbandi[2]. [1]University of Heidelberg & Max-Planck Institute of Biochemistry, Germany, [2]Max-Planck Institute of Biochemistry & University of Heidelberg, Germany
Disclosures: Carla Sens, None

SU0189 **Human micro-RNAs miR-29b, miR-30c2 and miR-125b and their target genes are important modulators of bone metabolism**
Andreas Kindmark*[1], Navya Laxman[2], Carl-Johan Rubin[3], Hans Mallmin[4], Olle Nilsson[4], Elin Grundberg[5], Tomi Pastinen[5]. [1]Uppsala University Hospital, Sweden, [2]Department of Medical Sciences, Uppsala University, Sweden, [3]Department of Medical Biochemistry & Microbiology, Uppsala University, Sweden, [4]Department of Surgical Sciences, Uppsala University, Sweden, [5]Department of Human Genetics, McGill University & Genome Quebec Innovation Centre, McGill University, Montreal, Quebec, Canada, Canada
Disclosures: Andreas Kindmark, None

SU0190 **Leukotrienes B_4 and C_4 play a role on the osteogenic differentiation by mechanism dependent on their receptors binding**
Flávia Oliveira*[1], Amanda Pereira[1], Marília Buzalaf[1], Camila Peres-Buzalaf[2], Rodrigo Oliveira[1]. [1]Bauru Dental School - University of São Paulo, Brazil, [2]Universidade Sagrado Coração, Brazil
Disclosures: Flávia Oliveira, None

SU0191 **MicroRNAs Involved in Bone Metabolism Are Transported into Matrix Vesicles during Bone Formation**
Yuko Nakao*[1], Yuichiro Takei[2], Tomoko Minamizaki[2], Hirotaka Yoshioka[2], Faisal Ahmed[1], Kotaro Tanimoto[2], Shumpei Niida[3], Yuji Yoshiko[2]. [1]Hiroshima University Graduate School of Biomedical & Health Sciences, Japan, [2]Hiroshima University Institute of Biomedical & Health Sciences, Japan, [3]Biobank, National Center of Geriatrics & Gerontology, Japan
Disclosures: Yuko Nakao, None

SU0192 **Mineralization in MC3T3-E1 Osteoblast Cultures: A Comparison with Bone**
William Addison[1], Valentin Nelea[2], Florencia Chicatun[2], Yung-Ching Chien[3], Nicolas Tran-Khanh[4], Michael Buschmann[4], Showan Nazhat[2], Mari Kaartinen[2], Hojatollah Vali[2], Mary Tecklenburg[5], Renny Franceschi[6], Marc McKee*[2]. [1]Harvard University, USA, [2]McGill University, Canada, [3]University of California at San Francisco, USA, [4]Ecole Polytechnique, Canada, [5]Central Michigan University, USA, [6]University of Michigan, USA
Disclosures: Marc McKee, None

SU0193 **Murine MicroRNA 126-3p is Upregulated by Endothelin-1 Signaling and Mediates some of Its Pro-Mineralization Effects**
Michael Johnson*[1], Robert D. Blank[2]. [1]University of Wisconsin, USA, [2]Medical College of Milwaukee-Endocrinology, USA
Disclosures: Michael Johnson, None

SU0194 **Parafibromin, a transcriptional repressor, is required in early development but not in mature osteoblasts, where its loss results in increased bone mass**
Casey Droscha*, Diegel Cassandra, Bart Williams. Van Andel Institute, USA
Disclosures: Casey Droscha, None

OSTEOBLASTS – MATRIX PROTEINS AND FUNCTION: HORMONAL AND LOCAL REGULATION

SU0195 **Contrasting Effects of Parathyroid Hormone on PHOSPHO1 and Alkaline Phosphatase Expression During Osteoblast Mineralization**
Dean Houston*[1], Katherine Myers[1], Vicky MacRae[1], Jose Luis Millan[2], Katherine Staines[1], Colin Farquharson[1]. [1]The Roslin Institute, The University of Edinburgh, United Kingdom, [2]Sanford Burnham Medical Research Institute, USA
Disclosures: Dean Houston, None

SU0196 **β-adrenergic blockade suppresses pancreaticlipase expression via osteocalcin in obese mice**
Kyunghwa Baek*[1], HyoRin Hwang[2], Jiho Kang[2], Danbi Park[3], Yewon Kwon[3], Heesu Lee[3], Sunghee Ko[3], Jeong-Hwa Baek[2]. [1]Gangneung-Wonju national university, School of dentistry, South korea, [2]Department of Molecular Genetics, School of Dentistry & Dental Research Institute, Seoul National University, South korea, [3]Department of Pharmacology, College of Dentistry & Research Institute of Oral Science, Gangneung-Wonju National University, South korea
Disclosures: Kyunghwa Baek, None

OSTEOBLASTS – MATRIX PROTEINS AND FUNCTION: SIGNAL TRANSDUCTION AND TRANSCRIPTIONAL REGULATION

SU0197 **Homer-1b/c is required for calcium-sensing receptor-mediated signaling in osteoblasts**
Mark Rybchyn[1], Tara Brennan-Speranza[1], Arthur Conigrave[1], Rebecca Mason*[2]. [1]Sydney Univeristy, Australia, [2]University of Sydney, Australia
Disclosures: Rebecca Mason, None

SU0198 **Hydrogen sulfide protects osteoblastic cells against homocysteine-induced oxidative damage: Implications for the treatment of osteoporosis**
Neetu Tyagi, Anuradha Kalani*, Suresh Tyagi. University of Louisville, USA
Disclosures: Anuradha Kalani, None

SU0199 **RBPJK Deficient Mesenchymal Stem Cell Enhances Osteogenesis by Up-regulation of BMP Signaling**
Bo Tian*[1], Junkui Sun[1], Xifu Shang[2], John Marymont[1], Yufeng Dong[3]. [1]Department of Orthopedic Surgery, LSUHSC-Shreveport, LA, USA, USA, [2]Anhui provincial Hospital, China, [3]Louisana State University, USA
Disclosures: Bo Tian, None

OSTEOBLASTS - ORIGIN AND CELL FATE: REGULATION OF DIFFERENTIATION

SU0200 **Discovery of Long Noncoding RNAs During Osteoblast Differentiation of Pluripotent Mesenchymal Stromal Cells**
Coralee Tye*, Jonathan Gordon, Hai Wu, Janet Stein, Jane Lian, Gary Stein. University of Vermont College of Medicine, USA
Disclosures: Coralee Tye, None

SU0201 **Identification of novel enhancer regions in mesenchymal stromal cells that regulate osteogenic differentiation**
Jonathan Gordon*[1], Hai Wu[2], Coralee Tye[2], Joesph Boyd[2], Andre van Wijnen[3], Janet Stein[2], Gary Stein[2], Jane Lian[2]. [1]University of Vermont, USA, [2]University of Vermont, Department of Biochemistry, USA, [3]Mayo Clinic, Department of Orthopedic Surgery, USA
Disclosures: Jonathan Gordon, None

SU0202 **Inhibition of c-src activity in primary bone marrow cells mimics the decreased expression of the osteoblast phenotype seen in tumor cells**
Ashley Dinkel*, Joseph Tarr, Dana Branch, Joshua Luster, Thomas Owen. Ramapo College of New Jersey, USA
Disclosures: Ashley Dinkel, None

SU0203 **Neuropeptide-Receptor expression during Osteoblastic Differentiation of Mouse iPS cells**
Tetsuya Goto*. Kagoshima UniversityGraduate School of Medical & Dental Sciences, Japan
Disclosures: Tetsuya Goto, None

SU0204 **Pin1-mediated modification prolongs the nuclear retention of β-catenin in wnt3a-induced osteoblast differentiation**
Hea-rim SHIN*[1], Taegyung Lee[1], Han-sol BAE[1], Rabia Islam[1], Won-joon YOON[1], Young-dan CHO[2], Bong-su KIM[1], Kyung-mi WOO[1], Hyun-mo RYOO[1]. [1]Seoul National University, South korea, [2]Seoul Nationl University, South korea
Disclosures: Hea-rim SHIN, None

OSTEOBLASTS - ORIGIN AND CELL FATE: STEMS CELLS AND PROGENITORS

SU0205 **A murine model of acute and chronic long bone segmental defect repair**
David Rowe*, Liping Wang, Jianping Huang. University of Connecticut Health Center, USA
Disclosures: David Rowe, None

SU0206 **Bone targeted delivery of mesenchymal stem cells for fracture healing and sex difference**
Wei Yao*[1], Evan Lay[2], Hongliang Zhang[2], Haiyan Chen[2], Nancy Lane[2]. [1]University of California, Davis Medical Center, USA, [2]Center for Musculoskeletal Health, Internal Medicine, University of California at Davis Medical Center, USA
Disclosures: Wei Yao, None

SU0207 **Effects of combination melatonin, strontium citrate, vitamin D3 and vitamin K2 on osteoblast and osteoclast differentiation grown as co-cultures**
Sifat Maria*[1], Larry Enderby[2], Holly Lassila[1], Christine O'Neil[1], Mark Swanson[3], Paula Witt-Enderby[4]. [1]Duquesne University, USA, [2]Enderby Healthcare/Legal Consulting, LLC, USA, [3]Private practice, Heart Preventics, LLC, USA, [4]Duquesne University,School of Pharmacy, USA
Disclosures: Sifat Maria, None

SU0208 **Ethanol Exposure Increases FoxO Activation in Cultured Primary Rat Mesenchymal Stem Cells**
Philip Roper*. Loyola Univeristy, USA
Disclosures: Philip Roper, None

SU0209 **GATA4 Regulates Mesenchymal Stem Cell Differentiation**
Aysha Khalid*[1], Miriam Guemes[2], Gustavo Miranda-Carboni[3], Susan Miranda[3]. [1]University of Tennessee, USA, [2]UCLA, USA, [3]UTHSC, USA
Disclosures: Aysha Khalid, None

SU0210 **Localized SOX9 Expression Delineates Regions of Cartilage and Bone Formation in a Tissue-Engineered Construct**
Pieter-Jan Stiers*, Nick van Gastel, Riet Van Looveren, Sophie Torrekens, Geert Carmeliet. Laboratory of Clinical & Experimental Endocrinology, KU Leuven, Belgium, Belgium
Disclosures: Pieter-Jan Stiers, None

SU0211 **Single CD271 marker identifies mesenchymal stem cells from human dental pulp with high osteogenic potential**
Christine Hong*, Ruth Alvarez, Hyelim Lee , Cun-yu Wang. UCLA School of Dentistry, USA
Disclosures: Christine Hong, None

OSTEOCLASTS - FUNCTION: BONE RESORPTION MECHANISMS

SU0212 **Analysis of contribution of marrow stromal cells and bone marrow macrophages to mechanical loading-induced osteoclastogenesis and bone resorption**
Hideki Kitaura*[1], Keisuke Kimura[2], Masahiko Ishida[2], Yumiko Ochi[2], Haruki Sugisawa[2], Jafari Saeed[2], Akiko Kishikawa[2], Teruko Takano-Yamamoto[2]. [1]Tohoku University, Japan, [2]Division of Orthodontics & Dentofacial Orthopedics, Department of Translational Medicine, Tohoku University Graduate School of Dentistry, Japan
Disclosures: Hideki Kitaura, None

SU0213 **Bone Active Nitrogen-containing Bisphosphonates with a Near Infrared Fluorescent Label for Potential Use in Arthritis Models**
Shuting Sun[1], Frank Ebetino[1], Kim Nguyen[2], Boris Kashemirov[2], Charles McKenna*[2], Mark Lundy[1], Xiaodong Hou[3], Zhenqiang Yao[3], Brendan Boyce[3]. [1]BioVinc LLC, USA, [2]University of Southern California, USA, [3]University of Rochester, USA
Disclosures: Charles McKenna, BioVinc LLC

SU0214 **C-C chemokine receptor 5, a co-receptor of HIV, -mediated signalregulates bone resorption via locomotion of osteoclasts**
Ji-Won Lee*[1], Akiyoshi Hoshino[2], Takashi Saitou[3], Kazuki Inoue[4], Shunsuke Uehara[5], Yasuhiro Kobayashi[6], Satoshi Ueha[7], Kouji Matsushima[7], Masako Ito[8], Akira Yamaguchi[9], Yuuki Imai[10], Tadahiro Iimura[11]. [1]Ehime University, Proteo-Science Center (PROS), Japan, [2]Department of Pathology, Nagoya University Graduate School of Medicine, Japan, [3]Translational Research Center & Artificial Joint Integrated Center, Ehime University, Japan, [4]Department of Biological Resources, Integrated Center for Sciences, Ehime University, Japan, [5]Department of Biochemistry, Matsumoto Dental University, Japan, [6]Institute for Oral Science, Matsumoto Dental University, Japan, [7]Department of Molecular Preventive Medicine, Graduate School of Medicine, The University of Tokyo, Japan, [8]Medical Work-Life-Balance Center, Nagasaki University Hospital, Japan, [9]Department of Pathology, Nagoya University Graduate School of Medicine, Nagoya, Japan, Japan, [10]Division of Integrative Pathophysiology, Proteo-Science Center, Graduate School of Medicine, Japan, [11]Division of Bio-Imaging, Proteo-Science Center (PROS), Ehime University, Japan
Disclosures: Ji-Won Lee, None

SU0215 **G Protein-Coupled Receptor 120 Signaling Negatively Regulates Osteoclast Differentiation, Survival, and Function**
Hyun Ju Kim*[1], Hye-Jin Yoon[2], Bo Kyung Kim[2], Sook Jin Seong[2], Shin-Yoon Kim[2], Young-Ran Yoon[2]. [1]Kyungpook National University Hospital, South korea, [2]Kyungpook National University, South korea
Disclosures: Hyun Ju Kim, None

SU0216 **Inhibition of CysLTR1 Suppresses RANKL-induced Osteoclast Formation and Bone Loss in vivo**
Ju-Hee Kang*[1], Mijung Yim[2]. [1]Sookmyung Women's University, South korea, [2]Sookmyung women's university, South korea
Disclosures: Ju-Hee Kang, None

SU0217 **Inhibitory effects of KP-A159, a thiazolopyridine derivative, on osteoclast differentiation, function, and inflammatory bone loss via suppression of RANKL-induced MAP kinase signaling pathway**
Hye Jung Ihn*[1], Taeho Lee[2], Sang-Hyun Kim[1], Hong-In Shin[3], Yong Chul Bae[4], Eui Kyun Park[5]. [1]Department of Pharmacology, School of Medicine, Kyungpook National University, South korea, [2]College of Pharmacy, Research Institute of Pharmaceutical Sciences, Kyungpook National University, South korea, [3]Department of Oral Pathology & Regenerative Medicine, School of Dentistry, IHBR, Kyungpook National University, South korea, [4]Department of Oral Anatomy, School of Dentistry, Kyungpook National University, South korea, [5]Kyungpook National University, South korea
Disclosures: Hye Jung Ihn, None

SU0218 **Phosphorylation of the Actin Bundling Protein L-Plastin Regulates the Early Phase of Sealing Ring Formation**
Meenakshi Chellaiah*[1], Tao Ma[2]. [1]University of MarylandDental School, Us, [2]University of Maryland, Dental School, USA
Disclosures: Meenakshi Chellaiah, None

SU0219 **Regulation of tartrate-resistant acid phosphatase in osteoclasts by tetraspanin CD82**
Alexis Bergsma*, Cindy Miranti. Van Andel Institute, USA
Disclosures: Alexis Bergsma, None

SU0220 **Role of the iRhom2/TACE/TNFα pathway in the pathogenesis of haemophilic arthropathy**
Coline Haxaire*[1], Narine Hakobyan[2], Jane Salmon[1], Carl Blobel[1]. [1]Hospital for Special Surgery, USA, [2]Rush University, USA
Disclosures: Coline Haxaire, None

SU0221 **Tensin 3 activates Dock5 to drive podosome organization in osteoclasts and efficient bone resorption**
Anne Blangy*[1], Heiani Touaitahuata[2], Nabila Mansouri[2], Anne Morel[2]. [1]CNRS CRBM Montpellier University, France, [2]CNRS Montpellier University, France
Disclosures: Anne Blangy, None

OSTEOCLASTS - FUNCTION: SIGNAL TRANSDUCTION

SU0222 **Bach1 nuclear export attenuates osteoclastogenesis and osteoclast activation via inhibition of intracellular ROS signaling**
Hiroyuki Kanzaki*[1], Shinohara Fumiaki [2], Masazumi Matsuzawa[3], Yoshiki Nakamura[3]. [1]Tsurumi UniversitySchool of Dental Medicine, Japan, [2]Tohoku University Graduate School of Dentistry, Oral Microbiology, Japan, [3]Department of orthodontics, School of Dental Medicine, Tsurumi University, Japan
Disclosures: Hiroyuki Kanzaki, None

SU0223 **Bone Parameters Are Unchanged by Activation or Deletion of TGF-β Signaling in Mature Osteoclasts**
Jenna Regan*, Sutha K. John, Maria Niewolna, Yun She, Khalid S. Mohammad, Theresa A. Guise. Indiana University School of Medicine, USA
Disclosures: Jenna Regan, None

SU0224 **Sialylated Glycans of MMP-9 Mark Bone Resorption Lacunae**
Yukiko Kuroda*[1], Atsushi Kuno[2], Hisashi Narimatsu[3], Koichi Matsuo[4]. [1]Laboratory of Cell & Tissue Biology, Japan, [2]Research Center for Medical Glycoscience (RCMG), National Institute of Advanced Industrial Science & Technology (AIST), Japan, [3]Research Center for Medical Glycoscience (RCMG), National Institute of Advanced Industrial Science & Technology (AIST), Japan, [4]Laboratory of Cell & Tissue Biology, Keio University School o Medicine, Japan
Disclosures: Yukiko Kuroda, None

SU0225 **Zinc-induced effects on osteoclastogenesis involves activation of HCN channels via changes in membrane potential**
Takuya Notomi*[1], Miyuki Kuno[2], Akiko Hiyama[3], Kiyoshi Ohura[3], Masaki Noda[4], Timothy Skerry[5]. [1]Department of Pharmacology, Osaka Dental University, Japan, [2]Osaka City University, Japan, [3]Osaka Dental University, Japan, [4]Tokyo Medical & Dental University, Japan, [5]University of Shefield, United Kingdom
Disclosures: Takuya Notomi, None

OSTEOCLASTS - FUNCTION: TRANSCRIPTIONAL REGULATION AND GENE EXPRESSION

SU0226 **Human scaphoid non-unions exhibit increased *TNF-α* and osteoclast activity compared to adjacent cancellous bone**
Björn Behr*[1], Marcus Lehnhardt[2], Christoph Wallner[3], Stephanie Abraham[2], Jessica Schira[2]. [1]Ruhruniversity of Bochum, Germany, [2]Ruhr-University Bochum, Germany, [3]Ruhr University Bochum, Germany
Disclosures: Björn Behr, None

SU0227 **Titanium Particles and Mechanical Instability of Implants Induce Osteoclast Differentiation Through Indistinguishable Inflammatory Pathways**
Mehdi Amirhosseini*[1], Göran Andersson[2], Per Aspenberg[3], Anna Fahlgren[4]. [1]Faculty of Health Sciences, Linköping University, Linköping, Sweden, Sweden, [2]Division of Pathology, Department of Laboratory Medicine, Karolinska University Hospital, Sweden, [3]Division of Orthopedics, Department of Clinical & Experimental Medicine, Faculty of Health Sciences, Linköping University, Sweden, [4]Division of Cell Biology, Department of Clinical & Experimental Medicine, Faculty of Health Sciences, Linköping University, Sweden
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OSTEOCLASTS - ORIGIN AND CELL FATE: GENERAL

SU0228 **A RANKL-binding peptide W9 inhibits human osteoclast differentiation and stimulates human osteoblast differentiation**
Midori Nakamura*[1], Yuko Nakamichi[1], Teruhito Yamashita[1], Yuriko Furuya[2], Hisataka Yasuda[2], Nobuyuki Udagawa[3]. [1]Department of Biochemistry, Institute for Oral Science, Matsumoto Dental University, Japan, [2]Nagahama Institute for Biochemical Science, Biochemical Production & Development Center, Oriental Yeast Co., Ltd., Japan, [3]Matsumoto Dental University, Japan
Disclosures: Midori Nakamura, None

SU0229 **Effect of FTY720 on osteoclast formation in rats with periodontitis**
Dong-Eun Lee[1], Eun-Jung Bak*[2], Ji-Hye Kim[1], Gye-Hyeong Woo[3], Yun-Jung Yoo[1]. [1]Yonsei University Dental college, South korea, [2]Yonsei University, College of Dentistry, Kr, [3]Department of Clinical Science, Semyung University, South korea
Disclosures: Eun-Jung Bak, None

SU0230 **Mef2C Targets Energy Metabolism Genes in Bone**
Aimy Sebastian*[1], Deepa K. Murugesh[2], Sarah Hatsell[3], Aris N. Economides[3], Gabriela G. Loots[4]. [1]UC Merced, USA, [2]Lawrence Livermore National Laboratories, USA, [3]Regeneron Pharmaceuticals, USA, [4]Lawrence Livermore National Laboratories;University of California, Merced, USA
Disclosures: Aimy Sebastian, None

SU0231 **Microgravity Induction of TRAIL in Preosteoclast Cells Enhances Osteoclastogenesis**
Yuvaraj Sambandam*[1], Kelsey Baird[1], Maxwell Stroebel[1], William Ries[2], Sakamuri Reddy[2]. [1]Medical University of South Carolina, USA, [2]MUSC, USA
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SU0232 **Morinda citrifolia (Noni) inhibits inflammation-induced osteoclastogenesis**
Jeong-Hwa Baek*[1], Kanitsak Boonanantanasarn[2], Hanna Gu[2], Gwan-Shik Kim[2]. [1]Seoul National University, School of Dentistry, South korea, [2]Seoul National University School of Dentistry, South korea
Disclosures: Jeong-Hwa Baek, None

SU0233 **PU.1 and HDAC7 Interact to Regulate Osteoclast Differentiation**
Nick Blixt*[1], Rajaram Gopalakrishnan[2], Eric D. Jensen[2], Kim Mansky[1]. [1]University of Minnesota, USA, [2]Contributing Author, USA
Disclosures: Nick Blixt, None

SU0234 **Signaling interactions of myeloid DC precursors on osteoclastogenesis and bone remodeling: an alternative insight**
Yen-Chun Grace Liu[1], Andy Y-T Teng*[2]. [1]Koahsiung Medical University, Taiwan, [2]Center for Osteoimmunology & Biotechnology Research, College of Dental Medicine, Kaohsiung Medical University & KMU-Hopsital, Taiwan
Disclosures: Andy Y-T Teng, None

OSTEOCYTES: BONE REMODELING REGULATION

SU0235 **Blocking P2X7 receptor prevents the bystander osteocyte RANKL signaling normally triggered by osteocyte apoptosis at microdamage sites**
Wing-Yee Cheung*[1], Mitchell Schaffler[1], Robert Majeska[1], David Spray[2], Eliana Scemes[2]. [1]City College of New York, USA, [2]Albert Einstein School of Medicine, USA
Disclosures: Wing-Yee Cheung, None

SU0236 **Evidence for the novel role of Dynamin in regulating osteocyte dendrite elongation, and genes critical for bone remodeling**
Pierre Eleniste*. Indiana University School of Dentistry, USA
Disclosures: Pierre Eleniste, None

SU0237 **Ex Vivo Preservation of Phenotypic State of Primary Osteocytes via Microbeads-Guided Microfluidic Perfusion Culture**
Qiaoling Sun*[1], Yexin Gu[1], Wenting Zhang[1], Leah Dziopa[2], Jenny Zilberberg[2], Woo Lee[1]. [1]Stevens Institute of Technology, USA, [2]Research Department, Hackensack University Medical Center, USA
Disclosures: Qiaoling Sun, None

SU0238 **Inflammatory Cytokines Alter Gene Expression of Osteocyte Signaling Molecules by Human Osteocytes Cultured in Their Native Matrix**
Janak L. Pathak*[1], Astrid D. Bakker[1], Frank P. Luyten[2], Patrick Verschueren[2], Willem F. Lems[3], Jenneke Klein-Nulend[4], Nathalie Bravenboer[5]. [1]Department of Oral Cell Biology, Academic Centre for Dentistry Amsterdam (ACTA), University of Amsterdam & VU University Amsterdam, MOVE Research Institute Amsterdam, Netherlands, [2]Skeletal Biology & Engineering Research Center, KU Leuven, Belgium, [3]Department of Rheumatology, VU University Medical Center, MOVE Research Institute Amsterdam, Netherlands, [4]ACTA-VU University AmsterdamDept Oral Cell Biology (Rm # 11N-63), The netherlands, [5]Department of Clinical Chemistry, VU University Medical Center, MOVE Research Institute Amsterdam, Belgium
Disclosures: Janak L. Pathak, None

SU0239 **Isolating osteocytes from human trabecular bone**
Matthew Prideaux*, Christine Schutz, David Findlay, Lucian Solomon, Gerald Atkins. University of Adelaide, Australia
Disclosures: Matthew Prideaux, None

SU0240 **Osteocyte response to mechanical loading is reduced upon exposure to cobalt and chromium ions**
Karan Shah*, Peter Orton, Mark Wilkinson, Alison Gartland. The University of Sheffield, United Kingdom
Disclosures: Karan Shah, None

SU0241 **RANKL Expressed by Osteocytes is Required for the Increase in Bone Marrow B lymphocytes and Bone Loss Caused by Estrogen Deficiency**
Yuko Fujiwara*[1], Marilina Piemontese[1], Jinhu Xiong[1], Yu Liu[1], Priscilla Baltz[1], Stavros Manolagas[1], Charles O'Brien[2]. [1]University of Arkansas for Medical Sciences & Central Arkansas Veterans Healthcare System, USA, [2]Central Arkansas VA Healthcare System, Univ of Arkansas for Medical Sciences, USA
Disclosures: Yuko Fujiwara, None

SU0242 **Sclerostin expression in osteocytes of alveolar bone in streptozotocin-induced diabetic rats with ligature-induced periodontitis**
Ji-Hye Kim*[1], Dong-Eun Lee[2], Eun-Jung Bak[2], Yun-Jung Yoo[2]. [1]College of Dentistry, South korea, [2]Yonsei University Dental college, South korea
Disclosures: Ji-Hye Kim, None

OSTEOCYTES: ORIGIN, CELL CYCLE AND APOPTOSIS

SU0243 **Bidirectional Notch Signaling Activated by Interactions Between Multiple Myeloma Cells and Osteocytes Drives Tumor Cell Proliferation and Osteoclast Recruitment**
Jesus Delgado-Calle*, Judith Anderson, Meloney D. Cregor, Khalid S. Mohammad, Lilian I. Plotkin, Teresita Bellido, G. David Roodman. Indiana University School of Medicine, USA
Disclosures: Jesus Delgado-Calle, None

SU0244 **Mechanisms of Palmitate-Induced Lipotoxicity in Osteocytes**
Krishanthi Gunaratnam*[1], Christopher Vidal[1], Gustavo Duque[2]. [1]Musculoskeletal Ageing Research Program, Sydney Medical School Nepean, The UNiversity of Sydney, Australia, [2]Musculoskeletal Ageing Research Program, University of Sydney, Australia
Disclosures: Krishanthi Gunaratnam, None

OSTEOPOROSIS - ASSESSMENT: BIOCHEMICAL TESTS

SU0245 **Association between plasma sphingosine 1-phophate levels and incident fractures in postmenopausal women: A 3-year follow-up observation study**
Seung Hun Lee*[1], Sung Jin Bae[2], Hyeonmok Kim[3], Seong Hee Ahn [3], Beom-Jun Kim [3], Jae Suk Chang[4], Jung-Min Koh [3]. [1]Asan Medical Center, University of Ulsan College of Medicine, South korea, [2]Health Screening & Promotion Center, Asan Medical Center, University of Ulsan College of Medicine, South korea, [3]Division of Endocrinology & Metabolism, Asan Medical Center, University of Ulsan College of Medicine, South korea, [4]Department of Orthopedic Surgery, Asan Medical Center, University of Ulsan College of Medicine, South korea
Disclosures: Seung Hun Lee, None

SU0246 **Profiling C3-Epi-25-Hydroxyvitamin D_3 concentrations in paediatric populations as determined by LC-MS/MS**
Jonathan Tang*[1], Holly Nicholls[2], Milka Budnik-Zawilska[2], Paul Brookes[3], John Dutton[2], Isabelle Piec[2], Christopher Washbourne[2], William Fraser[2]. [1]University of East Anglia, Norwich, UK, United Kingdom, [2]University of East Anglia, United Kingdom, [3]Norfolk & Norwich University Hospitals, United Kingdom
Disclosures: Jonathan Tang, None

SU0247 **Surgery Alters Laboratory Results: Implications for Fracture Liaison Services**
Neil Binkley*[1], Gretta Borchardt[2], Ellen Fidler[3], Jessie Libber[3], Diane Krueger[3], Paul Iglar[3], Joan Lappe[4], John Heiner[5], Richard Illgen[5], Matthew Squire[5], Douglas Coursin[6], Kirk Hogan[6]. [1]University of Wisconsin, Madison, USA, [2]University of Wisconsin, United states, [3]University of Wisconsin, USA, [4]Creighton University, USA, [5]University of Wisconsin Department of Orthopedics, USA, [6]University of Wisconsin Department of Anesthesiology, USA
Disclosures: Neil Binkley, None

OSTEOPOROSIS - ASSESSMENT: BONE QUALITY

SU0248 **Characteristics of mandibular cortical layer between osteoporotic and normal patients : 3D volumetric analysis with CBCT**
Jin-Sun Jeong*[1], Yumie Rhee[2], Jisun Huh[3], Kyeong-Mee Park[4], Yu Gu[5], Kee-Deog Kim[4], Wonse Park[3]. [1]Department of Advanced General Dentistry,Yonsei University College of Dentistry, South korea, [2]Department of Internal Medicine, Endocrine Research Institute, Yonsei University College of Medicine, South korea, [3]Department of Advanced General Dentistry, Yonsei University College of Dentistry, South korea, [4]Department of Advanced General Dentistry, College of Dentistry, Yonsei University, South korea, [5]Department of Conservative Dentistry, Seoul National University, South korea
Disclosures: Jin-Sun Jeong, None

SU0249 **Examining the Calcaneus Using HRpQCT: Method Reproducibility and Regional Trabecular Variation**
Louis Metcalf*[1], John Rochester[2], Nicolas Vilayphiou[3], Margaret Paggiosi[2], Eugene McCloskey[2]. [1]Univeristy of Sheffield, United Kingdom, [2]University of Sheffield, United Kingdom, [3]SCANCO Medical AG, Switzerland
Disclosures: Louis Metcalf, None

SU0250 **Microindentation Assessed Bone Material Strength Is Associated with Cortical Porosity and Subcutaneous Fat in Older Women**
Daniel Sundh*[1], Robert Rudäng[2], Michail Zoulakis[2], Anna Darelid[2], Mattias Lorentzon[2]. [1]"institute of Medicine, Sahlgrenska Academy", Sweden, [2]GERIATRIC MEDICINE, INSTITUTE OF MEDICINE, Sweden
Disclosures: Daniel Sundh, None

SU0251 **The Canadian Multicentre Osteoporosis Bone Quality Study (CaMos BQS): Baseline Comparison of HR-pQCT and pQCT and Fracture Associations**
Andy Kin On Wong*[1], Claudie Berger[2], George Ioannidis[3], Karen Beattie[3], Christopher Gordon[3], Laura Pickard[3], Alexandra Papaioannou[4], David Goltzman[2], Jerilynn Prior[5], Heather Macdonald[5], Maureen Ashe[5], Leigh Gabel[5], Danmei Liu[6], Steve Boyd[7], Lauren Burt[7], Michelle Kan[7], Kyle Nishiyama[8], Saija Kontulainen[9], Andrew Frank-Wilson[9], Chantal Kawalilak[9], Wojciech Olszynski[9], K. Shawn Davison[10], Lora Giangreggorio[11], Robert Josse[12], Eva Szabo[13], Marta Erlandson[9], Tassos Anastassiades[14], Norma MacIntyre[3], Angela M. Cheung[13], Jonathan D. Adachi[3]. [1]University Health NetworkMcMaster University, Ca, [2]McGill university, Canada, [3]McMaster University, Canada, [4]Hamilton Health Sciences, Canada, [5]UBC, Canada, [6]CHHM, Canada, [7]University of Calgary, Canada, [8]Columbia University, USA, [9]University of Saskatchewan, Canada, [10]University of Victoria, Canada, [11]University of Waterloo, Canada, [12]St. Michael's Hospital, Canada, [13]UHN, Canada, [14]Queens University, Canada
Disclosures: Andy Kin On Wong, None

OSTEOPOROSIS - ASSESSMENT: DXA

SU0252 **Cortical and Trabecular Bone Analysis of Hip Fracture Patients using 3D-DXA**
Alexis Bagué[1], Luis Del Rio[2], Silvana Di Gregorio[2], Yves Martelli[3], Miguel A. González Ballester[4], Ludovic Humbert*[3]. [1]SIMBioSys – Simulation, Imaging & Modelling for Biomedical Systems, Universitat Pompeu Fabra, Spain, [2]CETIR Grup Medic, Spain, [3]Galgo Medical, Spain, [4]SIMBioSys – Simulation, Imaging & Modelling for Biomedical Systems, Universitat Pompeu Fabra - ICREA, Spain
Disclosures: Ludovic Humbert, None

SU0253 **Dynamically Filtered Control of X-ray Flux Maintains Precision and Accuracy Over Wide Tissue Thicknesses in the Norland DXA System**
Pat Cunniff[1], Joe Joyce[1], Jing Mei Wang[2], Tom Sanchez*[3]. [1]Bone Health Division, Norland at Swissray, USA, [2]Bone Health Division, Norland at Swissray, China, [3]Norland at Swissray, USA
Disclosures: Tom Sanchez, None

SU0254 **Reliability and validity of lower extremity computed tomography as a screening tool for osteoporosis**
Ki Hyuk Sung*[1], Soon-Sun Kwon[2], Seung Jun Mun[1], Seung Yeol Lee[3]. [1]Myongji Hospital, South korea, [2]National University Bundang Hospital, South korea, [3]Ewha Womans University Mokdong Hospital, South korea
Disclosures: Ki Hyuk Sung, None

SU0255 **Stochastic Predictors from DXA Scans of Human Lumbar Vertebrae Are Correlated with Microarchitecture Parameters of Trabecular Bone**
Neil Dong*[1], Rajeshwar Pinninti[1], Amy Tvinnereim[2], Timothy Lowe[1], David Di Paolo[1], Mukul Shirvaikar[1]. [1]The University of Texas at Tyler, USA, [2]UT Health Northeast, USA
Disclosures: Neil Dong, None

OSTEOPOROSIS - ASSESSMENT: OTHER IMAGING TECHNIQUES

SU0256 **A New System for Ultrasonic Assessment of the Calcaneus**
Emily Stein[1], Fernando Rosete[1], Mariana Bucovsky[1], Gangming Luo[2], Jonathan Kaufman*[2], Alfred Rosenbaum[3], Elizabeth Shane[1], Robert Siffert[4]. [1]Columbia University College of Physicians & Surgeons, USA, [2]CyberLogic, Inc., USA, [3]Computerized Scanning Associates, USA, [4]The Mount Sinai School of Medicine, USA
Disclosures: Jonathan Kaufman, None

SU0257 **Age dependend sensitivity and specificity of osteoporosis diagnostics at primary healthcare with Bindex**
Janne Karjalainen*[1], Ossi Riekkinen[2], John Schousboe[3], Heikki Kröger[4]. [1]Bone Index Finland Ltd., Finland, [2]Bone Index Finland Ltd, Finland, [3]Park Nicollet Institute, USA, [4]Kuopio University Hospital, Finland
Disclosures: Janne Karjalainen, Bone Index Finland Ltd.

SU0258 **Association of Body Habitus to Bone Density and Mass in Adults**
John Shepherd*[1], Bennett Ng[2], Alka Kanaya[2], Kathy Mulligan[2], Louise Marquino[2], Bo Fan[2]. [1]University of California, San Francisco, USA, [2]UCSF, USA
Disclosures: John Shepherd, None

SU0259 **Clinical efficacy of a simplified hip structure analysis method for the prediction of incident hip fracture events**
Ben Khoo[1], Joshua Lewis[2], Keenan Brown*[3], Richard Prince[2]. [1]Western Australian Health Department, Australia, [2]University of Western Australia, Australia, [3]Mindways Software, Inc, USA
Disclosures: Keenan Brown, None

SU0260 **Comparison of MRI Measures versus DXA Hip Structural Analysis Narrow Neck Geometric Indices in a Limited Sample of Adolescent Females**
Jodi Dowthwaite*[1], Tomas Cervinka[2], Paula Rosenbaum[3], Tamara Scerpella[4]. [1]SUNY Upstate Medical University;Syracuse University, USA, [2]Tampere University of Technology, Finland, [3]SUNY Upstate Medical University, USA, [4]University of Wisconsin, USA
Disclosures: Jodi Dowthwaite, None

SU0261 **Guided wave-based ultrasound biomarkers of cortical bone discriminate fractured from non-fractured post-menopausal women**
Quentin Vallet*[1], Jean-Gabriel Minonzio[1], Nicolas Bochud[1], Adrien Etcheto[2], Karine Briot[2], Sami Kolta[2], Christian Roux[2], Pascal Laugier[3]. [1]Sorbonne Universités, UPMC Univ Paris 06, CNRS, INSERM, Laboratoire d'Imagerie Biomédicale, France, [2]INSERM, U 1153, Rheumatology Department, Cochin Hospital, Paris Descartes University, France, [3]Université Pierre et Marie Curie-Paris 6, France
Disclosures: Quentin Vallet, None

SU0262 **Inter-Operator Precision and Monitoring Time Intervals for Bone Strength and BMD as Measured from CT Scans — A Comparison of Phantom and Phantomless Calibrations**
David Lee*[1], Paul Hoffmann[1], Kwang Lee[1], David Kopperdahl[1], Tony Keaveny[2]. [1]O.N. Diagnostics, USA, [2]University of California Berkeley, USA
Disclosures: David Lee, O.N. Diagnostics

SU0263 **Investigating the effects of motion streaks on the association between pQCT-derived leg muscle density and fractures in older adults**
Adrian Chan*, Jonathan D. Adachi, Alexandra Papaioannou, Laura Pickard, Andy Kin On Wong. McMaster University, Canada
Disclosures: Adrian Chan, None

SU0264 **Searching for side to side difference within the same vertebral body - The preliminary QCT study of trabecular bone density in intact lumbar vertebra of elderly patients with back pain**
Wojciech Glinkowski[1], Jerzy Narloch*[2]. [1]Medical University of Warsaw, Poland, [2]Chair & Department of Orthopaedics & Traumatology of Locomotor System, Center of Excellence "TeleOrto", Medical University of Warsaw, Poland, Poland
Disclosures: Jerzy Narloch, None

SU0265 **TBS reflects trabecular microarchitecture in premenopausal women and similarly aged men with low traumatic fractures**

Christian Muschitz*[1], Roland Kocijan[2], Judith Haschka[2], Dieter Pahr[3], Alexandra Kaider[4], Didier Hans[5], Astrid Fahrleitner-Pammer[6], Heinrich Resch[2]. [1]St. Vincent's Hospital, Austria, [2]St. Vincent Hospital Vienna - Medical Department II, Austria, [3]Institute of Lightweight Design & Structural Biomechanics, Vienna University of Technology, Austria, [4]Center for Medical Statistics, Informatics & Intelligent Systems, Medical University of Vienna, Austria, [5]Center of Bone Diseases, Lausanne University Hospital, Switzerland, [6]Department of Internal Medicine, Division of Endocrinology & Metabolism, Medical University of Graz, Austria

Disclosures: Christian Muschitz, None

SU0266 **The Fracturing Phenotype: What Can We Learn from Examining Cross-sectional Geometry with pQCT?**

Timo Rantalainen[1], Daniel Belavý[2], Rachel Duckham*[2], Tilo Blenk[3], Franziska Luhn[3], Rainer Rawer[4], Johannes Willnecker[4], Gabriele Armbrecht[3], Dieter Felsenberg[3]. [1]Centre for Physical Activity & Nutrition Research, Deakin University, Finland, [2]Centre for Physical Activity & Nutrition Research, School of Exercise & Nutrition Sciences, Deakin University, 221 Burwood Highway, Burwood, Victoria, 3125, Australia, Australia, [3]Centre for Muscle & Bone Research, Charité Universitätsmedizin Berlin, Hindenburgdamm 30, 12203 Berlin, Germany., Germany, [4]Stratec Medizintechnik GmbH, Durlacher Str. 35, 75172 Pforzheim, Germany, Germany

Disclosures: Rachel Duckham, None

OSTEOPOROSIS - EPIDEMIOLOGY: GENETIC STUDIES

SU0267 **Quantitative proteomics and integrative network analysis identified novel genes and pathways related to osteoporosis**

YONG ZENG*[1], Lan Zhang[1], Wei Zhu[1], Chao Xu[1], Hao He[1], Yu Zhou[1], Qing Tian[1], Ji-Gang Zhang[1], Fei-Yan Deng[2], Yao-Zhong Liu[1], Hong-Wen Deng[1]. [1]Tulane University, USA, [2]Hunan Normal University, China

Disclosures: YONG ZENG, None

OSTEOPOROSIS - EPIDEMIOLOGY: BONE MINERAL DENSITY

SU0268 **The Effect of Chronic Hyponatremia on Bone Mineral Loss Evaluated by Retrospective National Danish Patient Data**

Christian Kruse*[1], Pia Eiken[2], Joseph G. Verbalis[3], Peter Vestergaard[4]. [1]Aalborg University, Dk, [2]Department of Cardiology, Nephrology & Endocrinology, Nordsjællands Hospital Hilleroed, Hilleroed, Denmark, Denmark, [3]Division on Endocrinology & Metabolism at Georgetown University, USA, [4]Department of Endocrinology, Denmark

Disclosures: Christian Kruse, None

SU0269 **Time to Osteoporosis and Incidence of Major Osteoporotic Fracture in Older Men: the MrOS Study**

Margaret Gourlay*[1], Robert Overman[1], Jason Fine[1], Guillaume Filteau[1], Peggy Cawthon[2], John Schousboe[3], Eric Orwoll[4], Timothy Wilt[5], Tuan Nguyen[6], Nancy Lane[7], Pawel Szulc[8], Brent Taylor[5], Thuy-Tien Dam[9], Carrie Nielson[4], Jane Cauley[10], Elizabeth Barrett-Connor[11], Howard Fink[5], Jodi Lapidus[4], Deborah Kado[11], Susan Diem[3], Kristine Ensrud[5]. [1]University of North Carolina, USA, [2]Research Institute, California Pacific Medical Center, USA, [3]University of Minnesota, USA, [4]Oregon Health & Science University, USA, [5]University of Minnesota, Minneapolis VA Health Care System, USA, [6]Garvan Institute of Medical Research, Australia, [7]University of California, Davis, USA, [8]University of Lyon, France, [9]Columbia University, USA, [10]University of Pittsburgh, USA, [11]University of California, San Diego, USA

Disclosures: Margaret Gourlay, None

OSTEOPOROSIS - EPIDEMIOLOGY: ENVIRONMENTAL AND LIFESTYLE FACTORS

SU0270 **Does DNA Methylation Underpin the Social Gradient of Osteoporotic Fracture? A Conceptual Model**

Sharon Brennan-Olsen*[1], Richard Page[1], Michael Berk[1], Jose Riancho[2], William Leslie[3], Karen Saban[4], Julie Pasco[1], Shae Quirk[1], Natalie Hyde[1], Sarah Hosking[1], Lana Williams[1]. [1]Deakin University, Australia, [2]University of Cantabria, IDIVAL, Spain, [3]University of Manitoba, St Boniface Hospital, Canada, [4]Loyola University Chicago, USA

Disclosures: Sharon Brennan-Olsen, None

SU0271 **Prospective study of kyphosis and lower extremity function in women and men: The Framingham Study**

Amanda Lorbergs*[1], Yanhua Zhou[2], Ching-An Meng[3], Brochin Elana[3], Douglas P. Kiel[4], L. Adrienne Cupples[2], Joanne Murabito[2], Dennis E. Anderson[5], Brett Allaire[5], Mary B. Bouxsein[6], Thomas G. Travison[7], Elizabeth J. Samelson[7]. [1]Hebrew SeniorLife, Harvard Medical School, USA, [2]School of Public Health, Boston University, USA, [3]Institute for Aging Research, Hebrew SeniorLife, USA, [4]Institute for Aging Research, Hebrew SenioLife & Harvard Medical School, USA, [5]Beth Israel Deaconess Medical Center, USA, [6]Beth Israel Deaconess Medical Center, Harvard Medical School, USA, [7]Institute for Aging Research, Hebrew SeniorLife & Harvard Medical School, USA

Disclosures: Amanda Lorbergs, None

OSTEOPOROSIS - EPIDEMIOLOGY: FALLS AND FRACTURES

SU0272 **Associations of spinal inclination and vertebral deformities with difficulties in activities of daily living**

Yasuyo Abe*, Kiyoshi Aoyagi. Nagasaki University, Japan

Disclosures: Yasuyo Abe, None

SU0273 **Both High and Low serum Serotonin levels Predicts Incident Non-vertebral Fractures**

Dan Mellstrom*[1], Ewa Waern[2], Catharina Lewerin[3], Östen Ljunggren[4], Claes Ohlsson[5], Daniel Sundh[6], Mattias Lorentzon[5], Magnus Karlsson[7], Steven Cummings[8], Helena Johansson[9], Henrik Zetterberg[10], Ulf Lerner[5]. [1]Sahlgrenska University Hospital, Sweden, [2]Department of Geriatrics, University of Gothenburg, Sweden, [3]Section of Hematology & coagulation, department of internal medicine & clinical nutrition, institute of medicine, Sahlgrenska Academy, University of Gothenburg, Sweden, [4]Department of Medical Sciences, University of Uppsala, Sweden, Sweden, [5]Centre for Bone & Arthritis Research, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Sweden, [6]Geriatric Medicine, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Sweden, [7]Clinical & Molecular Osteoporosis Research Unit, Department of Clinical Sciences, Lund University, & department of Orthopedics, Skåne University Hospital, Sweden, [8]San Francisco Coordinating Center,California Pacific Medical Center Research Institute,USA, USA, [9]Geriatric Medicine, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Sweden. 2.
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Disclosures: Dan Mellstrom, None

SU0274 **Elevated Fasting Triglyceride Levels Are Associated With Risk of Subsequent Fracture in Midlife Women: Study of Women's Health Across the Nation (SWAN)**

Po-Yin Chang*[1], Jennifer S. Lee[2], Ellen B. Gold[3], Wesley Johnson[4], Carriez Karvonen-Gutierre[5], Kristine Ruppert[6], Elizabeth A. Jackson[7], Jane A. Cauley[6]. [1]Stanford University, USA, [2]Stanford University School of Medicine, USA, [3]Department of Public Health Sciences, University of California, Davis, USA, [4]Department of Statistics, University of California, Irvine, USA, [5]Department of Epidemiology, University of Michigan School of Public Health, USA, [6]Department of Epidemiology, University of Pittsburgh School of Public Health, USA, [7]Division of Cardiovascular Medicine University of Michigan Health Systems, USA

Disclosures: Po-Yin Chang, None

SU0275 **Fractures from Same-Level Falls in the Workplace: A Descriptive Study of Workers' Compensation Claims in Ontario, Canada**
Chamila Adhihetty*[1], Dorcas Beaton[2], Sheilah Hogg-Johnson[3], Susan Jaglal[1]. [1]University of Toronto, Canada, [2]St. Michael's Hospital, Canada, [3]Institute for Work & Health, Canada
Disclosures: Chamila Adhihetty, None

SU0276 **High incidence of typical osteoporotic fractures following an atypical femoral fracture**
Emmanuel Biver*[1], Marie Claude Audet[2], Rene Rizzoli[2], Raphael Meier[3], Robin Peter[4], Serge Ferrari[2]. [1]Division of Bone Diseases, Geneva University Hospitals & Faculty of Medicine, Geneva, Switzerland, [2]Division of Bone Diseases, Geneva University Hospitals & Faculty of Medicine, Switzerland, [3]Division of Visceral & Transplant Surgery, Geneva University Hospitals & Faculty of Medicine, Switzerland, [4]Division of Orthopedic Surgery, Geneva University Hospitals & Faculty of Medicine, Switzerland
Disclosures: Emmanuel Biver, None

SU0277 **High Serum SHBG Predicts Incident Vertebral Fractures in Elderly Men**
Liesbeth Vandenput*[1], Dan Mellström[2], Östen Ljunggren[3], Andreas Kindmark[3], Helena Johansson[4], Mattias Lorentzon[5], Jason Leung[6], Inga Redlund-Johnell[7], Björn Rosengren[7], Magnus Karlsson[7], Timothy Kwok[6], Claes Ohlsson[4]. [1]University of Gothenburg, Sweden, [2]Center for Bone & Arthritis Research & Geriatric Medicine at the Sahlgrenska Academy, University of Gothenburg, Sweden, [3]Department of Medical Sciences, University of Uppsala, Sweden, [4]Centre for Bone & Arthritis Research at the Sahlgrenska Academy, University of Gothenburg, Sweden, [5]Centre for Bone & Arthritis Research & Geriatric Medicine at the Sahlgrenska Academy, University of Gothenburg, Sweden, [6]Jockey Club Centre for Osteoporosis Care & Control, The Chinese University of Hong Kong, Hong kong, [7]Clinical & Molecular Osteoporosis Research Unit, Lund University, & Department of Orthopaedics, Skåne University Hospital, Sweden
Disclosures: Liesbeth Vandenput, None

SU0278 **Hip Fracture Rates in Long-term Care Residents Declining Faster than in the Community**
Alexandra Papaioannou*[1], Courtney Kennedy[1], George Ioannidis[1], Ruth Croxford[2], Cathy Cameron[3], Sara Mursleen[1], Jonathan Adachi[1], Susan Jaglal[3]. [1]McMaster University, Canada, [2]Institute for Clinical Evaluative Sciences, Canada, [3]University of Toronto, Canada
Disclosures: Alexandra Papaioannou, Amgen, Eli Lilly, Merck Canada Inc., Werner Chilcott; Amgen, Eli Lilly

SU0279 **Hypertension as a Risk Factor for Fractures: a Systematic and Meta-analysis of Observational Studies**
Raghad Alharthy*[1], Debra A. Butt[2], Jeevitha Srighanthan[3], George Tomlinson[2], Angela M. Cheung[4]. [1]University Health Network, Canada, [2]University of Toronto Departments of Family & Community Medicine & Medicine, Canada, [3]University Health Network Osteoporosis Program, Canada, [4]University Health Network Osteoporosis Program; University of Toronto Departments of Family & Community Medicine & Medicine, Canada
Disclosures: Raghad Alharthy, None

SU0280 **Identification of bone and fall-related patient phenotypes based on hierarchical cluster analysis in patients with a recent fracture**
Lisanne Vranken*[1], Joop van den Bergh[2], Piet Geusens[3], Caroline Wyers[2], Robert van der Velde[2]. [1]VieCuri Medical Centre, The netherlands, [2]VieCuri Medical Center, Venlo, The Netherlands, Netherlands, [3]Maastricht University Medical Center, Maastricht, The Netherlands, Netherlands
Disclosures: Lisanne Vranken, None

SU0281 **Incidence, Skeletal Site of, and Risk Factors for Clinical Fractures in Older Men by Baseline BMD Category**
Howard Fink*[1], Terri Blackwell[2], Brent Taylor[3], Eric Orwoll[4], Kristine Ensrud[5]. [1]GRECC, Minneapolis VA Medical Center, USA, [2]California Pacific Medical Center, USA, [3]Center for Chronic Disease Outcomes Research, VA Healthcare System, USA, [4]Oregon Health Sciences University, USA, [5]Center for Chronic Disease Outcomes Research, VA Health Care System, USA
Disclosures: Howard Fink, None

SU0282 **Loss in Health Related Quality of Life Following Low-Trauma Fractures in Frail Elderly**
Jean-Eric Tarride[1], Robert B. Hopkins[1], Louis Bessette[2], Natasha Burke[1], Jacques P. Brown[2], William D Leslie[3], Suzanne Morin[4], Alexandra Papaioannou [1], Louisa Pericleous[5], Jonathan D. (Rick) Adachi*[1]. [1]McMaster University, Canada, [2]Laval University, Canada, [3]University of Manitoba, Canada, [4]McGill University, Canada, [5]Amgen Canada Inc., Canada
Disclosures: Jonathan D. (Rick) Adachi, None

SU0283 **Low level of thoracic bone mineral density and low doses of glucocorticoid use are risk factors for clinical fractures in patients with rheumatoid arthritis: fourth-year results of the TOMORROW study**
Tatsuya Koike*[1], Kenji Mamoto[2], Tadashi Okano[3], Yuko Sugioka[4], Masahiro Tada[5], Kentaro Inui[6]. [1]Search Institute for Bone & Arthritis Disease (SINBAD), Japan, [2]Department of Orthopaedic Surgery, Osaka City University Medical School, Japan, [3]Department of Orthopedic Surgery, Osaka City University Medical School, Japan, [4]Center for Senile Degenerative Disorders, Osaka City University Medical School, Japan, [5]Department of Orthopedic Surgery, Osaka City General Hospital, Japan, [6]Department of Rheumatosurgery, Osaka City University Medical School, Japan
Disclosures: Tatsuya Koike, None

SU0284 **Mortality risk associated with fractures, The 45 and Up study, a population based cohort study of 238,673 Australians**
Weiwen Chen*[1], Lyn March[2], Fiona Blyth[3], Judy Simpson[4], Jacqueline Center[5]. [1]Garvan Institute, Australia, [2]Kolling Institute of Medical Research, University of Sydney, Australia, [3]Sax Institute, University of Sydney, Australia, [4]University of Sydney, Australia, [5]Garvan Institute of Medical Research, University of New South Wales, Australia
Disclosures: Weiwen Chen, None

SU0285 **Rest-activity patterns and their relation to falls and fractures in older men: The Osteoporotic Fractures in Men (MrOS) Study**
Peggy Cawthon*[1], Terri Blackwell[1], Greg Tranah[1], Douglas Bauer[2], Eric Orwoll[3], Dan Evans[1], Jane Cauley[4], Sonia Ancoli-Israel[5], Katie Stone[1], Steven Cummings[1]. [1]California Pacific Medical Center Research Institute, USA, [2]University of California, San Francisco, USA, [3]Oregon Health & Science University, USA, [4]University of Pittsburgh, USA, [5]University of California, San Diego, USA
Disclosures: Peggy Cawthon, None

SU0286 **Short Term Functional Outcomes in Elderly Patients Sustaining Fragility Hip Fractures**
Jordan Villa*[1], Joseph Koressel[2], Joaquin Moya [1], Arianna Gianakos[3], Joseph Lane[1]. [1]Hospital for Special Surgery, USA, [2]Weil Cornell Medical College, USA, [3]Hospital fro Special Surgery, USA
Disclosures: Jordan Villa, None

OSTEOPOROSIS - EPIDEMIOLOGY: RISK FACTORS

SU0287 **A Clinical Definition of Fragility Fracture**
Claudia Beaudoin*[1], Sonia Jean[2], Louis Bessette[3], Louis-Georges Ste-Marie[4], Jacques P. Brown[3]. [1]CHU de Quebec Research Centre, Canada, [2]Institut national de santé publique du Québec, Canada, [3]CHU de Québec Research Centre, Canada, [4]Université de Montréal, Canada
Disclosures: Claudia Beaudoin, Merck, Actavis, sanofi-aventis, Amgen, Eli Lilly, Novartis

SU0288 **Are Fragility Fractures Associated With Frailty Prior to Fracture? Healthcare Utilisation In Older Women Prior to Fracture Compared With Those Without Subsequent Fracture**
Kerrie Sanders*[1], Jenny Watts[2], Lucy Busija[3], Amanda Stuart[2], David Scott[4], Geoff Nicholson[3]. [1]NorthWest Academic CentreThe University of MelbourneWestern Health, Australia, [2]Deakin University, Australia, [3]Australian Catholic University, Australia, [4]Monash University, Australia
Disclosures: Kerrie Sanders, None

SU0289 **Differences In Pain Experience Between Women With And Without Vertebral Fractures: Novel Independent Descriptors Identified**
Emma Clark*, Rachael Gooberman-Hill, Tim Peters. University of Bristol, United Kingdom
Disclosures: Emma Clark, None

SU0290 **Muscle Mass Predicts Incident Fracture in Postmenopausal Women: The OFELY Study**
Elisabeth Sornay-Rendu[1], Francois Duboeuf[2], Stéphanie Boutroy[2], Roland Chapurlat*[2]. [1]INSERM UMR1033, Université de Lyon, France, [2]INSERM UMR1033 & Université de Lyon, France
Disclosures: Roland Chapurlat, None

SU0291 **Nonsteroidal Anti-Inflammatory Drug Prescriptions are Associated with Increased Stress Fracture Risk in U.S. Army Soldiers**
Julie Hughes*[1], Craig McKinnon[1], Lakmini Bulathsinhala[2], Katelyn Guerriere[1], Mary Bouxsein[3], Joseph Kardouni[1], Ronald Matheny, Jr[1]. [1]US Army Research Institute of Environmental Medicine, USA, [2]DoD-VA Extremity Trauma & Amputation Center of Excellence, USA, [3]Endocrine Unit, Massachusetts General Hospital, Center for Advanced Orthopedic Studies, Beth Israel Deaconess Medical Center, Department of Orthopaedic Surgery, Harvard Medical School, USA
Disclosures: Julie Hughes, None

SU0292 **Osteoporosis markers and atherosclerosis: higher bone density is associated with greater carotid intima-media thickness in middle-aged women**
Monika Frysz*[1], Kevin Deere[2], Debbie A Lawlor[3], William D Fraser[4], L-L Benfield[1], Jon H Tobias[2], Celia Gregson[5]. [1]School of Social & Community Medicine, University of Bristol, United Kingdom, [2]Musculoskeletal Research Unit, School of Clinical Sciences, University of Bristol, United Kingdom, [3]MRC Integrative Epidemiology Unit at the University of Bristol, United Kingdom, [4]Faculty of Medicine & Health Sciences, University of East Anglia, United Kingdom, [5]University of Bristol, United Kingdom
Disclosures: Monika Frysz, None

SU0293 **Parental Hip Fracture is an Independent Risk Factor for Fracture: A Population-Based Parent-Offspring Linkage Analysis**
Shuman Yang*[1], William Leslie[1], Lin Yan[1], Randy Walld[1], Leslie Roos[1], Suzanne Morin[2], Sumit Majumdar[3], Lisa Lix[1]. [1]University of Manitoba, Canada, [2]McGill University, Canada, [3]University of Alberta, Canada
Disclosures: Shuman Yang, None

SU0294 **The Relationship between Smoking Duration, Pulmonary Function and Bone Mineral Density in Korean Men: KNHANES 2008-2011**
Ji Hyun Lee*[1], Jung Hee Kim[2], A Ram Hong[3], Chan Soo Shin[3], Sang Wan Kim[3]. [1]Seoul national university hospital, South korea, [2]Department of Internal Medicine, Seoul National University College of Medicine, Seoul, South korea, [3]Department of Internal Medicine, Seoul National University College of Medicine, South korea
Disclosures: Ji Hyun Lee, None

SU0295 **Upper Body Center of Mass Location Affects the Factor of Risk for Vertebral Fracture**
Julie Choisne[1], Celia Amabile[2], Agathe Nérot[2], Christophe Travert[2], Hélène Pillet[2], Wafa Skalli*[2]. [1]Arts et Metiers ParisTech, France, [2]Arts et Metiers ParisTech, LBM/Institut de Biomecanique Humaine Georges Charpak, France
Disclosures: Wafa Skalli, None

SU0296 **Weight Change and Risk of Central Body Fractures in Older Community-Dwelling Men**
Kristine Ensrud*[1], Stephanie Harrison[2], Jane Cauley[3], Deborah Kado[4], Cora Lewis[5], Andrew Hoffman[6], Eric Orwoll[7], Carolyn Crandall[8], Marcia Stefanick[6], Peggy Cawthon[2]. [1]University of Minnesota & Minneapolis VA Health Care System, USA, [2]California Pacific Medical Center Research Institute, USA, [3]University of Pittsburgh, USA, [4]University of California - San Diego, USA, [5]University of Alabama at Birmingham, USA, [6]Stanford University, USA, [7]Oregon Health & Science University, USA, [8]University of California - Los Angeles, USA
Disclosures: Kristine Ensrud, None

SU0297 **Withdrawn**

SU0298 **Applying the Health Action Process Approach to Develop Educational Videos to Improve Vitamin D Adherence in Older Adult with Osteoporosis-A Pilot Knowledge Translation Study**
AHMED NEGM*[1], Jonathan D. Adachi[2], Arthur Lau[3], Norma J. MacIntyre[4]. [1]McMaster University, Canada, [2]St. Joseph's Healthcare/McMaster University, Canada, [3]Division of Rheumatology, McMaster University, Canada, [4]School of Rehabilitation Science, Faculty of Health Sciences, McMaster University, Canada
Disclosures: AHMED NEGM, None

SU0299 **Comparing Agreement of Osteoporosis Treatment Guidelines Using Data from the Patient Activation after DXA Receipt Notification (PAADRN) Study**
Nicole Wright*[1], Peter Cram[2], Fred Wolinsky[3], Douglas Roblin[4], Stephanie Edmonds[3], Kenneth Saag[1]. [1]University of Alabama at Birmingham, USA, [2]University of Toronto, Canada, [3]University of Iowa, USA, [4]Georgia State University, USA
Disclosures: Nicole Wright, Amgen

SU0300 **Healthcare costs of osteoporotic fracture in South Korea**
Ha Young Kim*[1], Deog-Yoon Kim[2], Sunmee Jang[3], Yong Chan Ha[4], Tae Young Kim[5]. [1]Wonkwang University Sanbon Hospital, South korea, [2]Kyung Hee University, South korea, [3]Gachon University, South korea, [4]Chung-Ang University, South korea, [5]Hallym University, South korea
Disclosures: Ha Young Kim, None

SU0301 **Online Linkage of FRAX Fracture Risk Assessment to Management Guidance is Used by Clinical Practitioners. An Analysis of Access to National Osteoporosis Guideline Group Guidance in the UK (July 2013-June 2014)**
Eugene McCloskey*[1], Helena Johansson[2], Nicholas Harvey[3], Juliet Compston[4], John Kanis[2]. [1]University of Sheffield, United Kingdom, [2]Centre for Metabolic Bone Diseases, University of Sheffield, United Kingdom, [3]MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, [4]Dept. of Medicine, Cambridge Biomedical Campus, United Kingdom
Disclosures: Eugene McCloskey, None

SU0302 **Osteoporosis Patients Assessed by Telemedicine: A Unique High Risk Cohort**
Rachel Johnston*[1], Sarah Munce[1], Sonya Allin[1], Alexandra Pearce[2], Arlene Silverstein [2], Shelley Bouchard[2], Tarik Bereket[1], Gillian Hawker[1], Susan Jaglal[1], Sandra A. Kim[3]. [1]University of Toronto, Canada, [2]Women's College Hospital, Canada, [3]Women's College Hospital, University of Toronto, Canada
Disclosures: Rachel Johnston, None

SU0303 **Osteoporosis screening and treatment among Veterans with recent low-trauma fracture after implementation of a centralized, interdisciplinary Bone Health Service**
Richard Lee*[1], Megan Pearson[2], Patricia Jenkins[2], Kenneth Lyles[2], Cathleen Colon-Emeric[2]. [1]Duke University, USA, [2]Durham VAMC, USA
Disclosures: Richard Lee, None

SU0304 **Patients Undergoing Their First DXA Receive NOF Guideline Discordant Osteoporosis Pharmacotherapy**
Stephanie Edmonds*[1], Yiyue Lou[1], Peter Cram[2], Douglas Roblin[3], Nicole Wright[4], Kenneth Saag[4], Fredric Wolinsky[1]. [1]University of Iowa, USA, [2]University of Toronto, Canada, [3]Georgia State University, USA, [4]University of Alabama at Birmingham, USA
Disclosures: Stephanie Edmonds, None

SU0305 **Physicians' Prescribing Considerations and Perceptions of Osteoporosis Patients' Compliance of Oral Bisphosphonate**
Tao Gu*[1], Debra Eisenberg[2], Jingbo Yu[3]. [1]HealthCore, USA, [2]healthcore Inc, USA, [3]Merck, USA
Disclosures: Tao Gu, HealthCore Inc

SU0306 **Risk Factors that are Associated with Osteoporosis Treatment in High Risk Residents Living in Long Term Care (LTC) Homes? The Gaining Optimal Osteoporosis Assessments in Long-Term Care (GOAL) Study**

George Ioannidis*[1], Alexandra Papaioannou[2], Denis O'Donnell[3], Courtney Kennedy[2], Hrishikesh Navare[3], Lora Giangregorio[4], Sharon Marr[2], Angela Cheung[5], Richard Crilly [6], Sid Feldman[7], Ravi Jain[8], Sophie Jamal [5], Robert Josse[5], Sadhana Prasad [1], Lehana Thabane [1], Jonathan Adachi[1]. [1]McMaster University, Canada, [2]McMaster University & GERAS Centre, Canada, [3]Medical Pharmacies Group Limited, Canada, [4]University of Waterloo, Canada, [5]University of Toronto, Canada, [6]University of Western Ontario, Canada, [7]Baycrest Geriatric Health Care System, Canada, [8]Osteoporosis Canada, Canada

Disclosures: George Ioannidis, None

OSTEOPOROSIS - HEALTH CARE DELIVERY: OUTCOME STUDIES

SU0307 **Association between Teriparatide Treatment Duration and Fracture Incidence in Taiwan: Analysis Using the National Health Insurance Research Database**

Ding-Cheng CHAN*[1], Cecile Hsiao-Chun CHANG[2], Lay-Chin LIM[3], Alan BRNABIC[4], Jau-Yih TSAUO[5], Russel BURGE[6], Fei-Yuan HSIAO[7], Ling JIN[8], Sirel GURBUZ[9], Rong-Sen YANG[10]. [1]Superintendent Office, Jin-Shan Branch, National Taiwan University Hospital, Taipei, Taiwan; Department of Geriatrics & Gerontology, & Department of Internal Medicine, National Taiwan University Hospital, Taipei, Taiwan, Taiwan, [2]Eli Lilly & Company, Taipei, Taiwan, [3]Department of Orthopaedics & Department of Geriatrics & Gerontology, National Taiwan University Hospital, Taipei, Taiwan, [4]Real World Analytics, Eli Lilly Australia Pty Ltd, Sydney, Australia, [5]School & Graduate Institute of Physical Therapy, National Taiwan University, Taipei, Taiwan, [6]Global Health Outcomes, Eli Lilly & Company, Indianapolis, USA, [7]Graduate Institute of Clinical Pharmacy, College of Medicine, National Taiwan University, Taipei, Taiwan, [8]Lilly Research Laboratories, Eli Lilly & Company, Indianapolis, USA, [9]Emerging Markets, Eli Lilly & Company, Indianapolis, USA, [10]Department of Orthopaedics, National Taiwan University Hospital, Taipei, Taiwan

Disclosures: Ding-Cheng CHAN, Lilly. MSD, Harvester, GSK, TCM biotech international

SU0308 **Characteristics of Patients Classified as Low or Moderate Risk Based on Fracture Risk Assessment (FRAX) After a Fragility Fracture**

Louis Rodrigue*[1], François Cabana[1], Marie-Claude Beaulieu[1], Nathalie Carrier[2], Joanna Sale[3], Sophie Roux[1], Gilles Boire[2]. [1]Université de Sherbrooke, Canada, [2]Centre hospitalier universitaire de Sherbrooke, Canada, [3]St. Michael's Hospital, University of Toronto, Canada

Disclosures: Louis Rodrigue, None

SU0309 **Improving the Rate of Bone Mineral Density Testing After Fracture**

Sabita Challagulla*, Veronica Piziak. Baylor Scott & white, USA

Disclosures: Sabita Challagulla, None

OSTEOPOROSIS - NUTRITION AND DIETARY SUPPLEMENTS: GENERAL

SU0310 **Dietary potassium intake is beneficial to bone mineral density: Korean National Health and Nutrition Examination Survey 2008 - 2011 (KNHANES IV-V)**

Jung Hee Kim*[1], Sung Hye Kong[2], A Ram Hong[3], Jee Hyun Lee[3], Kyoung Min Kim[4], Sang Wan Kim[4], Seong Yeon Kim[4], Chan Soo Shin[3]. [1]Seoul National University College of Medicine, South korea, [2]Department of Internal Medicine,Seoul National University Hospital, South korea, [3]Department of Internal Medicine, Seoul National University Hospital, South korea, [4]Department of Internal Medicine Seoul National University Hospital, South korea

Disclosures: Jung Hee Kim, None

SU0311 **Effect of Young Coconut Juice Supplementation on Bone Metabolism in Ovariectomized Rats**
Hiroshi Matsushita*[1], Akira Minami[2], Yuriko Ohyama[3], Hiroaki Kanazawa[4], Takashi Suzuki[2], Sanan Subhadhirasakul[5], Kazushi Watanabe[3], Akihiko Wakatsuki[3]. [1]Aichi Medical University, Japan, [2]Department of Biochemistry, School of Pharmaceutical Sciences, University of Shizuoka, Japan, [3]Department of Obstetrics & Gynecology, School of Medicine, Aichi Medical University, Japan, [4]Department of Functional Anatomy, School of Nursing, University of Shizuoka, Japan, [5]Department of Pharmacognosy & Pharmaceutical Botany, Faculty of Pharmaceutical Sciences, Prince of Songkla University, Thailand
Disclosures: Hiroshi Matsushita, None

SU0312 **Long-term green tea polyphenols supplementation improves bone microstructure of middle-aged ovariectomized rats: a dose-response study**
Chwan-Li Shen*[1], Xiao Song[2], Jia-Sheng Wang[2], Kylie Corry[3], Jiliang Li[3]. [1]Texas Tech University Health Sciences Center, USA, [2]University of Georgia, USA, [3]Indiana University-Purdue University Indianapolis, USA
Disclosures: Chwan-Li Shen, None

SU0313 **Nutritional status of calcium and other bone-related nutrients in Type 2 Diabetes Mellitus patients**
Sahoko Sekiguchi-Ueda*[1], Eri Ninomiya[2], Eisuke Tomatsu[3], Mizuho Ando[3], Izumi Hiratsuka[3], Yasumasa Yoshino[3], Takeshi Takayanagi[3], Ayako Kakita[3], Megumi Shibata[3], Masaki Makino[3], Akemi Ito[2], Tadashi Kinoshita[2], Kazuhiro Uenishi[4], Atsushi Suzuki[3]. [1]Fujita Health University, Division of Endocrinology, Japan, [2]Food & Nutrition Service, Fujita Health University Hospital, Japan, [3]Division of Endocrinology & Metabolism, Department of Internal Medicine, Fujita Health University, Japan, [4]Laboratory of Physiological Nutrition, Kagawa Nutrition University, Japan
Disclosures: Sahoko Sekiguchi-Ueda, None

SU0314 **Soluble Corn Fiber Increases Bone-Calcium Retention in Postmenopausal Women in a Dose-Dependent Manner**
Steven Jakeman*[1], Courtney Henry[2], Berdine Martin[3], George McCabe[2], Linda McCabe[2], George Jackson[4], Munro Peacock[5], Connie Weaver[3]. [1]Department of Food Science, Purdue University, United states, [2]Department of Statistics, Purdue University, USA, [3]Department of Nutrition Science, Purdue University, USA, [4]Department of Physics & Astronomy, Purdue University, USA, [5]Department of Medicine, Indiana University, USA
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OSTEOPOROSIS - NUTRITION AND DIETARY SUPPLEMENTS: VITAMIN D

SU0315 **Low bone mass is associated with low vitamin D levels in young healthy Korean adults**
Hee-Jeong Choi*[1], Byeong Yeon Yu[2], Han Jin Oh[3], Bom Taeck Kim[4], Hyuk Jung Kweon[5]. [1]Department of Family Medicine, Eulji University School of Medicine, South korea, [2]Department of Family Medicine, Konyang University School of Medicine, Korea, democratic people's republic of, [3]Department of Family Medicine, Hanseo University, Korea, democratic people's republic of, [4]Department of Family Medicine, Ajou University School of Medicine, Korea, democratic people's republic of, [5]Department of Family Medicine, Konkuk University School of Medicine, Korea, democratic people's republic of
Disclosures: Hee-Jeong Choi, None

SU0316 **Peptide analysis of racially linked vitamin D binding protein isoforms in older men**
Carrie Nielson*[1], Jon Jacobs[2], Jodi Lapidus[1], Joseph Zmuda[3], Tujin Shi[2], Yuqian Gao[2], Richard Smith[2], Eric Orwoll[1]. [1]Oregon Health & Science University, USA, [2]Pacific Northwest National Laboratory, USA, [3]University of Pittsburgh, USA
Disclosures: Carrie Nielson, None

SU0317 **Relationships of resting energy expenditure and bone metabolism in postmenopausal Japanese women with type 2 diabetes: 6-month follow-up with vitamin D supplementation**
Makiko Ogata*[1], Risa Ide[2], Miho Takizawa[2], Naoko Iwasaki[2], Yasuko Uchigata[2]. [1]Tokyo Women's Medical University, Japan, [2]Diabetes Center,Tokyo Women's Medical University, Japan
Disclosures: Makiko Ogata, None

SU0318 **The Association of Vitamin D with Femoral Neck Strength: an Additional Evidence of Vitamin D on Bone Health**
HyeonMok Kim*, Seung Hun Lee, JinJu Kim, Kyeong-Hye Lim, Seong Hee Ahn, Beom-Jun Kim, Jae Suk Chang, Jung-Min Koh. Asan Medical Center, University of Ulsan College of Medicine, South korea
Disclosures: HyeonMok Kim, None

SU0319 **The effectiveness of Siriraj orthopaedic vitamin D2 supplementation protocol to achieve sufficient vitamin D level**
Aasis Unnanuntana, Pojchong Chotiyarnwong*, Wachirapan Narktang. Siriraj Hospital, Thailand
Disclosures: Pojchong Chotiyarnwong, None

SU0320 **Vitamin D Status, Bone Health and Depressive Symptoms in Young Women**
Emma Callegari*[1], Nicola Reavley[1], Suzanne M. Garland[2], Alexandra Gorelik[3], John D. Wark[4]. [1]The University of Melbourne, Australia, [2]The University of Melbourne. Royal Women's Hospital, Murdoch Childrens Research Institute, Australia, [3]Melbourne Epi Centre, Royal Melbourne Hospital, Australia, [4]The University of Melbourne, Bone & Mineral Medicine, Royal Melbourne Hospital, Australia
Disclosures: Emma Callegari, None

OSTEOPOROSIS - PATHOPHYSIOLOGY: CALCIUM, VITAMIN D, NUTRITIONAL AND PHYSICAL FACTORS

SU0321 **Leptin is a Key Regulator of Bone Turnover and Bone Density in Obese Adults**
Amy L Evans[1], Fatma Gossiel[1], Margaret A Paggiosi[1], Richard Eastell[1], Jennifer Walsh*[2]. [1]Academic Unit of Bone Metabolism, University of Sheffield, United Kingdom, [2]University of Sheffield, United Kingdom
Disclosures: Jennifer Walsh, None

OSTEOPOROSIS - PATHOPHYSIOLOGY: GENERAL

SU0322 **Absence of hypophosphatasia mutations in atypical femur fractures**
Timothy Bhattacharyya*[1], Smita Jha[2], Nicholas Laucis[1], Hongying Wang[3], Daniel Kastner[3], Elaine Remmers[3]. [1]NIH/NIAMS, USA, [2]NIH/NICHD, USA, [3]NIH/NHGRI, USA
Disclosures: Timothy Bhattacharyya, None

SU0323 **Cytosolic Proteome Profiling of Monocytes for Male Osteoporosis**
Wei Zhu*[1], Hong-Wen Deng[1], Lan Zhang[1], Yao-Zhong Liu[1], Qing Tian[1], Fei-Yan Deng[2], Yong Zeng[1], Yin-Chun Zhao[3], Hua-Lin Huang[1], Ji-Gang Zhang[1]. [1]Tulane University, USA, [2]Soochow University, China, [3]none, USA
Disclosures: Wei Zhu, None

SU0324 **MicroRNA miR-30e-5p discriminates patients with idiopathic osteoporosis and low-traumatic fractures**
Roland Kocijan*[1], Christian Muschitz[2], Fabian Plachel[2], Rainer Dormann[2], Elisabeth Geiger[3], Susanna Skalicky[3], Heinrich Resch[2], Patrick Heimel[4], Astrid Fahrleitner-Pammer[5], Johannes Grillari[6], Heinz Redl[7], Matthias Hackl[3]. [1]St. Vincent Hospital Vienna, Austria, [2]St. Vincent Hospital – Medical Department II, The VINFORCE Study Group, Academic Teaching Hospital of Medical University of Vienna, Austria, [3]TAmiRNA GmbH, Muthgasse 18, 1190 Vienna, Austria, [4]Ludwig Boltzmann Institute for Experimental & Clinical Traumatology Donaueschingenstraße 13,A-1200 Vienna, Austria, [5]Department of Internal Medicine, Division of Endocrinology & Metabolism, Medical University of Graz, Austria, [6]Department of Biotechnology, University of Natural Resources & Life Sciences Vienna, Austria, [7]Ludwig Boltzmann Institute for Experimental & Clinical Traumatology Austrian Cluster of Tissue Regeneration, Austria
Disclosures: Roland Kocijan, None

SU0325 **Nrf2 mediates gender specific mechanisms on bone accrual and maintenance**
Gretel Pellegrini*[1], Meloney Cregor[1], Kevin McAndrews [1], Jesus Delgado-Calle [1], Amy Sato[1], Hannah M Davis[1], Lilian I Plotkin[1], David Burr[1], Connie M Weaver[2], Teresita Bellido[3]. [1]Department of Anatomy & Cell Biology Indiana University School of Medicine, Indianapolis, IN, USA, [2]Department of Nutrition, Purdue University, West Lafayette, IN., USA, [3]Department of Anatomy & Cell Biology, Department of Medicine, Division of Endocrinology, Indiana University School of Medicine, Indianapolis, IN, Roudebush Veterans Administration Medical Center, Indianapolis, IN, USA
Disclosures: Gretel Pellegrini, None

SU0326 **Pathogenesis of Atypical Femur Fractures: Recruitment and Preliminary Results**
Sudhaker Rao*[1], Shijing Qiu[2], Elizabeth Warner[2], Heather Remtema[2], Mahalakshmi Honasoge[2], George Divine[2]. [1]Henry Ford Hospital, USA, [2]Henry Ford Health System, USA
Disclosures: Sudhaker Rao, None

OSTEOPOROSIS - PATHOPHYSIOLOGY: GLUCOCORTICOIDS AND OTHER DRUGS

SU0327 **A Clinical Used Antidepressant Drug Reduces Bone Volume by Increasing Osteoclastogenesis via Ubiquitin E3 Ligase ITCH**
Xing Li*[1], Wen Sun[2], Mengmeng Wang[2], Hengwei Zhang[2], Zhiyu Wang[3], Lingpeng Pei[2], Brendan Boyce[4], Lianping Xing[1]. [1]University of Rochester Medical Center, USA, [2]U of Rochester, USA, [3]Hebei Medical University, China, [4]University of Rochester, USA
Disclosures: Xing Li, None

SU0328 **Hijack of RUNX2 in Glucocorticoid-Induced Osteoporosis**
Eri Morimoto, Nyam-Osor Chimge, Baruch Frenkel*. University of Southern California, USA
Disclosures: Baruch Frenkel, None

SU0329 **Osteocyte-Derived RANKL Is Required for the Detrimental Effects of Glucocorticoids on Murine Cortical Bone**
Marilina Piemontese*[1], Jinhu Xiong[1], Yuko Fujiwara[1], Priscilla Baltz[1], Stuart Berryhill[1], Stavros Manolagas[1], Charles O'Brien[2]. [1]University of Arkansas for Medical Sciences & Central Arkansas Veterans Healthcare System, USA, [2]Central Arkansas VA Healthcare System, Univ of Arkansas for Medical Sciences, USA
Disclosures: Marilina Piemontese, None

OSTEOPOROSIS - PATHOPHYSIOLOGY: SEX HORMONES AND CALCIOTROPIC HORMONES

SU0330 **Estrogen Regulates Bone Turnover by Targeting RANKL Expression in Bone Lining Cells**
Carmen Streicher[1], Alexandra Heyny[1], Olena Andrukhova[1], Christiane Schüler[1], Karoline Kollmann[1], Ingrid Kantner[1], Veronika Sexl[1], Miriam Kleiter[1], Lorenz Hofbauer[2], Paul Kostenuik[3], Reinhold Erben*[1]. [1]University of Veterinary Medicine, Austria, [2]Technische Universität Dresden, Germany, [3]Phylon Pharma Services, USA
Disclosures: Reinhold Erben, None

OSTEOPOROSIS - SECONDARY CAUSES: DRUGS, OTHER THAN GLUCOCORTICOIDS

SU0331 **Role of Antiretroviral therapy (ART) on bone mass and bone texture**
Esteban Martinez*[1], Polyana Monteiro[1], Luis Del Rio[2]. [1]Infectious Diseases Unit, Hospital Clínic, Barcelona, Spain, Spain, [2]CETIR Grup Mèdic, Barcelona, Spain, Spain
Disclosures: Esteban Martinez, None

OSTEOPOROSIS - SECONDARY CAUSES: GLUCOCORTICOIDS

SU0332 **Cortisol Circadian Rhythm Changes are associated with low trabecular bone score (TBS) and increased fracture risk, without any influence on bone mineral density (BMD): The OsteoLaus Cohort**
Elena Gonzalez Rodriguez*[1], Bérengère Aubry-Rozier[1], Delphine Stoll[1], Olivier Lamy[1], Didier Hans[2]. [1]Center of Bone Diseases, Rheumatology Unit, Bone & Joint Department, Lausanne University Hospital, Switzerland, [2]Lausanne University Hospital, Switzerland
Disclosures: Elena Gonzalez Rodriguez, None

OSTEOPOROSIS - SECONDARY CAUSES: SMOKING, ALCOHOL AND OTHER ENVIRONMENTAL FACTORS

SU0333 **Obstructive Sleep Apnea is Associated with Deterioration in Bone Mass and Quality in Type 2 Diabetes**

Hataikarn Nimitphong*[1], Nantaporn Siwarasanond[1], Chanika Sritara[2], Sunee Saetung[1], Boonsong Ongphiphadhanakul[1], Sirimon Reutrakul[1]. [1]Medicine department, Ramathibodi hospital, Mahidol university, Thailand, [2]Radiology Department, Ramathibodi Hospital, Mahidol University, Thailand

Disclosures: Hataikarn Nimitphong, None

OSTEOPOROSIS - TREATMENT: ANABOLIC AGENTS

SU0334 **Circulating osteogenic progenitors (COPs) and COP surface IGF-1 receptor density predict tissue-based bone formation rate and response to teriparatide (TPTD) in premenopausal women with idiopathic osteoporosis (IOP)**

Adi Cohen*[1], J. Sanil Manavalan[2], Stavroula Kousteni[2], Robert Recker[3], Joan Lappe[3], David Dempster[2], Hua Zhou[4], Donald McMahon[2], Mariana Bucovsky[2], Mafo Kamanda-Kosseh[2], Julie Stubby[3], Elizabeth Shane[2]. [1]Columbia University Medical Center, USA, [2]Columbia University, USA, [3]Creighton University, USA, [4]Helen Hayes Hospital, USA

Disclosures: Adi Cohen, Eli Lilly

SU0335 **Comparative effect of alendronate and teriparatide on bone mineral density and bone turnover among Japanese postmenopausal women with history of fragility fractures: A clinical practice-based observational study**

Jun Iwamoto*[1], Mitsuyoshi Uzawa[2]. [1]Keio University School of Medicine, Japan, [2]Keiyu Orthopaedic Hospital, Japan

Disclosures: Jun Iwamoto, None

SU0336 **Rapid, High Dose vs. Slower, Low Dose Accrual of Bone Mass Following Sclerostin Antibody Treatment in Ovariectomized Rats: Comparison of Effects on Bone Strength**

Henry Bryant*[1], Matthew Hamang[1], Guilherme V Rocha[1], Qianqiang Zeng[1], Jonathan Lucchesi[1], Sarah E Raines [1], Stuart A Kuhstoss[1], Victor Obungu [1], Venkatesh Krishnan [2], Yanfei Ma[1]. [1]Eli Lilly & Company, USA, [2] Eli Lilly & Company, USA

Disclosures: Henry Bryant, Eli Lilly and Company

OSTEOPOROSIS - TREATMENT: ANTIRESORPTIVE AGENTS

SU0337 **Can We Use Bone Turnover Markers as Targets for Antiresorptive Treatment in Postmenopausal Osteoporosis? An Analysis From the DECIDE and STAND Clinical Trials**

Jacques P. Brown*[1], P Dakin[2], P Hadji[3], MR McClung[4], Paul Miller[5], JY Reginster[6], RB Wagman[2], A Wang[2], E McCloskey[7]. [1]Laval University & CHU de Quebec-(CHUL) Research Centre, Canada, [2]Amgen Inc., USA, [3]Philipps-University of Marburg, Germany, [4]Oregon Osteoporosis Center, USA, [5]Colorado Center for Bone Research, United states, [6]University of Liège, Belgium, [7]University of Sheffield, United Kingdom

Disclosures: Jacques P. Brown, Amgen, Eli Lilly, Novartis; Amgen, Eli Lilly; Amgen, Eli Lilly

SU0338 **Changes in Bone Metabolic Markers During Long-Term (>3 Years) Bisphosphonate Treatment**

Yuji Kasukawa*[1], Naohisa Miyakoshi[2], Michio Hongo[3], Koji Nozaka[3], Yoshinori Ishikawa[3], Daisuke Kudo[3], Toshihito Ebina[4], Hiroshi Aonuma [4], Kimio Saito[4], Yoichi Shimada[3]. [1]Akita University Graduate School of Medicine, Japan, [2]Department or Orthopedic Surgery, Akita University Graduate School of Medicine, Japan, [3]Department of Orthopedic Surgery, Akita University Graduate School of Medicine, Japan, [4]Department of Orthopedic Surgery, Kakunodate General Hospital, Japan

Disclosures: Yuji Kasukawa, None

SU0339 **Characteristics Associated with Bone Mineral Density Increase by 1-Year ALN/D5600 Treatment in a Randomized, Controlled Study on Postmenopausal Osteoporosis in Chinese Women**

Zhen Lin Zhang[1], Er Yuan Liao[2], Wei Bo Xia[3], Hua Lin[4], Qun Cheng[5], Li Wang[6], Yong Qiang Hao[7], De Cai Chen[8], Hai Tang[9], Yong De Peng[10], Li You[10], Liang He[11], Zhao Heng Hu[12], Chun Li Song[13], Fang Wei[14], Jue Wang[14], Lei Zhang[14], Arthur Santora*[15]. [1]Shanghai Sixth People's Hospital, Shanghai Jiaotong University, China, [2]The Second Xiangya Hospital, Central South University, China, [3]Peking Union Medical College Hospital, China, [4]Nanjing Drum Tower Hospital, China, [5]Huadong Hospital Affiliated to Fudan University, China, [6]Tianjin Hospital, China, [7]Shanghai Ninth People's Hospital, China, [8]West China Hospital, West China School of Medicine, Sichuan University, China, [9]Beijing Friendship Hospital, Capital Medical University, China, [10]Shanghai First People's Hospital, China, [11]Beijing Jishuitan Hospital, China, [12]Peking University People's Hospital, China, [13]Peking University Third Hospital, China, [14]Global Medical Affairs, Merck Sharp & Dohme China, China, [15]Merck Research Laboratories, Rahway, NJ, USA, USA

Disclosures: Arthur Santora, Merck; Merck

SU0340 **Denosumab Compared With Zoledronic Acid in Postmenopausal Women With Osteoporosis Previously Treated With Oral Bisphosphonates: Efficacy and Safety Results From a Randomized Double-blind Study**

Paul Miller*[1], N Pannacciulli[2], Jacques P. Brown[3], E Czerwinski[4], BS Nedergaard[5], MA Bolognese[6], J Malouf[7], HG Bone[8], JY Reginster[9], A Singer[10], C Wang[2], RB Wagman[2], SR Cummings[11]. [1]Colorado Center for Bone Research, United states, [2]Amgen Inc., USA, [3]Laval University & CHU de Québec (CHUL) Research Centre, Canada, [4]Krakow Medical Center, Poland, [5]Center for Clinical & Basic Research, Denmark, [6]Bethesda Health Research Center, USA, [7]Hospital de la Santa Creu i Sant Pau, Spain, [8]Michigan Bone & Mineral Clinic, USA, [9]University of Liège, Belgium, [10]Georgetown University Medical Center, USA, [11]San Francisco Coordinating Center, CPMC Research Institute, USA

Disclosures: Paul Miller, Alexion, Lilly, Amgen, Novartis, NBHA, Pfizer, University of Alabama, Boehringer Ingelheim, Merck, Merck Serano, Radius; Grünenthal, Shionogi, Radius, Amgen, Lilly; Radius, Alexion, Amgen

SU0341 **Ectosteric inhibitors of cathepsin K prevent bone resorption**

PREETY PANWAR*[1], Liming Xu[2], Kent Soe[3], Simon Law[2], Jean-Marie Delaisse[3], Dieter Bromme[4]. [1]University of British Columbia, Canada, [2]UBC, Canada, [3]Vejle Hospital, University of Southern Denmark, Denmark, [4]University od British Columbia, Canada

Disclosures: PREETY PANWAR, None

SU0342 **Effects of weekly risedronate with cholecalciferol on bone mineral density in Korean patients with osteoporosis**

Ho-Yeon Chung*[1], Hyoung-Moo Park[2]. [1]Kyung Hee University, South korea, [2]Chung-ang University, South korea

Disclosures: Ho-Yeon Chung, None

SU0343 **Lasofoxifene 0,25 mg compared with raloxifene 60 mg for effects on bone mineral density and markers of bone turnover. Results from the Phase III Comparison of Raloxifene and Lasofoxifene (CORAL) Trial**

Michael McClung*[1], Andrea LaCroix[2], James Simon[3], James Symons[4], David Portman[5]. [1]Oregon Osteoporosis Center, USA, [2]UCSD, USA, [3]James Simons Associates, USA, [4]James Symons, USA, [5]Pfizer, USA

Disclosures: Michael McClung, None

SU0344 **Monthly Oral Ibandronate 100mg Is as Effective as Monthly Intravenous Ibandronate 1mg in Japanese Patients with Primary Osteoporosis: the Phase III MOVEST Study**

Toshitaka Nakamura*[1], Masako Ito[2], Junko Hashimoto[3], Kenji Shinomiya[3], Yoshihiro Asao[3], Hiroshi Hagino[4], Tomoyuki Inoue[5], Tetsuo Nakano[6], Hideki Mizunuma[7]. [1]National Center for Global Health & Medicine, Jpn, [2]Nagasaki University Hospital, Japan, [3]Chugai Pharmaceutical Co. Ltd., Japan, [4]Tottori University Faculty of Medicine, Japan, [5]Taisho Pharmaceutical Co. Ltd., Japan, [6]Tamana Central Hospital, Japan, [7]Hirosaki University School of Medicine, Japan

Disclosures: Toshitaka Nakamura, Asahi Kasei Pharma Corp; Japan Ministry of Health, Welfare and Labor as a councillor for hospital administration and social medical insurance.

SU0345 **Retrospective Study of the Safety of Intravenous Bisphosphonate (Zolendronic Acid) in Patients with Chronic Kidney Disease**
Ali Achira*, Wael Taha, Dania Abushanab, Maria Diab, Bayan Chaker, Krishna Chalasani. Wayne State University, USA
Disclosures: Ali Achira, None

SU0346 **Safety Observations With Three Years of Denosumab Exposure: Comparison Between Subjects Who Received Denosumab During FREEDOM and Subjects Who Crossed Over to Denosumab During the FREEDOM Extension**
Nelson Watts*[1], Jacques P. Brown[2], S Papapoulos[3], EM Lewiecki[4], David Kendler[5], P Dakin[6], RB Wagman[6], A Wang[6], NS Daizadeh[6], S Smith[6], HG Bone[7]. [1]Mercy Health, USA, [2]Laval University & CHU de Québec Research Centre, Canada, [3]Leiden University Medical Center, Netherlands, [4]New Mexico Clinical Research & Osteoporosis Center, USA, [5]University of British Columbia, Canada, [6]Amgen Inc., USA, [7]Michigan Bone & Mineral Clinic, USA
Disclosures: Nelson Watts, NPS, Merck; OsteoDynamics; Abbvie, Amgen, Merck, Radius, Sanofi, Sprout; Amgen, Merck

SU0347 **The Effect of Bisphosphonate Treatment on Bone Turnover and Bone Balance in Postmenopausal Women with Osteoporosis**
Fatma Gossiel*[1], Richard Jacques[2], Kim Naylor[2], Eugene McCloskey[2], Nicola Peel[2], Jennifer Walsh[2], Richard Eastell[2]. [1]The University of Sheffield, United Kingdom, [2]University of Sheffield, United Kingdom
Disclosures: Fatma Gossiel, None

SU0348 **The concept of ectosteric cathepsin inhibitors**
Dieter Bromme*. The University of British Columbia, Canada
Disclosures: Dieter Bromme, None

OSTEOPOROSIS - TREATMENT: COMPLIANCE AND PERSISTENCE

SU0349 **Adherence to Osteoporosis Medications in Japanese Patients after Hospitalization for Acute Osteoporotic Fracture**
Shusuke Ota*[1], Yoshiaki Tsuboi[2], Yasuyoshi Okamoto[2], Takanobu Doi[2]. [1]MD. PhD., Japan, [2]Shizuoka Medical Center, Japan
Disclosures: Shusuke Ota, None

SU0350 **NHS Lanarkshire Osteoporosis Therapeutic Review Project**
Eamonn Brankin*[1], Wendy Feeney[2], Robin Munro[2]. [1]NHS Lanarkshire / University of Glasgow, United Kingdom, [2]NHS Lanarkshire, United Kingdom
Disclosures: Eamonn Brankin, Prostrakan

SU0351 **Persistence and Compliance with Subcutaneous Denosumab in Routine Practice**
Richard Pikner*[1], Zlata Fejfarkova[2], Michaela Heidenreichova[3]. [1]Klatovska Hospital, Czech republic, [2]Dept. of Clinical Laboratories, Klatovska Hospital, Czech republic, [3]Dept. of Bone Metabolism, Klatovska Hospital, Czech republic
Disclosures: Richard Pikner, None

OSTEOPOROSIS - TREATMENT: FRACTURE REPAIR

SU0352 **Effect of Teriparatide or Risedronate on Pertrochanteric Hip Fractures Recovery: 26-Week Results of a Randomized Clinical Trial**
Per Aspenberg*[1], Jorge Malouf[2], Umberto Tarantino[3], Pedro A. García-Hernández[4], Costantino Corradini[5], Soeren Overgaard[6], Jan Stepan[7], Lars Borris[8], Eric Lespessailles[9], Frede Frihagen[10], Kyriakos Papavasiliou[11], Helmut Petto[12], José Ramón Caeiro[13], Fernando Marin[14]. [1]Orthopaedic Surgery, Linköping University, Sweden, [2]Internal Medicine, Hospital San Pablo, Spain, [3]Orthopaedic Surgery, Univeristy Tor Vergata, Italy, [4]Osteoporosis Centre, University Hospital, Mexico, [5]Orthopaedic Institute; University of Milan, Italy, [6]Orthopaedic Surgery, University of Southern Denmark, Denmark, [7]Institute of Rheumatology, Charles University, Czech republic, [8]Orthopaedic Surgery, University Hospital, Denmark, [9]IPROS Unit, Hospital Porte Madeleine, France, [10]Orthopaedic Surgey, University Hospital, Norway, [11]Orthopaedic Surgery, Aristotle University, Greece, [12]Eli Lilly & Company, Austria, [13]Orthopaedic Surgery, University Hospital, Spain, [14]Eli Lilly & Company, Spain
Disclosures: Per Aspenberg, Lily; Addbio AB; Amgen; Biologics MD Inc.

OSTEOPOROSIS - TREATMENT: OTHER AGENTS

SU0353 **Histochemical examination on bone of postmenopausal model rats with switched administration from PTH to eldecalcitol**
Hiromi Hongo*[1], Sadaiki Sakai[2], Tomomaya Yamamoto[3], Tomoka Hasegawa[3], Satoshi Takeda[2], Koichi Endo[2], Hitoshi Saito[4], Norio Amizuka[3]. [1]Hokkaido University, Japan, [2]Product Research Dept., Chugai Pharmaceutical CO., LTD., Japan, [3]Department of Developmental Biology of Hard Tissue, Hokkaido University, Japan, [4]Medical Science Dept., Chugai Pharmaceutical CO., LTD., Japan
Disclosures: Hiromi Hongo, Chugai Pharmaceutical CO., LTD

SU0354 **Small molecules targeting the NXI-motif-binding pocket abrogate suppression of wnt-beta-catenin signaling by sclerostin**
Myengmo Kang*[1], Eunjin Kim[2], Jiwon Choi[2], Sungkil Lim[2]. [1]College of Medicine, Yensei University, Seoul Korea, South korea, [2]50 Yenseiro Seodeamungu, South korea
Disclosures: Myengmo Kang, None

OSTEOPOROSIS - TREATMENT: OTHER THERAPEUTIC AGENTS

SU0355 **Modeling and Simulation to Link Concentration of Urinary C-terminal Telopeptide of Type I Collagen and Percent Change in Hip Bone Mineral Density with Fracture Risk: MOVER Study with Monthly Intravenous Ibandronate**
Kiyohiko Nakai*[1], Masato Tobinai[2], Masayuki Matsunaga[2], Masao Yamamoto[2], Junko Hashimoto[2], Satofumi Iida[2], Takehiko Kawanishi[2]. [1]Chugai Pharmaceutical Co., Japan, [2]CHUGAI PHARMACEUTICAL CO., LTD., Japan
Disclosures: Kiyohiko Nakai, None

OSTEOPOROSIS - TREATMENT: QUALITY OF LIFE

SU0356 **Health Related QoL of Osteoporosis Patients with Daily Teriparatide in the Japan Fracture Observational Study (JFOS): Interim Report**
Hiroyuki Enomoto*[1], Saeko Fujiwara[2], Ryoichi Takayanagi[3], Masayo Sato[1], Mika Tsujimoto[4], Takanori Yamamoto[4], Satoshi Soen[5]. [1]Medicines Development Unit Japan, Eli Lilly Japan K.K., Japan, [2]Health Management & Promotion Center, Hiroshima Atomic Bomb Casualty Council, Japan, [3]Department of Medicine & Bioregulatory Science, Graduate School of Medical Sciences, Kyushu University, Japan, [4]Medicines Development Unit Japan, Eli Lilly Japan K.K, Japan, [5]Department of Orthopaedic Surgery & Rheumatology, Nara Hospital, Kinki University Faculty of Medicine, Japan
Disclosures: Hiroyuki Enomoto, Eli Lilly Japan K.K.

SU0357 **Improvement of Spinal Alignment and Quality of Life after Corrective Spinal Instrumentation for Spinal Kyphosis in Patients with Osteoporosis**
Naohisa Miyakoshi*[1], Michio Hongo[1], Takashi Kobayashi[2], Toshiki Abe[2], Eiji Abe[2], Yoichi Shimada[1]. [1]Akita University Graduate School of Medicine, Japan, [2]Akita Kousei Medical Center, Japan
Disclosures: Naohisa Miyakoshi, None

OSTEOPOROSIS IN SPECIAL POPULATIONS: DIABETES

SU0358 **Bone Resorption Assessed by Serum Type I Collagen C-terminal Telopeptide (Crosslaps) is Inversely Associated with Bone Mineral Density and Change in BMD but Not with Change in Calcified Atherosclerotic Plaque in African Americans with Diabetes (AA-DHS)**
Thomas Register*[1], J Jeffrey Carr[2], Leon Lenchik[1], Jasmin Divers[1], Gregory B. Russell[1], Nicholette D. Palmer[1], Lynne E. Wagenknecht[1], S. Carrie Smith[1], Jianzhao Xu[1], Donald W. Bowden[1], Barry I. Freedman[1]. [1]Wake Forest School of Medicine, USA, [2]Vanderbilt, USA
Disclosures: Thomas Register, None

SU0359 **Effects of Uncontrolled Type II Diabetes on Vertebral Bone Marrow Fat Distribution**
Mona Al Mukaddam*, Chamith Rajapakse, Mahdieh Bashoor Zadeh, Jeremy Magland, Wenli Sun, Helen Peachey, Peter Snyder, Felix Wehrli. University of Pennsylvania, USA
Disclosures: Mona Al Mukaddam, None

SU0360 **Microalbuminuria has additional negative impact on trabecular bone score and bone mineral density in postmenopausal women with longstanding type 2 diabetes**
Tomaz Kocjan*[1], Mojca Jensterle[1], Gaj Vidmar[2], Andrej Janez[3]. [1]University Medical Centre Ljubljana, Slovenia, [2]University Rehabilitation Institute, Slovenia, [3]University Medical Centre Ljubljana, Slovenia
Disclosures: Tomaz Kocjan, None

SU0361 **RISK FACTORS FOR FRAGILITY FRACTURES IN TYPE 1 DIABETES**
Giulia Leanza*[1], Dario Pitocco[2], Concetta Suraci[3], Anna Maria Altomare[3], Andrea Palermo[1], Claudio Pedone[1], Roberto Sacco[1], Simone Alfieri[1], Sergio Leotta[3], Paolo Pozzilli[1], Ann Schwartz[4], Nicola Napoli[1]. [1]Campus Bio-Medico university, Italy, [2]Università Cattolica Sacro Cuore, Italy, [3]Ospedale Pertini, Italy, [4]University of California, San Francisco, USA
Disclosures: Giulia Leanza, None

SU0362 **Site Specific Prevalence of Fragility Fractures and their Relationship with Body Mass Index in Patients with Type 1 Diabetes**
Tayyab Khan*[1], Lisa-Ann Fraser[2]. [1]Department of Medicine, Western University, Canada, [2]Western University, Canada
Disclosures: Tayyab Khan, None

OSTEOPOROSIS IN SPECIAL POPULATIONS: MOBILITY DISORDERS, DISUSE OSTEOPOROSIS

SU0363 **FES-Rowing Attenuates Bone Loss Following Spinal Cord Injury as Assessed by HR-pQCT**
Robin Gibbons[1], Gary Beaupre[2], Galateia Kazakia*[3]. [1]Brunel University, United Kingdom, [2]VA Palo Alto Health Care System, USA, [3]University of California, San Francisco, USA
Disclosures: Galateia Kazakia, None

OSTEOPOROSIS IN SPECIAL POPULATIONS: OTHER POPULATIONS

SU0364 **Fracture Diagnosis in Women compared with Men Veterans**
Jennifer Lee*[1], Po-Yin Chang[2], Jimmy Lee[3], Fay Saechao[3], Susan Frayne[4]. [1]Stanford University Medical CenterPalo Alto Veteran Affairs Health Care System, USA, [2]Department of Medicine, Stanford Medical Center, USA, [3]Veterans Affairs Palo Alto Health Care System, USA, [4]Veterans Affairs Palo Alto Health Care System & Stanford Medical Center, USA
Disclosures: Jennifer Lee, None

SU0365 **Grip Strength and Mortality in Osteoporotic Hip Fractures Among Latin American Elderly Patients**
Hugo Gutierrez Hermosillo*[1], ENRIQUE DIAZ DE LEON GONZALEZ[2]. [1]Hospital aranda de la parraConacyt.IMSS, UMAE 1 CMN BAJIO, Mexico, [2]IMSS, Mexico
Disclosures: Hugo Gutierrez Hermosillo, None

SU0366 **High Bone Turnover is Independently Related with Left Ventricular Stiffness in Primary Hyperparathyroidism – the EPATH Trial**
Nicolas Verheyen*[1], Astrid Fahrleitner-Pammer[2], Cristiana Catena[3], Evgeny Belyavkiy[4], Johann Martensen[2], Julia Wetzel[2], Martin Gaksch[2], Martin Grübler[2], Jakob Voelkl[5], Florian Lang[5], Elisabeth Kraigher-Krainer[4], Andreas Meinitzer[2], Burkert Pieske[4], Stefan Pilz[2], Andreas Tomaschitz[2]. [1]Medical University Graz, Austria, [2]Medical University of Graz, Austria, [3]University of Udine, Italy, [4]Charite Universitaetsmedizin Berlin, Germany, [5]University of Tübingen, Germany
Disclosures: Nicolas Verheyen, None

SU0367 **High prevalence of reduced bone mineral density and undertreatment of osteoporosis in patients with systemic sclerosis**
Moon J Spanjer[1], Alexandre E Voskuyl[1], Willem F Lems[2], Irene Bultink*[3]. [1]Department of Rheumatology, Amsterdam Rheumatology & immunology Center, location VU University Medical Center, Netherlands, [2]Amsterdam Rheumatology & immunology Center, location VU University Medical Center, Netherlands, [3]Amsterdam Rheumatology & immunology Center, location VU University Medical Center, The netherlands
Disclosures: Irene Bultink, None

SU0368 **Increased body weight as a risk factor of intertrochanteric fracture severity in elderly women**
Hyung Min JI*[1], Jun Han[1], Dong San Jin[2], Ye-Yeon Won[1]. [1]Ajou University Hospital, South korea, [2]Mary's Orthopedics Hospital, China
Disclosures: Hyung Min JI, None

SU0369 **Progressive Cortical and Trabecular Bone Loss Four Years After Bariatric Surgery**
Emily Stein*, Angela Carrelli, Mariana Bucovsky, Nientara Anderson, Chengchen Zhang, Melissa Bagloo, Marc Bessler, Beth Schrope, Elizabeth Shane, Shonni Silverberg. Columbia University College of Physicians & Surgeons, USA
Disclosures: Emily Stein, None

SU0370 **Withdrawn**

SU0371 **Transient Regional Osteoporosis of the Hip: Case study with use of bisphosphonate as a treatment option**
Susan Williams-judge*[1], Julie Carkin, M.D.[2], Yuli Son Mc Cann, M.D.[3], Camelia Whitten, M.D.[4]. [1]University of Washington/Northwest Hospital, United states, [2]University of Washington/Northwest Hospital, USA, [3]University of Washington, USA, [4]Via Radiology, USA
Disclosures: Susan Williams-judge, None

OSTEOPOROSIS IN SPECIAL POPULATIONS: TRANSPLANTATION

SU0372 **Efficacy and Safety of Denosumab for the Treatment of Patients With Low Bone Mineral Density Post Renal Transplantation: An Investigator-Initiated Pilot Study**
Medi Aloosh*[1], Anthony A. Karaplis[2], Mark Lipman[2], Andrew C. Karaplis[1]. [1]Lady Davis Institute for Medical Research, & Division of Endocrinology, Jewish General Hospital, McGill University, Canada, [2]Lady Davis Institute for Medical Research, & Division of Nephrology, Jewish General Hospital, McGill University, Canada
Disclosures: Medi Aloosh, None

PARACRINE REGULATORS: CYTOKINES AND IMMUNOMODULATORS

SU0373 **Adipokines Visfatin and Adiponectin Promote Inflammatory Phenotype for Human Nucleus Nulposus Cells**
Stephanie Miller*[1], Rachel Willardson[2], Dezba Coughlin[2], Jeffrey Lotz[2]. [1]University of California, San Francisco, USA, [2]UC San Francisco, USA
Disclosures: Stephanie Miller, None

SU0374 **Interleukin-1β Suppresses Expression of Osteoblastic Genes as well as the Regulators of Ecto-nucleotides and Pyrophosphate That Negatively Regulate Bio-mineralization in Mouse Bone Marrow Stromal Cells**
Yoichi Ezura*[1], Arina Hatta[2], Shin Lin[2], Yayoi Izu[2], Tadayoshi Hayata[3], Masaki Noda[2]. [1]Tokyo Medical & Dental University, Medical Research Insititute, Japan, [2]Tokyo Medical & Dental University, Japan, [3]University of Tsukuba, Japan
Disclosures: Yoichi Ezura, None

SU0375 **Loss of TIEG expression results in severe colitis-mediated bone loss**
Malayannan Subramaniam*, James Krempski, Kevin Pitel, Konstantinos Papadakis, John R. Hawse. Mayo Clinic, USA
Disclosures: Malayannan Subramaniam, None

SU0376 **RANKL Induction of Cytokines in Pre-Osteoclasts *In Vitro*: Dependence on Cyclooxygenase-2 (Cox2)**
Trisha Kwarko*, Shilpa Choudhary, Thomas Estus, Carol Pilbeam. University of Connecticut Health Center, USA
Disclosures: Trisha Kwarko, None

PARACRINE REGULATORS: FIBROBLAST AND INSULIN-LIKE GROWTH FACTORS

SU0377 **Gender-Specific Effects of Insulin-like Growth Factor Binding Protein 4 in Body Composition and Skeletal Maturation**

David Maridas*[1], Victoria DeMambro[1], Phuong Le[1], Casey Doucette[1], Subburaman Mohan[2], Clifford Rosen[1]. [1]Maine Medical Center Research Institute, USA, [2]Loma Linda University, USA

Disclosures: David Maridas, None

RARE BONE DISEASES: HYPOPHOSPHATASIA

SU0378 **Bone Mineral Density in Hypophophatasia**

Franca Genest*[1], Franz Jakob[2], Nicole Luksche[2], Michael Schneider[2], Lothar Seefried[2]. [1]AGA, AGBN, DGOOC, Germany, [2]Musculoskeletal Center Wuerzburg, Germany

Disclosures: Franca Genest, None

SU0379 **Establishing Reference Intervals for Pyridoxal 5'-Phosphate: the National Health and Nutrition Examination Survey 2007-2008 Data**

Philip Nicklin*[1], Richard Eastell[2], Kim Naylor[2]. [1]University of Sheffield, United Kingdom, [2]Academic Unit of Bone Metabolism, United Kingdom

Disclosures: Philip Nicklin, None

SU0380 **Exposure-Response Modeling and Simulation to Support Evaluation of Efficacious and Safe Exposure and Dose Range for Asfotase alfa in Patients with Hypophosphatasia**

Rajendra S Pradhan*[1], Marc R Gastonguay[2], Xiang Gao[1], Jonathon Monteleone[1], Jeannine Fisher[3], CJ Godfrey[3], Nathanael L Dirks[3], Augustin Melian[1], David Thompson[1], Chetan D Lathia[1]. [1]Alexion Pharmaceuticals, USA, [2]The Metrum Research Group, USA, [3]Metrum Research Group LLC, USA

Disclosures: Rajendra S Pradhan, Employee of Alexion Pharmaceuticals

SU0381 **Manifestations of Hypophosphatasia in Adults with Pediatric Onset of Symptoms: a Review of the Case Literature**

Eileen K Sawyer*, Karen Anderson. Alexion Pharmaceuticals, USA

Disclosures: Eileen K Sawyer, Employee of Alexion Pharmaceuticals

RARE BONE DISEASES: HYPOPHOSPHATEMIC RICKETS

SU0382 ***PHEX* 3'-UTR c.*321A>G demonstrates X-linked recessive inheritance in a large American family**

Gary S. Gottesman*[1], Katherine Madson[1], Valerie Wollberg[1], Steven Mumm[2], William H. McAlister[3], Michael Whyte[1]. [1]Center for Metabolic Bone Disease & Molecular Research, Shriners Hospitals for Children - St Louis, USA, [2]Division of Bone & Mineral Diseases, Washington University School of Medicine, USA, [3]Department of Pediatric Radiology, Mallinckrodt Institute of Radiology at St. Louis Children's Hospital, Washington University School of Medicine, USA

Disclosures: Gary S. Gottesman, None

SU0383 **Modification of hydroxyapatite involves carbonate ion substitution in both patients with XLH and HYP mice**

Eva Amenta*[1], Helen King[2], Catherine Skinner[3], Steven Tommasini[4], Carolyn Macica[1]. [1]Department of Medical Sciences, Frank H. Netter, M.D., School of Medicine at Quinnipiac University, USA, [2]Department of Earth Sciences, Utrecht University, Netherlands, [3]Department of Geology & Geophysics, Yale University, USA, [4]Department of Orthopaedics & Rehabilitation, Yale University School of Medicine, USA

Disclosures: Eva Amenta, None

RARE BONE DISEASES: OSTEOGENESIS IMPERFECTA

SU0384 **Mouse Model with Uncleavable Type I Collagen C-propeptide Processing Site has Extremely Brittle Bones**

Aileen Barnes*[1], Joseph Perosky[2], M. Helen Rajpar[1], Kenneth Kozloff[2], Joan C. Marini[1]. [1]NICHD/NIH, USA, [2]University of Michigan, USA

Disclosures: Aileen Barnes, None

SU0385 **A Case of Progressive Bony and Soft Tissue Overgrowth**
Doriel Pearson[1], Manish Butte[2], Joy Wu*[3]. [1]Lucille Packard Children's Hospital, USA, [2]Stanford University School of Medicine, USA, [3]Stanford University School of Medicine, Us
Disclosures: Joy Wu, None

SU0386 **A novel *GNAS* deletion identified among 58 patients affected by the sporadic form of pseudohypoparathyroidism type Ib (PHP1B)**
Rieko Takatani*[1], Angelo Molinaro[2], Monica Reyes[2], Lucy Raymond[3], Harald Jüppner[2]. [1]Massachusetts General Hospital & Harvard Medical School, USA, [2]Endocrine Unit, Massachusetts General Hospital & Harvard Medical School, USA, [3]Medical Genetics Department, Addenbrooke's Hospital, United Kingdom
Disclosures: Rieko Takatani, None

SU0387 **Activating Calcium Sensing Receptor Mutations Result in Abnormal Bone Quality Indices Independently of Parathyroid Hormone (PTH) Deficiency**
Diana Ovejero*[1], Barbara Misof [2], Rachel Gafni[3], Beth Brillante[4], Hua Zhou[5], David Dempster[6], James Reynolds[7], Jaime S. Brahim[8], Paul Roschger[9], Klaus Klaushofer[2], Michael T Collins[3]. [1]National Institutes of Health, USA, [2]Ludwig Boltzmann Institute of Osteology at the Hanusch Hospital of WGKK & AUVA Trauma Centre Meidling, Austria, [3]National Institute of Dental & Craniofacial Research, National Institutes of Health, USA, [4]National Institutes of Dental & Craniofacial Research, National Institutes of Health, USA, [5]Regional Bone Center, Helen Hayes Hospital, USA, [6]Columbia University College of P&S, USA, [7]National Institute of Child Health & Human Development, National Institutes of Health, USA, [8]University of Maryland Medical Center, USA, [9]Ludwig Boltzmann Institute of Osteology, Austria
Disclosures: Diana Ovejero, None

SU0388 **Biochemical evidence for increased bone formation in patients with osteopetrosis**
Christine Simpson*[1], Lisa Basso[2], Anna Maria Cusano[1], Paul Orchard[2], Karl Insogna[1]. [1]Yale University School of Medicine, USA, [2]University of Minnesota, USA
Disclosures: Christine Simpson, None

SU0389 **Case Report: Clinical and genetic analysis in a unique systemic skeletal disorder characterised by high bone turnover and bone expansion**
Huilin Jin[1], Alison Meynert[2], Martin Williams[3], Jon H Tobias[4], Stuart Ralston[1], Celia Gregson*[5]. [1]Centre for Genomic & Experimental Medicine, University of Edinburgh, United Kingdom, [2]MRC Human Genetics Unit, University of Edinburgh, United Kingdom, [3]Department of Radiology, North Bristol NHS Trust, United Kingdom, [4]Musculoskeletal Research Unit, School of Clinical Sciences, University of Bristol, United Kingdom, [5]University of Bristol, United Kingdom
Disclosures: Celia Gregson, None

SU0390 **Characterization of Biological Interaction between Steroid and Palvarotene**
Sayantani Sinha*[1], Kenta Uchibe[2], Haruna Shimizu[2], Jiyeon Son[2], Arima Naoko[2], Maurizio Pacifici[2], Masahiro Iwamoto[2]. [1]Children's Hospital Of Philadelphia, USA, [2]Divison Of Orthopedic Surgery, USA
Disclosures: Sayantani Sinha, None

SU0391 **Dysregulated TGF-β signaling and oxidative DNA damage as the cause for osteoporosis in the progeroid disorder gerodermia osteodysplastica**
Magdalena Steiner*[1], Hardy Chan[2], Thorsten Schinke[3], Michael Amling[3], Danny Chan[4], Stefan Mundlos[2], Uwe Kornak[5]. [1]Charitè, Germany, [2]Charitè Universitätsmedizin, Germany, [3]Universitätsklinikum Hamburg Eppendorf, Germany, [4]The University of Hong Kong, China, [5]Charitè Universitaetsmedizin, Germany
Disclosures: Magdalena Steiner, Österreichische Akademie der Wissenschaften

SU0392 **Improvement in Giant Cell Tumor of the Jaw treated with Denosumab**
Jessica Abramowitz*[1], Stuart Weinerman[2], Salvatore Ruggiero[3]. [1]Hofstra North Shore LIJ, Us, [2]Hofstra North Shore LIJ, USA, [3]Long Island Jewish Medical Center, USA
Disclosures: Jessica Abramowitz, None

SU0393 **New protocol to optimize iPS cells for genome analysis of fibrodysplasia ossificans progressiva**
Yoshihisa Matsumoto*[1], Makoto Ikeya[2], Makoto Fukuta[1], Takanobu Otsuka[1], Junya Toguchida[2]. [1]Nagoya city university, Japan, [2]Center for iPS Cell Research & Application, Kyoto University, Japan
Disclosures: Yoshihisa Matsumoto, None

SU0394 **Non-osteoporotic post-menopausal women do not have elevated concentrations of autoantibodies against osteoprotegerin**
Isabelle Piec*[1], Christopher Washbourne[2], Jonathan Tang[2], Julie Greeves[3], Sarah Jackson[3], Stuart Ralston[4], Phiilip Riches[5], Helen Macdonald[6], William D Fraser[7]. [1]BioAnalytical Facility, University of East Anglia, United Kingdom, [2]University of East Anglia-Bioanalytical Facility, United Kingdom, [3]HQ Army Recruiting & Training Division, United Kingdom, [4]University of Edinburgh, United Kingdom, [5]Rheumatoic Disease Unit, Institute of Genetics & Molecular Medecine, United Kingdom, [6]University of Aberdeen, United Kingdom, [7]University of East Anglia- Bioanalytical facility, United Kingdom
Disclosures: Isabelle Piec, None

SU0395 **Pathophysiology of Melorheostosis: A Theoretical Framework**
Smita Jha*[1], Nicholas Laucis[2], Timothy Bhattacharyya[2]. [1]National Institutes of Health, USA, [2]NIH, USA
Disclosures: Smita Jha, None

SARCOPENIA, MUSCLE AND BONE (CLINICAL): GENERAL

SU0396 **Distribution of body composition parameters and sarcopenia in Finnish female population – comparison of two geographically comparable cohorts**
Samu Sjöblom*, Juha Suuronen, Toni Rikkonen, Risto Honkanen, Heikki Kröger, Joonas Sirola. University of Eastern Finland, Finland
Disclosures: Samu Sjöblom, None

SU0397 **Effects of life-style factors on body composition in healthy Finnish women aged 20-40 years**
Juha Suuronen*[1], Samu Sjöblom[2], Marjo Tuppurainen[3], Risto Honkanen[2], Toni Rikkonen[2], Heikki Kröger[4], Joonas Sirola[4]. [1]University of Eastern-Finland, Finland, [2]Kuopio Musculoskeletal Research Unit (KMRU), Finland, [3]Kuopio Musculoskeletal Research Unit (KMRU) & Departments of Obstetrics & Gynaecology, Kuopio, Finland, Finland, [4]Kuopio Musculoskeletal Research Unit (KMRU) & Surgery/Orthopaedics, University of Eastern Finland, Kuopio, Finland, Finland
Disclosures: Juha Suuronen, None

SU0398 **Forearm Bone Density is Not Related to Lean Body Mass in Postmenarcheal Girls Who Habitually Consume Less Than 2 Servings of Dairy per Day: Preliminary Results of the FAMILY Study**
May Slim*[1], Catherine Vanstone[1], Suzanne Morin[1], Elham Rahme[2], Hope Weiler[1]. [1]McGill University, Canada, [2]McGill University Health Center, Canada
Disclosures: May Slim, None

SU0399 **High Prevalence of Muscle-Skeletal Abnormalities in Patients with Chronic Obstructive Pulmonary Disease**
Tatiana Costa[1], Fabio Costa[2], Carolina Moreira[1], Thaísa Jonasson[1], Leda Rabelo[2], César Boguszewski[1], Victoria Borba*[1]. [1]Serviço de Endocrinologia do Hospital de Clinicas da UFPR (SEMPR), Brazil, [2]Serviço de Pneumologia da UFPR, Brazil
Disclosures: Victoria Borba, None

SU0400 **Perceptions of Elderly Women with Osteoporosis and Back Pain by Using a Spinal Orthosis**
Helena Salminen*[1], Nathalie Frisendahl[2], Ann-Charlotte Grahn Kronhed[3], Christina Kaijser Alin[1]. [1]Karolinska Institutet, Sweden, [2]Unea university, Sweden, [3]Linkoping University, Sweden
Disclosures: Helena Salminen, None

SU0401 **Sarcopenia – prevalence, incidence, and association with osteoporosis: A four-year follow-up of the ROAD study**
Noriko Yoshimura*[1], Shigeyuki Muraki[2], Hiroyuki Oka[3], Sakae Tanaka[4], Hiroshi Kawaguchi[5], Kozo Nakamura[6], Toru Akune[6]. [1]22nd Century Medical & Research Center, The University of Tokyo, Japan, [2]Department of Clinical Motor System Medicine, 22nd Century Medical & Research Center, The University of Tokyo, Japan, [3]Department of Medical Research & Management for Musculoskeletal Pain, 22nd Century Medical & Research Center, The University of Tokyo, Japan, [4]Department of Orthopaedic Surgery, Sensory & Motor System Medicine, Graduate School of Medicine, The University of Tokyo, Japan, [5]JCHO Tokyo Shinjuku Medical Center, Japan, [6]National Rehabilitation Center for Persons with Disabilities, Japan
Disclosures: Noriko Yoshimura, None

SU0402 **SARCOPENIA IN UKRAINIAN WOMEN: ASSESSMENT AND DETERMINATION OF LEAN BODY MASS DEFICIENCY**
Vladyslav Povoroznyuk*[1], Dzerovych Nataliia[2], Povoroznyuk Roksolana[2]. [1]Institute of Gerontology AMS Ukraine, Ukraine, [2]D.F. Chebotarev Institute of gerontology NAMS Ukraine, Ukraine
Disclosures: Vladyslav Povoroznyuk, None

SU0403 **The Effects of Vitamin D and Sarcopenia on Bone Mineral Density in Korean women**
Sung Won Yang*, Duck Joo Lee, Bom Taeck Kim. Ajou University School of Medicine, South korea
Disclosures: Sung Won Yang, None

SU0404 **Using the European Working Group of Sarcopenia in Older People (EWGSOP) criteria for identifying sarcopenia and sarcopenic obesity in a group of community dwelling Seniors**
Angela Juby*, Christopher Davis, Suglo Minimaana, Marilyn Cree. University of Alberta, Canada
Disclosures: Angela Juby, None

SKELETAL AGING: CELLULAR AND MOLECULAR MECHANISMS

SU0405 **Effect of Aging on Bone Properties in Male and Female Transgenic Mice Carrying the Human LRP5^{G171V} (HBM) Mutation**
Nuria Lara*[1], Mark Begonia[2], Mark Dallas[2], Ganesh Thiagarajan[2], Mark L. Johnson[2]. [1]University of Missouri - Kansas City, USA, [2]University of Missouri-Kansas City, USA
Disclosures: Nuria Lara, None

SU0406 **Vascular Endothelial Growth Factor: Relationship to Bone Mineral Density (BMD), Size and Strength: The Osteoporotic Fractures in Men Study (MrOS)**
Jane Cauley*[1], Stephanie Harrison[2], Joseph Zmuda[3], Elizabeth Barrett-Connor[4], Jodi Lapidus[5], Eric Orwoll[5]. [1]University of Pittsburgh Graduate School of Public Health, USA, [2]California Pacific Medical Center Research Institute, USA, [3]University of PIttsburgh, USA, [4]University of California, USA, [5]Oregon Health & Science University, USA
Disclosures: Jane Cauley, None

SKELETAL AGING: FRAILTY AND SARCOPENIA

SU0407 **Histomorphometrical Characteristics of Cortical Bone in Male Subtrochanteric Femoral Shaft**
Xiaoyu Tong*[1], Markus Malo[2], Inari Burton[3], Hanna Isaksson[4], Jukka Jurvelin[2], Heikki Kröger[5]. [1]Kuopio Musculoskeletal Research Unit (KMRU), Institute of Clinical Medicine, University of Eastern Finland, POB 1627, FIN-70211 Kuopio, Finland, Finland, [2]Department of Applied Physics, University of Eastern Finland, Finland, [3]Kuopio Musculoskeletal Research Unit (KMRU), Institute of Clinical Medicine, University of Eastern Finland, Finland, [4]Department of Biomedical Engineering, Department of Orthopaedics, Lund University, Sweden, [5]Department of Orthopaedics, Traumatology, & Hand Surgery, Kuopio University Hospital, Finland
Disclosures: Xiaoyu Tong, None

SKELETAL AGING: REHABILITATION AND EXERCISE

SU0408 **Effect of Treatment on Back Pain and Back Extensor Strength with a Spinal Orthosis in Elderly Women with Osteoporosis; a Randomized Controlled Trial**
Helena Salminen[1], Christina Kaijser Alin*[1], Ann-Charlotte Grahn Kronhed[2], Hans Lundin[1]. [1]Karolinska Institutet, Sweden, [2]Linkoping University, Sweden
Disclosures: Christina Kaijser Alin, None

SU0409 **The Association between Spinal Curvature and Balance in Elderly Women at High Risk of Osteoporotic Fractures in Primary Healthcare**
Helena Salminen[1], Ann-Charlotte Grahn Kronhed*[2], Christina Kaijser Alin[1]. [1]Karolinska Institutet, Sweden, [2]Linkoping University, Sweden
Disclosures: Ann-Charlotte Grahn Kronhed, None

SKELETAL DEVELOPMENT: BONE MODELING

SU0410 **3D scaffold with VEGF/FGF9 conjugated fibrin, nano calcium sulfate and BMP2 genetically engineered mesenchymal stem cells promotes vascularized bone formation**
Xue Yuan*[1], Randall J Smith Jr[2], Huiyan Guan[3], Zunpeng Liu[4], Stelio T. Andreadis[5], Ciprian N Ionita[6], Parag Khobragade[2], Manhui Pan[7], Changdong Wang[4], Guoqiang Guan[3], Shuying Yang[8]. [1]University At Buffalo, USA, [2]Department of Biomedical Engineering, State University of New York at Buffalo, USA, [3]Department of Orthodontics, State University of New York at Buffalo, USA, [4]Department of Oral Biology, State University of New York at Buffalo, USA, [5]Department of Biomedical Engineering; Department of Chemical & Biological Engineering; Center of Excellence in Bioinformatics & Life Sciences, State University of New York at Buffalo, USA, [6]Toshiba Stroke & Vascular Research Center; Department of Biomedical Engineering, State University of New York at Buffalo, USA, [7]Clinical & Translational Research Center, State University of New York at Buffalo, USA, [8]Department of Oral Biology; Center of Excellence in Bioinformatics & Life Sciences, State University of New York at Buffalo, USA
Disclosures: Xue Yuan, None

SU0411 **Mesenchymal Cell-Based Biological Enhancement of Porous Titanium Orthopedic Implants**
Eric Lewallen*[1], Dakota Jones[1], Amel Dudakovic[1], Carolina Bonin[1], Matthew Getzlaf[1], Roman Thaler[1], Scott Riester[1], Emily Camilleri[1], Jennifer Westendorf[1], Allan Dietz[1], Robert Cohen[2], David Lewallen[1], Andre van Wijnen[1]. [1]Mayo Clinic, USA, [2]Stryker Orthopedics, USA
Disclosures: Eric Lewallen, None

SKELETAL DEVELOPMENT: GROWTH AND DEVELOPMENT

SU0412 **Bone Loss in C57BL/6J-OlaHsd Mice, a Substrain of C57BL/6J Carrying Mutated Alpha-Synuclein and Multimerin-1 Genes**
Tamar Liron*[1], Bitya Raphael[2], Itai Bab[3], Yankel Gabet[1]. [1]Tel Aviv University, Israel, [2]Tel Aviv Universiy, Israel, [3]Hebrew University, Israel
Disclosures: Tamar Liron, None

SU0413 **Bone Mineral Density of the Bottlenose Dolphin: Establishing a Definitive Region of Interest and Clinical Reference Dataset**
James Powell*[1], Wayne McFee[2], Gangming Luo[3], Jonathan Kaufman[3]. [1]Portland State University, Us, [2]National Ocean Service, USA, [3]CyberLogic, Inc., USA
Disclosures: James Powell, None

SU0414 **Development of Peak Bone Traits in Young Men – Estimations by pQCT and DXA**
Erik Lindgren*[1], Magnus Karlsson[1], Mattias Lorentzon[2], Jan Åke Nilsson[1], Bjorn Rosengren[1]. [1]Skåne University Hospital Malmö, Lund University, Sweden, [2]Geriatric Medicine, Institute of Medicine, Sahlgrenska University Hospital & Gothenburg University, Sweden, Sweden
Disclosures: Erik Lindgren, None

SU0415 **Different regulation of limb development by p63 transcript variants**
Manabu Kawata*[1], Daisuke Mori[2], Yuki Taniguchi[1], Fumiko Yano[2], Keita Okada[1], Song Ho Chang[1], Kosuke Kanke[3], Sakae Tanaka[1], Taku Saito[2]. [1]Department of Orthopaedic Surgery, Graduate School of Medicine, The University of Tokyo, Japan, [2]Department of Bone & Cartilage Regenerative Medicine, The University of Tokyo, Japan, [3]Center for Disease Biology & Integrative Medicine, The University of Tokyo, Japan
Disclosures: Manabu Kawata, None

SU0416 **Effects of vivarium temperature on body composition and bone architecture in young, growing male C57Bl/6J mice**
Maureen Devlin*, Katarina Alajbegovic. University of Michigan, USA
Disclosures: Maureen Devlin, None

SU0417 **MicroRNA Profiling of the Early Phases of Fracture Repair**
Michael Hadjiargyrou*[1], David komatsu[2], Jizu Zhi[2]. [1]New York Institute of Technology, USA, [2]Stony Brook University, USA
Disclosures: Michael Hadjiargyrou, None

SU0418 **Specific deletion of Ebf1 within the kidney mesanguim results in renal osteodystrophy, growth reduction, and premature death**
Jackie Fretz*[1], Li Li[2], Rose Webb[2], Tracy Nelson[2], Ben-hua Sun[2], Nancy Troiano[2]. [1]Yale University School of Medicine, USA, [2]Yale School of Medicine, USA
Disclosures: Jackie Fretz, None

SU0419 **Study of a PLGA film / Titanium Nanotubes Compound Growth Factor Sustained Releasing System**
Sun Shengjun*[1], Yu Weiqiang[2], Zhang Yilin[3], Zhang Fuqiang[2]. [1]Shandong University, Peoples republic of china, [2]Shanghai 9th People's Hospital, China, [3]Shandong Province Hospital, China
Disclosures: Sun Shengjun, None

SU0420 **Study of Body Composition and Bone Measures Acquired from Osteoporotic Measurement Sites using Regional DXA Scans**
Louise Marquino*[1], Bo Fan[2], Bennett Ng[2], Vicente Gilsanz[3], Heidi Kalkwarf[4], Joan Lappe[5], Sharon Oberfield[6], Karen Winer[7], Babette Zemel[8], John Shepherd[2]. [1]University of California, San Francisco, USA, [2]UCSF, USA, [3]USC, USA, [4]CCHMC, USA, [5]Creighton Univ, USA, [6]CUMC Columbia, USA, [7]NICHD, USA, [8]CHOP, USA
Disclosures: Louise Marquino, None

SU0421 **The Essential Role of Connective Tissue Growth Factor (CTGF/CCN2) in Palatogenesis**
Joseph Tarr*, Honey Hendesi, Alex Lambi, James Bradley, Steven Popoff. Temple University School of Medicine, USA
Disclosures: Joseph Tarr, None

LATE-BREAKING POSTER SESSION II

12:30 pm - 2:30 pm **Washington State Convention Center**
Discovery Hall - Hall 4BC

LB-SU0001 **Oral PTH (1-34) in the Treatment of Hypoparathyroidism**
Sofia Ish-Shalom*[1], Yoseph Caraco[2], Nariman Saba Khazen[1], Michal Gershinsky[1], Auryan Szalat[2], Hillel Galitzer[3], Jonathan C. Y. Tang[4], Gregory Burshtien[5], Ariel Rothner[5], Arthur Raskin[5], Miriam Blum[5], William D. Fraser[4]. [1]Endocrine Research Center, Lin Medical Center, Clalit Health Services, Haifa, Israel, [2]Hebrew University Medical School - Hadassah Medical Center Jerusalem, Israel, [3]Entera Bio, Il, [4]Bioanalytical Facility, Biomedical Research Centre, Norwich Medical School, Faculty of Medicine & Health Sciences, University of East Anglia, Norwich, United Kingdom NR4 7TJ, [5]Entera Bio Ltd, Hadassah Ein-Kerem, Jerusalem Bio Park, Jerusalem, Israel
Disclosures: Sofia Ish-Shalom, Entera Bio

LB-SU0002 **Bone Material Compositional Properties at Actively Bone Forming Trabecular Surfaces are Able to Discriminate Between Chronic Obstructive Pulmonary Disease (COPD) Patients that Sustain Fragility Fractures vs. Those Who Do Not, Irrespective of Glucocorticoid Therapy**

Eleftherios Paschalis*[1], Sonja Gamsjaeger[2], David Dempster[3], Vanda Jorgetti[4], Victoria Borba[5], Klaus Klaushofer[2], Carolina Moreira[5]. [1]Ludwig Boltzmann Institute for Osteology, Austria, [2]Ludwig Boltzmann Institute of Osteology at the Hanusch Hospital of WGKK & AUVA Trauma Centre Meidling, 1st Medical Department, Hanusch Hospital, Vienna, [3]Columbia University, [4]Department of Nephrology, School of Medicine, University of Sao Paulo, SP, [5]Endocrine Division (SEMPR), Department of Internal Medicine, Clinical Hospital of the Federal University of Parana, Curitiba, PR

Disclosures: Eleftherios Paschalis, None

LB-SU0003 **Differential effects of age and BMI on Trabecular Bone Score and Femur geometry**

KyongYoung Kim*, KyoungMin Kim[1], Sung Hee Choi[1], Soo Lim[1], Sang Wan Kim[2], Chan Soo Shin[3], Hak Chul Jang[1]. [1]Seoul National University Bundang Hospital & Seoul National University College of Medicine, [2]Borame Hospital & Seoul National University College of Medicine, [3]Seoul National University Hospital & Seoul National University College of Medicine

Disclosures: KyongYoung Kim, None

LB-SU0004 **Hypophosphat*asemia* in Duchenne Muscular Dystrophy**

Anna Petryk*[1], Peter Karachunski[1], James Hodges[1], Michael Whyte[2]. [1]University of Minnesota, USA, [2]Shriners Hospital for Children & Washington University School of Medicine, USA

Disclosures: Anna Petryk, None

LB-SU0005 **Withdrawn**

LB-SU0006 **Atsttrin, an engineered protein derived from progranulin growth factor, is therapeutic in osteoarthritis**

Jianlu WEI*[1], Qingyun Tian[1], Brendon Richbourgh[1], chuanju liu[1]. [1]Hospital for Joint Diseases of NYU, USA

Disclosures: Jianlu WEI, None

LB-SU0007 **Interactive effects of long term high fat high sucrose diet and estrogen deficiency on endothelial function and bone property in 6-month-old female rats**

Xiaoli Dong*[1], Chunmei Li[2], Sisi Cao[3], Shun Wan Chan[3], Man Sau Wong[3]. [1]The Hong Kong Polytechnic University, Hong kong, [2]Guangdong Pharmaceutical College, [3]The Hong Kong Polytechnic University

Disclosures: Xiaoli Dong, None

LB-SU0008 **Glucose-loading reduces bone remodelling in women and osteoblast function in vitro**

Itamar Levinger[1], Ego Seeman[2], Glenn McConell[3], Mark Rybchyn[4], Samantha Cassar[5], Elizabeth Byrnes[6], Steve Selig[7], Rebecca Mason[8], Peter Ebeling[9], Tara Brennan-Speranza*[4]. [1]Institute of Sport, Exercise & Active Living (ISEAL), Victoria University, Australia, [2]University of Melbourne & the Department of Endocrinology, Austin Health, Melbourne, Australia, [3]Clinical Exercise Science Program, Institute of Sport, Exercise & Active Living (ISEAL), Victoria University, Melbourne, Australia, [4]Department of Physiology, Bosch Institute for Medical Research, University of Sydney, Australia, [5]Clinical Exercise Science Program, Institute of Sport, Exercise & Active Living (ISEAL), Victoria University, Melbourne, Australia, [6]PathWest QEII Medical Centre, Perth, Australia, [7]School of Exercise & Nutrition Sciences, Deakin University, Melbourne, Australia., [8]Department of Physiology, Bosch Institute for Medical Research, University of Sydney, Australia, [9]Department of Medicine, School of Clinical Sciences, Faculty of Medicine, Nursing & Health Sciences, Monash University, Australia

Disclosures: Tara Brennan-Speranza, None

LB-SU0009 **Serum citrate is inversely related to bone turnover: findings from a large cross-sectional metabolomic study of adolescents**
John Kemp*[1], Adrian Sayers[2], William D. Fraser[3], David M. Evans[4], Jonathan H. Tobias[2]. [1]MRC Centre for Causal Analyses in Translational Epidemiology, Australia, [2]School of Clinical Sciences, University of Bristol, Bristol, UK, [3]Norwich Medical School, University of East Anglia, Norwich, UK, [4]MRC Integrative Epidemiology Unit, University of Bristol, Bristol, UK & University of Queensland Diamantina Institute, Translational Research Institute, Queensland, Australia
Disclosures: John Kemp, None

LB-SU0010 **Targeted Ablation of Macrophages and Mast Cells Impairs Heterotopic Ossification in a Mouse Model of Fibrodysplasia Ossificans Progressiva**
Michael Convente*[1], EnJun Yang[2], Salin Chakkalakal[2], Deyu Zhang[2], Robert Caron[2], Daniel Perrien[3], Taku Kambayashi[2], Frederick Kaplan[2], Eileen Shore[2]. [1]University of Pennsylvania School of Medicine, USA, [2]University of Pennsylvania, USA, [3]Vanderbilt University, USA
Disclosures: Michael Convente, None

LB-SU0011 **"Raine Syndrome", Caused By Mutations In *FAM20C*, Is "Congenital Sclerosing Osteomalacia With Cerebral Calcification"**
Michael P. Whyte*[1], William H. McAlister[2], Vinieth N. Bijanki[3], Shenghui Duan[4], Steven Mumm[5]. [1]Center for Metabolic Bone Disease & Molecular Research, Shriners Hospital for Children;, [2]Department of Pediatric Radiology, Mallinckrodt Institute of Radiology at St. Louis Children's Hospital, Washington University School of Medicine; St. Louis, MO, USA, 63110, [3]Center for Metabolic Bone Disease & Molecular Research, Shriners Hospital for Children, [4]Division of Bone & Mineral Diseases, Washington University School of Medicine at, [5]Washington University School of Medicine, USA
Disclosures: Michael P. Whyte, None

LB-SU0012 **BGJ398, a Pan-specific FGFR Inhibitor, Ameliorates Phosphate Wasting and Impaired Wnt Signaling in FGF2 High Molecular Weight Isoform Transgenic Mice**
Erxia Du*[1], Liping Xiao[2], Marja Hurley[2]. [1]USA, [2]UCONN Health
Disclosures: Erxia Du, None

LB-SU0013 **1-84PTH Amino Terminal Specific Immunoassay Mitigates Sample Instability due to *ex vivo* Processing and Oxidation: A Prevalent Haemodialysis Sample Analysis**
Frank Blocki*[1], Greg Olson[1], John Wall[1], Angela Podgorski[1], Dawn Vaught[1], Fabrizio Bonelli[1], Gavin Reid[2], Kevin Martin[3]. [1]DiaSorin Inc, [2]University of Melbourne, [3]Saint Louis University
Disclosures: Frank Blocki, DiaSorin Inc

LB-SU0014 **Altered Calcium Homeostasis in the Klotho Mutant Mouse Does Not Reflect Changes in Calcium Homeostasis that Occur with Aging**
Vaishali Veldurthy*[1], Puneet Dhawan[1], Leila mady[1], Sylvia Christakos[2]. [1]Department of Microbiology, Biochemistry & Molecular Genetics, NJMS, Rutgers University, [2]Rutgers - New Jersey Medical School, USA
Disclosures: Vaishali Veldurthy, None

LB-SU0015 **Osteoclasts Exhibit Rheotaxis in Response to Fluid Flow: Crawling Against the Tide**
Noelle M. Ochotny*[1], Brandon H. Kim[1], David W. Holdsworth[2], S. Jeffrey Dixon[1], Stephen M. Sims[1]. [1]Department of Physiology & Pharmacology, Schulich School of Medicine & Dentistry, Bone & Joint Institute, Western University, [2]Department of Surgery, Schulich School of Medicine & Dentistry, Bone & Joint Institute, Western University
Disclosures: Noelle M. Ochotny, None

LB-SU0016 **The effects of local and sustained delivery of estrogen conjugated with hydrogel and nanodiamonds on bone formation**
Christine Hong*[1], Tania Ohebsion[1], Dong Keun Lee[2], Dean Ho[2]. [1]UCLA School of Dentistry, USA, [2]UCLA School of Bioengieering, USA
Disclosures: Christine Hong, None

LB-SU0017 **Low dose CAPE treatment in a CAIA model of Inflammatory Arthritis**
Bonnie Williams[1], Helen Tsangari[2], Melissa Cantley[1], Victor Marino[3], Jiake Xu[4], Egon Perilli[5], A. Kencana Dharmapatni[2], Tania Crotti*[6]. [1]Discipline of Anatomy & Pathology, School of Medicine, University of Adelaide, [2]Discipline of Anatomy & Pathology, School of Medicine, The University of Adelaide, [3]School of Dentistry, University of Adelaide, [4]School of Pathology & Laboratory Medicine, The University of Western Australia, [5]Biomedical Engineering Medical Device Research Institute, School of Computer Science, Engineering & Mathematics, Flinders University, [6]University of Adelaide, Australia
Disclosures: Tania Crotti, None

LB-SU0018 **Treatment with soluble activin type IIB receptor improves fracture healing in a closed tibial fracture model**
Tero Puolakkainen*[1], Petri Rummukainen[1], Jemina Lehto[1], Olli Ritvos[2], Ari Hiltunen, Anna-Marja Säämänen[1], Riku Kiviranta[1]. [1]University of Turku, [2]University of Helsinki
Disclosures: Tero Puolakkainen, None

LB-SU0019 **Withdrawn**

LB-SU0020 **Loss of Multiple Endocrine Neoplasia Type 1 (*Men1*) Gene in Osteocytes Causes Osteoporosis by Increasing Osteoclastogenesis**
Peng Liu*[1], Sooyeon Lee[2], Jeanette Knoll[3], Alexander Rauch[4], Susanne Ostermay[3], Mario Zaiss[5], Nicole Malkusch[2], Ulf Lerner[6], Julia Luther[7], Mona Neven[7], Martina Rauner[8], Jean-Pierre David[7], Philippe Bertolino[9], Chang Zhang[9], Jan Tuckermann[2]. [1]University of Ulm, Germany, [2]University of Ulm, [3]Leibniz Institute for Age Research, Fritz Lipmann Institute (FLI), [4]University of Southern Denmark, [5]Swiss Federal Institute of Technology in Lausanne, [6]University of Gothenburg, [7]University Medical Center Hamburg-Eppendorf, [8]TU Dresden, [9]University of Lyon
Disclosures: Peng Liu, None

LB-SU0021 **Lower leg arterial calcification assessed by high-resolution peripheral quantitative computed tomography is associated with bone microstructure abnormalities in women**
Julien Paccou*[1], Mark Edwards[1], Janina Patsch[2], Karen Jameson[1], Kate Ward[3], Charlotte Moss[1], Elaine Dennison[1], Cyrus Cooper[4]. [1]MRC Lifecourse Epidemiology Unit, University of Southampton, Southampton General Hospital, Southampton SO16 6YD, UK, [2]Department of Biomedical Imaging & Image-Guided Therapy, Medical University of Vienna, Vienna, Austria, [3]MRC Human Nutrition Research, Elsie Widdowson Laboratory, 120 Fulbourn Road, Cambridge CB1 9NL, UK, [4]MRC Lifecourse Epidemiology Unit, University of Southampton, Southampton General Hospital, Southampton SO16 6YD, UK, United Kingdom
Disclosures: Julien Paccou, None

LB-SU0022 **Increased mortality, functional decline and dependency in elderly patients with dementia admitted with Fragility Fracture**
Charles Inderjeeth*[1], Noreen Mughal[2]. [1]University of Western Australia, Australia, [2]Sir Charles Gairdner Hospital
Disclosures: Charles Inderjeeth, None

LB-SU0023 **GWAS meta-analysis for total body BMD unveils 14 new BMD loci and variants exerting age-specific effects**

Carolina Medina-Gomez*[1], John Kemp[2], Alessandra Chesi[3], Eskil Kreiner-Møller[4], Tarun Ahluwalia[4], Dennis Mook[5], Youfang Liu[6], Fernando P. Hartwig[7], Dan Evans[8], Raimo Joro[9], Cornelia van Duijn[10], Ivana Nedeljkovic[11], Benjamin Mullin[12], Joel Eriksson[13], Brent Richards[14], Rebecca Jackson[15], David Karasik[16], Nathalie Van der Velde[17], Albert Hofman[10], Babette Zemel[18], Benjamin Mullin[12], Tamara Harris[19], Yanhua Zhou[20], John Robins[21], Ruifang Li[22], Bruce Psaty[23], Carrie Nielson[24], Wilson Scott[25], Bernardo L Horta[26], Timo Lakka[27], Struan Grant[3], Fiona McGuigan[28], Jim Wilson[29], Unnur Styrkársdóttir[30], Dan Koller[31], Kun Zhu[32], Doug Kiel[33], Claes Ohlsson[34], Andre G. Uitterlinden[35], Vincent Jaddoe[36], Jon H. Tobias[37], Dave M. Evans[2], Fernando Rivadeneira[35]. [1]Erasmus Medical Center, The netherlands, [2]The University of Queensland Diamantina Institute, The University of Queensland, Translational Research Institute, Brisbane, Australia, MRC Integrative Epidemiology Unit, School of Social & Community Medicine, [3]Division of Human Genetics, Children's Hospital of Philadelphia, [4]COPSAC; Copenhagen Prospective Studies on Asthma in Childhood; Faculty of Health Sciences, University of Copenhagen, Denmark, [5]Department of Endocrinology & Clinical Epidemiology, Leiden University Medical Centre, Leiden, The Netherlands, [6]Thurston Arthritis Research Center, University of North Carolina at Chapel Hill, [7]Postgraduate Program in Epidemiology, Federal University of Pelotas, Brazil, [8]California Pacific Medical Center Research Institute, [9]Institute of Biomedicine, Physiology, University of Eastern Finland, [10]Department of Epidemiology, ErasmusMC, [11]Department of Epidemiology, Erasmus MC, Rotterdam, the Netherlands, [12]School of Medicine & Pharmacology, University of Western Australia, [13]Centre for Bone & Arthritis Research, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, [14]Centre for Clinical Epidemiology, Lady Davis Institute for Medical Research, Jewish General Hospital, McGill University, [15]Division of Endocrinology, Diabetes & Metabolism, Ohio State University, [16]Hebrew SeniorLife & Harvard Medical School, [17]Department of Internal Medicine-Section Geriatric Medicine, Erasmus MC, [18]Division of GI, Hepatology, & Nutrition, Children's Hospital of Philadelphia, [19]Laboratory for Epidemiology, Demography, & Biometry, National Institutes of Aging, [20]Department of Biostatistics, Boston University School of Public Health, [21]Department of Internal Medicine, University of California at Davis, [22]Department of Clinical Epidemiology, LUMC, [23]Department of Biostatistics, University of Washington, [24]School of Medicine, Oregon Health & Science University, [25]Department of Twin Research & Genetic Epidemiology, King's College London, [26]Postgraduate Program in Epidemiology, Federal University of Pelotas, [27]Kuopio Research Institute of Exercise Medicine, Kuopio, Finland; The Department of Clinical Physiology & Nuclear Medicine, University of Eastern Finland, Finland; Department of Physiology, Institute of Biomedicine, University of Eastern Finland, [28]Clinical & Molecular Osteoporosis Research Unit, Department of Clinical Sciences Malmö, Lund University, [29]Centre for Population Health Sciences at the University of Edinburgh, [30]deCODE Genetics/Amgen, [31]Departments of Medical & Molecular Genetics, Indiana University School of Medicine, [32]Department of Endocrinology & Diabetes, Sir Charles Gairdner Hospital; School of Medicine & Pharmacology, University of Western Australia, [33]nstitute for Aging Research, Hebrew SeniorLife, Department of Medicine, Harvard Medical School, [34]Department of Internal Medicine & Clinical Nutrition, Center for Bone & Arthritis Research (CBAR), Sahlgrenska Academy, Institute of Medicine, University of Gothenburg, [35]Internal Medicine, Erasmus MC University, Rotterdam, The Netherlands, [36]The Generation R Study, ErasmusMC, [37]School of Clinical Sciences, University of Bristol, Bristol, United Kingdom

Disclosures: Carolina Medina-Gomez, None

LB-SU0024 **Osteoporotic Fractures in Heart failure; Findings from National Health Insurance Data in Korea**

Da Hea Seo*[1], Jong-Chan Youn[2], Jung Wha Hong[3], Seok-Min Kang[2], Yumie Rhee[4]. [1]Department of Internal Medicine, Endocrine Research Institute, Yonsei University College of Medicine, [2]Division of Cardiology, Severance Cardiovascular Hospital, Yonsei University College of Medicine, [3]Departement of Biostatistics, Yonsei University College of Medicine, [4]Department of Internal Medicine, College of Medicine, Yonsei University, South korea

Disclosures: Da Hea Seo, None

LB-SU0025 **Retrospective Analysis of Osteoporosis Evaluation and Treatment Following Fragility Fracture of the Hip**
Sara Heintzman*[1], Mitchell Hughes[2], Tamara Scerpella[2]. [1]University of Wisconsin Hospitals & Clinics, USA, [2]University of Wisconsin School of Medicine & Public Health, USA
Disclosures: Sara Heintzman, None

LB-SU0026 **Enhanced Hip Fracture Management: Use of Sfn System to Evaluate a Fractured Neck of Femur Fast Track Pathway – Pilot Study**
Nigel Gilchrist*[1], Kris Dalzell[2], Scott Pearson[3], Jeremy Hickling[4], Kit Hoeben[5], Ma Yi[6]. [1]Department of Orthopaedic Surgery, Canterbury District Health Board, [2]Department of Orthopaedic Surgery, Canterbury District Health Board, [3]Emergency Department, Canterbury District Health Board, [4]Department of Anaesthesia, Canterbury District Health Board, [5]Planning & Funding, Canterbury District Health Board, [6]Biostatistician, Canterbury District Health Board
Disclosures: Nigel Gilchrist, None

LB-SU0027 **Falls are increased on Recommended Doses of Vitamin D in Elderly Women.**
J. Christopher Gallagher[1], Shervin Yousefian*[2], Lynnette Smith[3]. [1]Creighton University Medical Center, USA, [2]Creighton University Medical Center, USA, [3]University of Nebraska, USA
Disclosures: Shervin Yousefian, None

LB-SU0028 **Epigenetic priming confers direct cell trans-differentiation in a transgene-free state**
YOUNG DAN CHO*[1], Han-Sol Bae[2], Bong-Soo Kim[2], Kyung-Mi Woo[2], Jeong-Hwa Baek[2], Hyun-Mo Ryoo[2]. [1]Seoul National University, South Korea, [2]Department of Molecular Genetics, School of Dentistry, Seoul National University, South Korea
Disclosures: YOUNG DAN CHO, None

LB-SU0029 **High cardiovascular risk in older men with low sclerostin levels – prospective STRAMBO study**
Pawel Szulc*[1], Lorenz Hofbauer[2], Roland Chapurlat[3]. [1]INSERM UMR 1033, University of Lyon, Hopital E. Herriot, Pavillon F, France, [2]Division of Endocrinology, Diabetes, & Bone Diseases, Dresden University Medical Center, [3]INSERM UMR 1033, University of Lyon, Hospices Civils de Lyon
Disclosures: Pawel Szulc, None

LB-SU0030 **Differential changes in bone geometry and microarchitecture in extreme duration type 1 compared to younger type 1's and controls**
Ernesto Maddaloni*[1], Hillary Keenan[1]. [1]Joslin Diabetes Center
Disclosures: Ernesto Maddaloni, None

LB-SU0031 **MSC therapy for hypophosphatasia**
Luke Mortensen*. University of Georgia, USA
Disclosures: Luke Mortensen, None

LB-SU0032 **DOES AUTOSOMAL DOMINANT OSTEOPETROSIS TYPE 2 (ADO2) HAVE A CENTRAL NERVOUS SYSTEM PHENOTYPE?**
Mattia Capulli*, Antonio Maurizi, Juliana Cortes, Laura Di Rito, Nadia Rucci, Anna Teti. University of L'Aquila, Italy
Disclosures: Mattia Capulli, None

LB-SU0033 **Novel Variant of G_s-alpha Associated with Albright's Hereditary Osteodystrophy, Osteolysis, and Syndrome of Inappropriate ADH Secretion**
Kelly Wentworth*, Edward Hsiao[1], Murat Bastepe[2], Yan Zhu[2]. [1]University of California- San Francisco, [2]Endocrine Unit, Massachusetts General Hospital & Harvard Medical School
Disclosures: Kelly Wentworth, None

LB-SU0034 **Factors Predicting Functional Status, Muscle and Bone Parameters in Long-Term Survivors of Acute Lymphoblastic Leukemia (ALL)**
Louis-Nicolas Veilleux*[1], Frank Rauch[2], Daniel Curnier[3], Maja Krajinovic[4], Caroline Laverdière[4], Daniel Sinnett[4], Nathalie Alos[4]. [1]McGill University/Shriners Hospital for Children-Canada, Canada, [2]McGill University-Shriners Hospital for Children, Canada, [3]Department of Kinesiology, University of Montreal, Canada, [4]Sainte-Justine University Hospital Center, Canada
Disclosures: Louis-Nicolas Veilleux, None

LB-SU0035 **Blocking the senescence-associated secretory phenotype (SASP) reduces osteoclastogenesis and prevents age-related bone loss**
Ming Xu*[1], Megan Weivoda[2], Christine Hachfeld[1], Merry Jo Oursler[1], James Kirkland[1]. [1]Mayo Clinic, [2]Mayo Clinic, United states
Disclosures: Ming Xu, None

LB-SU0036 **Targeting CKIP-1 within osteoblast: A potential anabolic strategy for bone formation reduction during aging?**
Jin Liu*[1], Zongkang Zhang[2], Jie Li[2], Baosheng Guo[3], Baoting Zhang[2], Aiping Lu[3], Ge Zhang[3]. [1]Hong Kong Baptist University, Hong kong, [2]School of Chinese Medicine, The Chinese University of Hong Kong, [3]Institute for Advancing Translational Medicine in Bone & Joint Diseases, Hong Kong Baptist University
Disclosures: Jin Liu, None

LB-SU0037 **SENP6, a desumoylase, protects osteochondroprogenitors and chondrocytes from senescence and apoptosis**
Jianshuang Li[1], Di Lu[1], Kevin Weaver[1], Huadie Liu[1], Hong Dou[2], Edward Yeh[2], Bart Williams[1], Tao Yang*[3]. [1]Van Andel Research Institute, [2]MD Anderson Cancer Center, [3]Van Andel Research Institute, USA
Disclosures: Tao Yang, None

CONCURRENT ORALS: BONE ACQUISITION AND PEDIATRIC BONE DISORDERS

2:30 pm - 4:00 pm **Washington State Convention Center**
Room 6C

Moderators:
Catherine Gordon, M.D.
Hasbro Children's Hospital and Brown University, USA
Disclosures: Catherine Gordon, None

Mary Leonard, M.D.
Stanford School of Medicine, USA
Disclosures: Mary Leonard, None

2:30 pm **1093** **Reference Ranges and Characteristics of Spine Bone Mineral Apparent Density in U.S. Children – Results from the Bone Mineral Density in Childhood Study**
Babette Zemel*[1], Karen Winer[2], Andrea Kelly[3], Joan Lappe[4], John Shepherd[5], Sharon Oberfield[6], Vicente Gilsanz[7], Heidi Kalkwarf[8]. [1]Children's Hospital of Philadelphia, USA, [2]NICHD, USA, [3]The Children's Hospital of Philadelphia, USA, [4]Creighton University, USA, [5]University of California San Francisco, USA, [6]Columbia University, USA, [7]Children's Hospital Los Angeles, USA, [8]Cincinnati Children's Hospital & Medical Center, USA
Disclosures: Babette Zemel, None

2:45 pm **1094** **Skeletal Maturation and Genetically Determined Population Ancestry in Non-Obese, Pre-Pubertal Children**
Alessandra Chesi*[1], Sani M. Roy[2], Jonathan A. Mitchell[3], Heidi J. Kalkwarf[4], Joan M. Lappe[5], Vicente Gilsanz[6], Sharon E. Oberfield[7], John A. Shepherd[8], Soroosh Mahboubi[2], Karen Winer[9], Andrea Kelly[2], Struan F.A. Grant[1], Babette S. Zemel[1], Shana McCormack[2]. [1]Children's Hospital of Philadelphia, USA, [2]Children's Hospital of Philadelphia, USA, [3]University of Pennsylvania, USA, [4]Cincinnati Children's Hospital Medical Center, USA, [5]Creighton University School of Medicine, USA, [6]University of Southern California Los Angeles, USA, [7]Columbia University Medical Center, USA, [8]University of California San Francisco, USA, [9]NIH, USA
Disclosures: Alessandra Chesi, None

3:00 pm **1095** **Are we still accruing bone mineral content during the third decade of life?**
Adam Baxter-Jones*[1], Stefan Jackowski[2], Augusta Rosie Hatton[3], Saija Kontulainen[2]. [1]University of Saskatchewan, USA, [2]University of Saskatchewan, Canada, [3]McGill University, Canada
Disclosures: Adam Baxter-Jones, None

3:15 pm **Effects of maternal calcium supplementation on childhood bone growth differs between males and females**
1096
Kate Ward*[1], Landing Jarjou[2], Ann Prentice[1]. [1]MRC Human Nutrition Research, United Kingdom, [2]MRC The Gambia Unit, Gambia
Disclosures: Kate Ward, None

3:30 pm **Pediatric bone density is influenced by physical activity and genetic variation at known bone density loci**
1097
Jonathan Mitchell*[1], Alessandra Chesi[2], Okan Elci[2], McCormack Shana[2], Sani Roy[2], Heidi Kalkwarf[3], Joan Lappe[4], Vicente Gilsanz[5], Sharon Oberfield[6], John Shepherd[7], Andrea Kelly[2], Struan Grant[2], Babette Zemel[2]. [1]University of Pennsylvania, USA, [2]Children's Hospital of Philadelphia (CHOP), USA, [3]Cincinnati Children's Hospital Medical Center, USA, [4]Creighton University, USA, [5]Children's Hospital Los Angeles, USA, [6]Columbia University Medical Center, USA, [7]University of California San Francisco, USA
Disclosures: Jonathan Mitchell, None

3:45 pm **ASBMR 2015 Annual Meeting Young Investigator Award**
1098 **Deficits in Bone Strength in Girls with a Distal Radius Fracture Track 1 Year after Fracture**
Mikko Maatta*[1], Heather Macdonald[2], Douglas Race[2], Lindsay Nettlefold[2], Kishore Mulpuri[3], Heather McKay[2]. [1]University of British Columbia, Canada, [2]Centre for Hip Health & Mobility, Canada, [3]British Columbia Children's Hospital, Canada
Disclosures: Mikko Maatta, None

CONCURRENT ORALS: BONE TUMORS AND METASTASIS

2:30 pm - 4:00 pm **Washington State Convention Center**
Room 6E

Moderators:
Aymen Idris, MSc, Ph.D.
University of Sheffield, United Kingdom
Disclosures: Aymen Idris, None

Michaela Reagan, Ph.D.
Dana-Farber Cancer Institute/ Harvard Medical School, USA
Disclosures: Michaela Reagan, None

2:30 pm **Leukemia Inhibitory Factor Receptor (LIFR) Signaling Regulates Breast Cancer Cell Dormancy and Bone Colonization**
1099
Rachelle Johnson*[1], Alyssa Merkel[2], Julie Sterling[2], Joshua Johnson[3], Joy Wu[3], Amato Giaccia[4]. [1]Stanford University, USA, [2]Department of Veterans Affairs, Tennessee Valley Healthcare System (VISN 9), Vanderbilt University Medical Center, USA, [3]Department of Medicine, Stanford University, USA, [4]Department of Radiation Oncology, Stanford University, USA
Disclosures: Rachelle Johnson, None

2:45 pm **The Wnt-miR-218-axis promotes breast cancer -induced osteolytic disease**
1100
Hanna Taipaleenmaki*[1], Mohammad Q Hassan[2], Yukiko Maeda[3], Andre van Wijnen[4], Eric Hesse[5], Janet L Stein [6], Gary S Stein[6], Jane B Lian[6]. [1]University Medical Center Hamburg- Eppendorf, Germany, [2]Department of Oral & Maxillofacial Surgery, School of Dentistry, University of Alabama at Birmingham, USA, [3]Department of Cell Biology, University of Massachusetts Medical School, USA, [4] Department of Biochemistry & Molecular Biology, Department of Orthopedic Surgery, Mayo Clinic, USA, [5]Heisenberg-Group for Molecular Skeletal Biology, Department of Trauma, Hand & Reconstructive Surgery, University Medical Center Hamburg-Eppendorf, Germany, [6]Department of Biochemistry & Vermont Cancer Center, University of Vermont College of Medicine, USA
Disclosures: Hanna Taipaleenmaki, None

3:00 pm 1101 **Reciprocal Interactions between Sensory Neurons and Tumor Cells Promote Breast Cancer Progression in Bone, Secondary Visceral Metastasis and Bone Pain**
Tatsuo Okui*[1], Masahiro Hiasa[1], Yuki Nagata[1], Fletcher White[2], G David Roodman[1], Toshiyuki Yoneda[1]. [1]Department of Medicine, Hematology Oncology, Indiana University School of Medicine, USA, [2]Department of Anesthesia, Paul & Carole Stark Neurosciences Research Institute, USA
Disclosures: Tatsuo Okui, None

3:15 pm 1102 **EpCAM Promotes Bone Metastases of Breast Cancer by Conferring Cancer Stem-like and Epithelial Properties**
Toru Hiraga*[1], Susumu Ito[2], Hiroaki Nakamura[1]. [1]Matsumoto Dental University, Japan, [2]Shinshu University, Japan
Disclosures: Toru Hiraga, None

3:30 pm 1103 **Lysyl oxidase endows colon cancer cells with the ability to thrive in the bone marrow and promotes bone metastasis formation**
Caroline Reynaud*[1], Laura Ferreras[2], Marie Brevet[3], Philippe Clezardin[4]. [1]INSERM Unité 1033UFR de Médecine Lyon-Est (domaine Laënnec), Fr, [2]INSERM Unité 1033UFR de Médecine Lyon-Est, France, [3]Hospices Civils de Lyon - Accueil, France, [4]INSERM & University of Lyon, France
Disclosures: Caroline Reynaud, None

3:45 pm 1104 **ASBMR 2015 Annual Meeting Young Investigator Award**
Dickkopf-related protein 1 (Dkk1) exerts immune suppressive effects in cancer by regulating expansion and function of myeloid derived suppressor cells
Lucia D'Amico*[1], Aude Helene Capietto[1], Ali' Zamani[1], David Bumpass[2], Roberta Faccio[3]. [1]Washington University School of Medicine, USA, [2]Orthopaedic Surgery, Washington University School of Medicine, USA, [3]Department of Orthopedics, Washington University School of Medicine, USA
Disclosures: Lucia D'Amico, None

CONCURRENT ORALS: OSTEOBLASTS

2:30 pm - 4:00 pm **Washington State Convention Center**
Room 6B

Moderators:
Daniel Perrien, Ph.D.
TVHS, Department of Veterans Affairs and Vanderbilt University Medical Center, USA
Disclosures: Daniel Perrien, None

Lilian Plotkin, Ph.D.
Indiana University School of Medicine, USA
Disclosures: Lilian Plotkin, None

2:30 pm 1105 **Deletion of the Transcriptional Coactivators YAP and TAZ in Mesenchymal Progenitors Promotes Osteoblastogenesis and Increases Bone Mass**
Jinhu Xiong*[1], Marilina Piemontese[1], Yuko Fujiwara[1], Priscilla Baltz[1], Charles O'Brien[2]. [1]University of Arkansas for Medical Sciences & Central Arkansas Veterans Healthcare System, USA, [2]Central Arkansas VA Healthcare System, Univ of Arkansas for Medical Sciences, USA
Disclosures: Jinhu Xiong, None

2:45 pm 1106 **ASBMR 2015 Annual Meeting Young Investigator Award**
Assessing the Skeletal Phenotype of Compound Gja1$^{+/-}$ Runx2$^{+/-}$ Mice
Atum Buo*, Joseph Stains. University of Maryland, School of Medicine, USA
Disclosures: Atum Buo, None

3:00 pm 1107 **DOK3 Affects Bone Homeostasis by Regulating Osteoblast and Osteoclast Differentiation and Function**
Mary Beth Humphrey*[1], Junjie Xing[1], Courtney Long[2]. [1]University of Oklahoma Health Sciences Center, USA, [2]University of Hamberg-Eppendorf, Germany
Disclosures: Mary Beth Humphrey, None

3:15 pm 1108 **Telomerase Expression Marks Transitional Growth-Associated Skeletal Progenitor/Stem Cells**
Diana Carlone*, Rebecca Riba-Wolman, Luke Deary, Alessio Tovaglieri, Dana Ambruzs, Manasvi Shah, Benjamin Mead, David Breault. Boston Children's Hospital, USA
Disclosures: Diana Carlone, None

3:30 pm 1109 **DNA Damage Checkpoint Pathway Modulates The Regulation of Skeletal Growth and Osteoblastic Bone Formation by Parathyroid Hormone-Related Peptide**
Ying Zhang*[1], Guangpei Chen[1], Zhen Gu[1], Andrew Karaplis[2], David Goltzman[2], Dengshun Miao[3]. [1]Nanjing Medical University, China, [2]McGill University, Canada, [3]Nanjing Medical University, Peoples republic of china
Disclosures: Ying Zhang, None

3:45 pm 1110 **Transition of Chondrocytes into Osteoblasts in Endochondral Bones Requires Active Canonical Wnt Signaling**
Xin Zhou*[1], Ailing Huang[2], Klaus von der Mark[3], Benoit de Crombrugghe[2], Venkata Battula [2], Michael Andreeff[2]. [1]MD Anderson Cancer Center, USA, [2]UT MD Anderson Cancer Center, USA, [3]University of Erlangen-Nuremberg, Germany
Disclosures: Xin Zhou, None

CONCURRENT ORALS: SARCOPENIA

2:30 pm - 4:00 pm **Washington State Convention Center**

Room 6A

Moderators:
Rene Rizzoli, M.D.
Geneva University Hospitals and Faculty of Medicine, Switzerland
Disclosures: Rene Rizzoli, None

Robert McLean, DSc
Hebrew SeniorLife Institute for Aging Research and Harvard Medical School, USA
Disclosures: Robert McLean, None

2:30 pm 1111 **Sarcopenia and age-related muscle impairment: histology and imaging in a close relationship**
Umberto Tarantino*[1], Jacopo Baldi[1], Manuel Scimeca[2], Elena Bonanno[2], Elena Gasbarra[3], Eleonora Piccirilli[4]. [1]University of Rome Tor Vergata, orthopaedics & traumatology, Italy, [2]University of Rome Tor Vergata, Anatomic Pathology Department, Italy, [3]Univesity of Rome Tor Vergata, orthopaedics & traumatology, Italy, [4]University of Rome Tor Vergata, Department of orthopaedics & traumatology, Italy
Disclosures: Umberto Tarantino, None

2:45 pm 1112 **Evaluation of cutpoints for low lean mass and slow gait speed in predicting death in the National Health and Nutrition Examination Survey 1999-2004**
Ching-Lung Cheung*[1], Karen Lam[2], Bernard Cheung[2]. [1]The University of Hong Kong, Hong kong, [2]University of Hong Kong, Hong kong
Disclosures: Ching-Lung Cheung, None

3:00 pm 1113 **Hyperparathyroidism is Associated with Osteosarcopenia in Older Individuals with a History of Falling**
Pushpa Suriyaarachchi*[1], Fernando Gomez[2], Carmen L. Curcio[2], Ruth Huo[3], Derek Boersma[1], Oddom Demontiero[1], Piumali Gunawardene[1], Gustavo Duque[4]. [1]Musculoskeletal Ageing Research Program, Sydney Medical School Nepean, The University of Sydney, Australia, [2]Research Group on Geriatrics & Gerontology, Faculty of Health Sciences, International Association of Gerontology & Geriatrics Collaborative Centre, University of Caldas, Colombia, [3]Faculty of Medicine, University of New South Wales, Australia, [4]Musculoskeletal Ageing Research Program, University of Sydney, Australia
Disclosures: Pushpa Suriyaarachchi, None

3:15 pm **Greater Grip Strength is associated with Larger Cortical Thickness in Men and Larger Bone**
1114 **Size in Women: The Framingham Osteoporosis Study**
Robert McLean*[1], Xiaochun Zhang[2], Kerry Broe[2], Ching-An Meng[2], Elizabeth Samelson[1], L Adrienne Cupples[3], Marian Hannan[1], Mary Bouxsein[4], Douglas Kiel[1]. [1]Hebrew SeniorLife Institute for Aging Research & Harvard Medical School, USA, [2]Hebrew SeniorLife Institute for Aging Research, USA, [3]Boston University School of Public Health, USA, [4]Beth Israel Deaconess Medical Center & Harvard Medical School, USA
Disclosures: Robert McLean, Policy Analysis Inc

3:30 pm **Sarcopenia Predicts Fracture Risk in 65-year Old Healthy Community-dwellers**
1115
Andrea Trombetti*[1], Mélany Hars[2], Emmanuel Biver[2], Thierry Chevalley[2], Serge Ferrari[2], Rene Rizzoli[2]. [1]University Hospital of Geneva, Switzerland, [2]Division of Bone Diseases, Geneva University Hospitals & Faculty of Medicine, Switzerland
Disclosures: Andrea Trombetti, None

3:45 pm **Poor peripheral nerve function increases the risk of injurious falls: the Health, Aging and Body**
1116 **Composition Study**
Elsa Strotmeyer*[1], Mary E. Winger[1], Jane A. Cauley[1], Robert M. Boudreau[1], Teresa M. Waters[2], Julie M. Donohue[1], Steven M. Albert[1], Ann V. Schwartz[3], Suzanne Satterfield[2], Sasa Zivkovic[1], Aaron I. Vinik[4], Melissa Garcia[5], Tamara B. Harris[5], Anne B. Newman[1]. [1]University of Pittsburgh, USA, [2]University of Tennessee Health Science Center, USA, [3]University of California, San Francisco, USA, [4]Eastern Virginia Medical School, USA, [5]National Institute on Aging, USA
Disclosures: Elsa Strotmeyer, None

NETWORKING BREAK

4:00 pm - 4:30 pm **Washington State Convention Center**
Discovery Hall - Hall 4BC

SYMPOSIUM - GREG MUNDY MEMORIAL SESSION: SKELETAL NEOPLASIA

4:30 pm - 5:45 pm **Washington State Convention Center**
Hall 4A

Co-Chairs
Florent Elefteriou, Ph.D.
Baylor College of Medicine, USA
Disclosures: Florent Elefteriou, None

Archana Sanjay, Ph.D.
UCHC, USA
Disclosures: Archana Sanjay, None

4:30 pm **Genetic Mechanisms in Osteosarocma**
Brendan Lee, M.D., Ph.D.
Baylor College of Medicine, USA
Disclosures: Brendan Lee, None

4:55 pm **Tumor-Stromal Interactions in Breast Cancer Bone Metastasis**
Yibin Kang, Ph.D.
Princeton University, USA
Disclosures: Yibin Kang, Amgen 13

5:20 pm **Tumor/Bone Microenvironment Interactions: Learning Lessons from Multiple Myeloma**
Peter Croucher, Ph.D.
Garvan Institute of Medical Research, Australia
Disclosures: Peter Croucher, Ph.D., None

SYMPOSIUM - LOW BMD AND FRACTURES IN YOUNGER PATIENTS

This program is supported by an educational grant from Lilly.

4:30 pm - 5:45 pm **Washington State Convention Center**

Room 6C

Co-Chairs
Angela M. Cheung, M.D., Ph.D.
University Health Network-University of Toronto, Canada
Disclosures: Angela M. Cheung, None

Suzanne Jan De Beur, M.D.
Johns Hopkins University, USA
Disclosures: Suzanne Jan De Beur, None

4:30 pm **Osteoporosis in Children**
Laura Bachrach, M.D.
Stanford University School of Medicine, USA
Disclosures: Laura Bachrach, None

4:55 pm **Osteoporosis in Pre-Menopausal Women**
Elizabeth Shane, M.D.
Columbia University College of Physicians and Surgeons, USA
Disclosures: Elizabeth Shane, Eli Lilly 13; Amgen 13

5:20 pm **Idiopathic Osteoporosis in Men**
Eric Orwoll, M.D.
Oregon Health and Science University, USA
Disclosures: Eric Orwoll, None

ASBMR ANNUAL TOWN HALL MEETING AND RECEPTION

PRESENTATION OF THE ASBMR SHIRLEY HOHL SERVICE AWARD

6:00 pm - 7:00 pm **Washington State Convention Center**

Room 6A

You are invited to attend the ASBMR Town Hall Meeting and Reception, where you will learn about the Society, including the year in review, planned activities, strategic directions and leadership opportunities. Come learn more about ASBMR, meet with leadership, ask questions during an "open-mic" period and enjoy a wine and cheese reception.

MOLECULAR BIOLOGY AND PATHOLOGY OF THE SKELETON WORKING GROUP

Supported by educational grants from Exiqon and Epigenetics Program in the Mayo Clinic Center for Individualized Medicine

7:15 pm - 9:15 pm **Washington State Convention Center**
Room 613-614

Genetic and Epigenetic Skeletal Informatics for Biological and Clinical Applications

Session Moderators:
Jennifer J. Westendorf, Ph.D., Mayo Clinic (USA)
J. Wesley Pike, Ph.D., University of Wisconsin-Madison (USA)

The genomic profiling of clinical, animal model and cellular samples encompasses a wide range of experimental approaches and bioinformatics analyses to interrogate disease associations, underlying mechanisms of phenotypes via discovery of affected genes, pathways and noncoding RNAs. The presentations will demonstrate how interrogation of data sets from various types of massive parallel sequencing studies and available databases from their research can address key biological questions.

7:15 pm **Box Dinner and Opening Remarks**

7:30 pm **Bioinformatics tools to unravel the complexity underlying GWAS signals**
Fernando Rivadeneira, M.D., Ph.D., Erasmus University (The Netherlands)

8:00 pm **Integrating data sets: Multiple histone modifications as predictors of osteogenesis**
Jonathan Gordon, Ph.D., University of Vermont (USA)

8:30 pm **Transcriptome analyses and epigenetic changes in response to hormone stimulation in osteoblasts**
Mark Meyer, Ph.D., University of Wisconsin-Madison (USA)

9:00 pm **Open Discussion and Concluding Remarks**

Conference Organizers:
Gary S. Stein, Ph.D., University of Vermont-Burlington (USA)
Jane B. Lian, Ph.D.,University of Vermont-Burlington (USA)

Disclosures: Jonathan Gordon-Nothing to disclose; Fernando Rivadeneira-Nothing to disclose; Mark Meyer-Nothing to disclose

NUTRITION WORKING GROUP

Supported by educational grants from the National Dairy Council

7:15 pm - 9:15 pm **Washington State Convention Center**
Room 608-609

Fetal and Early Programming of Bone

7:15 pm Plated Dinner

7:30 pm Opening Remarks
Sue Shapses, Ph.D., Rutgers University (USA)

7:40 pm Placental transfer of nutrients (Ca and vitamin D) in adolescents
Kim O'Brien, Ph.D., Cornell University (USA)

8:10 pm Maternal vitamin D and bone health in the MAVIDOS trial
Cyrus Cooper, OBE, FMedSci, University of Southampton, University of Oxford (United Kingdom)

8:40 pm Sexual dismorphism during bone development
Vicente Gilsanz, M.D., Ph.D., University of Southern California (USA)

9:10 pm Concluding Remarks
Connie Weaver, Ph.D., Purdue University (USA)

Disclosures: Cyrus Cooper-Nothing to disclose; Kimberly O'Brien-Nothing to disclose; Vicente Gilsanz-Nothing to disclose

BONE STRENGTH WORKING GROUP

Sponsored by the Canadian Bone Strength Working Group
Supported by unrestricted educational grants from Amgen Canada, Eli Lilly Canada and Merck Canada

7:15 pm - 9:45 pm **Washington State Convention Center**
Room 606-607

7:15 pm Registration and Dinner

7:45 pm Welcome and Introduction
Angela Cheung, M.D., Ph.D., University of Toronto (Canada)
Co-Chairs:
Jonathan D. Adachi, M.D., McMaster University (Canada)
Jacques Brown, M.D., Laval University (Canada)

Oral Abstracts

7:55 pm Mechanical and Biochemical Assessment of Bone Quality in Men with Type 2 Diabetes
Helen Hunt, Cornell University (USA)

8:02 pm **Appendicular Lean Mass Index is Associated with Estimated Bone Strength at the Distal Radius and Distal Tibia in Middle-aged and Older Adults**
Jenna Gibbs, University of Waterloo (Canada)

8:09 pm **Rapid, High Dose vs. Slower, Low Dose Accrual of Bone Mass Following Sclerostin Antibody Treatment in Ovariectomized Rats: Comparison of Effects on Bone Strength**
Henry Bryant, Eli Lilly (USA)

8:16 pm **Determining Interdependency Structure of Contributors to Bone Microarchitecture: The Framingham Osteoporosis Study**
Roby Hanes, Harvard University (USA)

Keynote Debate

8:25 pm **The Science of Skeletal Self-Repair**
Matthew Silva, Ph.D., Washington University in St. Louis School of Medicine (USA)
Mitchell Schaffler, Ph.D., City College of New York (USA)

9:25 pm **Questions and Discussion/Final Vote**

9:30 pm **Concluding Remarks**
Richard Kremer, M.D., Ph.D., McGill University Health Center (Canada)

Co-Organizers:
Angela Cheung, M.D., Ph.D., University of Toronto (Canada)
Richard Kremer, M.D., Ph.D., McGill University Health Center (Canada)

PEDIATRIC BONE AND MINERAL WORKING GROUP

Supported by educational grants from Ultragenyx Pharmaceutical and Alexion Pharmaceuticals, Inc.

7:15 pm - 9:30 pm **Washington State Convention Center**
Room 611-612

Moderators:
Farzana Perwad, M.D., University of California, San Francisco (USA)
Peter Tebben, M.D., Mayo Clinic (USA)

7:15 pm **Dinner**

7:35 pm **Opening Remarks**

7:40 pm **Bone Mineral Density and Premature Infants**
Mary Fewtrell, M.D., Institute of Child Health, University College London (United Kingdom)

8:10 pm **Deficient Vertebral Growth in Adolescent Idiopathic Scoliosis**
Vicente Gilsanz, M.D., Ph.D., Children's Hospital Los Angeles (USA)

8:25 pm **Under Development in Trabecular Bone Microarchitecture is Dictated by Level of Motor Function in Children with Cerebral Palsy**
Christopher M. Modlesky, Ph.D., University of Delaware (USA)

8:40 pm **Low Bone Mineral Density and Fractures are Prevalent in Children with Spinal Muscular Atrophy**
Halley M. Wasserman, M.D., Cincinnati Children's Hospital Medical Center (USA)

8:55 pm **Skeletal Benefits of Physical Activitiy in Childhood May Be Greatest for Males with Lower Bone Mineral Content (BMC) and Density (BMD)**
Jonathan A. Mitchell, M.D., Children's Hospital of Philadelphia (USA)

9:15 pm Closing Remarks

Disclosures: Mary Fewtrell-Nothing to disclose; Vicente Gilsanz-Nothing to disclose; Christopher Modlesky-Nothing to disclose; Jonathan Mitchell-Nothing to disclose; Halley Wasserman-Nothing to disclose

DIVERSITY HAPPY HOUR

Sponsored by the ASBMR Membership Engagement and Education Committee and the Diversity Subcommittee.

7:30 pm - 8:30 pm **Sheraton Seattle**

Metropolitan Ballroom A

The ASBMR Diversity Subcommittee looks forward to connecting with attendees and members to celebrate racial and ethnic diversity within the Society. Food and drink will be provided.

Monday, October 12, 2015

Day-At-A-Glance

Time/Event/Location **All locations in the Washington State Convention Center unless otherwise noted**

ASBMR REGISTRATION OPEN

7:30 am - 4:00 pm **Washington State Convention Center**
Atrium Lobby - Level 4

POSTERS OPEN

8:00 am - 3:00 pm **Washington State Convention Center**
Discovery Hall - Hall 4BC

CONCURRENT ORALS: HORMONAL REGULATORS

8:00 am - 9:30 am **Washington State Convention Center**
Room 6C

Moderators:
Marie Lagerquist, Ph.D.
Centre for Bone and Arthritis Research, Sweden
Disclosures: Marie Lagerquist, None

Ling Qin, Ph.D.
University of Pennsylvania, USA
Disclosures: Ling Qin, None

8:00 am **ASBMR 2015 Annual Meeting Young Investigator Award**
1117 **Erythropoietin andFGF23 cross-talk during iron-deficiency anemia**
Erica Clinkenbeard*[1], Keith Stayrook[2], Hitesh Appaiah[3], Taryn Cass[4], Emily Farrow [5], Mircea Ivan[6], Rebecca Chan[7], Ernestina Schipani[8], Thomas Clemens[9], Kenneth White[4]. [1]Indiana University-Purdue University Indianapolis, USA, [2]Department of Pharmacology & Toxicology, Indiana University School of Medicine, USA, [3]Department of Medical & Molecular Genetics Indiana University School of Medicine, USA, [4]Department of Medical & Molecular Genetics, Indiana University School of Medicine, USA, [5]Department of Pediatrics, University of Missouri-Kansas City School of Medicine, USA, [6]Department of Medicine/Hematology-Oncology, Indiana University School of Medicine, USA, [7]Herman B Wells Center for Pediatric Research, Indiana University School of Medicine, USA, [8]Departments of Orthopaedic Surgery & Medicine/Endocrinology, University of Michigan School of Medicine, USA, [9]Department of Orthopaedic Surgery, Johns Hopkins School of Medicine, USA
Disclosures: Erica Clinkenbeard, None

8:15 am **Genetic or Pharmacological Ablation of Fgf23 Ameliorates Progression of Chronic Kidney**
1118 **Disease in Mice**
OLENA ANDRUKHOVA*[1], Svetlana Slavic[2], Sathish Kumar Murali[2], Bill Richards[3], Reinhold G. Erben[2]. [1]INST. OF PHYSIOLOGY, PATHOPHYSIOLOGY & BIOPHYSICS, Austria, [2]Department of Biomedical Sciences, University of Veterinary Medicine, Austria, [3]Amgen Inc, USA
Disclosures: OLENA ANDRUKHOVA, None

8:30 am **Inhibition of Fibroblast Growth Factor Receptor Signaling Partially Rescues**
1119 **Hypophosphatemic Rickets in FGF2 High Molecular Weight Isoform Transgenic Mice**
Liping Xiao*, Erxia Du, Patience Meo Burt, Marja Marie Hurley . University of Connecticut Health Center, USA
Disclosures: Liping Xiao, None

8:45 am **ASBMR 2015 Annual Meeting Young Investigator Award**
1120 **Sorting Nexin 27 Links PTHR Trafficking to the Retromer for Postnatal Bone Growth**
Audrey Chan*[1], Euphemie Landao[1], Thomas Clairfeuille[2], Pei Ying Ng[1], Genevieve Kinna[2], Li Shen Loo[3], Tak Cheng[4], Ming Hao Zheng[1], Rohan Teasdale[2], Wanjin Hong[3], Brett Collins[2], Nathan Pavlos[1]. [1]Cellular Orthopaedic Laboratory, School of Surgery, University of Western Australia, Australia, [2]IMB, University of Queensland, Australia, [3]Institute of Molecular & Cell Biology, A*STAR, Singapore, [4]Cellular Orthopaedic Laboratory, School of Surgery, University of Western Australia, USA
Disclosures: Audrey Chan, None

9:00 am **Thyroid Hormone Receptor β (TRβ) Signaling is Critically Involved in Regulating Secondary**
1121 **Ossification via Promoting Transcription of the IHH Gene in the Epiphysis**
Weirong Xing*[1], Patrick Aghajanian[2], Heather Watt[2], Catrina Alarcon[2], Subburaman Mohan[2]. [1]Musculoskeletal Disease Center, Jerry L. Pettis Memorial Veteran's Admin., USA, [2]Jerry L. Pettis Memorial VA Medical Center, USA
Disclosures: Weirong Xing, None

9:15 am **Osteocytic JAK/STAT signalling controls corticalization of long bones by estradiol and**
1122 **testosterone-dependent mechanisms**
Daechul Cho[1], Narelle McGregor[1], Brett Tonkin[2], Holly Brennan[2], Rachelle Johnson[2], Roger Zebaze[3], David Handelsman[4], T John Martin[2], Natalie Sims*[1]. [1]St. Vincent's Institute of Medical Research, Australia, [2]St. Vincent's Institute of Medical Research, Australia, [3]Austin Health, University of Melbourne, Australia, [4]ANZAC Research Institute, The University of Sydney, Australia
Disclosures: Natalie Sims, None

CONCURRENT ORALS: MICROENVIRONMENT AND BONE MARROW NICHES

8:00 am - 9:30 am **Washington State Convention Center**
Room 6B

Moderators:
Melissa Kacena, Ph.D.
Indiana University School of Medicine, USA
Disclosures: Melissa Kacena, None

Florent Elefteriou, Ph.D.
Vanderbilt University, USA
Disclosures: Florent Elefteriou, None

8:00 am **ASBMR 2015 Annual Meeting Young Investigator Award**
1123 **Osteoblast-Activated Notch1 signaling in Hematopoietic Cells Induces Acute Myeloid leukemia**
Marta Galán-Díez*[1], Aruna Kode[1], Sanil J Manavalan[1], Julie Teruya-Feldstein[2], Govind Bhagat[3], Ellin Berman [4], Stavroula Kousteni[3]. [1]Columbia University Medical Center, USA, [2]Mount Sinai Health System, Icahn School of Medicine at Mount Sinai, USA, [3]Columbia University, USA, [4]MSKCC, USA
Disclosures: Marta Galán-Díez, None

8:15 am **ASBMR 2015 Annual Meeting Young Investigator Award**
1124 **NOTCH Signaling in Skeletal Progenitors is a Critical Determinant in Fracture Repair and Nonunion**
Cuicui Wang*[1], Jason Inzana[2], Anthony Mirando[3], Zhaoyang Liu[2], Jie Shen[4], Regis O'Keefe[4], Hani Awad[2], Matthew Hilton[3]. [1]Washington University in St. Louis, USA, [2]University of Rochester, USA, [3]Duke University, USA, [4]Washington University in St Louis, USA
Disclosures: Cuicui Wang, None

8:30 am 1125 **Transplanted Hematopoietic Stem Cells form Functional Osteoblasts that Deposit Collagen and Repair Bone in a Mouse Model of *Osteogenesis Imperfecta***
Yongren Wu[1], Hai Yao[1], Makio Ogawa[1], Amanda LaRue[2], Meenal Mehrotra*[3]. [1]Medical University of South Carolina, USA, [2]Medical University of South Carolina, Ralph H Johnson VAMC, USA, [3]Medical University of South Carolina & Research Services, Ralph H Johnson VAMC, USA
Disclosures: Meenal Mehrotra, None

8:45 am 1126 **Identification of a Distinct Progenitor Cell within Long Bones that Gives Rise to Bone Marrow Adipocytes In Vivo**
Ryan Berry*[1], Tracy Nelson[1], Rose Webb[1], Clifford Rosen[2], Matthew Rodeheffer[1], Mark Horowitz[1]. [1]Yale University, USA, [2]Maine Medical Center Research Institute, USA
Disclosures: Ryan Berry, None

9:00 am 1127 **Deletion of PTH/PTHrP Receptor in Osteoprogenitors Deregulates Local Bone Marrow Vasculature in Mice**
Cristina Panaroni*, Joy Wu, Joshua Johnson, Ke Yuan, Vinicio de Jesus Perez. Stanford University School of Medicine, USA
Disclosures: Cristina Panaroni, None

9:15 am 1128 **T-cell specific deletion of TIEG alters chemokine expression profiles and results in increased bone mass in mice**
Malayannan Subramaniam*[1], AKM Khyrul Wara[2], Fang Fang[2], Kevin Pitel[1], Mark Feinberg[2], John R. Hawse[1]. [1]Mayo Clinic, USA, [2]Harvard Medical School, USA
Disclosures: Malayannan Subramaniam, None

CONCURRENT ORALS: OSTEOCLASTS II

8:00 am - 9:30 am **Washington State Convention Center**
Room 6A

Moderators:
Mary Nakamura, M.D.
University of California, San Francisco/San Francisco VA Medical Center, USA
Disclosures: Mary Nakamura, None

Xu Feng, Ph.D.
University of Alabama at Birmingham, USA
Disclosures: Xu Feng, None

8:00 am 1129 **Conditional Disruption of *miR17~92* in Osteoclasts Results in Activation of Functional Activity of Osteoclasts and Substantial Loss of Trabecular Bone in Mice**
Kin-Hing William Lau*[1], Virginia Stiffel[1], Matilda Sheng[2]. [1]Jerry L. Pettis Memorial VA Medical Center, USA, [2]Loma Linda University, USA
Disclosures: Kin-Hing William Lau, None

8:15 am 1130 **DNA Demethylation Ameliorates Inflammatory Bone Loss in Scurfy Mice by Modulating both Myeloid and Lymphoid lineages**
Tim Chen*[1], Gaurav Swarnkar[2], Gabriel Mbalaviele[3], Yousef Abu-Amer[4]. [1]Washington University in St. Louis School of Medicine, USA, [2]Department of Orthopaedic Surgery, Washington University School of Medicine, USA, [3]Division of Bone & Mineral Diseases, Department of Internal Medicine, Washington University School of Medicine, USA, [4]Department of Orthopaedic Surgery & Cell Biology & Physiology, Washington University in St. Louis School of Medicine, USA
Disclosures: Tim Chen, None

8:30 am 1131 **ASBMR 2015 Annual Meeting Young Investigator Award**
Osteolytic Macrophages in Inflammatory Bone Resorption of Cherubism Mice Lacking c-Fos
Mizuho Kittaka*[1], Joshua Prather[2], Tomoyuki Mukai[2], Teruhito Yoshitaka[2], Yasuyoshi Ueki[2]. [1]University of Missouri-Kansas City School of Dentistry, USA, [2]University of Missouri-Kansas City School of Dentistry, USA
Disclosures: Mizuho Kittaka, None

8:45 am **A role for V-ATPase V0 domain subunit *e1* in bone homeostasis**
1132 Tak Cheng*[1], Hua Ying[2], An Qin[3], Nathan Pavlos[2], Euphemie Landao[2], Qing Jiang[4], Kerong Dai[3], Ming-Hao Zheng[2]. [1]Centre for Orthopaedic Research, School of Surgery, The University of Western Australia, USA, [2]Centre for Orthopaedic Research, School of Surgery, The University of Western Australia, Australia, [3]Shanghai Key Laboratory of Orthopaedic Implant, Department of Orthopaedics, Shanghai Jiao Tong University School of Medicine, China, [4]Australian-China Joint Centre for Bone & Joint Disease, Nanjing University, China
Disclosures: Tak Cheng, None

9:00 am **ASBMR 2015 Annual Meeting Young Investigator Award**
1133 **Deletion of Plekhm1 in mice increases bone mass by attenuating osteoclast lysosome secretion and bone resorption**
Toshifumi Fujiwara*[1], Shiqiao Ye[1], Takashi Nakamura[2], Stavros C Manolagas[1], Haibo Zhao[3]. [1]Center for Osteoporosis & Metabolic Bone Diseases, Division of Endocrinology & Metabolism, Department of Internal Medicine, University of Arkansas for Medical Sciences & the Central Arkansas Veterans Healthcare System, USA, [2]Department of Biochemistry & Integrative Medical Biology, School of Medicine, Keio University, Japan, [3]Central Arkansas VA Healthcare System, Univ of Arkansas for Medical Sciences, USA
Disclosures: Toshifumi Fujiwara, None

9:15 am **Actin cytoskeleton regulators Nck1 and Nck2 are required for supporting osteoblastic**
1134 **migration, bone formation and bone mass under the control of IGF-1 and for suppressing osteoclastic bone loss**
Smriti Aryal A.C*, Yoichi Ezura , Yayoi Izu, Masaki Noda. Department of molecular pharmacology, Tokyo medical & dental university, Japan
Disclosures: Smriti Aryal A.C, None

CONCURRENT ORALS: OSTEOPOROSIS ASSESSMENT

8:00 am - 9:30 am **Washington State Convention Center**
Room 6E

Moderators:
Fjola Johannesdottir, Ph.D.
University of Cambridge, United Kingdom
Disclosures: Fjola Johannesdottir, None

Kenneth Poole, BM, FRCP, Ph.D.
University of Cambridge, United Kingdom
Disclosures: Kenneth Poole, None

8:00 am **Heritability and Genetic Correlations for Bone Microarchitecture: The Framingham Study**
1135 **Families**
David Karasik*[1], Yanhua Zhou[2], Mary L. Bouxsein[3], Kerry E. Broe[4], L. Adrienne Cupples[2], Serkalem Demissie[2], Douglas P. Kiel[5]. [1]Hebrew SeniorLife; Bar Ilan University, USA, [2]Biostatistics, BU School of Public Health, USA, [3]BIDMC, USA, [4]Institute for Aging Research, HSL, USA, [5]HSL, USA
Disclosures: David Karasik, None

8:15 am **Whole-genome sequencing and deep imputation identifies non-coding variants near *ENI* with**
1136 **large effects on bone mineral density**
Vince Forgetta*[1], Brent Richards[2]. [1]Lady Davis Institute for Medical Research, Canada, [2]McGill University, Canada
Disclosures: Vince Forgetta, None

8:30 am **Femoral Neck BMD is the Preferred Site in the Assessment of Hip Fracture in Elderly Men.**
1137 **(10 Year Follow Up of MrOs Sweden)**
Helena Johansson*[1], Anders Odén[2], Magnus Karlsson[3], Mattias Lorentzon[4], Björn Rosengren[3], Östen Ljunggren[5], Claes Ohlsson[4], Nicholas Harvey[6], Eugene McCloskey[7], John Kanis[7], Dan Mellström[4]. [1]Centre for Metabolic Bone Diseases, University of Sheffield Medical School, Sweden, [2]Centre for Bone & Arthritis Research (CBAR), Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden; Centre for Metabolic Bone Diseases, University of Sheffield, Sheffield, UK;, Sweden, [3]Clinical & Molecular Osteoporosis Research Unit, Department of Clinical Sciences, Lund University & Department of Orthopedics, Skane University Hospital, Malmo, Sweden, Sweden, [4]Centre for Bone & Arthritis Research (CBAR), Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden, Sweden, [5]Department of Medical Sciences, University of Uppsala, Uppsala, Sweden, Sweden, [6]MRC Lifecourse Epidemiology Unit, University of Southampton, Southampton, UK; NIHR Southampton Biomedical Research Centre, University of Southampton & University Hospital Southampton NHS Foundation Trust, Tremona Road, Southampton, UK, United Kingdom, [7]Centre for Metabolic Bone Diseases, University of Sheffield, Sheffield, UK, United Kingdom
Disclosures: Helena Johansson, None

8:45 am **FRAX underestimates hip fracture risk in older men with CKD**
1138
Thomas Nickolas*[1], Stephanie Shiau[2], Kyle Nishiyama[2], Natalia Cortez[2], Elizabeth Shane[2], Maria Rodriquez-Barradas[3], David Rimland[3], Cynthia Gibert[3], Roger Bedimo[3], Amy Justice[4], Julie Womack[4], Michael Yin[2]. [1]Columbia University College of Physicians & Surgeons, USA, [2]Columbia University, USA, [3]Veterans Affairs Medical Center, USA, [4]Yale University, USA
Disclosures: Thomas Nickolas, None

9:00 am **Altered trabecular microarchitecture in youth with type 1 diabetes mellitus**
1139
DEBORAH MITCHELL*, Mary Bouxsein, Madhusmita Misra. MASSACHUSETTS GENERAL HOSPITAL, USA
Disclosures: DEBORAH MITCHELL, None

9:15 am **Reference Point Microindentation Supplements Existing Clinical Factors for Improved**
1140 **Fracture Risk Assessment at the Femoral Neck**
Thomas Jenkins[1], Louise Coutts[1], Stefania D'Angelo[2], Douglas Dunlop[3], Richard Oreffo[4], Cyrus Cooper[2], Nicholas Harvey[5], Philipp Thurner*[6]. [1]Bioengineering Science Research Group, Faculty of Engineering & the Environment, University of Southampton, Southampton, UK, United Kingdom, [2]MRC Lifecourse Epidemiology Unit, University of Southampton, Southampton, United Kingdom, [3]University Hospital Southampton NHS Trust, Southampton, United Kingdom, [4]Centre for Human Development, Stem Cells & Regeneration, Institute for Developmental Sciences, Faculty of Medicine, University of Southampton, Southampton, United Kingdom, [5]MRC Lifecourse Epidemiology Unit, University of Southampton, Southampton, UK, United Kingdom, [6]TU Wien, Austria
Disclosures: Philipp Thurner, None

NETWORKING BREAK

9:30 am - 10:00 am **Washington State Convention Center**
Discovery Hall - Hall 4BC

DISCOVERY HALL OPEN

9:30 am - 3:00 pm **Washington State Convention Center**
Discovery Hall - Hall 4BC

PLENARY ORALS: JOHN H. CARSTEN'S MEMORIAL SESSION: OSTEOPOROSIS-TREATMENT

10:00 am - 11:30 am **Washington State Convention Center**

Room 6E

Moderators:
Michael McClung, M.D.
Oregon Osteoporosis Center, USA
Disclosures: Michael McClung, None

Joy Tsai, M.D.
Massachusetts General Hospital, USA
Disclosures: Joy Tsai, None

10:00 am 1141 Bisphosphonates reduce fracture risk in postmenopausal women with diabetes: Results from FIT and HORIZON trials

Ann Schwartz*[1], Eric Vittinghoff[1], Douglas Bauer[1], Steven R. Cummings[2], Andrew Grey[3], Michael R. McClung[4], Nicola Napoli[5], Ian R. Reid[3], Anne L. Schafer[1], Robert B. Wallace[6], Dennis Black[1]. [1]University of California, San Francisco, USA, [2]California Pacific Medical Center, USA, [3]University of Auckland, New zealand, [4]Oregon Osteoporosis Center, USA, [5]Universita Campus Bio-Medico di Roma, Italy, [6]University of Iowa, USA
Disclosures: Ann Schwartz, Chugai Pharmaceutical

10:15 am 1142 Eighteen Months of Treatment with Abaloparatide Followed by Six Months of Treatment with Alendronate in Postmenopausal Women with Osteoporosis – Results of the ACTIVExtend Trial

Felicia Cosman*[1], Paul Miller[2], Gary Hattersley[3], Edith Lau[4], Peter Alexandersen[5], Thomas Hala[6], Sorica Mustatea[7], Bettina Storgaard Nedergaard[8], Annesofie Krogsaa[9], Jan Slesinger[10], Cristiano Zerbini[11], Ivo Valter[12], Zydrune Visockiene[13], Beata Jendrych[14], Carolina A Moirera Kulak[15], Farid Marquez[16], Alan Harris[17], Greg Williams[17], Ming-Yi (Tristan) Hu[17], D. Black[18], BJ Riis[19], Luis Russo[20], C. Christiansen[21]. [1]Helen Hayes Hospital, [2]Colorado Center for Bone Research, United states, [3]Radius Health, United states, [4]CCBR Hong Kong, China, [5]CCBR Vejle, Denmark, Denmark, [6]CCBR Pardubice, Czech Republic, Czech republic, [7]CCBR Bucharest, Romania, Romania, [8]CCBR Aalborg, DK, Denmark, [9]CCBR Ballerup, DK, Denmark, [10]CCBR Brno, Czech Republic, Czech republic, [11]CEPIC Sao Paolo, Brazil, Brazil, [12]CCBR, Estonia, [13]CCBR Vilnius, Lithuania, Lithuania, [14]CCBR Warsaw, Poland, Poland, [15]SEMPR Curitiba, Brazil, Brazil, [16]Palm Springs Research Center, USA, [17]Radius Health, USA, [18]UC San Francisco, USA, [19]Nordic Bioscience Herleve, Denmark, Denmark, [20]CCBR Rio de Jeniero Brazil, Brazil, [21]Nordic Bioscience Herlev, Denmark, Denmark
Disclosures: Felicia Cosman, Radius Health

10:30 am 1143 Romosozumab Improves Strength at the Lumbar Spine and Hip in Postmenopausal Women With Low Bone Mass Compared With Teriparatide

Tony Keaveny*[1], DB Crittenden[2], MA Bolognese[3], HK Genant[4], K Engelke[5], B Oliveri[6], JP Brown[7], BL Langdahl[8], YC Yang[2], A Grauer[2], C Libanati[9]. [1]UC Berkeley, Berkeley & O.N. Diagnostics, USA, [2]Amgen Inc., USA, [3]The Bethesda Health Research Center, USA, [4]UCSF & Synarc Inc., USA, [5]Synarc Germany, Germany, [6]Hospital de Clínicas, INIGEM, Argentina, [7]Laval University & CHU de Québec (CHUL) Research Centre, Canada, [8]Aarhus University Hospital, Denmark, [9]UCB Pharma, Belgium
Disclosures: Tony Keaveny, Amgen, AgNovos Healthcare; O.N. Diagnostics

10:45 am 1144 **Efficacy of Odanacatib in Postmenopausal Women With Osteoporosis: Subgroup Analyses of Data From the Phase 3 Long-Term Odanacatib Fracture Trial (LOFT)**
Kenneth G. Saag*[1], Peter Alexandersen[2], Claude-Laurent Benhamou[3], Nigel Gilchrist[4], Johan Halse[5], E. Michael Lewiecki[6], Kurt Lippuner[7], Michael McClung[8], Masataka Shiraki[9], Carolyn A. DaSilva[10], Nadia Verbruggen[11], Boyd B. Scott[10], Antonio Lombardi[10]. [1]University of Alabama at Birmingham, USA, [2]Center for Clinical & Basic Research, Denmark, [3]Hôpital d'Orléans-la-Source, France, [4]The Princess Margaret Hospital, New zealand, [5]Osteoporoseklinikken, Norway, [6]New Mexico Clinical Research & Osteoporosis Center, USA, [7]Bern University Hospital, Switzerland, [8]Oregon Osteoporosis Center, USA, [9]Research Institute & Practice for Involutional Diseases, Japan, [10]Merck & Co., Inc., USA, [11]MSD Europe Inc., Belgium
Disclosures: Kenneth G. Saag, Amgen, Merck; Amgen, Lilly, Merck

11:00 am 1145 **Hip BMD by DXA Can Reliably Estimate Reduction in Hip Risk in Osteoporosis Trials: A Meta-Regression**
Dennis Black*[1], Eric Vittinghoff [1], Richard Eastell[2], Mary Bouxsein[3], Charles McCulloch[1], Peggy M. Cawthon[4], Steven R. Cummings[5], Stephanie L. Harrison[5], Anne de Papp[6], Victor Dishy[7], Andreas Grauer[8], Ursula Klause[9], Bruce H. Mitlak[10], Bruce Schneider[11], Sanya Fanous-Whitaker[12], Jeff Zachwieja[13], Chiyuan A. Zhang[1], Douglas Bauer[1]. [1]University of California, San Francisco, USA, [2]University of Sheffield, United Kingdom, [3]Harvard University, USA, [4]San Francisco Coordinating Center; California Pacific Medical Center, USA, [5]San Francisco Coordinating Center, California Pacific Medical Center, USA, [6]Merck & Co., Inc., USA, [7]Daiichi Sankyo, Inc., USA, [8]Amgen Inc., USA, [9]Roche Diagnostics Corporation, Indianapolis, USA, [10]Eli Lilly & Co., USA, [11]Food & Drug Administration, USA, [12]Foundation for the National Institutes of Health, USA, [13]Dairy Research Institute, USA
Disclosures: Dennis Black, None

11:15 am 1146 **Relationship Between Total Hip BMD T-score and Incidence of Nonvertebral Fracture With up to 8 Years of Denosumab Treatment**
Serge Ferrari*[1], C Libanati[2], CJF Lin[2], S Adami[3], Jacques P. Brown[4], F Cosman[5], E Czerwiński[6], LH de Gregório[7], J Malouf[8], J-Y Reginster[9], NS Daizadeh[2], A Wang[2], RB Wagman[2], EM Lewiecki[10]. [1]Geneva University Hospital, Switzerland, [2]Amgen Inc., USA, [3]University of Verona, Italy, [4]Laval University & CHU de Québec Research Centre, Canada, [5]Helen Hayes Hospital, USA, [6]Krakow Medical Center, Poland, [7]CCBR, Brazil, [8]Universitat Autònoma de Barcelona, Spain, [9]University of Liège, Belgium, [10]New Mexico Clinical Research & Osteoporosis Center, USA
Disclosures: Serge Ferrari, MSD, Amgen, Oscare; MSD, Amgen, GSK, UCB, Lilly, Agnovos

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PLENARY ORALS: SIGNALING AND TRANSCRIPTIONAL REGULATION OF BONE

10:00 am - 11:30 am **Washington State Convention Center**
Room 6B

Moderators:
Riku Kiviranta, M.D., Ph.D.
Medical Biochemistry and Genetics and Turku PET Centre, University of Turku, Finland
Disclosures: Riku Kiviranta, None

Gabriela Loots, Ph.D.
Lawrence Livermore National Laboratory, UC Merced, USA
Disclosures: Gabriela Loots, None

10:00 am 1147 **Bmp2 Controls the Runx2/Osx Transition and Regulates Mineral Metabolism in Osteoblasts**
Valerie Salazar*[1], Luciane Capelo[2], Satoshi Ote[3], Vicki Rosen[3]. [1]Harvard School of Dental Medicine, Us, [2]Universidade Federal de São Paulo, Brazil, [3]Harvard School of Dental Medicine, USA
Disclosures: Valerie Salazar, None

10:15 am **Wnt1 Regulates Bone Homeostasis by Regulating the Function of Osteoblasts**
1148 Kyu Sang Joeng*[1], Brendan Lee[1], Yi-Chien Lee[1], Ming-Ming Jiang[2], Terry Bertin[1], Yuqing Chen[1]. [1]Baylor College of Medicine, USA, [2]mjiang@bcm.edu, USA
Disclosures: Kyu Sang Joeng, None

10:30 am **ASBMR 2015 Annual Meeting Young Investigator Award**
1149 **Critical and Interrelated role of Parathyroid Klotho and CaSR in Regulating PTH Synthesis and Parathyroid Gland Growth**
Yi Fan*[1], Tadatoshi Sato[1], Michael Densmore[1], Hannes Olauson[2], Tobias E. Larsson[2], Hakan Toka[3], Beate Lanske[1]. [1]Harvard School of Dental Medicine, USA, [2]Karolinska Institute, Sweden, [3]Nephrology & Hypertension, Eastern Virginia Medical School, USA
Disclosures: Yi Fan, None

10:45 am **ASBMR 2015 President's Award**
1150 **Chondrogenesis is an essential physiological phase of endochondrogenesis but not separated from osteogenesis**
Yinshi Ren*[1], Yan Jing[1], Xin Zhou[2], Junjun Jing[1], Jingya Wang[1], Jian Feng[1]. [1]Baylor College of Dentistry, USA, [2]The University of Texas MD Anderson Cancer Center, USA
Disclosures: Yinshi Ren, None

11:00 am **ASBMR 2015 Annual Meeting Young Investigator Award**
1151 **An Sp7/Dlx transcriptional complex specifies mammalian osteoblasts**
Hironori Hojo*[1], Shinsuke Ohba[2], Xinjun He[3], Lick Pui Lai[3], Andrew McMahon[3]. [1]The Center for Disease Biology & Integrative Medicine, USA, [2]Dept. of Bioengineering, Univ. of Tokyo, Japan, [3]USC Broad-CIRM Center, USA
Disclosures: Hironori Hojo, None

11:15 am **ASBMR 2015 Felix Bronner Young Investigator Award**
1152 **AMPK favors the Smurf1-dependent ubiquitination of Runx2 in vivo**
Junko Shimazu*[1], Jianwen Wei[2], Gerard Karsenty[2]. [1] College of Physicians & Surgeons, Columbia University, USA, [2]College of Physicians & Surgeons, Columbia University, USA
Disclosures: Junko Shimazu, None

MEET-THE-PROFESSOR SESSIONS

11:30 am - 12:30 pm **Washington State Convention Center**
Rooms 615-620

Meet-the-Professor Session: Calcium and Vitamin D: Current Status
Room 615
J. Christopher Gallagher, M.D.
Creighton University Medical Center, USA
Disclosures: J. Christopher Gallagher, None

Meet-the-Professor Session: Fat-Bone Connection
Room 616
Clifford Rosen, M.D.
Maine Medical Center, USA
Disclosures: Clifford Rosen, None

Meet-the-Professor Session: Implementing a Fracture Liaison Service
Room 617
Piet Geusens, M.D., Ph.D.
University Hasselt, Belgium
Disclosures: Piet Geusens, None

Meet-the-Professor Session: Mouse Models of Osteoarthritis: Promises and Pitfalls
Room 618
Martine Cohen-Solal, M.D.
Centre Viggo Petersen, France
Disclosures: Martine Cohen-Solal, None

Meet-the-Professor Session: New Developments in Wnt Signaling and Bone
Room 619

Francesca Gori, Ph.D.
Harvard School of Dental Medicine, Massachusetts General Hospital, USA
Disclosures: Francesca Gori, None

Meet-the-Professor Session: Role of the Microbiome in Skeletal Biology
Room 620

Claes Ohlsson, M.D., Ph.D.
Center for Bone and Arthritis Research at the Sahlgrenska Academy, Sweden
Disclosures: Claes Ohlsson, None

LATE-BREAKING ABSTRACT PRESENTATIONS

11:30 am - 12:30 pm **Washington State Convention Center**
Room 6C

11:30 am
LB-1153 **Reduced Mortality and Subsequent Fracture Risk with Oral Bisphosphonate Treatment in Secondary Fracture Prevention: an Observational 8-Year Follow-Up Study**
Tineke van Geel*[1], Dana Bliuc[2], Piet Geusens[3], Jacqueline Center[2], Geert-Jan Dinant[1], Joop van den Bergh[4], Alastair McLellan[5] John A Eisman[2]. [1]Maastricht University, The Netherlands; [2]Garvan Institute of Medical Research, Australia; [3]Maastricht University Medical Center, The Netherlands; [4]VieCuri Medical Centre of Noord-Limburg, The Netherlands; [5]NHS Education for Scotland, United Kingdom

11:42 am
LB-1154 **Vosoritide (BMN 111) in children with achondroplasia: Results from a Phase 2, open label, sequential cohort, dose-escalation study**
Melita Irving*[1], Carlos Bacino[2], Xiaofan Cao[3], Joel Charrow[4], Valerie Cormier-Daire[5], Paul Harmatz[6], Leonid Katz[3], John Phillips[7], Sagar Vaidya[3], Julie Hoover-Fong[8], Ravi Savarirayan[9]. [1]Guy's and St. Thomas' NHS Foundation Trust, Evelina Children's Hospital, United Kingdom; [2]Baylor College of Medicine, United States; [3]BioMarin Pharmaceutical Inc., United States; [4]Ann and Robert H. Lurie Children's Hospital of Chicago, United States; [5]Institut Imagine, Université Paris Descartes, Hôpital Necker - Enfants Malades, France; [6]UCSF Benioff Children's Hospital Oakland, United States; [7]Vanderbilt University Medical Center, United States; [8]Johns Hopkins University School of Medicine, United States; [9]Royal Children's Hospital Victoria, University of Melbourne, Australia.

11:54 am
LB-1155 **The ACVR1^{R206H} mutant receptor causes Fibrodysplasia Ossificans Progressiva by gaining responsiveness to Activin A**
Aris Economides*[1], Sarah Hatsell[1], Vincent Idone[1], Dana Alessi Wolken[1], Lily Huang[1], Hyon Kim[1], Lili Wang[1], Xialing Wen[1], Kalyan Nannuru[1], Johanna Jimenez[1], LiQin Xie[1], Genevieve Makhoul[1], Rostislav Chernomorsky[1], David D'Ambrosio[1], Richard Corpina[1], Christopher Schoenherr[1], Kieran Feeley[2], Paul Yu[3], Harakiran Nistala[4], George Yancopoulos[1], Andrew Murphy[1]. [1]Regeneron Pharmaceuticals, Inc., United States; [2]Ohio State University College of Medicine, United States; [3]Brigham and Women's Hospital, United States; [4]Regeneron Genetics Center, United States.

12:06 pm
LB-1156 **The Association of Race Ethnicity and Risk of Atypical Femur Fracture in Women Treated with Oral Bisphosphonate Drugs**
Joan Lo*[1], Rita Hui[2], Christopher Grimsrud[3], Malini Chandra[3], Romain Neugebauer[3], Joel Gonzalez[3], Amer Budayr[3], Gene Lau[3], Bruce Ettinger[3]. [1]Kaiser Permanente, United States; [2]Kaiser Permanente California, United States; [3]Kaiser Permanente Northern California, United States.

12:18 pm **Ten Years of Denosumab Treatment in Postmenopausal Women With Osteoporosis: Results**
LB-1157 **From the FREEDOM Extension Trial**

HG Bone*[1], ML Brandi[2], JP Brown[3], R Chapurlat[4], SR Cummings[5], E Czerwinski[6], A Fahrleitner-Pammer[7], DL Kendler[8], K Lippuner[9], J-Y Reginster[10], C Roux[11], E Vittinghoff[12], NS Daizadeh[13], A Wang[13], P Dakin[13], RB Wagman[13], S Papapoulos[14]. [1]Michigan Bone and Mineral Clinic, United States; [2]University of Florence, Italy; [3]Laval University and CHU de Québec Research Centre, Canada; [4]Hôpital Edouard Herriot, France; [5]San Francisco Coordinating Center, CPMC Research Institute, and UCSF, United States; [6]Krakow Medical Centre, Poland; [7]Medical University Graz, Austria; [8]University of British Columbia, Canada; [9]Bern University Hospital, Switzerland; [10]University of Liège, Belgium; [11]Paris Descartes University, France; [12]UCSF, United States; [13]Amgen Inc., United States; [14]Leiden University Medical Center, The Netherlands

FUNDING OPPORTUNITIES IN A CHANGING NIH LANDSCAPE

11:30 am - 12:30 pm **Washington State Convention Center**
Room 6A

This session will be an open forum for discussion with NIH directors and program officers regarding new, future and/or underutilized opportunities for supporting science in bone and mineral research.

CAREER DEVELOPMENT SESSION: MOVING ON IN YOUR CAREER: HOW TO MAKE SUCCESSFUL TRANSITIONS

Sponsored by the ASBMR Membership Engagement and Education Committee and the Women in Bone and Mineral Research Committee.

11:30 am - 12:30 pm **Washington State Convention Center**
Room 606-607

Transitions are an inevitable part of growth and development for any career path, and those transitions are often met with successes and challenges. This session will provide commentary from an experienced ASBMR member on his/her own experiences with career transitions, followed by the opportunity for small group break-out discussions. Small discussion table topics will cover various transition types, including: non-tenure track to tenure-track, industry to academia, graduate student to post-doc, post-doc to first faculty position, and more. This is an interactive session meant for any and all who are expecting to navigate, or who have already navigated, a career transition in the bone and mineral field.

Co-Chairs
Melissa Kacena, Ph.D.
Indiana University School of Medicine, USA
Disclosures: Melissa Kacena, None

Teresita Bellido, Ph.D.
Indiana University School of Medicine, USA
Disclosures: Teresita Bellido, None

Stavroula Kousteni, Ph.D.
Columbia University Medical Center, USA
Disclosures: Stavroula Kousteni, None

Speaker
Vicki Rosen, Ph.D.
Harvard School of Dental Medicine, USA
Disclosures: Vicki Rosen, None

ADULT METABOLIC BONE DISORDERS: CHRONIC KIDNEY DISEASE – METABOLIC BONE DISORDER

MO0001 **CKD effects on cortical bone are age-independent**
Karl Foley[1], Emily Stein[1], Natalia Cortez[1], Kyle Nishiyama[1], Donald McMahon[1], Elizabeth Shane[1], Thomas Nickolas*[2]. [1]Columbia University, USA, [2]Columbia University College of Physicians & Surgeons, USA
Disclosures: Thomas Nickolas, None

MO0002 **Diminished bone quality in tissue formed following the onset of moderate Chronic Kidney Disease in C57BL/6 mice**
Chelsea Heveran*[1], Moshe Levi[2], Karen King[2], Virginia Ferguson[1]. [1]University of Colorado, USA, [2]University of Colorado School of Medicine, USA
Disclosures: Chelsea Heveran, None

MO0003 **Nanomechanical properties of cortical bone in dialysis patients**
Yoshiko Iwasaki*[1], Ryota Kawamata[2], Yuko Mikuni-Takagaki[2], Junichiro Kazama[3], Masafumi Fukagawa[4]. [1]Oita University of Nursing & Health Sciences, Japan, [2]Division of Biochemistry & Molecular Biology, Kanagawa Dental University, Japan, [3]Dialysis center, Niigata University Medical &Dental Hospital, Japan, [4]Division of Nephrology, Endocrinology, & Metabolism, Tokai University School of Medicine, Japan
Disclosures: Yoshiko Iwasaki, None

MO0004 **The impact of dementia in hip fractures in patients receiving dialysis therapy**
Milka Maravic[1], Agnes Ostertag[2], Pablo Urena Torres[3], Martine Cohen-Solal*[4]. [1]department of rheumatology, hopital Lariboisiere, France, [2]Inserm U1132, hopital Lariboisiere, France, [3]Unité de nephrologie et de dialyse, clinique du Landy, France, [4]Centre Viggo Petersen, France
Disclosures: Martine Cohen-Solal, None

MO0005 **The Role of Activin in the Pathogenesis of the CKD-MBD**
Toshifumi Sugatani*[1], Olga Agapova[1], Yifu Fang[1], William Smith[2], Hartmut Malluche[3], Keith Hruska[4]. [1]Washington University, USA, [2]Celgene Corporation, USA, [3]University of Kentucky, USA, [4]Washington University in St. Louis School of Medicine, USA
Disclosures: Toshifumi Sugatani, None

ADULT METABOLIC BONE DISORDERS: HEMATOLOGIC MALIGNANCIES AND BONE

MO0006 **Lim-Domain Protein AJUBA Is A Required Co-Factor For Gfi1 Suppression Of Runx2 In Pre-Osteoblasts In Multiple Myeloma**
Juraj Adamik*[1], Jixin Ding[2], Peng Zhang[1], Sun Quanhong [1], G. David Roodman [3], Deborah L. Galson[1]. [1]University of Pittsburgh, USA, [2]Indiana University, USA, [3]Indiana University & Veterans Administration Medical Centre, USA
Disclosures: Juraj Adamik, None

ADULT METABOLIC BONE DISORDERS: OSTEONECROSIS

MO0007 **Knee Loading Enhances Vessel Remodeling and Bone Healing in a Rat Femoral Head Osteonecrosis Model**
Daquan Liu[1], Jie Li[1], Xinle Li[1], Hiroki Yokota[2], Ping Zhang*[3]. [1]School of Basic Medical Sciences, Tianjin Medical University, China, [2]Department of Biomedical Engineering, Indiana University Purdue University Indianapolis, USA, [3]School of Basic Medical Sciences, Tianjin Medical University, USA
Disclosures: Ping Zhang, None

ADULT METABOLIC BONE DISORDERS: OTHER ADULT METABOLIC BONE DISORDERS

MO0008 **acromegaly and bone health: combined effects of disease activity and gonadal status**
giuseppe guglielmi[1], claudia battista[2], francesca di chio[1], antonio salcuni[3], michelangelo nasuto[1], Renaud Winzenrieth*[4], doris tran[4], alfredo scillitani[3]. [1]Department of Radiology, University of Foggia, Italy, [2]Unit of Endocrinology, "Casa Sollievo della Sofferenza" IRCCS, Italy, [3]Unit of Endocrinology, "Casa Sollievo della Sofferenza" IRCCS, Italy, [4]Department of Clinical Research, Medimaps Group, France
Disclosures: Renaud Winzenrieth, None

MO0009 **Clinical and Biochemical Features of Adults with Hypercalcemia, Hypercalciuria, Elevated Calcitriol and Nephrolithiasis due to CYP24A1 Mutations in a Single Family**
Derek O'Keefe*[1], Peter Tebben[2], Rajiv Kumar[2], Ravinder Singh[2], Yanhong Wu[2], Robert Wermers[2]. [1]Mayo Clinic, Us, [2]Mayo Clinic, USA
Disclosures: Derek O'Keefe, None

MO0010 **Withdrawn**

ADULT METABOLIC BONE DISORDERS: PAGET'S DISEASE

MO0011 **Increased MicroRNA-34a Expression Levels in Paget's Disease of Bone**
Daniela Merlotti*[1], Guido Sebastiani[2], Simone Bianciardi[2], Marco Valentini[2], Stefano Gonnelli[2], Carla Caffarelli[2], Isabella Evangelista[2], Simone Cenci[3], Ranuccio Nuti[2], Francesco Dotta[2], Luigi Gennari[2]. [1]University of Siena, Italy, [2]Department of Medicine, Surgery & Neurosciences University of Siena, Italy, Italy, [3]Division of Genetics & Cell Biology , San Raffaele Scientific Institute, Milan, Italy, Italy
Disclosures: Daniela Merlotti, None

MO0012 **MVNP Alters The Balance Of TBK1 And Optineurin In Osteoclast Lineage Cells To Generate Pagetic Osteoclasts**
Quanhong Sun*[1], Peng Zhang[1], Juraj Adamik[1], Jolene J Windle[2], Laëtitia Michou[3], Jacques P Brown[3], Noriyoshi Kurihara[4], G. David Roodman[5], Deborah Galson[1]. [1]University of Pittsburgh, USA, [2]Virginia Commonwealth University, USA, [3]Laval University, CHU de Quebec Research Centre & CHU de Quebec, Canada, [4]Indiana University, USA, [5]Indiana University & Veterans Administration Medical Center, USA
Disclosures: Quanhong Sun, None

MO0013 **Paget's disease of Bone in Thai: Clinical Characteristics and Genetic Studies of Three Sporadic Cases**
Lalita Wattanachanya*[1], Sumittra Charoenhirunyingyos[2], Voranuch Thanakit[3], Weerapan Khovidhunkit[2]. [1]Kingchulalongkorn memorial hospital, Thailand, [2]Division of Endocrinology & Metabolism, Departments of Medicine, Faculty of Medicine, Chulalongkorn University & King Chulalongkorn Memorial Hospital, Thai Red Cross Society, Bangkok, 10330 Thailand, Thailand, [3]Departments of Pathology, Faculty of Medicine, Chulalongkorn University, & King Chulalongkorn Memorial Hospital, Thai Red Cross Society, Bangkok, 10330 Thailand, Thailand
Disclosures: Lalita Wattanachanya, None

ADULT METABOLIC BONE DISORDERS: PARATHYROID DISORDERS

MO0014 **Changes in BMD and TBS up to 2 years after Surgical or Medical Management of Primary Hyperparathyroidism**
Alice Abraham*[1], Cristiana Cipriani[2], Zhang Chengchen[3], Didier Hans[4], Bilezikian John[5]. [1]Endocrinology fellow, USA, [2]Sapienza University of Rome, Italy, [3]Columbia College of Physicians & Surgeons, Division of Endocrinology, USA, [4]University of Lausanne, Switzerland, [5]Columbia University College of Physicians & Surgeons, Division of Endocrinology, USA
Disclosures: Alice Abraham, None

MO0015 **Comparative Effect of PTH(1-84) on Bone Mineral Density and Trabecular Bone Score (TBS) in Hypoparathyroidism and Osteoporosis**
Cristiana Cipriani*[1], Barbara Silva[2], Mishaela Rubin[3], Natalie Cusano[3], Donald J. Mcmahon[3], Jessica Pepe[4], Sara Piemonte[5], Wen-Wei Fan[3], Juviza K. Rodriguez[3], Federica De Lucia[5], Federica Biamonte[4], Salvatore Minisola[5], John P. Bilezikian[3]. [1]"Sapienza", University of Rome, Italy, [2]Santa Casa de Belo Horizonte & Felicio Rocho Hospital, Division of Endocrinology, Brazil, [3]Metabolic Bone Diseases Unit, Division of Endocrinology, Department of Medicine, College of Physicians & Surgeons, Columbia University, USA, [4]Department of Internal Medicine & Medical Disciplines, "Sapienza" University of Rome, Italy, [5]Department of Internal Medicine & Medical Disciplines, "Sapienza" University of Rome, Italy
Disclosures: Cristiana Cipriani, None

MO0016 **Prevalence of Normocalcemic Primary Hyperparathyroidism among Blood Donors**
Federica De Lucia*[1], Federica Ferrone[1], Vittoria Danese[1], Valeria Fassino[1], Giancarlo Ferrazza[2], Enrico Panzini[3], Jessica Pepe[1], Cristiana Cipriani[1], Frank Blocki[4], Salvatore Minisola[1]. [1]Department of Internal Medicine & Medical Disciplines University of Rome 'Sapienza', Policlinico Umberto I, Viale del Policlinico, 155, 00161 Rome, Italy, Italy, [2]Department of Immunohematology & Transfusion Medicine, University of Rome 'Sapienza', Policlinico Umberto I, Viale del Policlinico, 155, 00161 Rome, Italy, Italy, [3]Department of Immunohematology & Transfusion Medicine, University of Rome 'Sapienza', Policlinico Umberto I, Viale del Policlinico, 155, Italy, [4]DiaSorin, 1951 Northwestern Avenue, Stillwater, MN, USA, USA
Disclosures: Federica De Lucia, None

MO0017 **Quality of Life Changes in Patients with Asymptomatic Primary Hyperparathyroidism. Systematic Review and Meta-analysis**
Naykky Singh Ospina*[1], Spyridoula Maraka[2], Ana E Espinosa De Ycaza[3], Rene Rodriguez Gutierrez[4], Sina Jasmin[5], Michael Gionfriddo[4], Ana Castaneda-Guarderas[4], Alaa Al Nofal[6], Victor Montori[2], Robert Wermers[7]. [1]Mayo Clinic, Rochester, MN, USA, [2]Endocrinology, Mayo Clinic, USA, [3]Mayo Clinic, USA, [4]Knowledge Evaluation Research Unit, Mayo Clinic, USA, [5]Endocrinology, Mayo Clinic, [6]Pediatric Endocrinology, Mayo Clinic, USA, [7]Endocrinolgoy, Mayo Clinic, USA
Disclosures: Naykky Singh Ospina, None

MO0018 **Spontaneous Remission of Primary Hyperparathyroidism - A Case Report**
Barbara Silva*[1], Jessica Fleischer[2], Zachary Lenane[2], Wen-Wei Fan[2], Donald McMahon[2], John Bilezikian[2]. [1]Uni-BH, Santa Casa de Belo Horizonte & Felicio Rocho Hospital, Brazil, Brazil, [2]Columbia University, USA
Disclosures: Barbara Silva, None

MO0019 **Vitamin D Deficiency and Insufficiency in Primary Hyperparathyroidism: Effects on the Trabecular Bone Score**
Marcella Walker[1], Elaine Cong[1], Melissa Sum*[1], James Lee[1], Anna Kepley[1], Chengchen Zhang[1], Didier Hans[2], Shonni Silverberg[1]. [1]Columbia University, USA, [2]Lausanne University, Switzerland
Disclosures: Melissa Sum, None

MO0020 **Primary Hyperparathyroidism: Investigating Mechanisms of Cognitive Dysfunction**
Elaine Cong[1], Marcella D. Walker[2], Melissa Sum*[2], Ronald M. Lazar[2], Yunglin Gazes[2], Anna Kepley[2], Kevin Slane[2], Chen Cheng Zhang[2], Donald J. McMahon[2], Randolph S. Marshall[2], Shonni J. Silverberg[2]. [1]Columbia Presbyterian Medical Center, USA, [2]College of Physicians & Surgeons, Columbia University, USA
Disclosures: Melissa Sum, None

BIOMECHANICS AND BONE QUALITY: ASSESSMENT OF BONE QUALITY AND STRENGTH

MO0021 ***In vivo*** **RPI by BioDent, but not OsteoProbe, Correlates with Bone Tissue-Level Mechanical Properties**
Erin McNerny*[1], Jason Organ[1], Christopher Newman[1], Drew Brown[1], Joseph M. Wallace[2], Matthew R. Allen[1]. [1]Indiana University School of Medicine, USA, [2]Indiana University-Purdue University Indianapolis, USA
Disclosures: Erin McNerny, None

MO0022 **Age and Sex Dependence of Human Vertebral Body Composite Traits Determined Using Statistical Shape and Density Modeling**
Jessica Coogan[1], Travis Eliason[1], Donald Moravits[1], Arthur Nicholls[1], Ellen Quillen[2], Daniel Nicolella[1], Todd Bredbenner*[1]. [1]Southwest Research Institute, USA, [2]Texas Biomedical Research Institute, USA
Disclosures: Todd Bredbenner, None

MO0023 **Assessment Of A Finite Element Model To Reproduce An Ex-Vivo Forward Fall Protocol Leading To Fractured And Non-Fractured Radii**
Helene Follet[1], Edison Zapata*[2], François Duboeuf[3], Jean-Baptiste Pialat[4], David Mitton[5]. [1]INSERM, UMR1033 ; Universite De Lyon, France, [2]Université de Lyon, F-69622; IFSTTAR, LBMC, UMR_T9406. INSERM UMR1033, Université de Lyon, France, [3]INSERM UMR1033, Université de Lyon, France, [4]INSERM UMR1033, Université de Lyon, Department of radiology, Hospital E. Herriot, Hospices Civils de Lyon, France, [5]Université de Lyon, F-69622 ; IFSTTAR, LBMC, UMR_T9406., France
Disclosures: Edison Zapata, None

MO0024 **Combining Microindentation and Monotonic Macroscopic Testing to Bridge Scales in Human Osteonal Bone**
Mohammad Mirzaali, Jakob Schwiedrzik, Suwanwadee Thaiwichai, Philippe Zysset*, Uwe Wolfram. Institute for Surgical Technology & Biomechanics, University of Bern, Switzerland
Disclosures: Philippe Zysset, None

MO0025 **Effects of vitamin C and teriparatide on bone mineral density, quality, and strength in vitamin C-deficient rats**
Masashi Fujii*[1], Naohisa Miyakoshi[2], Yuji Kasukawa[2], Koji Nozaka[2], Toyohito Segawa[2], Kentaro Ouchi[2], Hayato Kinoshita[2], Chie Sato[2], Yoichi Shimada[2]. [1]Akita University, Japan, [2]Akita university graduate school of medicine, Japan
Disclosures: Masashi Fujii, None

MO0026 **Finite Element Methods on Multi-Row Detector CT Imaging to Estimate Elastic Modulus of Human Trabecular Bone**
Cheng Chen*, Elena Letuchy, Ryan Amelon, Anneliese Heiner, Kathleen Janz, Trudy Burns, James Torner, Steven Levy, Punam Saha. The University of Iowa, USA
Disclosures: Cheng Chen, None

MO0027 **Genetic Variability in Fracture Healing Under Phosphate Deficiency**
Amira Hussein*[1], Alexander Wulff[2], Heather Matheny[2], Brenna Hogue[2], Kyle Lybrand[2], Anthony DeGiacomo[2], Louis Gerstenfeld[2], Elise Morgan[3]. [1]Boston University School of Medicine, USA, [2]Orthopaedic Surgery, Boston University School of Medicine, USA, [3]Mechanical Engineering, Boston University, USA
Disclosures: Amira Hussein, None

MO0028 **Glucose-dependent insulinotropic polypeptide (GIP) is required for an optimal bone strength and quality**
Benoît Gobron*[1], Béatrice Bouvard[1], Satoko Kuwahara[2], Sheng Zhang[3], Norio Harada[2], Burton Wice[3], Nobuya Inagaki[2], Erick Legrand[1], Daniel Chappard[1], Guillaume Mabilleau[1]. [1]GEROM-LHEA, LUNAM University, France, [2]Department of Diabetes, Endocrinology & Nutrition, Graduate School of Medicine, Kyoto University, Japan, [3]Department of Internal Medicine, Washington University School of Medicine, USA
Disclosures: Benoît Gobron, None

MO0029 **HIV infection is associated with reduced bone material properties independently of bone mineral density**
Robert Guerri Fernandez*[1], Daniel Prieto-Alhambra[2], Judit Villar-García[1], Xavier Nogués[3], Leonardo Mellibovsky[4], Ana Guelar[5], Natalia García-Giralt[6], Anna March[1], Maria Rodríguez-Sanz[7], Juan Pablo Horcajada[5], Hernando Knobel[5], Adolfo Díez-Pérez[4]. [1]Infectious Diseases. Hospital del Mar., Spain, [2]NIHR Clinician Scientist NDORMS, University of Oxford, United Kingdom, [3]Internal Medicine. Hospital del Mar, Spain, [4]Internal Medicine. Hospital del Mar., Spain, [5]Infectious Diseases. Hospital del Mar, Spain, [6]URFOA. IMIM, Spain, [7]URFOA.IMIM, Spain
Disclosures: Robert Guerri Fernandez, None

MO0030 **Impaired Bone Material Properties are associated with increased fracture risk and severity of vertebral fractures in osteoporosis**
Erik Fink Eriksen*[1], Daysi Duarte Sosa[2]. [1]Dept. of Clinical Endocrinology, Morbid Obesity & Preventive Medicine, Oslo University Hospital, Norway, [2]Dept. of Endocrinology, Morbid Obesity & Preventive Medicine, Oslo University Hospital, Norway
Disclosures: Erik Fink Eriksen, Got the micro indentation device and probe for free from ActiveLife Scientific

MO0031 **Is it time to say goodbye to SMI?**
Michael Doube[1], Phil Salmon*[2], Ava Tivesten[3]. [1]Royal Veterinary College, United Kingdom, [2]Bruker-microCT, Belgium, [3]Sahlgrenska Institute
Disclosures: Phil Salmon, None

MO0032 **Pore Network Architecture Determines Cortical Bone Elasticity During Growth and Aging**
Yohann Bala*[1], Emmanuelle Lefèvre[2], Jean-Paul Roux[1], Cécile Baron[2], Philippe Lasaygues[3], Martine Pithioux[2], Valérie Kaftandjian[4], Hélène Follet[5]. [1]INSERM U1033, Université de Lyon, France, [2]Aix-Marseille Université, CNRS, ISM UMR 7287, 13288 Marseille Cedex 09, France / APHM, Hôpital Sainte Marguerite, IML, Marseille Cedex 09, France, France, [3]Laboratory of Mechanics & Acoustics, UPR CNRS 7051, Aix-Marseille University, Centrale Marseille, 13009 Marseille, France, France, [4]Laboratoire Vibrations Acoustique, INSA Lyon, Campus LyonTech la Doua, 69621 Villeurbanne Cedex, France, France, [5]INSERM UMR 1033, Université de Lyon, France
Disclosures: Yohann Bala, None

MO0033 **Precision Assessment of Biomechanical Testing of the Distal Radius in Cynomolgus Monkeys**
Gabrielle Boyd, Aurore Varela*, Susan Smith. Charles River Laboratories, Canada
Disclosures: Aurore Varela, None

MO0034 **QCT Intra- and Inter-Scanner Precision In Estimation Of Proximal Femur Strength**
SERENA BONARETTI*[1], JULIO CARBALLIDO-GAMIO[2], JOYCE KEYAK[3], ISRA SAEED[4], LIFENG YU[5], MICHAEL BRUESEWITZ[5], ANDREW J. BURGHARDT[2], SUNDEEP KHOSLA[6], THOMAS F. LANG[2]. [1]University of California, San Francisco, USA, [2]Musculoskeletal Quantitative Imaging Research Group, Department of Radiology & Biomedical Imaging, University of California, San Francisco, CA, USA, [3]University of California, Irvine, Irvine, CA, USA, [4]Musculoskeletal Quantitative Imaging Research Group, Department of Radiology & Biomedical Imaging, University of California, San Francisco, CA, USA, USA, [5]Division of Medical Physics, Department of Radiology, College of Medicine, Mayo Clinic, Rochester, MN, USA, [6]Division of Endocrinology, Metabolism & Nutrition, Department of Internal Medicine, College of Medicine, Mayo Clinic, Rochester, MN, USA
Disclosures: SERENA BONARETTI, None

MO0035 **Significant Alterations in Gene Expression Within the Wnt Pathway Contribute to the Natural Variation in Bone Mechanical Function**
Stephen Schlecht*[1], Lauren Smith[1], Erin Bigelow[1], Yueqin Yang[2], Amber Cathey[1], Bonnie Nolan[1], Eugene Manley[1], Melissa Ramcharan[1], Maureen Devlin[3], Joseph Nadeau[4], Karl Jepsen[1]. [1]University of Michigan, USA, [2]Tsinghua University, China, [3]Department of Anthropology, USA, [4]Pacific Northwest Research Institute, USA
Disclosures: Stephen Schlecht, None

MO0036 **The Effect of Age on Cortical Bone Crack Initiation and Crack Growth Toughness**
Travis Eliason*[1], Todd Bredbenner[1], Lorena Havill[2], Daniel Nicolella[1]. [1]Southwest Research Institute, USA, [2]Texas Biomedical Research Institute, USA
Disclosures: Travis Eliason, None

MO0037 **Tumor necrosis factor negative regulation on the bone mineral density and trabecular bone architecture texture in chickens**
Lixian Liu*[1], Hua Rong[1], Qihua Li[1], Dahai Gu[1], Zhiqiang Xu[1], Tengfei Dou[1], Ying Huang[1], Limei Huang[1], Hongyong Zhang[2], Marinus F.W.te Pas[3], Changrong Ge[1], Junjing Jia[4]. [1]Yunnan Provincial Key Laboratory of Animal Nutrition & Feed Techology, Yunnan Agricultural University, China, [2]Department of Medicine, University of California at Davis Medical Center Sacramento, USA, [3] Animal Breeding & Genetics Centre, Wageningen UR Livestock Science, Wagenngen, Netherlands, [4]Yunnan Provincial Key Laboratory of Animal Nutrition & Feed Techology, Yunnan Agricultural University, Peoples republic of china
Disclosures: Lixian Liu, None

MO0038 **Validation of CT-based Assessment of Bone Mineralization and Heterogeneity**
Maleeha Mashiatulla*, Ryan D. Ross, D. Rick Sumner. Rush Medical University, USA
Disclosures: Maleeha Mashiatulla, None

BIOMECHANICS AND BONE QUALITY: DISUSE OSTEOPOROSIS – ANIMAL MODELS

MO0039 **Hindlimb Suspension Plus Immobilization Exaggerates Sarcopenia but not Osteopenia**
Toni Speacht*[1], Andrew Krause[2], Jennifer Steiner[3], Charles Lang[4], Henry Donahue[5]. [1]Division of Musculoskeletal Sciences, Department of Orthopaedics & Rehabilitation, Penn State College of Medicine, United states, [2]Division of Musculoskeletal Sciences, Department of Orthopaedics & Rehabilitation, Penn State College of Medicine, USA, [3]Department of Cellular & Molecular Physiology, Penn State College of Medicine, USA, [4]Department of Cellular & Molecular Physiology, Department of Surgery, Penn State College of Medicine, USA, [5]Division of Musculoskeletal Sciences, Department of Orthopaedics & Rehabilitation, Department of Cellular & Molecular Physiology, Penn State College of Medicine, USA
Disclosures: Toni Speacht, None

MO0040 **Pre-Treatment with Bisphosphonates Mitigates Bone Loss at the Tibia Metaphysis and Femoral Neck During Subsequent Hindlimb Unloading and Recovery**
Jessica Brezicha*[1], Scott Lenfest[2], Jennifer Kosniewski[2], Coleman Leach[1], Jeremy Black[1], Susan Bloomfield[1], Matthew Allen[3], Harry Hogan[1]. [1]Texas A&M University, USA, [2]Texas A&M, USA, [3]Indiana University School of Medicine, USA
Disclosures: Jessica Brezicha, None

BIOMECHANICS AND BONE QUALITY: GENERAL

MO0041 **Age Matters: Correlating Age with Spectroscopic Markers of Fragility Risk**
Adele Boskey*[1], Lyudmila Spevak[1], Elizabeth Boskey[2], Robert Recker[3]. [1]Hospital for Special Surgery, USA, [2]Boston University, USA, [3]Creighton University, USA
Disclosures: Adele Boskey, None

MO0042 **Global Phosphorylation of Bone Matrix and Bone Fragility**
Grazyna Sroga*, Deepak Vashishth. Rensselaer Polytechnic Institute, USA
Disclosures: Grazyna Sroga, None

MO0043 **Hip Fracture Risk during Simulated Falls: Influence of Pelvis Impact Angle and Hip Muscle Forces**
Woochol Joseph Choi*[1], Stephen Robinovitch[2]. [1]Chapman University, USA, [2]Simon Fraser University, Canada
Disclosures: Woochol Joseph Choi, None

MO0044 **Optimizing Pulsed Electromagnetic Field (PEMF) Signals to Reduce Bone Loss in the Ovariectomized (OVX) Rat**
Caroline Androjna*[1], Erik I. Waldorff[2], Nianli Zhang[2], James T. Ryaby[2], Maciej Z. Zborowski[3], Ronald J. Midura[3]. [1]Lerner Research InstituteCleveland Clinic, USA, [2]Orthofix Inc., USA, [3]Cleveland Clinic, USA
Disclosures: Caroline Androjna, Orthofix Inc

BIOMECHANICS AND BONE QUALITY: MECHANICAL LOADING EFFECTS IN INTACT ANIMALS

MO0045 **Low-Impact Multi-Directional Mechanical Loading Using a Fine-Wire Climbing Substrate Enhances Mechanical Properties of the Mouse Femur**
Jason Organ*[1], Benjamin Vickery[1], Jeffery Joll[1], Kelly Biro[1], Craig Byron[2], Joseph Wallace[3], Matthew Allen[1]. [1]Indiana University School of Medicine, USA, [2]Mercer University, USA, [3]Indiana University-Purdue University at Indianapolis, USA
Disclosures: Jason Organ, None

MO0046 **Structural and Mechanical Improvements to Bone are Strain Dependent in a Targeted Tibial Loading Model of Young Female C57BL/6 Mice**
Alycia Berman*[1], Creasy Clauser[2], Caitlin Wunderlin[2], Max Hammond[3], Joseph Wallace[4]. [1]Indiana University - Purdue University Indianapolis, USA, [2]Indiana University Purdue University Indianapolis, USA, [3]Purdue University, USA, [4]Indiana University Purdue University Indianapolis (IUPUI), USA
Disclosures: Alycia Berman, None

BIOMECHANICS AND PHYSICAL ACTIVITY: PHYSICAL ACTIVITY AND EXERCISE

MO0047 **A 7-Year School-Based Exercise Intervention Improves Musculoskeletal Traits in Both Genders and Reduces in Girls with Each Year with the Program the Fracture Risk**
Jesper Fritz*[1], Björn Rosengren[2], Magnus Dencker[2], Caroline Karlsson[2], Magnus Karlsson[2]. [1]Skane University Hospital, Sweden, [2]Clinical & Molecular Osteoporosis Research Unit, Departments of Orthopedics & Clinical Sciences, Lund University, Sweden
Disclosures: Jesper Fritz, None

MO0048 **Peri-menarcheal Upper Extremity Bone Loading Index Reflects Post-menarcheal DXA Outcomes**
Jodi Dowthwaite*[1], Kristen Dunsmore[2], Paula Rosenbaum[3], Carol Sames[3], Tamara Scerpella[4]. [1]SUNY Upstate Medical University;Syracuse University, USA, [2]Syracuse University, USA, [3]SUNY Upstate Medical University, USA, [4]University of Wisconsin, USA
Disclosures: Jodi Dowthwaite, None

MO0049 **Restoring Standing Height: Yet Another Benefit of Exercise for Osteoporosis**
Belinda Beck*, Benajmin Weeks, Amy Harding, Sean Horan, Steven Watson. Griffith University, Australia
Disclosures: Belinda Beck, None

MO0050 **Sclerostin Serum Level Immediate Variation After Physical Activity in Young Females**
Marie-Eva Pickering[1], Marie Simon[2], Karim Chikh[3], Marie Christine Carlier[3], Cyrille Confavreux*[4]. [1]Université de Lyon-INSERM UMR1033-Hospices Civils de Lyon, France, [2]Hospices Civils de Lyon, France, [3]Université de Lyon - Department of Biochemistry, Hospices Civils de Lyon, France, [4]Université de Lyon-INSERM U1033- Department of Rheumatology Hospices Civils de Lyon, France
Disclosures: Cyrille Confavreux, None

MO0051 **Vitamin C and E supplementation reduces the beneficial skeletal effects of strength training in elderly men**
Astrid Kamilla Stunes*[1], Unni Syversen[2], Sveinung Berntsen[3], Gøran Paulsen[4], Tonje H. Stea[3], Ken J. Hetlelid[3], Hilde Lohne-Seiler[3], Thomas Bjørnsen[3], Glenn Haugeberg[5]. [1]Norwegian University of Science & Technology, Norway, [2]Department of Cancer Research & Molecular Medicine, Norwegian University of Science & Technology, (NTNU), Trondheim, Norway & Department of Endocrinology, St Olav's University Hospital, Trondheim, Norway, Norway, [3]Department of Public Health, Sport & Nutrition, University of Agder, Norway, Norway, [4]Department of Physical Performance, Norwegian School of Sport Sciences, Oslo, Norway & Norwegian Olympic Sport Center, Oslo, Norway, Norway, [5]Department of Rheumatology, Hospital of Southern Norway Trust, Kristiansand, Norway & Department of Neuroscience, Division of Rheumatology, Norwegian University of Science & Technology (NTNU), Trondheim, Norway, Norway
Disclosures: Astrid Kamilla Stunes, None

BONE ACQUISITION AND PEDIATRIC BONE DISORDERS: ASSESSMENT OF BONE DISEASE IN CHILDREN

MO0052 **Adenine based mouse model of juvenile chronic kidney disease: preliminary bone and mineral findings**

Oleh Akchurin*[1], Sara Gardenghi[2], Paraskevi Rea Oikonomidou[2], Adele Boskey[3], Stefano Rivella[2]. [1]Cornell University, USA, [2]Weill Cornell Medical College, USA, [3]Hospital for Special Surgery, USA

Disclosures: Oleh Akchurin, None

MO0053 **Low Bone Mineral Density and Fractures are Prevalent in Children with Spinal Muscular Atrophy**

Halley Wasserman*, Lindsey Hornung, Peggy Stenger, Meilan Rutter, Brenda Wong, Irina Rybalsky, Jane Khoury, Heidi Kalkwarf. Cincinnati Children's Hospital Medical Center, USA

Disclosures: Halley Wasserman, None

BONE ACQUISITION AND PEDIATRIC BONE DISORDERS: BONE DEVELOPMENT AND BONE MASS ACCRUAL

MO0054 **Bone Robusticity in Two Distinct Skeletal Dysplasias: an Evaluation of the Second Metacarpal, a Surrogate for Bone Strength**

Josephine Marino[1], Karl Jepsen[2], Erin Carter[3], Cathleen Raggio*[4]. [1]Hospital for Special Surgery, USA, [2]Department of Orthopaedic Surgery, University of Michigan, USA, [3]Kathryn O. & Alan C. Greenberg Center for Skeletal Dysplasias, Hospital for Special Surgery, USA, [4]Pediatric Orthopaedics, Hospital for Special Surgery, USA

Disclosures: Cathleen Raggio, None

MO0055 **Decreased Vertebral Dimensions and Increased Spine Flexibility in Girls And Patients With Adolescent Idiopathic Scoliosis**

Tishya Wren*[1], Skorn Ponrartana[2], Carissa Fisher[1], Patricia Aggabao[1], Vicente Gilsanz[1]. [1]Children's Hospital Los Angeles, USA, [2]Children's Hosptial Los Angeles, USA

Disclosures: Tishya Wren, None

MO0056 **Side-to-side Differences in Bone Strength and Microstructure in Children and Adolescents with a Distal Radius Fracture**

Mikko Maatta*[1], Heather Macdonald[2], Douglas Race[2], Lindsay Nettlefold[2], Kishore Mulpuri[3], Heather McKay[2]. [1]University of British Columbia, Canada, [2]Centre for Hip Health & Mobility, Canada, [3]British Columbia Children's Hospital, Canada

Disclosures: Mikko Maatta, None

MO0057 **Underdevelopment in trabecular bone microarchitecture is dictated by level of motor function in children with cerebral palsy**

Christopher Modlesky*[1], Harshvardhan Singh[1], Daniel Whitney[1], Freeman Miller[2]. [1]University of Delaware, USA, [2]Nemours AI duPont Hospital for Children, USA

Disclosures: Christopher Modlesky, None

BONE ACQUISITION AND PEDIATRIC BONE DISORDERS: EFFECTS OF BONE ACTIVE DRUGS IN CHILDREN

MO0058 **Denosumab treatment of severe disuse osteoporosis in a boy with Werdnig-Hoffmann disease**

Stepan Kutilek*. Klatovy Hospital, Czech republic

Disclosures: Stepan Kutilek, None

MO0059 **Improved Functional Mobility with Asfotase alfa Treatment in Childhood Hypophosphatasia**

Katherine Madson*[1], Dawn Phillips[2], Cheryl Rockman-Greenberg[3], Amy Reeves[1], Kenji P Fujita[4], Scott Moseley[4], David Thompson[4], Michael Whyte[1]. [1]Shriners Hospital for Children, USA, [2]University of North Carolina Division of Physical Therapy, USA, [3]University of Manitoba, Canada, [4]Alexion Pharmaceuticals, USA

Disclosures: Katherine Madson, Honoraria from Alexion Pharmaceuticals

MO0060 **Treating Low Bone Mass with Calcium and Vitamin D Supplementation in Girls with Adolescent Idiopathic Scoliosis (AIS) – A Randomized Double-blinded Placebo-controlled Trial**

Tsz Ping Lam*[1], Benjamin Hon Kei Yip[1], Echo Ka Ling Tsang[1], Fiona Wai Ping Yu[1], Kenneth Kin Wah To[2], Yuk Wai Lee[1], Kwong Man Lee[3], Bobby Kin Wah Ng[1], Jack Chun Yiu Cheng[1]. [1]Department of Orthopaedics & Traumatology, The Chinese University of Hong Kong, Hong kong, [2]School of Pharmacy, The Chinese University of Hong Kong, Hong kong, [3]Lee Hysan Clinical Research Laboratories, The Chinese University of Hong Kong, Hong kong

Disclosures: Tsz Ping Lam, None

BONE MARROW MICROENVIRONMENT AND NICHES: BONE AND HEMATOPOIESIS

MO0061 **Bone marrow niche crippled by obesity is dependent on potent bone marrow HSC transplants for repopulation**

Divya Krishnamoorthy*[1], Benjamin J. Adler[2], Tee Pamon[2], Jeyantt Srinivas Sankaran[2], Danielle M. Frechette[3], Clinton T. Rubin[2]. [1]SUNY Stony Brook University, USA, [2]Stony Brook University, USA, [3]Stony Brook, USA

Disclosures: Divya Krishnamoorthy, None

MO0062 **EPO Attenuation of Bone Formation Is Mediated by the Plexin B1-Sema4D Pathway**

Sahar Hiram-Bab*[1], Tamar Liron[1], Namit Deshet-Unger[1], Moshe Mittelman[1], Max Gassmann[2], Martina Rauner[3], Ben Wielockx[4], Drorit Neumann[1], Yankel Gabet[1]. [1]Tel Aviv University, Israel, [2]Institute of Veterinary Physiology, Vetsuisse Faculty, & Zurich Center for Integrative Human Physiology (ZIHP), University of Zurich, Swaziland, [3]Department of Medicine III, Dresden University Medical Center, Germany, [4]Institute of Clinical Chemistry und Laboratory medicine, Department of Clinical Pathobiochemistry, University of Technology, Dresden, Germany

Disclosures: Sahar Hiram-Bab, None

BONE MARROW MICROENVIRONMENT AND NICHES: BONE AND VASCULATURE

MO0063 **Bone Marrow Blood Vessel Ossification is Present in 1-month-old Fischer-344 rats and Coincides with Altered Bone and Hematological Parameters in Advanced Age**

Sophie Guderian*[1], Mary Ann McLane[2], Rhonda Prisby[3]. [1]The University of Delaware, USA, [2]The University of Delaware Department of Medical Laboratory Sciences, USA, [3]The University of Delaware Bone & Microcirculation Lab, USA

Disclosures: Sophie Guderian, None

BONE MARROW MICROENVIRONMENT AND NICHES: GENERAL

MO0064 **Bone marrow mesenchymal stem cells are recruited towards expansion of fat depots, a migration accelerated by high fat diet and disrupted by mechanical signals**

Danielle Frechette*, Divya Krishnamoorthy, Vihitaben Patel, Meilin Chan, Clinton Rubin. Stony Brook University, USA

Disclosures: Danielle Frechette, None

BONE MARROW MICROENVIRONMENT AND NICHES: OSTEOIMMUNOLOGY

MO0065 **Alternative activation of macrophages by IL-10 promotes efferocytosis of osteoblasts**

Megan Michalski*, Amy Koh, Hernan Roca, Laurie McCauley. University of Michigan School of Dentistry, USA

Disclosures: Megan Michalski, None

BONE TUMORS AND METASTASIS: BONE TUMOR MICROENVIRONMENT

MO0066 **A Novel Sequestosome-1 / p62-ZZ Domain Inhibitor Prevents Gfi1-Mediated Epigenetic Suppression of Runx2 in Myeloma Exposed Preosteoblasts**

Rebecca Silbermann*[1], Juraj Adamik[2], Dan Zhou[3], Xiang-Qun Xie[2], Noriyoshi Kurihara[3], Deborah Galson[2], G. David Roodman[3]. [1]Indiana University School of Medicine, USA, [2]University of Pittsburgh, USA, [3]Indiana University, USA

Disclosures: Rebecca Silbermann, Celgene

MO0067 **Etoposide directs apoptosis and myeloid driven cell clearance with net negative impacts on bone**
Amy Koh*, Megan Michalski, Benjamin Sinder, James Rhee, Laurie McCauley. University of Michigan, USA
Disclosures: Amy Koh, None

MO0068 **Osteocytes are an Important Mediator of Bone Pain in Myeloma**
Masahiro Hiasa*[1], Tatsuo Okui[2], Yuki Nagata[2], Yohance M Allette[3], Matthew S Ripsch[3], Jesús Delgado-Calle[4], Teresita Bellido[4], G David Roodman[2], Lilian Plotkin[4], Fletcher White[3], Toshiyuki Yoneda[2]. [1]Indiana University School of Medicine, USA, [2]Department of Medicine, Hematology Oncology, Indiana University School of Medicine, USA, [3]Department of Anesthesia, Paul & Carole Stark Neurosciences Research Institute, USA, [4]Department Anatomy & Cell Biology, Indiana University School of Medicine, USA
Disclosures: Masahiro Hiasa, None

BONE TUMORS AND METASTASIS: GENERAL

MO0069 **Curcumin promoting osteosarcoma cell death by activating miR-125a/ ERRα/ROS pathway**
Peng Chen*[1], Haibing Wang[2], Junjian Wang[3], Wei He[2]. [1]First School of Clinical Medicine of Guangzhou University of Chinese Medicine, USA, [2]First Affiliated Hospital of Guangzhou University of Chinese Medicine, China, [3]Cancer Center, UCDavis, USA
Disclosures: Peng Chen, None

MO0070 **Enhanced sensitivity of bone seeking breast cancer cells to Metformin by targeting Runx2-IGF-1Rβ and AMPK-Erk pathway**
Manish Tandon*, Ahmad Othman, Zujian Chen, Jitesh Pratap. Rush University Medical Center, USA
Disclosures: Manish Tandon, None

MO0071 **P38 MAPK regulates the Wnt-inhibitor Dickkopf-1 in osteolytic prostate cancer cells**
Andrew Browne[1], Andy Göbel[1], Martina Rauner[1], Lorenz Hofbauer[1], Tilman Rachner*[2]. [1]Technische Universität Dresden, Department of Medicine III, Germany, [2]University Hospital Dresden, Germany
Disclosures: Tilman Rachner, None

MO0072 **Runx2 is associated with poor survival in dogs with malignant mammary tumors**
Kristi Milley*[1], Eman Saad[2], Syu Mi Sam[2], Barbara Bacci[3], Judith Nimmo[4], Samantha Richardson[2], Janine Danks[5]. [1]RMIT University, Australia, [2]School of Medical Sciences, RMIT University, Australia, [3]School of Veterinary Science, The University of Melbourne, Australia, [4]Australian Specialised Animal Pathology Laboratories, Australia, [5]School of Medical Science, RMIT University, Australia
Disclosures: Kristi Milley, None

BONE TUMORS AND METASTASIS: MECHANISMS OF BONE METASTASIS

MO0073 **CD44 and RUNX2 Peptides Prevents Osteoclastogenesis by Suppressing RANKL Expression in Prostate Cancer PC3 cells**
Meenakshi Chellaiah*[1], Aditi Gupta[2]. [1]University of MarylandDental School, Us, [2]University of Maryland, USA
Disclosures: Meenakshi Chellaiah, None

BONE TUMORS AND METASTASIS: THERAPEUTIC TARGETS FOR BONE TUMORS

MO0074 **Withdrawn**

MO0075 **TRAIL is not a proapoptotic but rather anti-apoptotic mediator for osteoclasts to stimulate their differentiation and survival**
Hirofumi Tenshin*[1], Jumpei Teramachi[2], Asuka Oda[3], Ryota Amachi[1], Masahiro Hiasa[4], Keiichiro Watanabe[1], Shingen Nakamura[3], Hirokazu Miki[5], Itsuro Endo[3], Eiji Tanaka[1], Toshio Matsumoto[6], Masahiro Abe[3]. [1]Department of Orthodontics & Dentofacial Orthopedics, Institute of Biomedical Sciences, Tokushima University Graduate School, Japan, [2]Department of Histology & Oral Histology,Institute of Biomedical Sciences, Tokushima University Graduate School, Japan, [3]Department of hematology, endocrinology & metabolism, Institute of Biomedical Sciences, Tokushima University Graduate School, Japan, [4]Department of Biomaterials & Bioengineering, Institute of Biomedical Sciences, Tokushima University Graduate School, Japan, [5]Division of Transfusion Medicine & Cell Therapy, Tokushima University Hospital, Japan, [6]Fujii Memorial Institute of Medical Sciences, Tokushima University, Japan
Disclosures: Hirofumi Tenshin, None

MO0076 **$\alpha_v\beta_3$-Fumagillin-prodrug Nanoparticles and Zoledronic Acid Additively Reduce Tumor Angiogenesis Through Differential Effects on Endothelial and Myeloid Cells**
Alison Esser*[1], Anne Schmieder[1], Michael Ross[1], Jingyu Xiang[1], Xinming Su[1], Grace Cui[1], Huiying Zhang[1], Xiaoxia Yang[1], John S. Allen[1], Chidananda Mudalagiriyappa[1], Samual Wickline[1], Rebecca Aft[1], Dipanjan Pan[2], Gregory Lanza[1], Kathy Weilbaecher[1]. [1]Washington University in St. Louis, USA, [2]University of Illinois at Urbana-Champaign, USA
Disclosures: Alison Esser, None

CHONDROCYTES AND CARTILAGE MATRIX: ARTICULAR CARTILAGE

MO0077 **A high-throughput screening identified fluocinolone acetonide as a potent synergistic factor of TGF-β3-mediated chondrogenesis of BMSCs for articular surface repair**
Emilio Hara*[1], Takuo Kuboki[2]. [1]Okayama University Graduate School of Medicine, Dentistry & Pharmaceutical Sciences, , [2]Department of Oral Rehabilitation & Regenerative Medicine, Graduate School of Medicine, Dentistry & Pharmaceutical Sciences, Japan
Disclosures: Emilio Hara, None

MO0078 **Involvement of Core binding factor β in maintenance of the articular cartilage through interaction with Runx**
Xiangguo Che*, Clara Yongjoo Park, Na-Rae Park, Yu-Ra Choi, Da-In Yeo, Je-Yong Choi. Kyungpook National University, School of Medicine, South korea
Disclosures: Xiangguo Che, None

MO0079 **Long-Acting Parathyroid Hormone Analog as a Therapy for Osteoarthritis in mice**
Tomoyuki Watanabe*, Thomas Gardella, Tatsuya Kobayashi, Braden Corbin, Monica Reyes, Henry Kronenberg, John Potts. Massachusetts General Hospital, USA
Disclosures: Tomoyuki Watanabe, Chugai Pharmaceutical Co.Ltd.

MO0080 **Mechanical responsive miR-365 contributes to osteoarthritis development**
Xu Yang*[1], Yuanhe Wang[1], Yingjie Guan[2], Qian Chen[2], Kang Sun[1]. [1]Affiliated Hospital of Medical College of Qingdao University, China, [2]Alpert Medical School of Brown University, USA
Disclosures: Xu Yang, None

MO0081 **P34HB film promote cell adhesion and proliferation in vitro and cartilage repair in vivo**
Na Fu*[1], Yunfeng Lin[2]. [1]Sichuan University, Peoples republic of china, [2]Sichuan University, China
Disclosures: Na Fu, None

MO0082 **Protein Malnutrition affects cartilage quality and could contribute to osteoarthritis development**
CEDRIC LAVET*, Patrick AMMANN. Division of Bone Diseases, Department of Internal Medicine Specialties, Geneva University Hospital & Faculty of Medicine., Switzerland
Disclosures: CEDRIC LAVET, None

CHONDROCYTES AND CARTILAGE MATRIX: GENERAL

MO0083 **Delayed bone fracture healing in mice due to the knockout of CaSR gene in chondrocytes**
Zhiqiang Cheng*[1], Alfred Li[2], fuqing song[2], Hanson Ho[2], dolores shoback[2], Chia-ling Tu[2], wenhan chang[2]. [1]University of California, San Francisco, USA, [2]Department of Veterans Affairs Medical Center, NCIRE, University of California, San Francisco, CA, USA., USA
Disclosures: Zhiqiang Cheng, None

MO0084 **Estrogen via Estrogen Receptor α Promotes Mandibular Condylar Chondrogenesis**
Jennifer Robinson*[1], Jing Chen[1], Manshan Xu[1], Thomas Choi[1], Kenneth Korach[2], Helen H. Lu[1], Sunil Wadhwa[1]. [1]Columbia University, USA, [2]National Institutes of Health, USA
Disclosures: Jennifer Robinson, None

MO0085 **Halofuginone Attenuates Osteoarthritis by Inhibition of TGF-β activity and H-type Vessel Formation in Subchondral Bone**
Zhuang Cui*[1], Janet Crane[1], Hui Xie[1], Xin Jin[1], Gehua Zhen[1], Changjun Li[1], Liang Xie[1], Long Wang[1], Qin Bian[1], Tao Qiu[1], Mei Wan[1], Sheng Ding[2], Bin Yu[3], Xu Cao[1]. [1]Johns Hopkins University School of Medicine, USA, [2]University of California, San Francisco, USA, [3]Nanfang Hospital, Southern Medical University, China
Disclosures: Zhuang Cui, None

CHONDROCYTES AND CARTILAGE MATRIX: NON-COLLAGEN MATRIX PROTEINS

MO0086 **A bioactive perlecan/HSPG2 IV-3 subdomain promotes chondrocyte condensation**
Jerahme Martinez*, Mary C. Farach-Carson, Brian Grindel, Jose Olmos. Rice University, USA
Disclosures: Jerahme Martinez, None

CHONDROCYTES AND CARTILAGE MATRIX: ORIGIN, DIFFERENTIATION, APOPTOSIS

MO0087 **Regulation of Chondrocyte Differentiation by miR-483**
Britta Anderson*[1], Audrey McAlinden[2]. [1]Washington University in St. Louis, USA, [2]Washington University in St. Louis, Department of Orthopaedic Surgery, USA
Disclosures: Britta Anderson, None

ENERGY METABOLISM AND BONE: DIABETES AND BONE (ANIMAL MODELS)

MO0088 **Bone density and strength are significantly compromised in the db/db mouse model of diabetes**
Rana Samadfam*[1], Erik C. Rocheford[2], Joe Cornicelli[2], Gabrielle Boyd[1], Susan Smith[1]. [1]Charles River Laboratories, Canada, [2]Charles River Laboratories, USA
Disclosures: Rana Samadfam, None

MO0089 **Disruption of Glucocorticoid Signaling in Osteoblasts Prevents Diet-induced Obesity and Metabolic Dysregulation**
Sarah Kim*[1], Holger Henneicke[2], Sylvia Gasparini[2], Lee Thai[2], Markus Seibel[3], Hong Zhou[2]. [1]ANZAC Research Institute, Australia, [2]Bone Research Program, ANZAC Research Institute, The University of Sydney, Australia, [3]Department of Endocrinology & Metabolism, Concord Hospital, The University of Sydney, Australia
Disclosures: Sarah Kim, None

MO0090 **Effect of Hydrogenated Coconut Oil High Fat Diet on Bone Mass in Streptozotocin-induced Type 1 Diabetic Mice**
Adriana Carvalho*[1], Katherine Motyl[2], Francisco De Paula[1], Clifford Rosen[2]. [1]University of Sao Paulo, Brazil, [2]Maine Medical Center Research Institute (MMCRI), USA
Disclosures: Adriana Carvalho, None

MO0091 **Glucose Fluctuations in Diabetes Have Targeted Effects on the Osteocyte *In Vitro* and *In Vivo***
Donna Pacicca*[1], Tammy Brown[1], Josh Wirtz[1], Karen Kover[1], Yun Yan[1], Dara Watkins[1], Pei Tong[1], Lynda Bonewald[2]. [1]Children's Mercy Hospital, USA, [2]University of Missouri - Kansas City, USA
Disclosures: Donna Pacicca, None

MO0092 **Metformin Increases Bone Mass, Reduces Adipocyte Size and Significantly Changes Circulating Metabolites in B6 Mice Only During States of Energy Excess**
Michaela Reagan*[1], Michele Moschetta[2], Yawara Kawano[2], Mark Horowitz[3], Karla Salem[2], Mary Bouxsein[4], Daisy Huynh[2], Juliette Bouyssou[2], Aldo Roccaro[2], Clifford Rosen[5], Irene Ghobrial[2]. [1]Dana-Farber Cancer Institute/ Harvard Medical School, Us, [2]Dana-Farber Cancer Institute, USA, [3]Yale University, USA, [4]Beth Israel Deaconess Medical Center, USA, [5]Maine Medical Center Research Institute, USA
Disclosures: Michaela Reagan, None

ENERGY METABOLISM AND BONE: FAT AND BONE

MO0093 **Arachidonic Acid Reduces Bone Mass Without Influencing Visceral Adiposity in Growing Obese Rats**
Ivy Mak*, Krystyna Wang, Paula Lavery, Sherry Agellon, Hope Weiler. McGill University, Canada
Disclosures: Ivy Mak, None

MO0094 **Bone Marrow Adipose Tissue (BMAT) in Short Bowel Syndrome (SBS)**
Francisco Jose De Paula*[1], Luciana Parreiras-e-Silva[2], Jessica Bonella[2], Iana Araújo[2], Carlos Salmon[3], Júlio Marchini[2], Vivian Suen[2], Marcello Nogueira-Barbosa[2], Jorge Elias Jr.[2]. [1]School of Medicine of Ribeirao Preto - USP, Br, [2]Ribeirao Preto Medical School, USP, Brazil, [3]Faculty of Philosophy, Sciences & Arts of Ribeirao Preto, USP, Brazil
Disclosures: Francisco Jose De Paula, None

MO0095 **Exercise diminishes obesity-associated Marrow Fat as quantified by Magnetic Resonance Imaging (MRI)**
Maya Styner*[1], Martin Styner[2], Gabriel Pagnotti[3], Xin Wu[4], Buer Sen[4], Gunes Uzer[5], Zhihui Xie[4], Mark Horowitz[6], Clinton Rubin[3], Janet Rubin[4]. [1]University of North Carolina, Chapel Hill, School of Medicine, USA, [2]Departments of Computer Science & Psychiatry , University of North Carolina at Chapel Hill, USA, [3]Department of Biomedical Engineering, State University of New York, Stony Brook, NY, USA, [4]Department of Medicine, University of North Carolina at Chapel Hill, USA, [5]University of North Carolina at Chapel Hill, USA, [6]Department of Orthopedics & Rehabilitation, Yale University, New Haven, CT, USA
Disclosures: Maya Styner, None

MO0096 **High fat diet mediated inflammation contributes to the development of osteoarthritis: Role of the innate immune system**
Evangelia Kalaitzoglou*, MaryBeth Humphrey, Jacquelyn Herron. OUHSC, USA
Disclosures: Evangelia Kalaitzoglou, None

MO0097 **Male, But Not Female, *Trpm8-/-* Mice Have Impaired Core Temperature Regulation, Altered Body Composition, and Low Bone Mass With Age**
Katherine Motyl*[1], Daniel Brooks[2], Mary Bouxsein[2], Clifford Rosen[1]. [1]Maine Medical Center Research Institute, USA, [2]Beth Israel Deaconess Medical Center, Harvard Medical School, USA
Disclosures: Katherine Motyl, None

ENERGY METABOLISM AND BONE: GENERAL

MO0098 **Aromatic Amino Acids Restore the Impaired Anabolic Effect to PTH Associated With A Low Protein Diet**
Mona El Refaey, Mark Hamrick, Ke-Hong Ding, Qing Zhong, William Hill, Xing-ming Shi, Mohammed Elsalanty, Nicole Howie, Monte Hunter, Meghan McGee-Lawrence, Jianrui Xu, Wendy Bollag, Carlos Isales*. Georgia Regents University, USA
Disclosures: Carlos Isales, None

MO0099 **Dietary restriction of methionine affects bone structure differently in young male and female mice**
Jason Plummer[1], Frantz Perodin[1], Mark Horowitz[2], David Orentreich[1], Julie Hens*[1]. [1]Orentreich Foundation for the Advancement of Science, USA, [2]Yale Medical School, USA
Disclosures: Julie Hens, None

MO0100 **Down-regulation of Sirtuin type 1 (Sirt 1) expression in bone marrow of anorexia nervosa mouse model: potential involvement in osteoporotic phenotype**
Olfa Ghali*[1], DAMIEN LETERME[2], ANNE RESONET[2], SEVERINE DELPLACE[2], PIERRE MARCHANDISE[2], FLORE MIELLOT[2], PIERRE HARDOUIN[2], CHRISTOPHE CHAUVEAU[2]. [1]Laboratory of bone diseases inflammatory (PMOI) EA 4490, France, [2]PMOI-EA 4490, France
Disclosures: Olfa Ghali, None

MO0101 **LCN2 knock out mice have an unexpected osteopenic phenotype. Association with altered energy metabolism**
Nadia Rucci*[1], Mattia Capulli[2], Sara Gemini-Piperni[2], Antonio Maurizi[2], Anna Teti[2]. [1]University of L'Aquila, Italy, [2]Department of Biotechnological & Applied Clinical Sciences, University of L'Aquila, Italy
Disclosures: Nadia Rucci, None

MO0102 **Thermoneutral Housing Prevents Premature Age-Related Cancellous Bone Loss in Mice**
Urszula T. Iwaniec*[1], Kenneth Philbrick[1], Carmen Wong[1], Dawn Olson[1], Arianna Kahler-Quesada[1], Adam Branscum[1], Russell Turner[2]. [1]Oregon State University, USA, [2]Oegon State University, USA
Disclosures: Urszula T. Iwaniec, None

GENETIC DISORDERS OF THE MUSCULOSKELETAL SYSTEM: ANIMAL MODELS

MO0103 ***Fkbp10*** **deletion in osteoblast and joint tissues leads respectively to qualitative but not quantitative defects in bone, and a postnatal contracture phenotype seen in Bruck syndrome**
Caressa Lietman*[1], Zhechao Ruan[1], Ingo Grafe[1], Elda Munivez[1], Yuqing Chen[1], Hao Ding[2], Xiaohong Bi[2], Catherine Ambrose[2], Nadja Fratzl-Zelman[3], Paul Roschger[3], MaryAnn Weis[4], David Eyre[4], Deborah Krakow[5], Brendan Lee[1]. [1]Baylor College of Medicine, USA, [2]University of Texas Health Science Center at Houston, USA, [3]Ludwig Boltzmann Institute of Osteology, Austria, [4]University of Washington, USA, [5]University of California at Los Angeles, USA
Disclosures: Caressa Lietman, None

MO0104 ***Gnas*** **Inactivation Adversely Affects Cortical Bone Quality by Altering Osteoclast and Osteocyte Activity During Bone Remodeling**
Girish Ramaswamy*, Hyunsoo Kim, Deyu Zhang, Yongwon Choi, Frederick Kaplan, Robert Pignolo, Eileen Shore. University of Pennsylvania, USA
Disclosures: Girish Ramaswamy, None

MO0105 **An Optimized In Vivo Chemical Screening Regimen For Osteoactive Compound Discovery in the Regenerating Zebrafish Tail Fin**
Adrian Monstad-Rios*[1], Ronald Kwon[2]. [1]University of Washington, United states, [2]University of Washington, USA
Disclosures: Adrian Monstad-Rios, None

MO0106 **Cause of Abnormal Bone Mineralization in X-Linked Hypophosphatemia**
Baozhi Yuan*[1], Abigail Radcliff[2], Ryley Zastrow[3], Ying Liu[4], Jian Feng[5], Robert Blank[6], Marc Drezner[7]. [1]Department of Medicine, University of Wisconsin-Madison & GRECC, William S. Middleton Memorial Veterans Hospital, USA, [2]Department of Medicine, University of Wisconsin-Madison & GRECC, William S. Middleton Veterans Hospital, USA, [3]University of Wisconsin-Madison, USA, [4]Baylor College of Dentristy, Texas A&M Health Science Center, USA, [5]Baylor College of Dentistry, Texas A&M Health Science Center, USA, [6]Medical College of Wisconsin & Clement J Zablocki Veterans Administration Hospital, USA, [7]University of Wisconsin, USA
Disclosures: Baozhi Yuan, None

MO0107 **Collaborative cross Mice in a GWA Study Reveal New Candidate Genes for Bone Microarchitecture**
Roei Levy*[1], Richard Mott[2], Fuad Iraqi[1], Yankel Gabet[1]. [1]Tel Aviv University, Israel, [2]Oxford University, United Kingdom
Disclosures: Roei Levy, None

MO0108 **Development of a database and web portal for murine models of skeletal variation**
Caibin Zhang[1], Pujan Joshi[2], Seung-Hyun Hong[2], Cheryl Ackert-Bicknell[3], John Sundberg[4], Douglas Adams[1], Dong-Guk Shin[2], David Rowe*[1]. [1]University of Connecticut Health Center, USA, [2]University of Connecticut, USA, [3]University of Rochester, USA, [4]The Jackson Laboratory, USA
Disclosures: David Rowe, None

MO0109 **MicroCT-Based Barcoding Reveals Novel High Bone Mass Mutations in Zebrafish**
Philippe Huber, Jane Lee, Claire Watson, Marjorie Thompson, Sarah McMenamin, David Parichy, Ronald Kwon*. University of Washington, USA
Disclosures: Ronald Kwon, None

MO0110 **Mutations in *Lrp5* Improve Bone Properties and Osteoblast Function In Mice with Osteogenesis Imperfecta**
Christina Jacobsen*[1], Erin Spiller[2], Kyung-Eun Lim[3], Alexander Robling[3], Matthew Warman[4]. [1]Boston Children's HospitalHarvard Medical School, USA, [2]Keck School of Medicine, University of Southern California, USA, [3]Indiana University, USA, [4]Boston Children's Hospital, Harvard University School of Medicine, Howard Hughes Medical Institute, USA
Disclosures: Christina Jacobsen, None

MO0111 **Osteogenesis Imperfecta Causes Splenomegaly and Elevated Osteoclast Progenitor Numbers in OIM Mice**
Brya Matthews*[1], Emilie Roeder[1], Mara O'Brien[1], Danka Grcevic[2], Ivo Kalajzic[1]. [1]University of Connecticut Health Center, USA, [2]University of Zagreb, Croatia
Disclosures: Brya Matthews, None

GENETIC DISORDERS OF THE MUSCULOSKELETAL SYSTEM: MONOGENIC BONE DISEASES

MO0112 **Identification of the mutations in the prostaglandin transporter gene, *SLCO2A1* and clinical characterization in Korean patients with pachydermoperiostosis**
Sihoon Lee*[1], So Young Park[2], Yumie Rhee[3]. [1]Gachon University School of Medicine, South korea, [2]Cheil General Hospital, South korea, [3]Yonsei University College of Medicine, South korea
Disclosures: Sihoon Lee, None

MO0113 **Mild bone phenotype in a young adult man with homozygous p.Val667Met mutation in LRP5 gene: the culprit gene**
Corinne Collet*[1], Agnes Ostertag[2], Thomas Funck-Brentano[3], Jean-Louis Laplanche[1], Marie-Christine de Vernejoul[3], Martine Cohen-Solal[4]. [1]Department of biochemistry & Genetics, hopital Lariboisiere, France, [2]Inserm U1132, hopital Lariboisiere, France, [3]Inserm U1132 & university Paris 7, hopital Lariboisiere, France, [4]Centre Viggo Petersen, France
Disclosures: Corinne Collet, None

GENETIC DISORDERS OF THE MUSCULOSKELETAL SYSTEM: OTHER DISEASES

MO0114 **Identification of Novel BMD Associated Genes Using Integrated Genome-Wide Analyses Employing DNA Methylations and Transcript Levels in Bone Biopsies from Postmenopausal Women**
Sjur Reppe*[1], Tonje G. Lien[2], Ole K. Olstad[3], Vigdis T. Gautvik[4], Ingrid K. Glad[2], Kaare M. Gautvik[5]. [1]Oslo University Hospital, Ullevaal, Norway, [2]Department of Mathematics, University of Oslo, Norway, [3]Oslo University Hospital, Department of Medical Biochemistry, Norway, [4]University of Oslo, Institute of Basic Medical Sciences, Norway, [5]Lovisenber Diakonale Hospital, Norway
Disclosures: Sjur Reppe, None

MO0115 **Osteoblasts from Type V OI patients demonstrate gain-of-function for mineralization despite decreased COL1A1 expression**
ADI REICH*[1], Alison Bae[2], Aileen Barnes[2], Wayne Cabral[2], Aleksander Hinek[3], Jennifer Stimec[4], Suvimol Hill[5], David Chitayat[6], Joan Marini[2]. [1]NIH, USA, [2]Bone & Extracellular Matrix Branch, NICHD, NIH, USA, [3]Physiology & Experimental Medicine Program, Heart Center, Hospital for Sick Children, University of Toronto, Canada, [4]Division of Diagnostic Imaging, Department of Pediatrics, Hospital for Sick Children, University of Toronto, Canada, [5]Diagnostic Radiology Department, NIH Clinical Center, NIH, USA, [6]The Prenatal Diagnosis & Medical Genetics Program, Department of Obstetrics & Gynecology, Mount Sinai Hospital, University of Toronto, Canada
Disclosures: ADI REICH, None

HORMONAL REGULATORS: CALCITONIN AND OTHER HORMONES

MO0116 **The Role of Wnt10b in Antiresorptive Therapy for Ovariectomy-Induced Osteoporotic Rats**
Jia-Fwu Shyu*[1], Hung-Shu Ma[2], Jung-Tzu Cheng[2], Tzu-Hui Chu[2], Wei-Yu Chen[2], Yen-Nien Ting[2]. [1]National Defense Medical Center, Taiwan, [2]Department of Biology & Anatomy, National Defense Medical Center, Taiwan
Disclosures: Jia-Fwu Shyu, None

HORMONAL REGULATORS: FGF23 AND OTHER PHOSPHATONINS

MO0117 **Effects of genetic ablation of parathyroid hormone on the induction of FGF23 by dietary phosphate**
Sherri-Ann Burnett-Bowie*, Marie Demay. Massachusetts General Hospital, USA
Disclosures: Sherri-Ann Burnett-Bowie, None

MO0118 **Phosphate Regulates Production and Post-Translational Modification of FGF23**
Yuichi Takashi*[1], Yuka Kinoshita[2], Nobuaki Ito[3], Michiko Hori[3], Manabu Taguchi[3], Seiji Fukumoto[1]. [1]Fujii Memorial Institute of Medical Sciences, Tokushima University, Japan, [2]Division of Nephrology & Endocrinology, The University of Tokyo Hospital, Jordan, [3]Division of Nephrology & Endocrinology, The University of Tokyo Hospital, Japan
Disclosures: Yuichi Takashi, None

HORMONAL REGULATORS: PARATHYROID HORMONE AND CALCIUM SENSING RECEPTORS

MO0119 **Calorie restriction changes bone metabolism by a pathway both GH-IGF-1 axis and others in rat**
Seiichiro Shimauchi*[1], Masato Tomita[1], Isao Shimokawa[2], Makoto Osaki[1]. [1]Department of Orthopaedic Surgery, Graduate School of Biomedical Sciences, Nagasaki University, Japan, [2]Investigative Pathology, Graduate School of Biomedical Sciences, Nagasaki University, Japan
Disclosures: Seiichiro Shimauchi, None

MO0120 **Diphtheria Toxin- and GFP-PTX-based mouse models of acquired hypoparathyroidism and treatment with a long-acting parathyroid hormone analog**
Ruiye Bi*[1], Tomoyuki Watanabe[1], Yi Fan[2], Thomas Gardella[1], Michael Mannstadt[1]. [1]Massachusetts general hospital, USA, [2]Harvard School of Dental Medicine, USA
Disclosures: Ruiye Bi, None

MO0121 **Effects of Abaloparatide on the Expression of Bone Resorption- and Formation-related Factors in Osteoblastic Cells; a Comparison with Teriparatide**
Akito Makino*, Hideko Takagi, Hiroyuki Sugiyama, Tsunefumi Kobayashi, Yoshinori Kasahara. Teijin Institute for Bio-Medical Research, Teijin Pharma Limited, Japan
Disclosures: Akito Makino, Teijin Pharma Limited

MO0122 **The Calcium-Sensing Receptor Supports the Growth and Survival of Breast Cancer Cells By Stimulating Parathyroid Hormone-related Protein Production in Calcium Rich Environments**
Wonnam Kim*, Pamela Dann, Karena Swan, John Wysolmerski. Yale School of Medicine, USA
Disclosures: Wonnam Kim, None

HORMONAL REGULATORS: SEX HORMONES AND GLUCOCORTICOIDS

MO0123 **Cyp11a1 Expression In Bone Is Associated With Aromatase Inhibitor-Related Bone Loss**
MARIA RODRIGUEZ SANZ*[1], NATALIA GARCIA-GIRALT[1], DANIEL PRIETO-ALHAMBRA[2], SONIA SERVITJA[3], SUSANA BALCELLS[4], ROSANGELA PECORELLI[5], ADOLFO DÍEZ-PÉREZ[5], DANIEL GRINBERG[4], IGNASI TUSQUETS[3], XAVIER NOGUES[5]. [1]IMIM (Hospital del Mar Research Institute), Red Temática de Investigación Cooperativa en Envejecimiento y Fragilidad (RETICEF), ISCIII, Barcelona, Spain., Spain, [2]Nuffield Department of Orthopaedics, Rheumatology & Musculoskeletal Sciences, Oxford. NIHR Musculoskeletal Biomedical Research Unit, University of Oxford, Oxford, UK., United Kingdom, [3]Medical Oncology Department, Hospital del Mar, Universitat Autònoma de Barcelona, IMIM (Hospital del Mar Research Institute), Barcelona, Spain., Spain, [4]Departament de Genètica, Universitat de Barcelona, IBUB, Centro de Investigación Biomédica en Red de Enfermedades Raras (CIBERER), ISCIII, Barcelona, Spain., Spain, [5]Internal Medicine Department, Hospital del Mar, Universitat Autònoma de Barcelona, Barcelona, Spain., Spain
Disclosures: MARIA RODRIGUEZ SANZ, None

MO0124 **Enzalutamide Reduces the Bone Mass in the Axial but not the Appendicular Skeleton in Male Mice**
Jianyao Wu*[1], Sofia Movérare-Skrtic[1], Anna E Börjesson[1], Marie K Lagerquist[2], Klara Sjögren[1], Sara H Windahl[1], Antti Koskela[3], Louise Grahnemo[2], Ulrika Islander[2], Anna S Wilhelmson[4], Åsa Tivesten[4], Juha Tuukkanen[3], Claes Ohlsson[1]. [1]Centre for Bone & Arthritis Research, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Sweden, [2]Centre for Bone & Arthritis Research, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden, [3]Department of Anatomy & Cell Biology, Medical Research Center, University of Oulu, Finland, [4]The Wallenberg Laboratory for Cardiovascular & Metabolic Research, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Sweden
Disclosures: Jianyao Wu, None

MO0125 **Estrogen and Androgen Differentially regulate RUNX2: Genome-wide analysis with implications to gender-dependent control of bone formation and resporption**
Anthony Martin[1], Jiali Yu[1], Jian Xiong[1], Jie Ji[1], Anna Borjesson[2], Sara Windahl[2], Paul Kostenuik[3], Yankel Gabet[4], Nyam-Osor Chimge[1], Dustin Schones[5], Claes Ohlsson[2], Baruch Frenkel*[1]. [1]University of Southern California, USA, [2]Centre for Bone & Arthritis Research, Institute of Medicine, Gothenburg University, [3]Phylon Pharma Services, USA, [4]Tel Aviv University, Israel, [5]City of Hope, USA
Disclosures: Baruch Frenkel, None

MO0126 **High-fat diet can elicit diverse effects on bone in relation with different sex hormone status**
Shinya Tanaka*[1], Takuto Tsuchiya[2], Akinori Sakai[3], Hiromi Odd[1]. [1]Saitama Medical University, Japan, [2]University of Occupational & Environment Health, Japan, [3]University of Occupational & Environmental Health, Japan
Disclosures: Shinya Tanaka, None

HORMONAL REGULATORS: VITAMIN D AND ANALOGS

MO0127 **Broader Transcriptional Activity of Vitamin D Receptor (VDR) in the Absence of 1,25-dihydroxyvitamin D in Human Cells**
Bruno Ferraz-de-Souza*[1], Pedro L F Costa[2], Eduardo C Teodoro[2], Maria L Katayama[3], Maria A K Folgueira[3], Monica M França[2]. [1]Univ of Sao Paulo School of Medicine (FMUSP), Brazil, [2]Endocrinology/LIM-18, Univ of Sao Paulo School of Medicine, Brazil, [3]Oncology/LIM-24, Univ of Sao Paulo School of Medicine, Brazil
Disclosures: Bruno Ferraz-de-Souza, None

MO0128 **CKD induces intrinsic alterations in osteoblast response to 1,25D**
Renata Pereira*[1], Nadine Khouzam[1], Richard Bowen[1], Earl Freymiller[2], Isidro Salusky[1], Katherine Wesseling-Perry[3]. [1]David Geffen School of Medicine at UCLA, USA, [2]School of Dentistry, UCLA, USA, [3]UCLA Medical Center, USA
Disclosures: Renata Pereira, None

MO0129 **Differential Effects of Vitamin D2 vs. Vitamin D3 on Bone are Associated with Variations in Free 25-Hydroxyvitamin D**
Rene Chun*[1], Renata Pereira[2], Tonnie Huijs[3], Leon Swinkels[3], Ivan Hernandez[4], Rui Zhou[5], Nancy Liu[5], John Adams[5], Martin Hewison[4]. [1]UCLA/Orthopedic Hospital Research Center, Us, [2]Dept of Pediatric Nephrology, David Geffen School of Medicine at UCLA, USA, [3]Future Diagnostics, Netherlands, [4]Centre for Endocrinology, Diabetes & Metabolism, The University of Birmingham, United Kingdom, [5]Dept of Orthopaedic Surgery, UCLA-Orthopaedic Hospital Research Center, USA
Disclosures: Rene Chun, None

MO0130 **Examination of VDR/RXR/DRIP205 interaction, intranuclear kinetic and DNA binding in ras-transformed keratinocytes and its implication for designing optimal vitamin D therapy in cancer**
Sylvester Jusu*[1], John Presley[2], Richard Kremer[3]. [1]Royal Victoria Hospital, Canada, [2]McGill University, Canada, [3]Supervisor, Canada
Disclosures: Sylvester Jusu, None

MO0131 **Gender Differences in Vitamin D Metabolism in MSCs from Pre-Pubertal Subjects**
Julie Glowacki*[1], Brian Ruggiero[1], Kristina Christoph[1], Bonnie Padwa[2]. [1]Brigham & Women's Hospital, USA, [2]Boston Children's Hospital, USA
Disclosures: Julie Glowacki, None

MO0132 **Mouse and Human Bacterial Artificial Chromosomes Encoding the *CYP24A1* Loci Rescue the Ability of *Cyp24a1* Null Mice to Catabolize 25-Hydroxyvitamin D_3 to 24,25-Dihydroxyvitamin D_3 and 25-Hydroxyvitamin D_3-26,23-Lactone**
Alex Carlson*[1], Martin Kaufmann[2], Rene St-Arnaud[3], Glenville Jones[2], J. Wesley Pike[1]. [1]University of Wisconsin-Madison, USA, [2]Queen's University, Canada, [3]McGill University, Canada
Disclosures: Alex Carlson, None

MO0133 **Optimization of an Elisa for the Direct Measurement of Free 25OH Vitamin D**
Nicolas Heureux*[1], Leon Swinkels[2], Fabienne Mathieu[1], Tonnie Huijs[2], Ernst Lindhout[2], Gregg Mayer[2], Mike Martens[2]. [1]DIAsource Immunoassays, Belgium, [2]Future Diagnostics Solutions, Netherlands
Disclosures: Nicolas Heureux, DIAsource Immunoassays

MO0134 **RNA- and ChIP-sequencing Analyses Identify Gene Networks Modulated by 1,25-Dihydroxyvitamin D_3 in Mouse Intestine and Directly Regulated by the Hormone-activated Vitamin D Receptor**
Seong Min Lee*, Mark Meyer, Nancy Benkusky, Lori Plum, Hector DeLuca, J. Wesley Pike. University of Wisconsin-Madison, USA
Disclosures: Seong Min Lee, None

MO0135 **Up-regulation of CYP24A1 splicing variants (CYP24A1-SV) expression is associated with vitamin D metabolic abnormality in insulin deficient diabetes mellitus**
Hironori Yamamoto*[1], Mari Tajiri[2], Otoki Nakahashi[2], Mariko Ishiguro[3], Eiji Takeda[2], Yutaka Taketani[2]. [1]University of Jin-ai, Jp, [2]University of Tokushima, Japan, [3]Jin-ai University, Japan
Disclosures: Hironori Yamamoto, None

MECHANOBIOLOGY: CELLULAR AND MOLECULAR EFFECT OF MECHANICAL LOADING AND UNLOADING

MO0136 **A Novel Mechanically-Induced Osteocyte/Th17 Cell Signaling Mechanism**
Travis McCumber*, Kristen Drescher, Diane Cullen. Creighton University, USA
Disclosures: Travis McCumber, None

MO0137 **Acute Negative Feedback Autoregulation During Bone Mechanotransduction**
Leah Worton, Dewayne Threet, Brandon Ausk, Edith Gardiner, Steven Bain, Ronald Kwon, Ted Gross, Sundar Srinivasan*. University of Washington, USA
Disclosures: Sundar Srinivasan, None

MO0138 **Application of Mechanical Vibration to Enhance Orthodontic Tooth Movement – The Science Behind It**
Dawei Liu*. Marquette University School of Dentistry, USA
Disclosures: Dawei Liu, None

MO0139 **Interpretation of Gene Expression During Immobilization – Don't Miss the Boat**
Jens Bay Vegger*[1], Annemarie Brüel[2], Jesper Skovhus Thomsen[2]. [1]Aarhus University, Denmark, [2]Department of Biomedicine, Health, Aarhus University, Denmark
Disclosures: Jens Bay Vegger, None

MO0140 **Low Intensity Vibrations Alter Macrophage Phenotype**
Suphannee Pongkitwitoon[1], Eileen Weinheimer-Haus[2], Timothy Koh[2], Stefan Judex*[1]. [1]Stony Brook University, USA, [2]University of Illinois at Chicago, USA
Disclosures: Stefan Judex, None

MECHANOBIOLOGY: CELLULAR AND MOLECULAR MECHANOSENSING

MO0141 **"Static" Osteoblasts Placed in Contact with Osteoblasts Previously Subject to Low Intensity Vibration Increases Proliferation, Gap Junction Based Cell-to-Cell Communication and Mineralization**
M. Ete Chan*, Michael Lopez, Dorothy Yuan, Clinton T. Rubin. Stony Brook University, USA
Disclosures: M. Ete Chan, None

MO0142 **Mechanobiological Modulation of Ca^{2+} Oscillations in Osteocytes of Intact Mouse Calvaria by Medium Intensity Focused Ultrasound**
Minyi Hu*, Daniel Gibbons, Jian Jiao, Yi-Xian Qin. Stony Brook University, USA
Disclosures: Minyi Hu, None

MO0143 **Strain Derived Fluid Flow Explains Observed Alignment of New Osteons towards the Main Direction of Loading in the Compact Bone**
Majid Nazemi*, James D. Johnston, David M. L. Cooper. University of Saskatchewan, Canada
Disclosures: Majid Nazemi, None

MO0144 **T-type Voltage-Sensitive Calcium Channels Mediate Mechanically Induced Intracellular Calcium Oscillations by Regulating Intracellular and Endoplasmic Reticulum Calcium Dynamics in Osteocytes**
Genevieve Brown*, Prajesh Desai, X. Edward Guo. Columbia University, USA
Disclosures: Genevieve Brown, None

MECHANOBIOLOGY: GENERAL

MO0145 **BIPHASIC BEHAVIOR AND SITE- AND GENDER-SPECIFICITY OF pQCT-ASSESSED "DISTRIBUTION/QUALITY" RELATIONSHIPS CONCERNING TORSION STRENGTH THROUGHOUT THE HUMAN TIBIA**
Gustavo Cointry[1], Laura Nocciolino[1], Jörn Rittweger[2], Jose Ferretti*[3], Ricardo Capozza[1]. [1]Centro de Estudios de Metabolismo Fosfo-Cálcico, Argentina, [2]German Space Agency (DLR), Germany, [3]National University of Rosario, Argentina
Disclosures: Jose Ferretti, None

MO0146 **Early Stage of Osteoarthritis Development is Associated with Substantial Weakening in Cartilage Nanomechanical Properties**
Wei Tong*[1], Basak Doyran[2], Qing Li[3], Haoruo Jia[4], Xianrong Zhang[5], Ling Qin[4], Lin Han[3]. [1]Perelman school of medicine, USA, [2]School of Biomedical Engineering, Science & Health Systems, Drexel University,, PA, United States, USA, [3]School of Biomedical Engineering, Science & Health Systems, Drexel University, USA, [4]Department of Orthopaedic Surgery, University of Pennsylvania, USA, [5]Department of Physiology, School of Basic Medical Sciences, Wuhan University, China
Disclosures: Wei Tong, None

MO0147 **IL-36 inhibits TGF-B-mediated collagen expression by suppressing nuclear localization of Smad2 and causes development of BRONJ-like lesions in mice**
Sol Kim*[1], Reuben Kim[1], Drake Williams[1], Cindy Lee[1], Terresa Kim[1], Ki-Hyuk Shin[1], Mo Kang[1], No-Hee Park[1], Songtao Shi[2], Jennifer Towne[3]. [1]UCLA School of Dentistry, USA, [2]University of Pennsylvania School of Dental Medicine, USA, [3]Amgen Inc, USA
Disclosures: Sol Kim, None

MO0148 **The Effects of Decellularisation on the Mechanical Properties of Bone, and Subsequent Recellularisation of the Samples**
MOHD RIDUAN MOHAMAD*, Philip Riches, M. Helen Grant. University of Strathclyde, United Kingdom
Disclosures: MOHD RIDUAN MOHAMAD, None

MODULATORS OF BONE REMODELING (ANIMAL MODELS): ANABOLIC FACTORS

MO0149 **A Novel Vitamin D Receptor Modulator, VS-105, Improves Bone Mineral Density in an Estrogen-deficient Rat Model of Osteoporosis**
J. Ruth Wu-Wong*[1], Yung-wu Chen[2], Jerry L. Wessale[2], Theresa Chen[2], Maysaa Oubaidin[3], Phimon Atsawasuwan[3]. [1]University of Illinois at Chicago, USA, [2]Vidasym, USA, [3]University of Illinois, USA
Disclosures: J. Ruth Wu-Wong, Vidasym

MO0150 **Effects of osteoporosis on the osteoinductivity of rhBMP-2 in the healing of segmental long-bone defect models**
Jae Hyup Lee*[1], Hae-Ri Baek[2], Kyung Mee Lee[2], Guang Bin Zheng[2], Sung Joon Shin[2], Hee-Jong Shim[2]. [1]Seoul National University, College of Medicine, South korea, [2]Department of Orthopedic Surgery, Seoul National University, College of Medicine, SMG-SNU Boramae Medical Center, South korea
Disclosures: Jae Hyup Lee, None

MO0151 **EP4 Agonist in Combination with Autograft Accelerated the Bone Fusion Time on Posterolateral Spinal Fusion in Canines**
YASUTOMO NAKANISHI*, AKINA SAITOH, RYOHEI MIYATA, YUSUKE ETO, SATOSHI NISHIKAWA, HIROSHI MORI, SHINSEI FUJIMURA, KAZUYA ABE, AKIO NISHIURA, YASUO OCHI, YASUSHI HIROTA. ONO Pharmaceutical Co., LTD., Japan
Disclosures: YASUTOMO NAKANISHI, None

MO0152 **Integrin beta 3 is required for the skeletal response to loading in mice**
Nicholas Heiniger*[1], Candice Tahimic[2], Yongmei Wang[3], Alicia Menendez[3], Katherine Weilbaecher[4], Daniel Bikle[3]. [1]University of California, San Francisco, USA, [2]Space Biosciences Division NASA Ames Research Center, USA, [3]University of California, San Francisco VA Medical Center, USA, [4]Washington University School of Medicine, Division of Oncology, USA
Disclosures: Nicholas Heiniger, None

MO0153 **Measles Virus Nucleocapsid Protein Increases IL-6 and IGF1 in Osteoclasts to Enhance Osteoblast Differentiation in Paget's Disease**
Jumpei Teramachi[1], Yuji Inagaki[1], Khalid Mohammad[2], Theresa Guise[2], Laëtitia Michou[3], Jacques P. Brown[3], Jolene J. Windle[4], Noriyoshi Kurihara*[1], G. David Roodman[5]. [1]Indiana University, Medicine/Hematology-Oncology, USA, [2]Indiana University, Medicine/Endocrinology, USA, [3]Department of Medicine, Laval University, CHU de Quebec Research Center, Canada, [4]Human & Molecular Genetics, Virginia Commonwealth University, USA, [5]Indiana University, Medicine/Hematology-Oncology, Roudebush VA Medical Center, USA
Disclosures: Noriyoshi Kurihara, None

MO0154 **Stereological Analysis Reveals Differential Effects of Sclerostin Antibody and Parathyroid Hormone on the Osteoblast Lineage in Young Female Rats**
Michael Ominsky*[1], Danielle Brown[2], Gwyneth Van[1], David Cordover[1], Efrain Pacheco[1], Emily Frazier[1], Linda Cherepow[1], Marnie Higgins-Garn[1], J Ignacio Aguirre[3], Thomas J Wronski[3], Marina Stolina[1], Lei Zhou[1], Ian Pyrah[1], Rogely W Boyce[1]. [1]Amgen Inc., USA, [2]WIL Research Laboratories, USA, [3]Department of Physiological Sciences, University of Florida, USA
Disclosures: Michael Ominsky, Amgen Inc.

MODULATORS OF BONE REMODELING (ANIMAL MODELS): ANTIRESORPTIVE FACTORS

MO0155 **Attenuation of antiresorptive action in withdrawal of minodronic acid for three months after treatment for twelve months in ovariectomized rats**
Makoto Tanaka*[1], Hiroshi Mori[2], Kazuhito Kawabata[2]. [1]ONO Pharmaceutical Co., Ltd., Japan, [2]Discovery Research Laboratories, Ono Pharmaceutical Co., Ltd., Japan
Disclosures: Makoto Tanaka, None

MO0156 **In vivo MRI and RPI measures reveal the positive effects of raloxifene on bone properties**
Mohammad Aref*[1], Drew Brown[1], Erin McNerny[1], Jason Organ[2], Chris Newman[1], Paul Territo[1], Matthew Allen[1]. [1]Indiana University School of Medicine, USA, [2]Indianan University School of Medicine, USA
Disclosures: Mohammad Aref, None

MO0157 **Local Reduction in Iron Promotes Bone Formation and Reduces Osteoclast Mediated Resorption**
Justin Drager*[1], Zeeshan Sheikh[2], Yu Ling Zhang[2], Abhishek Kumar[2], Jake Barralet[2], Edward Harvey[2]. [1]McGill Univerisity, Canada, [2]McGill University, Canada
Disclosures: Justin Drager, None

MO0158 **Odanacatib Inhibits Bone Resorption and Reverses Glucocorticoid-Induced Bone Loss in Adult Rabbits**
Brenda Pennypacker*[1], Peter Szczerba[2], Marc Washington[2], Maureen Pickarski[2], Le Duong[2]. [1]Merck Research Laboratories, USA, [2]Merck & Co., USA
Disclosures: Brenda Pennypacker, Merck and Co., Inc. -employee

MO0159 **Osteoclast-induced TcREG limit bone loss but cannot suppress innate immune response in Serum-transfer induced arthritis**
Reggie Aurora*[1], Anna Cline-Smith[2], Elena Shashkova[2]. [1]Saint Louis University University, USA, [2]St. Louis University School of Medicine, USA
Disclosures: Reggie Aurora, None

MO0160 **Zoledronate prevents lactation induced loss of bone strength and micro-architecture in mice**
Mette Høegh Wendelboe, Jesper Skovhus Thomsen, Annemarie Brüel*. University of Aarhus, Denmark
Disclosures: Annemarie Brüel, None

MODULATORS OF BONE REMODELING (ANIMAL MODELS): OTHER AGENTS

MO0161 ***S. aureus* infection causes aberrant bone healing**
Brandon Romero*, Nisreen Akel, Larry Suva, Allister Loughran, Mark Smeltzer, Dana Gaddy. University of Arkansas for Medical Sciences, USA
Disclosures: Brandon Romero, None

MO0162 **Chronic Antibiotic Treatment Causes Gender Specific Bone Loss**
Jonathan Schepper*, Fraser Collins, Regina Irwin, Sandi Raehtz, Nara Parameswaran, Laura McCabe. Michigan State University, USA
Disclosures: Jonathan Schepper, None

MO0163 **Effects of dietary iron and intermittent adriamycin administration on FGF23 and Fetuin A levels of C57BL/6J mice**
Masanori Takaiwa*[1], Kosei Hasegawa[2], Hiroyuki Tanaka[3], Hirokazu Tsukahara[2]. [1]Dept. of Pediatrics, Matsuyama Red Cross Hosp., Japan, [2]Okayama University GraduateDepartment of Pediatrics, School of Medicine, Dentistry & Pharmaceutical Sciences, Japan, [3]Department of Pediatrics, Okayama Saiseikai General Hospital, Japan
Disclosures: Masanori Takaiwa, None

MO0164 **Healing of large-scale bone defects in a mouse model involves hybrid cartilage/bone progenitors**
Nikita Tripuraneni, Sandeep Paul, Simone Schindler, Helen Chou, Jason Hsieh, Gage Crump, Francesca Mariani*. University of Southern California, USA
Disclosures: Francesca Mariani, None

MO0165 **Mechanistic insight into the adverse effects of Aryl hydrocarbon receptor activation on osteogenic differentiation**
Erin Hsu*, Chawon Yun, Sean Mitchell, Abhishek Kannan, Kevin Sonn, Sharath Bellary, Christian Park, Jonghwa Yun, Ryan Freshman, Danielle Chun, Ami Parekh, Wellington Hsu. Northwestern University, USA
Disclosures: Erin Hsu, None

MO0166 **The fate and distribution of autologous bone marrow mesenchymal stem cells with intra-arterial infusion in osteonecrosis of the femoral head in dogs**
Hongting Jin*[1], Taotao Xu[2], Qiqing Chen[2], Chengliang Wu[2], Pinger Wang[2], Qiang Mao[3], Shanxing Zhang[2], Jiayi Shen[2], Peijian Tong[3]. [1]Zhejiang Chinese Medical University, Peoples republic of china, [2]Zhejiang Chinese Medical University, China, [3]Department of Orthopaedic Surgery, The First Affiliated Hospital of Zhejiang Chinese Medical University, China
Disclosures: Hongting Jin, None

MO0167 **α2-Antiplasmin Deficiency Protects from Bone Loss Induced in Ovariectomized Mice**
Naoyuki Kawao*[1], Akihito Shiomi[1], Kiyotaka Okada[1], Yukinori Tamura [1], Katsumi Okumoto[2], Osamu Matsuo[1], Masao Akagi[3], Hiroshi Kaji[1]. [1]Kinki University Faculty of Medicine, Japan, [2]Life Science Research Institute, Kinki University, Japan, [3]Department of Orthopaedic Surgery, Kinki University Faculty of Medicine, Japan
Disclosures: Naoyuki Kawao, None

MUSCLE BIOLOGY AND BONE: CELLULAR AND MOLECULAR INTERACTIONS

MO0168 **BMP2 Regulates Both Osteogenesis and Angiogenesis**
Beth Bragdon*[1], Thomas Cheng[2], Elise F. Morgan[3], Ivo Kalajzic[4], Stephen E. Harris[5], Louis C. Gerstenfeld[2]. [1]Boston University School of Medicine Department of Orthopaedics, USA, [2]Department of Orthopaedic Surgery, Boston University School of Medicine, USA, [3]Department of Mechanical Engineering, Boston University College of Engineering, USA, [4]Center for Regenerative Medicine & Skeletal Development, University of Connecticut Health Center, USA, [5]Department of Peridontics, University of Texas Health Science Center at San Antonio, USA
Disclosures: Beth Bragdon, None

MUSCLE BIOLOGY AND BONE: GENERAL

MO0169 **A selective androgen receptor modulator that prevents disused muscle atrophy in rats**
Kyohei Horie*, Masanobu Kanou, Kenichirou Takagi, Shinnosuke Hosoda, Hidekazu Watanabe, Motoko Hamada, Naoki Hase, Hiromichi Sugiyama, Kei Yamana. TEIJIN PHARMA LIMITED, Japan
Disclosures: Kyohei Horie, TEIJIN PHARMA LIMITED

MO0170 **Considerations for Intramuscular Injections in Rodents**
Melanie Felx*, Annie Martin, Solomon Haile, Susan Smith. Charles River Laboratories, Canada
Disclosures: Melanie Felx, None

MO0171 **CRTAP, the causative protein in type VII OI, may be tethered to the ER membrane**
Simone Smith*[1], Joan C. Marini[2]. [1]National Institutes of Health, USA, [2]NIH, USA
Disclosures: Simone Smith, None

MO0172 **Elucidating the Antifibrosis Effects of rPTH Therapy on Critical Defect Healing in the Murine Cranial Window Model**

Longze Zhang*[1], Claire Kaiser[1], Matthew Todd[2], Ryan Gao[1], Xinping Zhang[1], Edward Schwarz[1]. [1]Center for Musculoskeletal Research, University of Rochester Medical Center, School of Medicine & Dentistry, USA, [2]Center for Musculoskeletal Research, University of Rochester Medical Center, USA

Disclosures: Longze Zhang, None

MO0173 **Phosphate overload via type III Na-dependent Pi transporter deteriorates elastic fiber formation in vascular wall in Pit-1-overexpressing transgenic rats**

Yasumasa Yoshino*[1], Tomoka Hasegawa[2], Shukei Sugita[3], Eisuke Tomatsu[4], Sahoko Sekiguchi-Ueda[1], Megumi Shibata[1], Takeo Matsumoto[3], Norio Amizuka[2], Atsushi Suzuki[1]. [1]Division of Endocrinology & Metabolism, Fujita Health University, Japan, [2]Department of Developmental Biology of Hard Tissue, Division of Oral Health Science, Graduate School of Dental Medicine, Hokkaido University, Japan, [3]Biomechanics Laboratory,Nagoya Institute of Technology, Japan, [4]Division of Endocrinology & Metabolism,Fujita Health University, Japan

Disclosures: Yasumasa Yoshino, None

MO0174 **Variants in regulatory regions of *SREBF1*, a Lamin A interaction factor exert pleiotropic effects on BMD and lean mass in children**

Carolina Medina-Gomez*[1], John P. Kemp[2], Eskil Kreiner-Møller[3], Alessandra Chesi[4], Denise H.M. Heppe[5], Babette S. Zemel [6], Klaus Bønnelykke[3], Hans Bisgaard[3], Vincent W.V. Jaddoe[5], André G Uitterlinden[7], Jon H Tobias[8], Gustavo Duque[9], Struan F.A. Grant[4], David M. Evans[2], Fernando Rivadeneira[10]. [1]Erasmus Medical Center, The netherlands, [2]University of Queensland Diamantina Institute, Translational Research Institute, Brisbane, Queensland, Australia, [3]Copenhagen Prospective Studies on Asthma in Childhood, Health Sciences, University of Copenhagen, Danish Pediatric Asthma Center, Copenhagen University Hospital, Gentofte, Denmark, [4]Division of Human Genetics, Children's Hospital of Philadelphia, Philadelphia, PA 19104, USA, [5]The Generation R Study Group, Erasmus University Medical Center, 3015GE, Rotterdam, Netherlands, [6]Division of GI, Hepatology, & Nutrition, Children's Hospital of Philadelphia, Philadelphia, PA 19104, USA, [7]Department of Internal Medicine, Erasmus University Medical Center, 3015GE, Rotterdam, Netherlands, [8]School of Clinical Sciences, University of Bristol, Bristol, United Kingdom, [9]Musculoskeletal Ageing Research Program, Sydney Medical School Nepean, The University of Sydney., Australia, [10]Department of Internal Medicine, Erasmus University Medical Center, Rotterdam, Netherlands

Disclosures: Carolina Medina-Gomez, None

OSTEOARTHRITIS AND OTHER JOINT DISORDERS: GENERAL

MO0175 **Comparison of Hyaluronic Acid and Placebo in Patients with Knee Osteoarthritis. A Simulated Meta-Analysis Study**

Abdulhafez Selim[1], Sahar Ghoname*[2]. [1]Center for Chronic Disorders of Aging, PCOM, USA, [2]Ain Shams University School of Medicine, Egypt

Disclosures: Sahar Ghoname, None

MO0176 **Pre-operative pre-albumin: Relation to 30-day risk of complication in elective spine surgical patients**

Erin Coburn*[1], Jung Yoo[2], Jackie Shannon[2], Sabina Blizzard[2], Lizzy Boshears[2], Lynn Marshall[2]. [1]Oregon Health & Science University, USA, [2]OHSU, USA

Disclosures: Erin Coburn, None

MO0177 **Prevalence of Hand Osteoarthritis and Factors associated with Pain in Korean Farmers**
Sang-Hyon Kim[1], Sang-Il Lee*[2], Sang-Heon Lee[3], Young-Il Seo[4], Jinseok Kim[5], Jung Soo Song[6]. [1]Div. of Rheumatology, South korea, [2]Division of Rheumatology, Department of Internal Medicine, 2Department of Preventive Medicine, Gyeongsang National University School of Medicine, 3Clinical Research Institute, Gyeongsang National University Hospital, Jinju, Republic of Korea, South korea, [3]Division of Rheumatology, Konkuk University School of Medicine, Seoul, Republic of Korea, South korea, [4]Division of Rheumatology, Hallym University Medical Center, Ahnyang, Republic of Korea, South korea, [5] Department of Internal Medicine, Jeju National University Hospital, Jeju, Republic of Korea, South korea, [6]Division of Rheumatology, Department of Internal Medicine, Chung-Ang University Medical school, Seoul, Republic of Korea, South korea
Disclosures: Sang-Il Lee, None

MO0178 **Ultrasound-Guided intra-articular injection of platelet-rich plasma in treating knee osteoarthritis in short-term follow-up: a prospective, randomized, controlled trial**
Peijian Tong*. Zhejiang Provincial Hospital of TCM, Peoples republic of china
Disclosures: Peijian Tong, None

OSTEOARTHRITIS AND OTHER JOINT DISORDERS: RHEUMATOID ARTHRITIS AND INFLAMMATORY ARTHRITIS

MO0179 **Efficacy and Safety of Undenatured Type II Collagen Supplement in Modulating Knee Joint Function in Osteoarthritic Subjects**
James Lugo[1], Zainulabedin Saiyed[1], Nancy Lane*[2]. [1]InterHealth Nutraceuticals, USA, [2]University of California, USA
Disclosures: Nancy Lane, InterHealth Nutraceuticals

MO0180 **The Short-Term Efficacy of Denosumab in Osteoporosis in Patients with Rheumatoid Arthritis from a Japanese Multicenter Registry**
Yuji Hirano*[1], Yasuhide Kanayama[2], Shinya Hirabara[3], Syuji Asai[4], Nobunori Takahashi[4], Takayasu Ito[5], Naoki Ishiguro[4], Toshihisa Kojima[4]. [1]Toyohashi Municipal Hospital, Japan, [2]Orthopaedic Surgery & Rheumatology, Toyota Kosei Hospital, Japan, [3]Rheumatology, Toyohashi Municipal Hospital, Japan, [4]Orthopaedic Surgery, Nagoya University Graduate School of Medicine, Japan, [5]Ito Orthopeadic Hospital, Japan
Disclosures: Yuji Hirano, None

OSTEOBLASTS – MATRIX PROTEINS AND FUNCTION: ADHESION, MOTILITY AND CELL-CELL COMMUNICATION

MO0181 **A Novel Optogenetic Approach To Elucidate Spatial Regulation Of Semaphorin-Plexin Signaling In Osteoblasts**
Abhijit Deb Roy*[1], Taofei Yin[2], Yi Wu[2]. [1]University of Connecticut Health Centre, USA, [2]University of Connecticut Health Center, USA
Disclosures: Abhijit Deb Roy, None

MO0182 **Antiarrhythmic peptide GAP-134 promote osteoblastic differentiation and function in association with upregulation of Cx43 in vitro**
Dong Jin Chung*, Nam Hee Lee, Jin Ook Chung, Dong Hyeok Cho, Min Young Chung. Chonnam National University Medical School, South korea
Disclosures: Dong Jin Chung, None

MO0183 **Collagens VI and XII Matrix Bridges Mediate Osteoblast Cell Communicating Networks During Bone Formation**
Yayoi Izu*[1], Yoichi Ezura[2], Manuel Koch[3], David Birk[4], Masaki Noda[2]. [1]Tokyo Medical & Dental University, Medical Research Institute, Japan, [2]Tokyo Medical & Dental University, Japan, [3]University of Cologne, Germany, [4]University of South Florida, USA
Disclosures: Yayoi Izu, None

OSTEOBLASTS – MATRIX PROTEINS AND FUNCTION: BONE FORMATION MECHANISMS

MO0184 **A Novel Role of MACF1: Positively Regulates Osteoblast Differentiation**
Lifang Hu*[1], Peihong Su[2], Runzhi Li[2], Chong Yin[2], Kun Yan[2], Ge Zhang[3], Peng Shang[2], Airong Qian[2]. [1]Northwestern Polytechnical University, Peoples republic of china, [2]Key Laboratory for Space Bioscience & Biotechnology, Institute of Special Environmental Biophysics, School of Life Sciences, Northwestern Polytechnical University, China, [3]Institute for Advancing Translational Medicine in Bone & Joint Diseases, School of Chinese Medicine, Hong Kong Baptist University, China
Disclosures: Lifang Hu, None

MO0185 **Effects of Bone Morphogenetic Protein-4 (BMP-4) on Adipocyte Differentiation from mouse Adipose-derived Stem Cells**
Xueqin Wei*[1], Xiaoxiao Cai[2]. [1]Sichuan University, Peoples republic of china, [2]Sichuan University, China
Disclosures: Xueqin Wei, None

MO0186 **Functionalized self-assembling nano-peptides promote osteogenic differentiation of human Mesenchymal Stem Cells (hMSCs) in vitro**
Shaun Peggrem[1], Baichuan Wang[2], James Triffitt[3], Zhidao Xia*[1]. [1]Swansea University, United Kingdom, [2]Union Hospital Affiliated to Huazhong University of Science & Technology, China, [3]University of Oxford, United Kingdom
Disclosures: Zhidao Xia, None

MO0187 **How Do Heavy Metal Ions Uncouple Bone Formation from Bone Resorption**
J. Edward Puzas*[1], Tzong-jen Sheu[2], Catherine A. Muzytchuk[2], Eric E. Beier[2]. [1]University of Rochester School of Medicine, USA, [2]University of Rochester School of Medicine & Dentistry, USA
Disclosures: J. Edward Puzas, None

MO0188 **Inhibition of histone deacetylases enhances the osteogenic differentiation of human periodontal ligament cells**
Nam Cong-Nhat Huynh*[1], Vincent Everts[2], Prasit Pavasant [3], Ruchanee Salingcarnboriboon Ampornaramveth[4]. [1]Mineralized Tissue Research Unit, Faculty of Dentistry, Chulalongkorn University, Thailand, [2]Department of Oral Cell Biology, Academic Centre for Dentistry Amsterdam (ACTA), University of Amsterdam & VU University Amsterdam, Research Institute MOVE, Netherlands, [3]Department of anatomy, Faculty of Dentistry, Chulalongkorn University, Thailand, [4]DRU in Oral Microbiology, Microbiology department, Faculty of Dentistry, Chulalongkorn University, Thailand
Disclosures: Nam Cong-Nhat Huynh, None

MO0189 **Osteoblastogenesis increases through up-regulation of RUNX2, CX43 and beta-catenin after treatment with human serum collected 1 hour and 2 hour post dried plum ingestion**
Paulina Cuenca*, Shirin Hooshmand. San Diego State University, USA
Disclosures: Paulina Cuenca, None

MO0190 **Transgenic Expression of Dentin Phosphoprotein (DPP) Inhibits Long Bone Growth**
Hua Zhang*[1], Peihong Liu[2], Chao Liu[1], Priyam Jani[1], Xiaohua Xie[1], Yongbo Lu[1], Chunlin Qin[1]. [1]Texas A&M University Baylor College of Dentistry, USA, [2]Harbin Medical University School of Stomatology, China
Disclosures: Hua Zhang, None

OSTEOBLASTS – MATRIX PROTEINS AND FUNCTION: HORMONAL AND LOCAL REGULATION

MO0191 **A gram positive bacterial toxin lipoteichoic acid induces inflammatory bone resorption through PGE2 production**
Tsukasa Tominari, Michiko Hirata, Chisato Miyaura, Masaki Inada*. Tokyo University of Agriculture & Technology, Japan
Disclosures: Masaki Inada, None

MO0192 **Expression of Collagen-Modifier Genes in the Gonads: Another Link between Bone and Reproduction**
Sarah Zimmerman*[1], Roberta Besio[2], Milena Dimori[1], Melissa Heard[1], Frances Swain[1], Dana Gaddy[1], Larry Suva[1], Alberto Ferlin[3], Patrizio Castagnola[4], Roy Morello[1]. [1]University of Arkansas for Medical Sciences, USA, [2]University of Pavia, Italy, [3]University of Padova, Italy, [4]IRCCS, Italy
Disclosures: Sarah Zimmerman, None

OSTEOBLASTS – MATRIX PROTEINS AND FUNCTION: SIGNAL TRANSDUCTION AND TRANSCRIPTIONAL REGULATION

MO0193 **Analysis of the Osteoblast Lineage Reveals Inhibition of Mitogenesis and Cell Cycle Progression Associated With Attenuation of Bone Formation in Response to Sclerostin Antibody in Ovariectomized Rats**
Scott Taylor*, Paul Nioi, Rong Hu, Efrain Pacheco, Yudong He, Cynthia A Afshari, Ian Pyrah, Michael Ominsky, Rogely W Boyce. Amgen Inc., USA
Disclosures: Scott Taylor, Amgen

MO0194 **Ascorbic acid drives Tet-mediated methylcytosine hydroxylation to induce osteoblastogenesis *in vitro*.**
Casey Droscha*, Bart Williams. Van Andel Institute, USA
Disclosures: Casey Droscha, Amgen

MO0195 **Carbamazepine and Phenytoin Inhibit Native Sodium Currents in Murine Osteoblasts**
Sandra Petty*[1], Carol J Milligan[2], Marian Todaro[3], Kay L Richards[2], Pamu Kularathna[4], Charles Pagel[4], Elisa L Hill-Yardin[5], Chris French[6], Terence J O'Brien[6], John D Wark[7], Eleanor J Mackie[4], Steven Petrou[2]. [1]The University of Melbourne, Australia, [2]The Florey Institute of Neuroscience & Mental Health, Australia, [3]Melbourne Brain Centre at The Royal Melbourne Hospital, Australia, [4]Faculty of Veterinary & Agricultural Sciences, The University of Melbourne, Australia, [5]Department of Physiology, University of Melbourne, Australia, [6]Melbourne Brain Centre at The Royal Melbourne Hospital, The University of Melbourne, Australia, [7]Department of Medicine, The Royal Melbourne Hospital, The Univerisity of Melbourne, Australia
Disclosures: Sandra Petty, None

MO0196 **Integrative Analysis of RNA-seq and ChIP-seq Data Identifies Wnt3a Inducible Genes and Regulatory Elements in Osteoblasts**
Aimy Sebastian*[1], Nicholas R. Hum[2], Deepa K. Murugesh[2], Sarah Hatsell[3], Aris N. Economides[3], Gabriela G. Loots[4]. [1]UC Merced, USA, [2]Lawrence Livermore National Laboratories, USA, [3]Regeneron Pharmaceuticals, USA, [4]Lawrence Livermore National Laboratories;University of California, Merced, USA
Disclosures: Aimy Sebastian, None

MO0197 **Pigment Epithelium Derived Factor Activates Wnt/b-Catenin Signaling Pathway in Mesenchymal Stem Cells via cross-talk with ERK Signaling Pathway**
Christopher Niyibizi[1], Feng Li*[2], Joyce Tombran-Tink[3]. [1]The Pennsylvania State University College of Medicine, USA, [2]Penn State College of Medicine, USA, [3]Penn State Collge of Medicine, USA
Disclosures: Feng Li, None

MO0198 **SIT (SHP2-Interacting Transmembrane Adaptor) - A Novel Regulator of Bone Mass**
Joseph Tarr*[1], Sarah Carrante[2], Lev Blekher[2], Brooke Marks[2], Samantha Dyckman[2], Elizabeth Figueiredo[2], Kaitlin Reilly[2], Luca Simeoni[3], Thomas Owen[2], Steven Popoff[1]. [1]Temple University School of Medicine, USA, [2]Ramapo College of New Jersey, USA, [3]Otto von Guericke University, Germany
Disclosures: Joseph Tarr, None

MO0199 **Trps1 Affects Signaling and Expression of Mineralization Genes in Response to Phosphate**
Maria Kuzynski*[1], Sandeep Chaudhary[2], Morgan Goss[2], Callie Mobley[2], Dobrawa Napierala[2]. [1]University of Alabama at Birmingham, USA, [2]UAB, USA
Disclosures: Maria Kuzynski, None

OSTEOBLASTS - ORIGIN AND CELL FATE: REGULATION OF DIFFERENTIATION

MO0200 **BCL11B a Transcriptional Regulator of Sutural Patency**
Kenneth Philbrick*, Kateryna Kyrylkova, Urszula Iwaniec, Mark Leid. Oregon State University, USA
Disclosures: Kenneth Philbrick, None

MO0201 **Ectoderm neural cortex 1 isoforms have disparate effects on MC3T3 osteoblast differentiation and mineralization**
Leah Worton*[1], Yanchuan Shi[2], Elisabeth Smith[2], David Little[3], Jon Whitehead[4], Edith Gardiner[1]. [1]University of Washington, USA, [2]Garvan Institute, Australia, [3]The University of Sydney, Australia, [4]The University of Queensland, Australia
Disclosures: Leah Worton, None

MO0202 **Modulation of the extracellular matrix environment and epigenetic DNA methylation improves osteogenicity of human mesenchymal stromal cells**
Roman Thaler*[1], Markus Schreiner[1], Eric A. Lewallen[1], Dakota L. Jones[1], David R. Deyle[1], Allan B. Dietz[2], David G. Lewallen[1], Andre J. van Wijnen[2]. [1]Mayo Clinic, USA, [2]Mayo Clinc, USA
Disclosures: Roman Thaler, None

MO0203 **Rorβ, a Negative Regulator of Osteoblast Function, Regulates the Circadian Clock Through Upregulation of Bmal1 and Period Genes**
David Monroe*[1], Joshua Farr[2], Sundeep Khosla[2]. [1]Mayo Foundation, USA, [2]Mayo Clinic, USA
Disclosures: David Monroe, None

OSTEOBLASTS - ORIGIN AND CELL FATE: STEMS CELLS AND PROGENITORS

MO0204 **Candidate Enhancer RNA Expression During aSMA+ Progenitor to Mineralizing Osteoblasts-Osteocytes: Exploration of the 'Dark Matter' of the Genome**
Stephen Harris*[1], Marie A Harris[2], Coralee Tye[3], Ivo Kalajzic[4], Jonathan Gordon[3], Jane Lian[3], Gary Stein[3]. [1]University of Texas Health Science Center at San Antonio, USA, [2]u. of texas health science center at san antonio, USA, [3]U. of Vermont Medical School, USA, [4]U. of Cnnecticut Health Center, USA
Disclosures: Stephen Harris, None

MO0205 **Effect of Tryptophan on the stemness and osteogenesis of bone marrow-derived mesenchymal stromal cells *in vitro* and *in vivo***
Hai Pham*[1], Mitsuaki Ono[2], Emilio Hara[2], Yasutaka Oida[2], Ha Nguyen[2], Kentaro Akiyama[2], Takuo Kuboki[2]. [1]Okayama University, Japan, [2]Department of Oral Rehabilitation & Regenerative Medicine, Okayama University Graduate School of Medicine, Dentistry & Pharmaceutical Sciences, Okayama, Japan, Japan
Disclosures: Hai Pham, None

MO0206 **Fatty Acids and Energy Metabolism in Mesenchymal Stem Cells**
Laura Shum*, Roman Eliseev. University of Rochester, USA
Disclosures: Laura Shum, None

MO0207 **Foxd1 lineage tracing during skeletal development identifies a unique subset of osteogenic precursors**
Jackie Fretz*[1], Nancy Troiano[2], Rose Webb[2], Tracy Nelson[2]. [1]Yale University School of Medicine, USA, [2]Yale School of Medicine, USA
Disclosures: Jackie Fretz, None

MO0208 **Human Platelet Lysate derived Exosomes affect Proliferation and Osteogenic Differentiation of Adipose Stem Cells**
Behrouz Zanndieh-Doulabi*[1], Jenneke Klein-Nulend[2]. [1]Department of Oral Cell Biology, Academic Centre for Dentistry Amsterdam(ACTA), University of Amsterdam & VU University Amsterdam, MOVE Research Institute Amsterdam, Amsterdam, The Netherlands., , [2]Dept. Oral Cell Biology, Academic Centre for Dentistry Amsterdam (ACTA), University of Amsterdam & VU University Amsterdam, Move Research Institute Amsterdam, Amsterdam, The Netherlands, Netherlands
Disclosures: Behrouz Zanndieh-Doulabi, None

MO0209 **Inhibition of Histone Methyltransferase SMYD2 Attenuates Lineage Commitment of Mesenchymal Stem Cells**
Christopher Paradise*, Amel Dudakovic, Scott Riester, Emily Camilleri, Allan Dietz, Andre van Wijnen. Mayo Clinic, USA
Disclosures: Christopher Paradise, None

MO0210 **Potential role of Secreted frizzled related protein (Sfrp2) in regulating activity of bone marrow stem/progenitor cells**
Luis Fernandez De Castro*[1], Brian Sworder[2], Agnes Berendsen[3], Matthew Phillips[3], Natasha Cherman[3], Sergei Kuznetsov[3], Kenn Holmbeck[1], Pamela Robey[3]. [1]NIDCR (NIH), USA, [2]Boston University-NIDCR, USA, [3]NIDCR, USA
Disclosures: Luis Fernandez De Castro, None

MO0211 **SWI/SNF-mediated lineage determination in mesenchymal stem cells confers resistance to osteoporosis**
Stephen Flowers*[1], Kevin Hong Nguyen[1], Fuhua Xu[1], Eric Himelman[1], Edek AJ Williams[1], J Christopher Fritton[1], Elizabeth Moran[2]. [1]Department of Orthopaedics, New Jersey Medical School, Rutgers, The State University of New Jersey, Newark, NJ 07103., USA, [2]Rutgers, The State University of New Jersey, NJMS Cancer Center, USA
Disclosures: Stephen Flowers, None

OSTEOCLASTS - FUNCTION: BONE RESORPTION MECHANISMS

MO0212 **Denosumab and Odanacatib as Reference Compounds in Human Osteoclast Cultures**
Jussi Halleen*, Jenni Bernoulli, Jukka Rissanen, Katja Fagerlund. Pharmatest Services Ltd, Finland
Disclosures: Jussi Halleen, Pharmatest Services Ltd; Pharmatest Services Ltd, employer; IDS plc

MO0213 **Elevated miR-214 level within osteoclasts associates with increased bone resorption in both postmenopausal osteoporosis and osteolytic bone metastasis**
Li Defang*[1], Jin Liu[2], Baosheng Guo[2], Lei Dang[2], Chao Liang[2], Xiaojuan He[2], Aiping Lu[2], Ge Zhang[3]. [1]Institute for Advancing Translational Medicine in Bone & Joint Diseases, School of Chinese Medicine, Hong Kong Baptist University, Hong Kong SAR, , [2]Institute for Advancing Translational Medicine in Bone & Joint Diseases, School of Chinese Medicine, Hong Kong Baptist University, Hong Kong SAR, China, [3]nstitute for Advancing Translational Medicine in Bone & Joint Diseases, School of Chinese Medicine, Hong Kong Baptist University, Hong Kong SAR, China
Disclosures: Li Defang, None

MO0214 **Heme Oxygenase-1 Protects Bone Loss via Attenuating Oxidative Stress**
KE KE*[1], Hye-Seon Choi[2]. [1]University of Ulsan, South korea, [2]Department of Biological Sciences, University of Ulsan, South korea
Disclosures: KE KE, None

MO0215 **Leucine Rich Repeat Kinase 1 (Lrrk1) Regulates Osteoclast Function via Modulating RAC1 Serine/Threonine Phosphorylation and Activation**
Weirong Xing*[1], Subburaman Mohan[2]. [1]Musculoskeletal Disease Center, Jerry L. Pettis Memorial Veteran's Admin., USA, [2]Jerry L .Pettis Memorial VA Medical Center, USA
Disclosures: Weirong Xing, None

MO0216 **Loss Of Gfi1 Disorganizes The Podosome Belt And Impairs Osteoclast Migration And Bone Resorption**
Peng Zhang*, Quanhong Sun, Juraj Adamik, Deborah L. Galson. University of Pittsburgh, USA
Disclosures: Peng Zhang, None

MO0217 **Pit And Trench Forming Osteoclasts: a Distinction That Matters?**
Ditte MH Merrild[1], Dinisha C Pirapaharan[1], Christina M Andreasen[2], Per Kjærsgaard-Andersen[3], Ming Ding[2], Jean-Marie Delaisse[1], Kent Soe*[4]. [1]Dept. of Clinical Cell Biology, Vejle Hospital, University of Southern Denmark, Denmark, [2]Dept. of Orthopaedic Surgery & Traumatology, Odense University Hospital, University of Southern Denmark, Denmark, [3]Department of Orthopedic Surgery, Vejle Hospital, University of Southern Denmark, Denmark, [4]Vejle Hospital, University of Southern Denmark, Denmark
Disclosures: Kent Soe, None

MO0218 **Protein Kinase D2 (PRKD2) Regulation of the Actin Cytoskeleton during Osteoclast Differentiation**
Amanda Leightner*, Eric Jensen, Kim Mansky, Rajaram Gopalakrishnan. University of Minnesota, USA
Disclosures: Amanda Leightner, None

MO0219 **Targeted inhibition of miR-214 in osteoclasts suppresses bone resorption in both ovariectomy-induced osteoporosis and osteolytic bone metastasis *in vivo:* A pilot study**
Lei Dang*[1], Ge Zhang[2], Li Defang[1], Jin Liu[2], Baosheng Guo[2], Aiping Lu[2]. [1]Hong Kong Baptist University, Hong kong, [2]Hong Kong Baptist University, China
Disclosures: Lei Dang, None

MO0220 **The subcellular distribution of Siglec-15 in bone-resorbing osteoclasts implies complementary roles at the cell surface and ruffled border**
Matthew Stuible*[1], Annie Fortin[2], Mario Filion[2], Gilles B. Tremblay[2]. [1]Alethia Biotherapeutics, Canada, [2]Alethia Biotherapeutics Inc., Canada
Disclosures: Matthew Stuible, Alethia Biotherapeutics

OSTEOCLASTS - FUNCTION: SIGNAL TRANSDUCTION

MO0221 **Autophagy and Phospho-Inositide Dependent Kinase 1 (PDK1) -Related Kinome in Pagetic Osteoclasts**
Stephen McManus*, Martine Bisson, Richard Chamberland, Michèle Roy, Shekeba Nazari, Sophie Roux. University of Sherbrooke, Canada
Disclosures: Stephen McManus, None

MO0222 **Cathepsin K deficiency suppresses disuse-induced bone loss**
Shuichi Moriya*[1], Yoichi Ezura[1], Yayoi Izu[1], Masaki Noda[2]. [1]TMDU, Japan, [2]Tokyo Medical & Dental University, Japan
Disclosures: Shuichi Moriya, None

MO0223 **C-reactive protein could promote osteoclastogenesis in rheumatoid arthritis**
Sang-Hyon Kim[1], Sang-Heon Lee*[2], Young-Il Seo[3], Sang-Il Lee[4], Jinseok Kim[5], Jung Soo Song[6]. [1]Division of Rheumatology, Department of Internal Medicine, Dongsan Medical Center, Keimyung University, Daegu, Republic of Korea, South korea, [2]Division of Rheumatology, Konkuk University School of Medicine, Seoul, Republic of Korea, South korea, [3]Division of Rheumatology, Hallym University Medical Center, Ahnyang, Republic of Korea, South korea, [4]Division of Rheumatology, Department of Internal Medicine, 2Department of Preventive Medicine, Gyeongsang National University School of Medicine, 3Clinical Research Institute, Gyeongsang National University Hospital, Jinju, Republic of Korea, South korea, [5]Department of Internal Medicine, Jeju National University Hospital, Jeju, Republic of Korea, South korea, [6]Division of Rheumatology, Department of Internal Medicine, Chung-Ang University Medical school, Seoul, Republic of Korea, South korea
Disclosures: Sang-Heon Lee, None

MO0224 **Molecular Mechanism of Hyponatremia-Induced Osteoporosis**
Julia (Julianna) Barsony*[1], Qin Xu[2], Joseph G Verbalis[2]. [1]Georgetown University Hospital, USA, [2]Georgetown University Medical Center, USA
Disclosures: Julia (Julianna) Barsony, None

MO0225 **Role of Becn1 ubiquitination in RANKL-mediated osteoclastogenesis**
Atsushi Arai[1], Sol Kim[1], Terresa Kim[1], Cindy Lee[1], Cun-Yu Wang[1], No-Hee Park[1], Reuben Kim*[2]. [1]UCLA School of Dentistry, USA, [2]UCLA, USA
Disclosures: Reuben Kim, None

MO0226 **Smad4 In Osteoclasts Reduce Bone Mass by Inhibiting Osteoclast Differentiation**
Mayu Morita*[1], Ryotaro Iwasaki[2], Hiromasa Kawana[2], Shigeyuki Yoshida[2], Taneaki Nakagawa[2], Takeshi Miyamoto[3]. [1]Keio University, Japan, [2]Division of Oral & Maxillofacial Surgery, Department of Dentistry & Oral Surgery, Keio University School of Medicine, Tokyo, Japan, Japan, [3]Department of Orthopedic Surgery, Keio University School of Medicine, Tokyo, Japan, Japan
Disclosures: Mayu Morita, None

OSTEOCLASTS - FUNCTION: TRANSCRIPTIONAL REGULATION AND GENE EXPRESSION

MO0227 **Pentosan Polysulfate Sodium Suppress RANK Ligand Induced Osteoclast Differentiation via IL-1R/TLR Signal Transduction Involving Fos-Jun/AP-1 Transcriptional Regulator Complex Repression**

Suranji Wijekoon*, Sangho Kim, Jing Fang, Eugene C. Bwalya, Kenji Hosoya, Masahiro Okumura. Hokkaido University, Japan

Disclosures: Suranji Wijekoon, None

OSTEOCLASTS - ORIGIN AND CELL FATE: GENERAL

MO0228 **Withdrawn**

MO0229 **Dicam attenuates macrophage differentiation via suppression of integrin αvβ3-dependent Akt-Foxo3a-Irf7 pathway**

Gunwoo Kim*[1], Youn-Kwan Jung[2], Seung-Woo Han[3], Min-Su Han[2], Eun-Ju Lee[2], Hye-Ri Park[2], Ji-Ae Jang[2], Dong-Ju Shin[4]. [1]Fatima Research Institute & Daegu Fatima Hospital, Daegu, Republic ofKorea, South korea, [2]Fatima Research Institute, Daegu Fatima Hospital, South korea, [3]Department of internal medicine, Daegu Fatima Hospital, South korea, [4]Department of Orthopedics, Daegu Fatima Hospital, South korea

Disclosures: Gunwoo Kim, None

MO0230 **Intravenous Immunoglobulin (IVIG) Attenuates TNF-induced Pathologic Bone Resorption and Suppresses Osteoclastogenesis by Inducing A20 Expression**

Min Joon Lee*, Elisha Lim, Sehwan Mun, Lionel Ivashkiv, Kyung-Hyun Park-Min. Hospital for Special Surgery, USA

Disclosures: Min Joon Lee, None

MO0231 **Proliferation-coupled osteoclast differentiation by RANKL**

Sunao Takeshita*, M. Motiur Rahman, Kyoji Ikeda. National Center for Geriatrics & Gerontology, Japan

Disclosures: Sunao Takeshita, None

MO0232 **Small leucine-rich proteoglycans may regulate osteoblast-osteoclast coupling through TNF-alpha sequestration**

Vardit Kram*, Tina Kilts, Nisan Bhattacharyya, Marian Young. Craniofacial & Skeletal Diseases Branch, NIDCR, NIH, USA

Disclosures: Vardit Kram, None

MO0233 **TNF Promotes Osteoclastogenesis by Inducing M1 Macrophage Formation and Limits it through RelB Inhibition of NFATc1 Activity**

Xiaodong Hou*[1], Zhijun Zhao[2], Chunyu Wang[3], Xiaoxiang Yin[2], Yanyun Li[1], Rong Duan[1], Brendan F Boyce[1], Zhenqiang Yao[1]. [1]University of Rochester, USA, [2]Henan University First Affiliated Hospital, China, [3]The First Hospital of Shangqiu City, China

Disclosures: Xiaodong Hou, None

MO0234 **Twisted gastrulation-deficient osteoclast precursors are hypersensitive to RANKL and M-CSF due to changes in *RANK* and *C-fms* Expression**

Melissa Stemig*[1], Raphael Huntley[2], Anna Petryk[3], Kim Mansky[2], Rajaram Gopalakrishnan[2], Eric Jensen[2]. [1]University of Minnesota School of Dentistry, USA, [2]University of MN School of Dentistry, USA, [3]University of MN School of Medicine, USA

Disclosures: Melissa Stemig, None

OSTEOCYTES: BONE REMODELING REGULATION

MO0235 **Direct roles of osteocyte in bone mineralization and weightless-caused bone loss: beyond mechanosensors**

Yuan Hui*[1], Rong Zhang[2], Yinshi Ren[1], Ying Liu[1], Jingya Wang[1], Lynda Bonewald[3], Weiping Qin[4], Jian.Q Feng[2]. [1]Department of Biomedical Science,Texas A&M Baylor College of Dentistry, USA, [2]Department of Biomedical Sciences,Texas A&M Baylor College of Dentistry, USA, [3]University of Missouri-Kansas City School of Dentistry, USA, [4]Medicine, Mount Sinai School of Medicine Researcher, James J. Peters VA Medical Center, USA

Disclosures: Yuan Hui, None

MO0236 **Indirect Effects of Factors from Contracted Muscle on Osteoblasts via Osteocytes**
Hisataka Kondo*[1], Ning Zhao[2], Matt Prideaux[2], Yukiko Kitase[2], Julian Vallejo[2], Sarah Dallas[2], Marco Brotto[2], Lynda Bonewald[2]. [1]University of Missouri Kansas City, Japan, [2]University of Missouri Kansas City, USA
Disclosures: Hisataka Kondo, None

MO0237 **Inflammatory Bowel Disease Alters Osteocyte Protein Levels Controlling Bone Turnover**
CORINNE METZGER*[1], Anand Narayanan[2], Tatiana AzZani[3], Walter Cromer[2], David Zawieja[2], Susan Bloomfield[3]. [1]Texas A&M University, United states, [2]Texas A&M Health Science Center, USA, [3]Texas A&M University, USA
Disclosures: CORINNE METZGER, None

MO0238 **Osteocyte Conditional Deletion of Sirtuin 1 Results in Distinct Alterations in Bone Structure**
Elizabeth Rendina-Ruedy*[1], Guillaume Vignaux[1], Nicole Fleming[1], Daniel Perrien[2]. [1]Vanderbilt University Medical Center, USA, [2]VA Tennessee Valley Healthcare System, Vanderbilt University Medical Center, USA
Disclosures: Elizabeth Rendina-Ruedy, None

MO0239 **Osteocyte-Driven Perilacunar Remodeling is Impaired in Glucocorticoid Induced Osteonecrosis**
Tristan Fowler*[1], Faith Hall-Glenn[2], Aaron Fields[2], Hrishkesh Bale[2], Robert Ritchie[3], Thomas Vail[2], Jeffrey Lotz[2], Tamara Alliston[2]. [1]Universität Wien, USA, [2]University of California San Francisco, USA, [3]Lawrence Berkeley National Laboratory, University of Berkeley, USA
Disclosures: Tristan Fowler, None

MO0240 **Variation in systemic human cortical osteocyte lacunar density: relationships with intracortical porosity**
Randee Hunter*[1], Amanda Agnew[2]. [1]The Ohio State University, Us, [2]The Ohio State University, USA
Disclosures: Randee Hunter, None

OSTEOCYTES: ORIGIN, CELL CYCLE AND APOPTOSIS

MO0241 **Activation of AMP-activated Protein Kinase Protects Against Homocysteine-Induced Apoptosis of Osteocytic MLO-Y4 Cells by Regulating the Expressions of NADPH oxidase 1 (Nox1) and Nox2**
Ayumu Takeno*, Ippei Kanazawa, Ken-ichiro Tanaka, Masakazu Notsu, Maki Yokomoto, Toru Yamagucih, Toshitsugu Sugimoto. Internal Medicine 1, Shimane University Faculty of Medicine, Japan
Disclosures: Ayumu Takeno, None

MO0242 **E11 protein stabilization through inhibition of the proteasome promotes osteocyte differentiation in murine *in vitro* models and may protect against osteoarthritis bone pathology**
Katherine Staines*[1], Matt Prideaux[2], Peter Hohenstein[1], Mark Hopkinson[3], Anish Amin[4], David Buttle[5], Andrew Pitsillides[3], Colin Farquharson[1]. [1]The Roslin Institute & R(D)SVS, The University of Edinburgh, United Kingdom, [2]University of Adelaide, Australia, [3]Royal Veterinary College, United Kingdom, [4]The University of Edinburgh, United Kingdom, [5]The University of Sheffield, United Kingdom
Disclosures: Katherine Staines, None

OSTEOCYTES: PARACRINE AND ENDOCRINE FUNCTION

MO0243 **Calcitonin modulates the osteocyte S1P signalling pathway and sclerostin expression**
Jonathan Gooi*. The University of Melbourne, Australia
Disclosures: Jonathan Gooi, None

MO0244 **Validation of a novel *in vitro* 3D mineral-collagen model for the study of osteocyte biology**
Maxime Gallant*[1], Brian Golz[1], Haisheng Yang[1], Jesus Delgado-Calle[2], Teresita Bellido[2], Sherry L. Voytik-Harbin[1], Russell P. Main[1]. [1]Purdue University, USA, [2]Indiana University School of Medicine, USA
Disclosures: Maxime Gallant, None

OSTEOPOROSIS - ASSESSMENT: BIOCHEMICAL TESTS

MO0245 **High Bone Turnover is Associated with Hypocalcemia Induced by Denosumab in Women with Postmenopausal Osteoporosis**

Koji Ishikawa*[1], Takashi Nagai[1], Kenji Ohara[2], Katsunori Inagaki[1]. [1]Showa University School of Medicine, Japan, [2]Department of Orthopaedic Surgery, Yamanashi Red Cross Hospital, Japan

Disclosures: Koji Ishikawa, None

MO0246 **MicroRNAs miR-29b-3p, miR-365a-3p, miR-550a-3p are correlated to histomorphometry and bone turnover markers in idiopathic osteoporosis**

Roland Kocijan*[1], Christian Muschitz[1], Astrid Fahrleitner-Pammer[2], Rainer Dormann[1], Fabian Plachel[1], Susanna Skalicky[3], Elisabeth Geiger[3], Heinrich Resch[1], Heinz Redl[4], Patrick Heimel[4], Johannes Grillari[5], Matthias Hackl[3]. [1]St. Vincent Hospital – Medical Department II, The VINFORCE Study Group, Academic Teaching Hospital of Medical University of Vienna, Austria, [2]Department of Internal Medicine, Division of Endocrinology & Metabolism, Medical University of Graz, Austria, [3]TAmiRNA GmbH, Muthgasse 18, 1190 Vienna, Austria, [4]Ludwig Boltzmann Institute for Experimental & Clinical Traumatology Donaueschingenstraße 13, 1200 Vienna, Austria, [5]Department of Biotechnology, University of Natural Resources & Life Sciences Vienna, Austria

Disclosures: Roland Kocijan, None

MO0247 **Plasma periostin associates significantly with non-vertebral but not vertebral fracture in postmenopausal women: clinical evidence for the different effect of periostin depending on the skeletal site**

Beom-Jun Kim*[1], Yumie Rhee[2], Chong Hwa Kim[3], Ki Hyun Baek[4], Yong-Ki Min[5], Deog-Yoon Kim[6], Seong Hee Ahn[7], Hyeonmok Kim[7], Seung Hun Lee[7], Moo-Il Kang[4], Jung-Min Koh[7]. [1]Asan Medical Center, South korea, [2]Department of Internal Medicine, Severance Hospital, Endocrine Research Institute, Yonsei University College of Medicine, South korea, [3]Department of Internal Medicine, Sejong General Hospital, South korea, [4]Division of Endocrinology & Metabolism, Department of Internal Medicine, Seoul St. Mary's Hospital, The Catholic University of Korea College of Medicine, South korea, [5]Division of Endocrinology & Metabolism, Department of Internal Medicine, Sungkyunkwan University School of Medicine, South korea, [6]Department of Nuclear Medicine, Kyunghee University School of Medicine, South korea, [7]Division of Endocrinology & Metabolism, Asan Medical Center, University of Ulsan College of Medicine, South korea

Disclosures: Beom-Jun Kim, None

MO0248 **Serial measurement of BMD and bone turnover to detect a treatment response to zoledronic acid: The HORIZON-PFT Trial**

Katy J.L. Bell[1], Stephanie Harrison[2], Paul Glasziou [3], Andrew Hayen[4], Les Irwig[5], Richard Eastell[6], Dennis Black[2], Douglas Bauer*[2]. [1]University of Sydney & Bond University, Australia, [2]University of California, San Francisco, USA, [3]Bond University, Australia, [4]University of New South Wales, Australia, [5]University of Sydney, Australia, [6]University of Sheffield, United Kingdom

Disclosures: Douglas Bauer, None

OSTEOPOROSIS - ASSESSMENT: BONE QUALITY

MO0249 **Microindentation Assessed Bone Material Strength is Associated with Areal BMD but not with Prevalent Fractures in Older Women**

ROBERT RUDANG[1], MICHAIL ZOULAKIS*[2], ANNA DARELID[2], DANIEL SUNDH[2], DAN MELLSTROM[2], MATTIAS LORENTZON[2], LISA JOHANSSON[2]. [1]INSTITUTE OF MEDICINE, SAHLGRENSKA ACADEMY, Sweden, [2]GERIATRIC MEDICINE, INSTITUTE OF MEDICINE, SAHLGRENSKA ACADEMY, Sweden

Disclosures: MICHAIL ZOULAKIS, None

MO0250 **Osteocalcin detection in human bone extracts by antibody microarray**

Corinne Thomas*[1], Thao Nguyen[2], Timothy P. Cleland[2], Pankaj Karande[2], Deepak Vashishth[2]. [1]Rensselaer Polytechnic Institute, USA, [2]Rensselaer Polytechnic University, USA

Disclosures: Corinne Thomas, None

MO0251 **TBS is lower in African American than in Caucasian American women referred for bone density testing**
Tamara Vokes*[1], Disha Kumar[2], Rajesh Jain[2], hans didier[3]. [1]University of Chicago, USA, [2]University of Chicago Medicine, USA, [3]Lausanne University Hospital, Switzerland
Disclosures: Tamara Vokes, None

MO0252 **Trabecular bone score improves identification of major osteoporotic and vertebral fractures in Polish postmenopausal women with non-osteoporotic BMD**
Magdalena Ignaszak-Szczepaniak*[1], Michal Michalak[2]. [1]Poznan University of Medical Science, Poland, [2]Department of Computer Science & Statistics, University of Medical Sciences, Poznan, Poland, Poland
Disclosures: Magdalena Ignaszak-Szczepaniak, None

MO0253 **Trabecular Bone Score (TBS) Predicts Incident Clinical and Radiographic Vertebral Fractures in Older Men: Findings from the Osteoporotic Fractures in Men (MrOS) study**
John Schousboe*[1], Tien Vo[2], Brent Taylor[3], Peggy Cawthon[4], Ann Schwartz[4], Douglas Bauer[4], Eric Orwoll[5], Nancy Lane[6], Elizabeth Barrett-Connor[7], Kristine Ensrud[8]. [1]Park Nicollet ClinicUniversity of Minnesota, USA, [2]University of Minnesota, USA, [3]Center for Chronic Diseases Outcomes Research, Minneapolis VAMC; Department of Medicine, University of Minnesota, USA, [4]University of California San Francisco, USA, [5]Oregon Health Sciences University, USA, [6]University of California Davis, USA, [7]University of California San Diego, USA, [8]Division of Epidmiology, University of Minnesota; Department of Medicine, University of Minnesota, USA
Disclosures: John Schousboe, None

MO0254 **Why Are Additional Women with Fracture Identified by Measurement of Cortical Porosity than Identified by FRAX?**
Marit Osima[1], Rajesh Shigdel[2], Ragnar M Joakimsen[3], Erik F Eriksen[4], Ashild Bjornerem*[5]. [1]Department of Community Medicine, UiT – The Arctic University of Norway, Norway, [2]Department of Health & Care Sciences, UiT – The Arctic University of Norway, Norway, [3]Department of Clinical Medicine, UiT – The Arctic University of Norway, Norway, [4]Department of Clinical Endocrinology, Oslo University Hospital, Norway, [5]UiT The Arctic University of Norway, Norway
Disclosures: Ashild Bjornerem, None

OSTEOPOROSIS - ASSESSMENT: DXA

MO0255 **Efficacy of Dual Energy Xray Absorptiometry for Evaluation of Biomechanical Properties**
Il-Hyung Park*[1], Sung Hwa Seo[2], Joo-Mi Lee[3], Wonju Jeong[4]. [1]Kyungpook National University Hospital, South korea, [2]Department of Health & Medical Tourism, Gyeongju University, South korea, [3]Department of Orthopaedic Surgery, Kyungpook National University School of Medicin, South korea, [4]Department of Orthopeadic Surgery, Kyungpook National University Hospital, South korea
Disclosures: Il-Hyung Park, None

MO0256 **Functional muscle-bone unit assessed by 3D-DXA: Study in a cohort of post-polio syndrome patients**
Luis Del Rio*[1], Silvana Di Gregorio[1], Yves Martelli[2], Dolors Grados[3], Ludovic Humbert[2]. [1]CETIR Grup Medic; RETICEF Instituto Carlos III, Spain, [2]Galgo Medical, Spain, [3]Reumatologia, Hospital Sant Rafael, Spain
Disclosures: Luis Del Rio, None

MO0257 **Vertebral Fracture Assessment vs X-ray in severe osteoporosis**
Peter Schwarz[1], Linn Deleskog*[2], Barbara Nielsen[3]. [1]Glostrup Hospital, Denmark, [2]Endokrinologisk Klinik PE, Rigshospitalet, Denmark, [3]Research Centre of Ageing & Osteoporosis, Denmark
Disclosures: Linn Deleskog, None

OSTEOPOROSIS - ASSESSMENT: OTHER IMAGING TECHNIQUES

MO0258 **Bone Structure and Osteocyte Lacunar Properties in Kidney Patients**
Brad Hugenroth[1], Laura Armas[1], Mohammed Akhter*[2]. [1]Creighton University, USA, [2]Creighton University Osteoporosis Research Center, USA
Disclosures: Mohammed Akhter, None

MO0259 **Comparative Analysis of Human Lumbar and Thoracic Vertebrae Using Micro Computed Tomography (micro-CT) and the Fine Structure Analysis (fineSA®) MRI Technique**
Kirk McGilvray, PhD*[1], Samantha Telfer, PhD[2], James Rafferty, PhD[2], Amanda Cox[2], Lance Farr[2], Mario Mendoza[3], Snehal Shetye, PhD[1], Christian Puttlitz, PhD[1]. [1]Colorado State University, USA, [2]Acuitas Medical Ltd, United Kingdom, [3]University of California, Santa Barbara, USA
Disclosures: Kirk McGilvray, PhD, None

MO0260 **Effect Of PTH (1-84) Treatment On Bone Quantity And Quality**
Jorge Malouf*[1], Berta Magallares[1], Silvia Herrera[1], Ana Marin[1], Silvana DiGregorio[2], Luis Del Rio[2]. [1]Hospital de la Santa Creu i Sant Pau, Spain, [2]Cetir Medical Group, Spain
Disclosures: Jorge Malouf, None

MO0261 **Establishing Bone Mineral Density Reference Curves for HR-pQCT**
Lauren Burt*[1], Tolulope Sajobi[2], David Hanley[3], Steven Boyd[4]. [1]University of Calgary, Canada, [2]Department of Community Health Sciences & O'Brien Institute for Public Health, University of Calgary, Canada, [3]CaMos Centre Director, Departments of Medicine, Community Health Sciences, & Oncology, University of Calgary, Canada, [4]McCaig Institute for Bone & Joint Health, Department of Radiology, Faculty of Medicine, University of Calgary, Canada
Disclosures: Lauren Burt, None

MO0262 **Factors causing curved femur in elderly women**
Hiroyuki Tsuchie*[1], Naohisa Miyakoshi[1], Yuji Kasukawa[2], Yoichi Shimada[2]. [1]Akita university graduate school of medecine, Japan, [2]Akita University Graduate School of Medicine, Japan
Disclosures: Hiroyuki Tsuchie, None

MO0263 **Intravertebral Heterogeneity of Lumbar Vertebral Trabecular Bone Density is Associated with Vertebral Fracture Independently of Average BMD**
Elise Morgan*[1], Brett Allaire[2], Paul Fein[3], Darlene Lu[4], Alexander Adams[3], Douglas Kiel[5], Serkalem Demissie[4], Elizabeth Samelson[6], Mary Bouxsein[7]. [1]Boston University, USA, [2]Beth Israel Deaconess Medical Center, Harvard Medical School, USA, [3]Department of Mechanical Engineering, Boston University, USA, [4]Department of Biostatistics, Boston University, USA, [5]Department of Medicine, Harvard Medical School, USA, [6]Institute for Aging Research, Hebrew SeniorLife, USA, [7]Beth Israel Deaconess Medical Center, Harvard Medical Center, USA
Disclosures: Elise Morgan, None

MO0264 **QCT-based hip structural analysis: comparison between osteoporotic and non- osteoporotic patients**
Wojciech Glinkowski[1], Jerzy Narloch*[2]. [1]Medical University of Warsaw, Poland, [2]Chair & Department of Orthopaedics & Traumatology of Locomotor System, Center of Excellence "TeleOrto", Medical University of Warsaw, Poland, Poland
Disclosures: Jerzy Narloch, None

MO0265 **Racial and Sexual Dimorphism in Cortical Porosity Requires Appropriately Positioned Regions of Interest (ROI)**
Ali Ghasem-Zadeh*[1], Xiao-Fang Wang[2], Afrodite Zendeli[2], Åshild Bjørnerem[3], Andrew Burghardt[4], Roger Zebaze[2], Ego Seeman[2]. [1]Austin Health, University of Melbourne, Australia, [2]Depts Medicine & Endocrinology Austin Health, University of Melbourne, Australia, [3]Dept of Health & Care Silences, UiT The Arctic University of Norway, Norway, [4]Department of Radiology & Biomedical Imaging, University of California, USA
Disclosures: Ali Ghasem-Zadeh, None

MO0266 **The Reliability of Peripheral Quantitative Computed Tomography-Derived Marrow Fat Density and Area Measures Using Three Analysis Techniques**
Zachary Brown[1], Jenna Gibbs*[1], Andy Kin On Wong[2], Beverley Catharine Craven[3], Jonathan D Adachi[4], Lora Giangregorio[5]. [1]University of Waterloo, Canada, [2]University Health Network, Canada, [3]University Health Network - Toronto Rehabilitation Institute, Canada, [4]McMaster University - St. Joseph's Health Care, Canada, [5]University of Waterloo -Toronto Rehabilitation Institute, Canada
Disclosures: Jenna Gibbs, None

OSTEOPOROSIS - EPIDEMIOLOGY: GENETIC STUDIES

MO0267 **Genetic Risk Score Based on the Lifetime Prevalence of Femoral Fracture in 924 Consecutive Autopsies of Japanese Males**

Heying Zhou*[1], Seijiro Mori[1], Tatsuro Ishizaki[2], Masashi Tanaka[2], Kumpei Tanisawa[3], Makiko Mieno[4], Motoji Sawabe[5], Tomio Arai[1], Masaaki Muramatsu[5], Yoshiji Yamada[6], Hideki Ito[1]. [1]Tokyo Metropolitan Geriatric Hospital, Japan, [2]Tokyo Metropolitan Institute of Gerontology, Japan, [3]Waseda University, Japan, [4]Jichi Medical University, Japan, [5]Tokyo Medical & Dental University, Japan, [6]Mie University, Japan

Disclosures: Heying Zhou, None

OSTEOPOROSIS - EPIDEMIOLOGY: BONE MINERAL DENSITY

MO0268 **A Reduction in Kidney Function is Associated with Bone Mineral Density and Bone Loss in Elderly Swedish Women aged 75-85 years**

Linnea Malmgren*, Fiona McGuigan , Anders Christensson, Kristina Åkesson. Lund University, Sweden

Disclosures: Linnea Malmgren, None

MO0269 **Differences in the Trajectory of Change in BMD Measured at the Total Hip and Femoral Neck between Men and Women Following Hip Fracture**

Alan Rathbun*[1], Michelle Shardell[2], Denise Orwig[1], Richard Hebel[1], Gregory Hicks[3], Thomas Beck[4], Marc Hochberg[1], Jay Magaziner[1]. [1]University of Maryland School of Medicine, USA, [2]National Institutes on Aging, USA, [3]University of Delaware, USA, [4]Beck Radiological Innovations, USA

Disclosures: Alan Rathbun, None

MO0270 **Femoral Neck Cortical and Trabecular bone and Mortality: The AGES-Reykjavik Study**

Elisa Marques*[1], Vilmundur Gudnason[2], Gunnar Sigurdsson[3], Thomas Lang[4], Osório Meirelles[5], Fjola Johannesdottir[6], Kristin Siggeirsdottir[7], Lenore Launer[5], Gudny Eiriksdottir[8], Tamara Harris[5]. [1]National Institute on Aging, USA, [2]Icelandic Heart Association Research Institute, Kópavogur, Iceland; University of Iceland, Reykjavik, Iceland, Iceland, [3]Icelandic Heart Association Research Institute, Kópavogur, Iceland; University of Iceland, Reykjavik, Iceland; Landspitalinn University Hospital, Reykjavik, Iceland, Iceland, [4]Department of Radiology & Biomedical Imaging, University of California, San Francisco, CA, USA, USA, [5]Laboratory of Epidemiology & Population Science, Intramural Research Program, National Institute on Aging, National Institutes of Health, Bethesda, MD, USA, USA, [6]Faculty of Industrial Engineering, Mechanical Engineering & Computer Science, University of Iceland, Reykjavik, Iceland, Iceland, [7]Icelandic Heart Association Research Institute, Kópavogur, Iceland, Iceland, [8]Icelandic Heart Association Research Institute, Kópavogur, Iceland, USA

Disclosures: Elisa Marques, None

MO0271 **Withdrawn**

MO0272 **Physical exercise and vitamin D level improve BMD independently of each other and sex in Young Adults**

Rune Tønnesen*[1], Lars Thorbjørn Jensen[2], Peter Hambak Hovind[3], Peter Schwarz[4]. [1]Center of ageing & osteoporosis, Denmark, [2]Department of Clinical Physiology & Nuclear Medicine, Herlev University Hospital, Denmark, [3]Clinical Physiology & Nuclear Medicine, Righospitalet Glostrup University Hospital, Denmark, [4]Research Centre of Ageing & Osteoporosis, Departments of Medicine & Diagnostics, Glostrup University Hospital, Denmark

Disclosures: Rune Tønnesen, None

OSTEOPOROSIS - EPIDEMIOLOGY: ENVIRONMENTAL AND LIFESTYLE FACTORS

MO0273 Loneliness and Osteoporotic Fractures in Older Adults
Meltem Zeytinoglu*[1], Elbert Huang[2], Megan Huisingh-Scheetz[3], Diane Lauderdale[4], Tamara Vokes[5]. [1]University of Chicago, USA, [2]University of Chicago, Department of Medicine, Section of General Internal Medicine, USA, [3]University of Chicago, Department of Medicine, Section of Geriatric & Palliative Medicine, USA, [4]Department of Public Health Sciences, USA, [5]University of Chicago, Department of Medicine, Section of Endocrinology, Diabetes, & Metabolism, USA
Disclosures: Meltem Zeytinoglu, None

MO0274 Total Protein and Dietary Protein Food Pattern are Not Associated with Bone Mineral Density (BMD) Among Protein Replete Middle-Aged Adults
Kelsey Mangano*[1], Shivani Sahni[2], Robert McLean[2], Alyssa Dufour[2], Douglas Kiel[2], Katherine Tucker[3], Marian Hannan[4]. [1]Institute for Aging ResearchHebrew SeniorLifeHarvard Medical School, USA, [2]Institute for Aging Research, Hebrew Senior Life, Harvard Medical School, BIDMC, USA, [3]Department of Clinical Laboratory & Nutritional Sciences, University of Massachusetts, USA, [4]Institute for Aging Research, Hebrew SeniorLife, Harvard Medical School, BIDMC, USA
Disclosures: Kelsey Mangano, None

OSTEOPOROSIS - EPIDEMIOLOGY: FALLS AND FRACTURES

MO0275 A Useful Clinical Model to Predict Hip Fracture in U.S. Nursing Home (NH) Residents: the first step in developing a screening tool in the nursing home
Sarah Berry*[1], Zullo Andrew R[2], Yoojin Lee[2], Vincent Mor[2], Ralph D'Agostino[3], David Dosa[2], Jeffrey Hiris[2], Geetanjoli Banerjee[2], Douglas P Kiel[4]. [1]Hebrew SeniorLife/Beth Israel Deaconess Medical Center, USA, [2]Brown University, USA, [3]Boston University, USA, [4]Hebrew SeniorLife & Beth Israel Deaconess Medical Center, USA
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MO0276 atypical fremoral fractures: Radiographic features in 40 patients and Histomorphometric features in 11 patients
Waleed Hashem*[1], aliya khan[2], zohair rahman[2], angela cheung[3], ken pritzker[3], brain lentle[4]. [1]Mcmaster University, Saudi arabia, [2]McMaster University, Canada, [3]university of toronto, Canada, [4]british columbia university, Canada
Disclosures: Waleed Hashem, None

MO0277 Characteristics of Prevalent Vertebral Fractures Enhances in Old Men Prediction of Prevalent Osteoporosis and Incident Fractures
Magnus Karlsson*[1], Mehrsa Kherad[2], Ralph Hasserius[2], Jan-Åke Nilsson[2], Inga Redlund-Johnell[3], Caroline Karlsson[4], Claes Ohlsson[5], Dan Mellström[6], Mattias Lorentzon[6], Björn Rosengren[7]. [1]Skåne University Hospital Malmö, Lund University, Sweden, [2]Departments of Orthopedics & Clinical Sciences, Lund University, Skåne University Hospital, Malmö, Sweden, [3] Departments of Radiology & Clinical Sciences, Lund University, Skåne University Hospital, Malmö, Sweden, [4] Departments of Orthopedics & Clinical Sciences, Lund University, Skåne University Hospital, Malmö, Sweden, [5]Center for Bone & Arthritis Research, Institute of Medicine, Gothenburg University, Sahlgrenska University Hospital, Sweden, [6]Department of Geriatric Medicine, Gothenburg University, Sahlgrenska University Hospital, Sweden, [7]Departments of Orthopedics & Clinical Sciences, Lund University, Skåne University Hospital, Sweden
Disclosures: Magnus Karlsson, None

MO0278 Development of models for predicting fracture-associated outcomes
Tuan Nguyen*[1], Steve Frost[2], Jacqueline Center[1], John Eisman[3]. [1]Garvan Institute of Medical Research, Australia, [2]University of Western Sydney, Australia, [3]Garvan Institute of Medical Research; University of Notre Dame School of Medicine, Australia
Disclosures: Tuan Nguyen, None

MO0279 Falls predict death differentially by type of fall in postmenopausal women
Risto Honkanen*[1], Nadia Afrin[1], Heli Koivumaa-honkanen[1], Toni Rikkonen[1], Joonas Sirola[2], Marjo Tuppurainen[2], Heikki Kröger[1]. [1]University of Eastern Finland, Finland, [2]Kuopio University Hospital, Finland
Disclosures: Risto Honkanen, None

MO0280 **Incidence and mortality after distal radius fractures over 50 years of age in South Korea**
Tak Kim[1], Hyung Moo Park*[2], Yongchan Ha[2]. [1]Korea University Anam Hospital, South korea, [2]Chung-ang University, South korea
Disclosures: Hyung Moo Park, None

MO0281 **Mortality Risk, Cause of Death and Hip Fracture: A Prospective Study Over Two Decades of Hip Fracture Patients and Their Background Controls**
My von von Friesendorff*[1], Alicja Wizert[2], Jonas Ranstam[2], Fiona McGuigan[3], Cecilia Rogmark[4], Anna Holmberg[1], Anthony Woolf[5], Kristina Åkesson[4]. [1]Clinical Sciences Malmö, Lund University & Dept Orthopedics Malmö, Skåne University Hospital, Sweden, [2]Lund University, RCSyd, Skane University Hospital, Lund, Sweden, [3]Lund University, Sweden, [4]Dept of Clinical Sciences Malmö, Lund University & Dept Orthopedics Malmö, Skåne University Hospital, Sweden, [5]Dept of Rheumatology, Royal Cornwall Hospital, Truro, United Kingdom
Disclosures: My von von Friesendorff, None

MO0282 **Peri-Aortic Fat Is Associated with a Higher Risk of Vertebral Fracture and Negatively Associated with Volumetric Bone Mineral Density, Cross-Sectional Area and Compressive Strength of Lumbar Vertebrae: The Framingham Osteoporosis Study**
Yi-Hsiang Hsu*[1], Mary Bouxsein[2], Udo Hoffmann[3], David Karasik[4], L. Adrienne Cupples[5], Caroline Fox[6], Douglas Kiel[7]. [1]HSL Institute for Aging Research, Harvard Medical School, USA, [2]Center for Advanced Orthopedic Studies, Beth Israel Deaconess Medical Center, USA, [3]Massachusetts General Hospital, Department MR PET CT & Harvard Medical School, USA, [4]Hebrew SeniorLife Institute for Aging Research, USA, [5]Dept of Biostatistics, Boston Univ. Sch. of Public Health, Boston, USA, [6]Brigham & Women's Hospital, Division of Endocrinology & Harvard Medical School, USA, [7]Hebrew SeniorLife Institute for Aging Research & Harvard Medical School, USA
Disclosures: Yi-Hsiang Hsu, None

MO0283 **Post-Fracture Care: Do we need to educate the patients rather than the doctors? The PREVOST Randomized Control Trial**
Blandine Merle*[1], Roland Chapurlat[2], Emmanuelle Vignot[3], Thierry Thomas[4], Julie Haesebaert[5], Anne-Marie Schott[3]. [1]INSERM, France, [2]Hospices Civils Lyon, France, [3]Hospices Civils de Lyon, France, [4]Hospital Bellevue, France, [5]PIMER Hospices Civils de Lyon, France
Disclosures: Blandine Merle, None

MO0284 **Potential Years of Life Lost Following Low-Trauma Fractures in Canada**
Robert B. Hopkins[1], Jonathan D. (Rick) Adachi[1], Louis Bessette[2], Natasha Burke[1], Jacques P. Brown[2], William D Leslie*[3], Suzanne Morin[4], Alexandra Papaioannou[1], Louisa Pericleous[5], Jean-Eric Tarride[1]. [1]McMaster University, Canada, [2]Laval University, Canada, [3]University of Manitoba, Canada, [4]McGill University, Canada, [5]Amgen Canada Inc., Canada
Disclosures: William D Leslie, None

MO0285 **Presence of low bone mass and osteoporosis and cognitive impairment contribute to an increased risk for falls and fractures in older cancer patients**
Beatrice Edwards*, Holly Holmes, Juhee Song, Ming Sun. MD Anderson Cancer Center, USA
Disclosures: Beatrice Edwards, None

MO0286 **Prospective study of C-reactive protein and risk of hip fracture**
Junjuan Li *[1], Shouling Wu[1], Shivani Sahni[2], Chunpeng Ji[1], Xiang Gao[3], Katherine Tucker[4]. [1]Kailuan Hospital, China, [2]Institute for Aging Research, Hebrew SeniorLife, Harvard Medical School, USA, [3]The Pennsylvania State University, USA, [4]University of Massachusetts, Lowell, USA
Disclosures: Junjuan Li , None

MO0287 **Risk for Hip Fracture Ten Years Before and After Total Knee Replacement Surgery in the Entire Swedish Population**

CECILIE HONGSLO VALA*[1], Johan Kärrholm[2], Sabine Sten[3], Magnus Karlsson[4], Valter Sundh[2], Mattias Lorentzon[2], Dan Mellström[5]. [1]University of Gothenburg, Sweden, [2]Goteborgs Universitet, Sweden, [3]Uppsala Universitet, Sweden, [4]Skåne University Hospital Malmö, Lund University, Sweden, [5]Sahlgrenska University Hospital, Sweden

Disclosures: CECILIE HONGSLO VALA, None

MO0288 **The Predictive Value of Falls History for Incident Fracture Decreases With Time: MrOs Sweden**

Helena Johansson*[1], Nicholas Harvey[2], Anders Odén[3], Magnus Karlsson[4], Björn Rosengren[4], Östen Ljunggren[5], Cyrus Cooper[6], Eugene McCloskey[7], John Kanis[7], Claes Ohlsson[8], Dan Mellström[8]. [1]Centre for Metabolic Bone Diseases, University of Sheffield Medical School, Sweden, [2]MRC Lifecourse Epidemiology Unit, University of Southampton, Southampton, UK; NIHR Southampton Biomedical Research Centre, University of Southampton & University Hospital Southampton NHS Foundation Trust, Tremona Road, Southampton, UK, United Kingdom, [3]Centre for Bone & Arthritis Research (CBAR), Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden; Centre for Metabolic Bone Diseases, University of Sheffield, Sheffield, UK, Sweden, [4]Clinical & Molecular Osteoporosis Research Unit, Department of Clinical Sciences, Lund University & Department of Orthopedics, Skane University Hospital, Malmo, Sweden, Sweden, [5]Department of Medical Sciences, University of Uppsala, Uppsala, Sweden, Sweden, [6]NIHR Musculoskeletal Biomedical Research Unit, University of Oxford, Oxford, UK, United Kingdom, [7]Centre for Metabolic Bone Diseases, University of Sheffield, Sheffield, UK, United Kingdom, [8]Centre for Bone & Arthritis Research (CBAR), Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden, Sweden

Disclosures: Helena Johansson, None

MO0289 **Wrist Fracture and Risk of Subsequent Fracture: Post-hoc Findings from the Women's Health Initiative Study**

Carolyn Crandall*[1], Kathleen Hovey[2], Jane Cauley[3], Christopher Andrews[4], Jeffrey Curtis[5], Jean Wactawski-Wende[4], Nicole Wright[5], Wenjun Li[6], Meryl LeBoff[7]. [1]University of California, Los Angeles, USA, [2]State University of NY at Buffalo, USA, [3]University of Pittsburgh, Graduate School of Public Health, USA, [4]State University of NY at Buffalo, Buffalo, NY, USA, [5]University of Alabama at Birmingham, USA, [6]University of Massachusetts Medical School, USA, [7]Brigham & Women's Hospital, Harvard Medical School, USA

Disclosures: Carolyn Crandall, None

OSTEOPOROSIS - EPIDEMIOLOGY: RISK FACTORS

MO0290 **Determining interdependency structure of contributors to bone microarchitecture: The Framingham Osteoporosis Study**

Roby Joehanes*[1], Kerry Broe[2], David Karasik[3], Shivani Sahni[3], Robert McLean[3], Kelsey Mangano[3], Ching-An Meng[2], Yi-Hsiang Hsu[3], L. Adrienne Cupples[4], Elizabeth Samelson[3], Marian Hannan[3], Mary Bouxsein[5], Douglas Kiel[3]. [1]Hebrew SeniorLifeBeth Israel Deaconness Medical CenterHarvard Medical School, USA, [2]Hebrew SeniorLife, USA, [3]Harvard Medical School, USA, [4]Boston University School of Public Health, USA, [5]BIDMC & Harvard Medical School, USA

Disclosures: Roby Joehanes, None

MO0291 **Fracture Risk is Increased in Middle-aged Persons with Lower but Normal Range Serum Sodium Concentration: Results from the NEO study**

Chantal Wiepjes*[1], Renée de Mutsert[2], Anne de Boer[2], Natasja Appelman[2], Frits Rosendaal[2], Martin Den Heijer[3]. [1]VUMC / LUMC, Netherlands, [2]LUMC, Netherlands, [3]VU Medical CenterPb 70571007 MB Amsterdam, The netherlands

Disclosures: Chantal Wiepjes, None

MO0292 **Imminent Fracture Risk in Elderly Osteoporotic Women: Underlying Relationships Between Risk Factors and Outcome**

Rich Barron*[1], Derek Weycker[2], John Edelsberg[3], Alex Kartashov[3], Barry Crittenden[1], Andreas Grauer[1], James Lani[4]. [1]Amgen Inc., USA, [2]Policy Analysis Inc. (PAI), USA, [3]Policy Analysis Inc., USA, [4]Statistics Solutions Inc., USA

Disclosures: Rich Barron, Amgen Inc.

MO0293 **Insulin Resistance Independently Had the Negative Association with the Bone Mineral Density in Korean young women**
Sangmo Hong*[1], Woong Hwan Choi[2]. [1]Hanyang University, South korea, [2]Department of Internal Medicine, Hanyang University College of Medicine, South korea
Disclosures: Sangmo Hong, None

MO0294 **Serum phosphate levels are related to all-cause, cardiovascular and COPD mortality in men: the Rotterdam Study**
Natalia Campos*[1], Lies Lahousse[2], Guy G Brusselle[3], Bruno H Stricker[4], Albert Hofman[4], Henning Tiemeier[5], Oscar H Franco[4], André G Uitterlinden[6], M Carola Zillikens[6]. [1]Erasmus MC, The netherlands, [2]Department of Respiratory Medicine, Ghent University, Belgium, [3]Department of Respiratory Medicine, Ghent University Hospital, Belgium, [4]Department of Epidemiology, Erasmus Medical Center, Netherlands, [5]Department of Psychiatric Epidemiology, Erasmus Medical Center, Netherlands, [6]Department of Internal Medicine, Erasmus Medical Center, Netherlands
Disclosures: Natalia Campos, None

MO0295 **The Association Between Inflammatory Markers and Measures of Hip Bone Density, Geometry, and Strength in Older Men: the Osteoporotic Fractures in Men Study**
Kamil Barbour*[1], Stephanie Harrison [2], Eric Orwoll[3], Jane Cauley [4]. [1]CDC, USA, [2] California Pacific Medical Center Research Institute, San Francisco, CA, USA, USA, [3]Portland VA Medical Center, & Oregon Health Sciences University, Portland, Oregon, U.S.A, USA, [4]Department of Epidemiology, University of Pittsburgh, Pittsburgh, PA, USA, USA
Disclosures: Kamil Barbour, None

MO0296 **The Saudi Central Osteoporosis Registry (T-Score): A Kingdom-Wide Observational and Longitudinal Registry for Saudis with Osteoporosis**
Nasser Al-Daghri*. King Saud University, Saudi arabia
Disclosures: Nasser Al-Daghri, None

OSTEOPOROSIS - HEALTH CARE DELIVERY: GENERAL

MO0297 **Catch-a-Break: A novel approach to detect osteoporosis after an incident fracture**
Angela Juby*[1], Liz Evens[2], David Hanley[3], Lara Osterreicher[4], Members Bone Joint Health Strategic Clinical Network[5]. [1]University of Alberta, Canada, [2]Alberta Bone & Joint Health Institute, Canada, [3]University of Calgary, Canada, [4]Health Link Alberta, Alberta Health Services, Canada, [5]Alberta Health Services, Canada
Disclosures: Angela Juby, None

MO0298 **Decline in BMD testing: a nation-wide study in France**
Eric Lespessailles*[1], Pierre Gabach[2], Daniel Buchon[3], Maryline Douge[2], Jean Marc Feron[4], Laurent Grange[5], Claire Leboucher[2], Erick Legrand[6], Gabrielle PEYRE-LANQUAR[2], Eleonore Ronfle[2], Pascal Guggenbuhl[6], Thomas Thierry[6]. [1]Centre Hospitalier Regional Orleans, France, [2]CNAMTS, France, [3]Universistary Limoges, France, [4]Saint Antoine Hospital, France, [5]CHU Grenoble, France, [6]CHU, France
Disclosures: Eric Lespessailles, None

MO0299 **Design and Uptake of a Multi-modal Intervention for the Activating Patients at Risk for OsteoPOroSis (APROPOS) Study: a Cluster-randomized Trial within the GLOW Cohort**
Maria Danila*[1], Ryan Outman[1], Tammi Thomas[1], Jeroan Allison[2], Fred Anderson[2], Jeffrey Curtis[1], Susan Greenspan[3], Andrea LaCroix[4], Michael Miller[5], Jeri Nieves[6], Monika Safford[1], Stuart Silverman[7], Ethel Siris[6], Amy Warriner[8], Nelson Watts[9], Kenneth Saag[1]. [1]University of Alabama at Birmingham, USA, [2]University of Massachusetts Medical School, USA, [3]University of Pittsburgh, USA, [4]University of California at San Diego, USA, [5]University of Oklahoma, USA, [6]Columbia University, USA, [7]Cedars-Sinai Center of Excellence, USA, [8]Unversity of Alabama at Birmingham, USA, [9]Mercy Health Osteoporosis & Bone Health Services, USA
Disclosures: Maria Danila, None

MO0300 **Electronic Decision Support for the Investigation and Management of Osteoporosis**
Yvonne Selecki*[1], Tuan Nguyen[1], Jackie Center[1], John Eisman[2]. [1]Garvan Institute of Medical Research, Australia, [2]Garvan Insititute of Mdical Research, Australia
Disclosures: Yvonne Selecki, None

MO0301 **Integrated Osteoporosis, Sarcopenia, Fall Related Screening, Education, and Health Promotion Program for High Risk Population in Taiwan**
Rong-Sen Yang[1], Ding-Cheng Chan*[1], Chih-Hwa Chen[2], Hung-Yi Chiou[3], Jawl-Shan Hwang[4], Shih-Te Tu[5], Kuang-Hung Hsu[6], Fang-Ping Chen[7], Jung-Fu Chen[8], Chung-Yhu Yang[9], Lay-Chin Lim[1]. [1]National Taiwan University Hospital, Taiwan, [2]Taipei Medical University Hospital, Taiwan, [3]Taipei Medical University, Taiwan, [4]Chang Gung Memorial Hospital, Taiwan, [5]Changhua Christian Hospital, Taiwan, [6]Chang Gung University, Taiwan, [7]Keelung Chang Gung Memorial Hospital, Taiwan, [8]Kaohsiung Chang Gung Memorial Hospital, Taiwan, [9]Kaohsiung Medical University, Taiwan
Disclosures: Ding-Cheng Chan, None

MO0302 **Mortality and re-fracture benefits of Orthogeriatric and Fracture Liaison Service Models of Care: A UK Population Based Study**
Muhammad Javaid*[1], Samuel Hawley[2], Jose Leal[1], Daniel Prieto-Alhambra[2], Alastair Gray[1], Nigel Arden[2], Janet Lippett[3], Sally Sheard[1], Cyrus Cooper[4], Andrew Judge[2]. [1]University of Oxford, United Kingdom, [2]NIHR Musculoskeletal Biomedical Research Unit, University of Oxford, United Kingdom, [3]Royal Berkshire Hospital, United Kingdom, [4]MSc Lifecourse Eipdemiology Unit, University of Southampton, United Kingdom
Disclosures: Muhammad Javaid, Merck; Consilient Health; Jarrow Formulas; Lilly UK; Medtronic; Amgen; Servier; Internis

MO0303 **Real-world Persistence to Injectable Osteoporosis Therapy**
Ankita Modi[1], Shiva Sajjan*[2], Ralph Insinga[2], Jessica Weaver[2]. [1]Merck & Co., Inc., USA, [2]Merck & Company, USA
Disclosures: Shiva Sajjan, Merck and Company

MO0304 **Specialty Care Increases Odds of Osteoporosis Screening and Diagnosis in Postmenopausal Women Medically Homed in an Academic Multispecialty Practice**
Clare O'Connor*, Christie Bartels, Karen Hansen. University of Wisconsin School of Medicine & Public Health, USA
Disclosures: Clare O'Connor, None

MO0305 **The Ethics of Treating Osteopenia: What are we Preventing?**
Loren Greene*. New York University School of Medicine, USA
Disclosures: Loren Greene, None

MO0306 **Why patients still untreated 1 year after a Fragility Fracture refuse an intervention to treat osteoporosis?**
Noémie Gionet Landry*[1], François Cabana[2], Isabelle Gaboury[1], Gilles Boire[2], Sophie Roux[2], Nathalie Carrier[2], Marie-Claude Beaulieu[1]. [1]Université de Sherbrooke, Canada, [2]CHUS, Canada
Disclosures: Noémie Gionet Landry, None

OSTEOPOROSIS - HEALTH CARE DELIVERY: OUTCOME STUDIES

MO0307 **Change in Physical Function Following Hip Fracture among Elderly Osteoporotic Women**
Derek Weycker*[1], Rich Barron[2], John Edelsberg[3], Alex Kartashov[3], Barry Crittenden[2], Andreas Grauer[2]. [1]Policy Analysis Inc. (PAI), USA, [2]Amgen Inc., USA, [3]Policy Analysis Inc., USA
Disclosures: Derek Weycker, Amgen Inc.

MO0308 **Health Utility Following Osteoporotic Fracture Using SF6D: Results from ICUROS US**
Stuart Silverman*[1], Deborah T Gold[2], John T Schousboe[3], Loretta H Pearson[4], Mackenzie R Bronson[4], Fergus E McKiernan[5], Robert A Yood[6], John I Reed[6], Daniel H Solomon[7], Chad Deal[8], William Griffit[9], Michael B Nichol[10], Susan Gallagher[4], Kristin Anton[4], Anna NA Tosteson[4]. [1]Cedars-Sinai/UCLA, USA, [2]Duke University, USA, [3]Park Nicollet Clinic, HealthPartners, USA, [4]Geisel School of Medicine at Dartmouth, USA, [5]Marshfield Clinic, USA, [6]Reliant Medical Group, USA, [7]Brigham & Women's Hospital, USA, [8]Cleveland Clinic, USA, [9]University of Wisconsin, USA, [10]USC Pharmacy, USA
Disclosures: Stuart Silverman, None

MO0309 **The Osteoporosis Care Gap: Evaluation of Solutions for Remote and Rural Communities**
Rosemary Hollick*[1], Alison Black[2], Lorna McKee[3], David Reid[3]. [1]Aberdeen Royal Infirmary, United Kingdom, [2]NHS Grampian, United Kingdom, [3]University of Aberdeen, United Kingdom
Disclosures: Rosemary Hollick, None

OSTEOPOROSIS - NUTRITION AND DIETARY SUPPLEMENTS: CALCIUM

MO0310 **A low dietary calcium intake is a major health problem in Hong Kong postmenopausal Chinese women**
Rick Chung*[1], Connie Au[2], Gabrielle Lee[2], Ivy Wong[2], Selegne Wong[2], Novem Lam[2], Edith Lau[2]. [1]Center for Clinical & Basic Research (CCBR) (Hong Kong), Hong kong, [2]CCBR Hong Kong, Hong kong
Disclosures: Rick Chung, None

MO0311 **A Short, Quick, and Easy Questionnaire to Estimate Daily Dietary Calcium Intake of Osteoporosis Patients**
Linda Rasch[1], Marian de van der Schueren[2], Irene Bultink[3], Lilian van Tuyl[3], Willem Lems*[3]. [1]VU University Medical Center, The netherlands, [2]Department of Nutrition & Dietetics, VU University Medical Center, Netherlands, [3]Amsterdam Rheumatology & immunology Center, VU University Medical Center, Netherlands
Disclosures: Willem Lems, None

OSTEOPOROSIS - NUTRITION AND DIETARY SUPPLEMENTS: GENERAL

MO0312 **High serum uric acid concentration show different association between vitamin C intake and spine Quantitative Computed Tomography (QCT) bone measures in women**
Shivani Sahni*[1], Katherine Tucker[2], Caroline Fox[3], Douglas Kiel[1], Marian Hannan[1]. [1]Hebrew SeniorLife, Institute for Aging Research & Harvard Medical School, USA, [2]University of Massachusetts, USA, [3]Framingham Heart Study, NHLBI, Harvard Medical School, USA
Disclosures: Shivani Sahni, PAI, Inc.; General Mills Bell Institute of Health and Nutrition

MO0313 **Hypophosphatemia Associated with Elemental Formula Use in Children with Feeding Problems**
Luisa Gonzalez Ballesteros*[1], Nina Ma[2], Leanne Ward[3], Philippe Backeljauw[4], David Weber[5], Linda DiMeglio[6], Julie Gagne[7], Robert Stein[8], Declan Cody[9], Kimber Simmons[10], Paul Zimakas[11], Linda Casey[12], Erik Imel[6], Thomas Carpenter[13]. [1]Yale University, USA, [2]Boston Children's Hospital, USA, [3]Children's Hospital of Eastern Ontario, Canada, [4]Cincinnati Children's Hospital, USA, [5]University of Rochester, USA, [6]Indiana University, USA, [7]Centre hospitalier de l'Université Laval, Canada, [8]Children's Hospital of Western Ontario, Canada, [9]Our Lady's Children's Hospital, Crumlin, Ireland, [10]Children's Hospital Colorado, USA, [11]University of Vermont Medical Center, USA, [12]British Columbia Children's Hospital, Canada, [13]Yale University School of Medicine, USA
Disclosures: Luisa Gonzalez Ballesteros, None

MO0314 **Low ingestion of calcium and magnesium and high odds of hip fracture: a cross-sectional study**
Juliana Brondani, Raisa Bringhenti, Felipe Langer, Giovani Sartori, Adhan de Vieira, Antonio Codevilla, Fabio Comim, Melissa Premaor*. Federal University of Santa Maria, Brazil
Disclosures: Melissa Premaor, None

OSTEOPOROSIS - NUTRITION AND DIETARY SUPPLEMENTS: VITAMIN D

MO0315 **Calgary Vitamin D Trial: Safety of Supplementation up to 10,000 IU Vitamin D Daily, 12 Month Pilot Data**
Erin Hildebrandt*, David Hanley, Steven Boyd. University of Calgary, Canada
Disclosures: Erin Hildebrandt, None

MO0316 **Relationship of Directly Measured Free 25(OH) Vitamin D and Total 25OH Vitamin D: Effect of Daily Vitamin D Supplementation in Postmenopausal Women**
Gretta Borchardt*[1], Ellen Fidler[2], Diane Krueger[2], Neil Binkely[2]. [1]University of Wisconsin, United states, [2]University of Wisconsin, USA
Disclosures: Gretta Borchardt, None

MO0317 **Relationship of Serum 25-Hydroxyvitamin D Measured by Liquid Chromatography-Mass Spectrometry to Bone Turnover Markers and Parathyroid Hormone and Bone Mineral Density in Korean Adult Males with Low Bone Mass**
Da Young LEE*[1], Ju Young Jang[2], Tae Yang Yu[2], Won Jung Hong[2], Yong Joo Hong[2], Yong-Ki Min[2], Jae Hoon Chung[2], Jae Hyeon Kim[2], Kyu Yeon Hur[3], Moon Kyu Lee[2], Sun Wook Kim[2]. [1]Samsung Medical Center, South korea, [2]Division of Endocrinology & Metabolism, Department of Medicine, Samsung Medical Center, Sungkyunkwan University School of Medicine, South korea, [3]Division of Endocrinology & Metabolism, Department of Medicine, Samsung Medical Center, South korea
Disclosures: Da Young LEE, None

MO0318 **The effects of vitamin D on bone mineral density in rheumatoid arthritis and systemic lupus erythematosus**
Chang-Hee Suh[1], Ju-Yang Jung*[2], Hyoun-Ah Kim[2]. [1]Ajou University School of Medicine, South korea, [2]Ajou University Hospital, South korea
Disclosures: Ju-Yang Jung, None

MO0319 **The effects of vitamin D3 versus 25-hydroxyvitamin D3 on serum vitamin D metabolites and markers of calcium balance in a multi-ethnic cohort of healthy adults**
Albert Shieh*[1], Christina Ma[2], Emily Sondergaard[2], Yang Shen[2], Katrhryn Zavala[2], Philip Liu[2], John Adams[2]. [1]University of California, Los Angeles, USA, [2]UCLA, USA
Disclosures: Albert Shieh, None

MO0320 **ASBMR 2015 Phoebe Leboy Professional Development Award**
Vitamin D Replacement in Bariatric Surgery: A Critical Appraisal of Current Guidelines
Marlene Chakhtoura*[1], Ghada El Hajj Fuleihan[2], Nancy Nakhoul[2], Elie Akl[1], Christos Mantzoros[3]. [1]American University of Beirut, Lebanon, [2]American University of Beirut - Lebanon, Lebanon, [3]Harvard Medical School, USA
Disclosures: Marlene Chakhtoura, None

OSTEOPOROSIS - PATHOPHYSIOLOGY: CALCIUM, VITAMIN D, NUTRITIONAL AND PHYSICAL FACTORS

MO0321 **Higher Body Fat Mass is Associated with Reduced Serum 1,25-dihydroxyvitamin D Levels in Healthy Postmenopausal Women**
Magaly Hars, Andrea Trombetti, Mélany Hars, Claire Durosier, Emmanuel Biver, Thierry Chevalley, Serge Ferrari, Rene Rizzoli*. Division of Bone Diseases, Geneva University Hospitals & Faculty of Medicine, Switzerland
Disclosures: Rene Rizzoli, None

OSTEOPOROSIS - PATHOPHYSIOLOGY: GENERAL

MO0322 **Changes in Gene Expression in Osteoblastic cell line SCP1 after Stimulation with Adult Crohn's Disease Patient Serum**
Martina Blaschke[1], Regine Koepp[2], Marina Komrakova[2], Matthias Schieker[3], Heide Siggelkow*[2]. [1]Georg-August Universitat, Germany, [2]University Medical Center, Germany, [3]Ludwig-Maximillians-University, Germany
Disclosures: Heide Siggelkow, None

MO0323 **Circulating levels and liver protein and gene expression of sclerostin in patients with primary biliary cirrhosis. Correlation with hepatic histological features**
Silvia Ruiz-Gaspa*[1], Laia Gifre[1], Rosa Miquel[2], Marta Dubreuil[1], Pilar Peris[1], Ana Monegal[1], Ana Arias[1], Albert Pares[3], Nuria Guanabens[4]. [1]Metabolic Bone Diseases Unit, CIBERehd, Hospital Clinic, University of Barcelona, Spain, [2]Department of Pathology, Hospital Clinic, University of Barcelona, Spain, [3]Liver Unit, CIBERehd, IDIBAPS, Hospital Clinic, University of Barcelona, Spain, [4]Metabolic Bone Diseases Unit, Hospital Clinic, IDIBAPS, CIBERehd, University of Barcelona, Spain
Disclosures: Silvia Ruiz-Gaspa, None

MO0324 **Deficiency of C/EBP Homologous Protein Enhances Bone Mineral Density Loss in Female Mice**
Shing-Hwa Liu*, Cheng-Tien Wu, Rong-Sen Yang. National Taiwan University, Taiwan
Disclosures: Shing-Hwa Liu, None

MO0325 **Discovery of Small Molecules to Promote BMP Signaling and Bone Formation**
Chao Liang*[1], Mengyang Xu[2], Xin Zhou[3], Kayan Wang[4], Jun Xu[2], Baoting Zhang[4], Aiping Lu[3], Ge Zhang[3]. [1]Hong Kong Baptist University, Hong kong, [2]Research Center for Drug Discovery & Institute of Human Virology, School of Pharmaceutical Sciences, Sun Yat-Sen University, China, [3]Institute for Advancing Translational Medicine in Bone & Joint Diseases, School of Chinese Medicine, Hong Kong Baptist University, Hong kong, [4]School of Chinese Medicine, The Chinese University of Hong Kong, Hong kong
Disclosures: Chao Liang, None

MO0326 **GPR120 As a Molecular Target For Inflammatory Bone Diseases**
Md Rahman*[1], Stephen Harris[2], Wasim Chowdhury[2]. [1]University of Texas Health Science Center, USA, [2]UTHSCSA, USA
Disclosures: Md Rahman, None

MO0327 **Relation of serum serotonin levels and rates of bone loss in men**
Kihyun Baek*, Mooil Kang, Jeho Han. The Catholic University of Korea, South korea
Disclosures: Kihyun Baek, None

MO0328 **Relationship between acetylcholine levels and bone loss in the early stages of Alzheimer disease: a mouse study**
Yun Ma*[1], Randy Blakely[2], Florent Elefteriou[3]. [1]Vanderbilt University, USA, [2]Department of Pharmacology, Vanderbilt University, USA, [3]Department of Medicine,Department of Pharmacology,Department of cancer biology,Vanderbilt Center for Bone Biology, Vanderbilt University, USA
Disclosures: Yun Ma, None

OSTEOPOROSIS - PATHOPHYSIOLOGY: GLUCOCORTICOIDS AND OTHER DRUGS

MO0329 **Highly expressed CKIP-1 inhibits BMP signaling pathway to suppress osteogenic differentiation and mineral deposition in osteoblast during glucocorticoid treatment *in vitro***
Jin Liu*[1], Changwei Lv[2], Baosheng Guo[3], Li Defang[4], Chao Liang[5], Xiaohua Pan[6], Lingqiang Zhang[7], Baoting Zhang[8], Aiping Lu[5], Ge Zhang[5]. [1]Hong kong, [2]Institute for Advancing Translational Medicine in Bone & Joint Diseases, Hong Kong Baptist University, Hong Kong, Department of Orthopedics, Xijing Hospital, The Fourth Military Medical University, Hong kong, [3]Institute for Advancing Translational Medicine in Bone & Joint Diseases, Hong Kong Baptist University, Hong Kong, Hong kong, [4]Institute for Advancing Translational Medicine in Bone & Joint Diseases, Hong Kong Baptist University, , [5]Institute for Advancing Translational Medicine in Bone & Joint Diseases, Hong Kong Baptist University, Hong kong, [6]Department of Orthopedics in Second Hospital of Medical College (Shenzhen), Jinan University, China, [7]State Key Laboratory of Proteomics, Beijing Proteome Research Center, Beijing Institute of Radiation Medicine, Beijing, China, [8]School of Chinese Medicine, The Chinese University of Hong Kong, Hong kong
Disclosures: Jin Liu, None

OSTEOPOROSIS - PATHOPHYSIOLOGY: SEX HORMONES AND CALCIOTROPIC HORMONES

MO0330 **Modulation of Apolipoprotein E on Estrogen Mediated Bone Metabolism**
Ling Wang*[1], Yu-Yan Gui[2], Xue-Min Qiu[2]. [1]Fudan University, Institute of Obstetrics & Gynecology, Obstetrics & Gynecology, Peoples republic of china, [2]Laboratoryfor Reproductive Immunology, Hospital &Institute of Obstetrics & Gynecology, IBS,Fudan University Shanghai Medical College, Shanghai 200011,China, China
Disclosures: Ling Wang, None

OSTEOPOROSIS - SECONDARY CAUSES: DRUGS, OTHER THAN GLUCOCORTICOIDS

MO0331 **Longitudinal changes of trabecular bone score during aromatase inhibitor treatment in Korean breast cancer patients**

A Ram Hong*[1], Jung Hee Kim[2], Sang Wan Kim[2], Chan Soo Shin[2]. [1]Seoul National University Hospital, South korea, [2]Department of Internal Medicine, Seoul National University College of Medicine, South korea

Disclosures: A Ram Hong, None

MO0332 **Use of ibuprofen before, but not after, exercise blunts the serum IL-6 response in older women and men**

Sarah Wherry*, Catherine Jankowski, Pamela Wolfe, Robert Schwartz, Wendy Kohrt. University of Colorado, USA

Disclosures: Sarah Wherry, None

OSTEOPOROSIS - SECONDARY CAUSES: SMOKING, ALCOHOL AND OTHER ENVIRONMENTAL FACTORS

MO0333 **Trabecular Bone Score (TBS) is associated with pulmonary function and severe vertebral fractures in chronic obstructive pulmonary disease(COPD)**

Reiko Watanabe*[1], Takeshi Tanaka[1], Keisuke Aita[1], Masaaki Hagiya[1], Hiroaki Masaki[1], Nobuyuki Tai[1], Jyunko Hirano[1], Kyoko Yokosuka[2], Hisami Yamakawa[2], Toshiaki Homma[1], Tsutomu Yarita[2], Daisuke Inoue[1], Ryo Okazaki[1]. [1]Teikyo University Chiba Medical Center, Japan, [2]Yarita Hospital, Japan

Disclosures: Reiko Watanabe, None

OSTEOPOROSIS - TREATMENT: ANABOLIC AGENTS

MO0334 **Acceleration of Fracture Healing and Improvement of Quality of Life with Teriparatide: about 16 Cases**

Delphine Stoll[1], Bérengère Aubry-Rozier*[2], Elena Gonzalez Rodriguez[2], Didier Hans[2], Olivier Lamy[2]. [1]Centre a bone diseases, Switzerland, [2]Center of Bone Diseases, Bone & Joint Department, Lausanne University Hospital, Lausanne, Switzerland, Switzerland

Disclosures: Bérengère Aubry-Rozier, None

MO0335 **Biochemical Markers of Bone Turnover and the Prediction of the BMD Response to Teriparatide, Denosumab or Both in Postmenopausal Women in the DATA Study**

Joy Tsai[1], Paul Wallace[1], Sherri-Ann Burnett-Bowie[1], Alexander Uihlein[2], Robert Neer[2], Hang Lee[3], Benjamin Leder*[4]. [1]Endocrine Unit, Massachusetts General Hospital, USA, [2]MGH Endocrine Unit, USA, [3]Biostatistics Center, Massachusetts General Hospital, USA, [4]Massachusetts General Hospital Harvard Medical School, USA

Disclosures: Benjamin Leder, None

MO0336 **Genome-Wide Analysis Identifies Significant Predictors of Therapeutic Response to Teriparatide in Severe Osteoporosis**

Nerea Alonso*[1], Philip Riches[2], Bente Langdahl[3], Stuart Ralston[2]. [1]University of Edinburgh, United Kingdom, [2]Rheumatic Diseases Unit, CGEM-IGMM, University of Edinburgh, United Kingdom, [3]Department of Endocrinology & Internal Medicine THG, Aarhus University Hospital, Denmark

Disclosures: Nerea Alonso, None

OSTEOPOROSIS - TREATMENT: ANTIRESORPTIVE AGENTS

MO0337 **A Retrospective Cohort Study Assessing the Incidence of Non-Vertebral and Hip Fractures in Women Receiving Treatment for Postmenopausal Osteoporosis in Routine Clinical Practice**

Maurille Feudjo Tepie*[1], Lung-I Cheng[2], Paula Dakin[2], Leslie Spanger[2], Brad Stolshek[2], Rachel Wagman[2], J. Michael Sprafka[2]. [1]Amgen Ltd, United Kingdom, [2]Amgen Inc., USA

Disclosures: Maurille Feudjo Tepie, Amgen

MO0338 **Denosumab Compared to Other Treatments to Prevent or Treat Osteoporosis: a Systematic Review and Meta-analysis**

Claudia Beaudoin*[1], Sonia Jean[2], Louis Bessette[3], Louis-Georges Ste-Marie[4], Jacques P. Brown[3]. [1]CHU de Quebec Research Centre, Canada, [2]Institut national de santé publique du Québec, Canada, [3]CHU de Québec Research Centre, Canada, [4]Université de Montréal, Canada

Disclosures: Claudia Beaudoin, Merck, Actavis, sanofi-aventis, Amgen, Eli Lilly, Novartis

MO0339 **Difference and similarity between alendronate oral jelly therapy and alendronate weekly tablet therapy in the treatment of osteoporosis in Japanese clinical settings**
Nobukazu Okimoto*[1], Satoshi IKeda[2], Hidehiro Matsumoto[3], Akinori Sakai[4]. [1]Okimoto Clinic, Japan, [2]Ken-Ai memorial Hospital, Japan, [3]Sanzai Hospital, Japan, [4]University of Occupatinal & Environmetal Health Japan, Japan
Disclosures: Nobukazu Okimoto, None

MO0340 **Difference in Bone Mineral Density Change at the Lateral Femoral Cortices According to Administration of Different Bisphosphonate Agents**
Kyu Hyun Yang*[1], Sungjun Kim[1], IL Hyung Park[2]. [1]Gangnam Severance Hospital, South korea, [2]Kyungbook National University, South korea
Disclosures: Kyu Hyun Yang, None

MO0341 **Different BMD gains after denosumab compared to zoledronate following teriparatide in women with postmenopausal osteoporosis – a case-control study**
Albrecht Popp*[1], Schaefer Silke[2], Helene Buffat[2], Piera Rossi[2], Christoph Senn[2], Kurt Lippuner[2]. [1]Department of Osteoporosis, University Hospital & University of Bern, Switzerland, [2]Department of Osteoporosis, University Hospital Bern, Switzerland
Disclosures: Albrecht Popp, Amgen Switzerland

MO0342 **Discontinuation of Denosumab is associated with a severe increase risk of spontaneous vertebral fractures: 3 case reports**
Olivier Lamy[1], Delphine Stoll[2], Elena Gonzalez Rodriguez[3], Didier Hans[2], Bérengère Aubry-Rozier*[2]. [1]Chief of the Bone Unit, Switzerland, [2]Center of Bone Diseases, Lausanne University Hospital, Switzerland, [3]Center of Bone Disease, Lausanne University Hospital, Switzerland
Disclosures: Bérengère Aubry-Rozier, None

MO0343 **Ectosteric inhibitors of cathepsin K from *Salvia miltiorrhiza***
Simon Law*, Preety Panwar, Nham Nguyen, Gary Brayer, Dieter Bromme. University of British Columbia, Canada
Disclosures: Simon Law, None

MO0344 **Factors Affecting Persistence With Denosumab (Prolia®) in Postmenopausal Women With Osteoporosis: Results From a Prospective Observational Study**
Stuart Silverman*[1], E Siris[2], David Kendler[3], D Belazi[4], Jacques P. Brown[5], DT Gold[6], EM Lewiecki[7], A Papaioannou[8], C Simonelli[9], G Quinn[10], S Yue[11], LI Cheng[11], B Stolshek[11], C Recknor[12]. [1]Cedars-Sinai Medical Center, UCLA School of Medicine, & OMC Clinical Research, USA, [2]Columbia University Medical Center, USA, [3]University of British Columbia, Canada, [4]AlchemiPharma LLC, USA, [5]Laval University & CHU de Québec (CHUL) Research Centre, Canada, [6]Duke University Medical Center, USA, [7]New Mexico Clinical Research & Osteoporosis Center & University of New Mexico School of Medicine, USA, [8]McMaster University, Canada, [9]Health East Osteoporosis Care, USA, [10]Sarnia Statistics Ltd, United Kingdom, [11]Amgen Inc., USA, [12]United Osteoporosis Centers, USA
Disclosures: Stuart Silverman, Lilly, Amgen, Pfizer; Lilly, Amgen, Pfizer; Amgen

MO0345 **Incidence Rate of Osteonecrosis of the Jaw among Women with Postmenopausal Osteoporosis Treated with Prolia or Bisphosphonate**
Fei Xue*[1], Rachel Wagman[2], Susan Yue[2], Shawna Smith[3], Violeta Hennessey[4], Tarun Arora[5], Jeffrey Curtis[5], Vera Ehrenstein[6], Henrik Sorensen[6], Grethe Tell[7], Helle Kieler[8], Florence Wang[9], David Dore[9], J. Michael Sprafka[10]. [1]Amgen Inc., USA, [2]Global Development, Amgen Inc., USA, [3]Global Safety, Amgen Inc., USA, [4]Global Biostatistics, Amgen Inc., USA, [5]Division of Clinical Immunology & Rheumatology, University of Alabama at Birmingham, USA, [6]Department of Clinical Epidemiology, Aarhus University, Denmark, [7]Department of Global Public Health & Primary Care, University of Bergen, Norway, [8]Center for Pharmacoepidemiology, Karolinska Institute, Sweden, [9]Optum Epidemiology, USA, [10]Center for Observational Research, Amgen Inc., USA
Disclosures: Fei Xue, Amgen Inc. ; Amgen Inc.

MO0346 **Relationship Between Suppression of Bone Turnover Markers (TRACP-5b, BAP) and Future Increases in Bone Mineral Density in Risedronate Treatment– Sub-analysis of Japanese Phase III Study of Risedronate 75 mg –**

Taro Mawatari*[1], Ryoichi Muraoka[2], Yukihide Iwamoto[3]. [1]Hamanomachi Hospital, Japan, [2]Ajinomoto Pharmaceuticals Co., Ltd., Japan, [3]Department of Orhtopaedic Surgery, Graduate School of Medical Sciences, Kyushu University, Japan

Disclosures: Taro Mawatari, None

MO0347 **Spaceflight Bone Atrophy-Problem Solved?**

Adrian LeBlanc*[1], Toshio Matsumoto[2], Jeffrey Jones[3], Jay Shapiro[4], Thomas Lang[5], Linda Shackelford[6], Scott M. Smith[6], Scott M. smith[6], Harlan Evans[7], Elisabeth Spector[8], Robert Ploutz-Snyder[9], Jean Sibonga[6], Joyce Keyak[10], Toshitaka Nakamura[11], Kenjiro Kohri[12], Hiroshi Ohshima[13], Gilbert Moralez[14]. [1]Baylor College of Medicine, USA, [2]Fujii Memorial Institute of Medical Sciences, University of Tokushima, Japan, [3]Baylor College of Medicine- Center for Space Medicine, USA, [4]Kennedy Krieger Institute, USA, [5]UC San Francisco, USA, [6]NASA, USA, [7]Wyle Houston, USA, [8]Wyle Science, Technology & Engineering Group, USA, [9]USRA, USA, [10]UC Irvine, USA, [11]National Center for Global Health & Medicine Center Hospital, Jpn, [12]Nagoya City U, Japan, [13]Space Biomedical Research Group, JAXA, Japan, [14]The University of North Texas Health Science Center (UNTHSC), USA

Disclosures: Adrian LeBlanc, None

MO0348 **The Effects of a Novel Selective Estrogen Receptor Modulator (SERM) pERD on Bone Health in Intact Female Rats**

Jukka Morko*[1], Arndt Schmitz[2], ZhiQi Peng[1], Katja M Fagerlund[1], Yvonne Konkol[1], Mari I Suominen[1], Jenni Bernoulli[1], Jukka P Rissanen[1], Jussi Halleen[1], Andrea Wagenfeld[2]. [1]Pharmatest Services Ltd, Finland, [2]Bayer Pharma AG, Finland

Disclosures: Jukka Morko, Pharmatest Services Ltd, Employee

MO0349 **The Effects of Teriparatide and Zoledronic Acid Differ Across Different Bones Sites. A Study at the Femoral Neck, Vertebra and Iliac Crest in Ewes**

Nathalie R Portero-Muzy, Pascale Chavassieux*, Evelyne Gineyts, Roland Chapurlat. INSERM UMR1033, Université de Lyon, France

Disclosures: Pascale Chavassieux, None

MO0350 **ASBMR 2015 Annual Meeting Young Investigator Award**
Utilization of osteoporosis medication after a fragility fracture among elderly Medicare beneficiaries

Akeem Yusuf*[1], Tom Matlon[2], Andreas Grauer[3], Rich Barron[3], David Chandler[3], Yi Peng[2]. [1]Minneapolis Medical Research Foundation, USA, [2]Chronic Disease Research Group, USA, [3]Amgen Inc., USA

Disclosures: Akeem Yusuf, None

OSTEOPOROSIS - TREATMENT: COMPLIANCE AND PERSISTENCE

MO0351 **Bone Union rate of PLIF using local bone graft in long term bisphosphonates users**

Si Young Park*[1], Seung Woo Suh[2], Jae Young Hong[2], Hyun Min Lee[2], Hwan Mo Lee[3], Hwan Mo Lee[3]. [1]Korea University, College of Medicine, South korea, [2]Korea University Hospital, South korea, [3]Yonsei University Severance Hospital, South korea

Disclosures: Si Young Park, None

OSTEOPOROSIS - TREATMENT: FRACTURE REPAIR

MO0352 **Can combined therapy with teriparatide and low-intensity pulsed ultrasound accelerate fracture healing with an Ilizarov external fixator?**

Koji Nozaka*, Yoichi Shimada, Naohisa Miyakoshi, Shin Yamada, Michio Hongo, Yuji Kasukawa, Hidetomo Saito, Hiroaki Kijima, Tsuchie Hiroyuki. Akita University Graduate School of Medicine, Japan

Disclosures: Koji Nozaka, None

MO0353 **The bone union promoting effect of intermittent administrated Teriparatides daily or weekly in the treatment of vertebral fractures**

Yoichi Kishikawa*. Kishikawa Orthopedics, Japan

Disclosures: Yoichi Kishikawa, None

OSTEOPOROSIS - TREATMENT: OTHER AGENTS

MO0354 **Effects of Mineralocorticoid Receptor Antagonism on Markers of Bone Turnover in Patients with Primary Hyperparathyroidism – the EPATH Trial**
Nicolas Verheyen*[1], Astrid Fahrleitner-Pammer[2], Cristiana Catena[3], Evgeny Belyavkiy[4], Johann Martensen[2], Julia Wetzel[2], Martin Gaksch[2], Martin Grübler[2], Elisabeth Kraigher-Krainer[5], Jakob Voelkl[4], Florian Lang[6], Andreas Meinitzer[2], Burkert Pieske[5], Stefan Pilz[2], Andreas Tomaschitz[2]. [1]Medical University Graz, Austria, [2]Medical University of Graz, Austria, [3]University of Udine, Italy, [4]Medical University of Graz, Germany, [5]Charite Universitaetsmedizin Berlin, Germany, [6]University of Tübingen, Germany
Disclosures: Nicolas Verheyen, None

MO0355 **Inhibition of Osteoclastogenesis by Poly - γ - glutamic acid**
Tae-Hwan Kim*[1], Bitnara Lee[1], Eunji Kwon[1], Jong Dae Ji[2], Sang-Hyon Kim[3]. [1]Hanyang University Hospital for Rheumatic Diseases, South korea, [2]College of Medicine, Korea University, South korea, [3]Keimyung University Dongsan Medical Center, South korea
Disclosures: Tae-Hwan Kim, None

OSTEOPOROSIS - TREATMENT: OTHER THERAPEUTIC AGENTS

MO0356 **The importance of vitamin D on mineralization by the osteocyte in CKD subjects with renal hyperparathyroidism**
Aiji Yajima*. Otsuki Municipal Central Hospital, Japan
Disclosures: Aiji Yajima, None

OSTEOPOROSIS - TREATMENT: QUALITY OF LIFE

MO0357 **Patient Perspectives on Participating in the Effectiveness of Discontinuing Bisphosphonates (EDGE) Study**
Nicole Wright*[1], Phillip Foster[1], Sally Fullman[2], Susan Randall[3], Mary Melton[1], Wilson Pace[4], Walter Calmbach[5], Kenneth Saag[1]. [1]University of Alabama at Birmingham, USA, [2]Project Healthy Bones, USA, [3]National Osteoporosis Foundation, USA, [4]University of Colorado Denver, USA, [5]University of Texas Health Science Center at San Antonio, USA
Disclosures: Nicole Wright, Amgen

OSTEOPOROSIS IN SPECIAL POPULATIONS: ANOREXIA NERVOSA AND HIV

MO0358 **Accelerated tooth loss in HIV-infected women**
Grace Kim*[1], Elizabeth Shane[2], Kyle Nishiyama[2], Sunil Wadhwa[1], Michael Yin[2]. [1]Columbia College of Dental Medicine, USA, [2]Columbia University Medical Center, USA
Disclosures: Grace Kim, None

OSTEOPOROSIS IN SPECIAL POPULATIONS: DIABETES

MO0359 **Age at first Major Osteoporotic Fracture in Danes aged 50 and over: Influence of diabetes on mean age at fracture and one year mortality**
Bo Abrahamsen*[1], Björn Rosengren[2], Daniel Prieto-Alhambra[3], Nicola Napoli[4], Cyrus Cooper[5]. [1]University of Southern Denmark, Denmark, [2]Clinical & Molecular Osteoporosis Research Unit, Department of Orthopedics, Sweden, [3]Oxford NIHR Musculoskeletal Biomedical Research Unit, Nuffield Department of Orthopaedics, United Kingdom, [4]Division of Endocrinology & Diabetes, Università Campus Bio-Medico di Roma, Italy, [5]MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom
Disclosures: Bo Abrahamsen, Novartis

MO0360 **Serum Sclerostin and Bone Turnover Markers in Patients with Type 2 Diabetes or LADA**
Nicola Napoli[1], Rocky Strollo*[1], Giuseppe Defeudis[1], Mohammed Hawa[2], Gaetano Leto[3], Luca D'Onofrio[3], Andrea Palermo[1], Giuseppe Campagna[3], Richard David Leslie[4], Paolo Pozzilli[1], Raffaella Buzzetti[3]. [1]University Campus Bio-Medico, Italy, [2]Queen Mary University of London, United Kingdom, [3]University Sapienza of Rome, Italy, [4]Queen Mary University of London, Italy
Disclosures: Rocky Strollo, None

OSTEOPOROSIS IN SPECIAL POPULATIONS: MOBILITY DISORDERS, DISUSE OSTEOPOROSIS

MO0361 ***Parkin*, A link between Parkinson's disease and bone homeostasis**
Thomas Mbimba*[1], Kimberly Novack[2], Fouad M. Moussa[2], Gregory Songdag[2], Li Lin[3], Christine Dengler-Crish[3], Werner J Geldenhuys[3], Fayez Safady[4]. [1]Kent State University, USA, [2]Biomedical Science Department, Kent State University/ Anatomy & Neuroscience Department NEOMED, USA, [3]NEOMED, USA, [4]NEOMED - KENT STATE, USA
Disclosures: Thomas Mbimba, None

MO0362 **A Testosterone Deficit Precedes Bone Loss in a Rodent Contusion Spinal Cord Injury Model**
Joshua Yarrow*[1], Fan Ye[1], Christine Conover[2], Dana Otzel[2], Thomas Wronski[3], J. Ignacio Aguirre[3], Stephen Borst[1]. [1]VA Medical Center, University of Florida, USA, [2]VA Medical Center, USA, [3]University of Florida, USA
Disclosures: Joshua Yarrow, None

MO0363 **Denosumab Increases Sublesional Bone Mass In Osteoporotic Patients With Recent Spinal Cord Injury**
Laia Gifre*[1], Joan Vidal[2], Josep Lluís Carrasco[3], Africa Muxi[4], Enric Portell[2], Ana Monegal[5], Núria Guañabens[5], Pilar Peris[5]. [1]Hospital Clinic Barcelona, Spain, [2]Guttmann Neurorehabilitation Institute. Universitat Autònoma de Barcelona, Spain, [3]Public Health Department, University of Barcelona, Spain, [4]Nuclear Medicine Department. Hospital Clínic of Barcelona, Spain, [5]Rheumatology Department, Hospital Clinic of Barcelona, Spain
Disclosures: Laia Gifre, None

OSTEOPOROSIS IN SPECIAL POPULATIONS: OTHER POPULATIONS

MO0364 **A semi-automatic algorithm to assess bone attenuation and thoracic kyphosis on chest CT scans of patients with chronic obstructive pulmonary disease**
Mayke Van Dort*[1], Erica P.A. Rutten[2], Bert van Rietbergen[3], Elisabeth A.P.M. Romme[4], Frank W.J.M. Smeenk[4], Piet P.M.M. Geusens[5], Emiel F.M. Wouters[6], Joop P.W. van den Bergh[7]. [1]Department of Internal Medicine, NUTRIM School of Nutrition & Translational Research in Metabolism, Maastricht University Medical Center+ (MUMC+), , [2]Research & Education, Centre of expertise for chronic organ failure + (CIRO+), Netherlands, [3]Department of Medical Engineering, Eindhoven University of Technology, Netherlands, [4]Department of Respiratory Medicine, Catharina Hospital, Netherlands, [5]Department of Internal Medicine, Rheumatology, Maastricht University Medical Center+ (MUMC+), Netherlands, [6]Department of Respiratory Medicine, Maastricht University Medical Centre + (MUMC+), Netherlands, [7]Department of Internal Medicine, VieCuri Medical Centre, Venlo & Department of Internal Medicine, NUTRIM School of Nutrition & Translational Research in Metabolism, Maastricht University Medical Center+ (MUMC+), Netherlands
Disclosures: Mayke Van Dort, None

MO0365 **Arterial Stiffness is Associated with Low Bone Mineral Density in Women Living with Human Immunodeficiency Virus**
Zoraya Barros[1], Francisco Bandeira [2], Érico Carvalho[3], Democrito Miranda Filho[4], Heloisa Melo[1], Nathalia Brito*[5], Maria Albuquerque[6], Ulisses Montarroyos[7], Ricardo Ximenes[7]. [1]Departamento de Medicina Clínica, Universidade de Pernambuco, Brazil, [2]Serviço de Endocrinologia, Hospital Agamenon Magalhães, SUS/Universidade de Pernambuco, Brazil, [3]Serviço de Infectologia, Universidade de Pernambuco, Brazil, [4]Departamento de Medicina Clinica, Universidade de Pernambuco, Brazil, [5]training, Brazil, [6]Centro de Pesquisa Aggeu Magalhães, Brazil, [7]Departamento de Medicina Tropical, Universidade Federal de Pernambuco, Brazil
Disclosures: Nathalia Brito, None

MO0366 **Effects of Gastric Bypass Surgery on Bone Mass and Microarchitecture Occur Early and Particularly Impact Postmenopausal Women**
Anne Schafer*[1], Galateia Kazakia[2], Lygia Stewart[3], Stanley Rogers[2], Jonathan Carter[2], Andrew Posselt[2], Courtney Pasco[2], Dolores Shoback[3], Dennis Black[2]. [1]University of California, San Francisco & the San Francisco VA Medical Center, USA, [2]University of California, San Francisco, USA, [3]San Francisco VA Medical Center & University of California, San Francisco, USA
Disclosures: Anne Schafer, None

MO0367 **Osteoporosis: What Is the Burden of Disease in Psoriatic Arthritis?**
Glenn Haugeberg*[1], Berit Helen Grandaunet[2], Hege Høiberg[3], Andreas P Diamantopoulos[4], Arthur Kavanaugh[5]. [1]Professor ,MD, PhD, Norway, [2]St. Olavs Hospital, Norway, [3]Sørlandet sykehus, Norway, [4]Sshf Kristiansand, Norway, [5]UC San Diego School of Medicine, USA
Disclosures: Glenn Haugeberg, None

MO0368 **Serum carboxy-terminal telopeptide of type 1 collagen (1CTP) is a prognostic factor in a cohort of Japanese male patients undergoing coronary angiography: CHIBA (Coronary Heart Disease of Ischemia and Bone Association) Study**
Nobuyuki Tai*[1], Reiko Watanabe[2], Junko Hirano[2], Hiroaki Masaki[2], Toshihiro Amaki[2], Fumitaka Nakamura[2], Ryo Okazaki[2], Daisuke Inoue[2]. [1]Teikyo University School of Medicine, Japan, [2]Third Depatment of Medicine,Teikyo University School of Medicine, Japan
Disclosures: Nobuyuki Tai, None

MO0369 **Using electronic health records and machine learning to develop a fracture prediction tool in end stage renal disease patients**
Kyle Nishiyama*[1], Chengchen Zhang[1], Jianhua Li[1], Donald McMahon[1], Jonathan Lorch[2], Elizabeth Shane[1], Jeri Nieves[1], Herbert Chase[1], Thomas Nickolas[1]. [1]Columbia University, USA, [2]Rogosin Institute, USA
Disclosures: Kyle Nishiyama, None

OSTEOPOROSIS IN SPECIAL POPULATIONS: PREMENOPAUSAL WOMEN AND PREGNANCY

MO0370 **Advanced Glycation End-products are Higher in Trabecular Bone from Premenopausal Women with Idiopathic Osteoporosis**
Timothy Cleland*[1], Adi Cohen[2], David Dempster[2], Robert Recker[3], Joan Lappe[3], Hua Zhou[4], Elizabeth Shane[2], Deepak Vashishth[1]. [1]Rensselaer Polytechnic Institute, USA, [2]Columbia University, USA, [3]Creighton University, USA, [4]Helen Hayes Hospital, USA
Disclosures: Timothy Cleland, None

MO0371 **Pregnancy and Lactation Associated Osteoporosis (PLO): Similar Bone Structure and Lower Bone Remodeling than Idiopathic Osteoporosis**
Adi Cohen*[1], Mafo Kamanda-Kosseh[2], Hua Zhou[3], David Dempster[2], Mariana Bucovsky[2], Julie Stubby[4], Robert Recker[4], Joan Lappe[4], Elizabeth Shane[2]. [1]Columbia University Medical Center, USA, [2]Columbia University, USA, [3]Helen Hayes Hospital, USA, [4]Creighton University, USA
Disclosures: Adi Cohen, None

OSTEOPOROSIS IN SPECIAL POPULATIONS: TRANSPLANTATION

MO0372 **Are fractures and bone loss to be inevitably expected after renal transplantation? Results of up to 5 year follow up in a South East Asian population of renal transplant patients**
Manju Chandran*[1], Matthew Tan[2]. [1]Singapore General Hospital, Singapore, [2]Osteoporosis & Bone Metabolism Unit, Department of Endocrinology, Singapore General Hospital, Singapore
Disclosures: Manju Chandran, None

PARACRINE REGULATORS: BONE MORPHOGENETIC PROTEINS AND TRANSFORMING GROWTH FACTORS

MO0373 **PDGF and BMP2 Enhance Proliferation, Migration and Differentiation of Periosteal Progenitor Cells**
Xi Wang*, Brya Matthews, Ivo Kalajzic. University of Connecticut Health Center, USA
Disclosures: Xi Wang, None

PARACRINE REGULATORS: CYTOKINES AND IMMUNOMODULATORS

MO0374 **Release of Titanium particle by Ultrasonic Cleaning of dental implants may aggravate the peri-implant inflammatory response**
Yankel Gabet, Michal Eger*, Tamar Liron, Nir Sterer, David Kochavi. Tel Aviv University, Israel
Disclosures: Michal Eger, None

PARACRINE REGULATORS: FIBROBLAST AND INSULIN-LIKE GROWTH FACTORS

MO0375 **The Role of EphrinB2 Signaling during Endochondral Bone Formation**
Yongmei Wang*[1], Alicia Menendez[2], Chak Fong[3], Nicholas Heiniger [3], Daniel Bikle[4]. [1]Endocrine Unit, University of California, San Francisco/VA Medical Center, USA, [2]Endocrine Unit, University of California, San Francisco/ San Francisco VA Medical Center, USA, [3]Endocrine Unit, University of California, San Francisco/San Francisco VA Medical Center, USA, [4]Endocrine Unit, University of Calfornia, San Francisco/San Francisco VA Medical Center, USA
Disclosures: Yongmei Wang, None

PARACRINE REGULATORS: PTHRP AND OTHER PARACRINE REGULATORS

MO0376 **Localization of parathyroid hormone-related protein and its receptor in different pancreatic tumor types**
Syu Mi Sam*[1], Kristi Milley[2], John Slavin[3], Peter Little[2], Mathis Grossmann[4], Jeffrey Zajac[4], Janine Danks[2]. [1]RMIT University, Australia, [2]School of Medical Sciences, RMIT University, Australia, [3]Department of Pathology, St Vincent's Hospital, Melbourne, Australia, [4]Department of Medicine, The University of Melbourne, Austin Health, Australia
Disclosures: Syu Mi Sam, None

PARACRINE REGULATORS: RANK, RANKL AND OPG

MO0377 **PTH Stimulation of RANKL in Primary Osteoblasts Is Independent of PTH-Stimulated cAMP**
Thomas Estus*, Shilpa Choudhary, Carol Pilbeam. University of Connecticut, USA
Disclosures: Thomas Estus, None

RARE BONE DISEASES: FIBROUS DYSPLASIA

MO0378 **Osteogenic potential of FOP iPS cell-derived endothelial cells**
Emilie Barruet*[1], Marcela Morales[1], Iris Pennings[2], Debby Gawlitta [3], Hannah Kim[1], Ashley Urrutia[1], Wint Lwin[1], Mark P. White[4], Christina Theodoris[4], Deepak Srivastava[4], Edward C Hsiao[1]. [1]University of California, San Francisco, USA, [2]Department of Orthopaedics, University Medical Center Utrecht, Netherlands, [3]Department of Orthopaedics, University Medical Center Utrecht, Utrecht, The Netherlands, Netherlands, [4]Gladstone Institute of Cardiovascular Disease & University of California, San Francisco, USA, USA
Disclosures: Emilie Barruet, None

MO0379 **Response to treatment with bisphosphonates in McCune-Albright Syndrome: A case series**
Natasha Appelman-Dijkstra*[1], Bas Majoor[2], Sander Dijkstra[3], Neveen Hamdy[3]. [1]Leiden University Medical Center Netherlands, Netherlands, [2]Leiden University Medical Center in the Netherlands, The netherlands, [3]Leiden University Medical Center, Netherlands
Disclosures: Natasha Appelman-Dijkstra, None

RARE BONE DISEASES: HYPOPHOSPHATASIA

MO0380 **Clinical, Biochemical and Radiographic Spectrum of gene diagnosed X-linked Hypophosphatemia in Adults**
Bo Wu*, Yan Jiang, Lijun Xu, Zhen Zhao, Ou Wang, Mei Li, Xiaoping Xing, Wei Yu, Weibo xia. Peking Union Medical College Hospital Department of Endocrinology, China
Disclosures: Bo Wu, None

MO0381 **Searching for Hypophosphatasia: Conditions Associated with Low Serum Alkaline Phosphatase in Children**
Linda Dimeglio*[1], Erik Imel[2], Marc Rosenman[2]. [1]Indiana University School of Medicine, USA, [2]Indiana University, USA
Disclosures: Linda Dimeglio, Alexion Pharmaceuticals

MO0382 **Validation of a Novel Scoring System, the Radiographic Global Impression of Change (RGI-C) Scale, for Assessing Skeletal Manifestations of Hypophosphatasia in Infants and Children**
Michael Whyte*[1], Kenji P Fujita[2], Scott Moseley[2], David Thompson[2], William H McAlister[3]. [1]Shriners Hospital for Children, USA, [2]Alexion Pharmaceuticals, USA, [3]Department of Pediatric Radiology, Mallinckrodt Institute of Radiology, St. Louis Children's Hospital, USA
Disclosures: Michael Whyte, Honoraria, research grant, travel support

RARE BONE DISEASES: HYPOPHOSPHATEMIC RICKETS

MO0383 **^{68}Ga-DOTATATE for tumor localization in Tumor-induced Osteomalacia**
Diala El-Maouche*[1], Samira Sadowski[2], Lori Guthrie[3], Candice Cottle-Delisle[2], Roxanne Merkel[2], Corina Millo[4], Clara Chen[4], Electron Kebebew[2], Michael Collins[5]. [1]University of Miami/ National Institutes of Health/NIDCR, USA, [2]NIH/NCI, USA, [3]NIH.NIDCR, USA, [4]NIH/CC, USA, [5]NIH/NIDCR, USA
Disclosures: Diala El-Maouche, None

MO0384 **Pain Resulting from Unresolved Skeletal Disease has a Significant Impact on the Daily Function of Adults with X-linked Hypophosphatemia (XLH)**
Alison Skrinar, PhD*[1], Ayla Marshall[2], Javier San Martin, MD[2], Melita Dvorak-Ewell, PhD[2], Carolyn Macica, M.S., PhD[3]. [1]Ultragenyx Pharmaceutical, USA, [2]Ultragenyx Pharmaceutical Inc., USA, [3]Frank H. Netter School of Medicine Quinnipiac University, USA
Disclosures: Alison Skrinar, PhD, Ultragenyx Pharmaceutical Inc.

RARE BONE DISEASES: OSTEOGENESIS IMPERFECTA

MO0385 **Muscle Function in Osteogenesis Imperfecta Type IV**
Louis-Nicolas Veilleux*[1], Francis H. Glorieux[2], Frank Rauch[2]. [1]McGill University/ Shriners Hospital for Children, Canada, [2]Shriners Hospital for Children-Canada, Canada
Disclosures: Louis-Nicolas Veilleux, None

RARE BONE DISEASES: OTHER RARE BONE DISEASES

MO0386 **A heterozygous missense mutation p.His381Arg identified in a patient with a childhood form of hypophosphatasia**
Anna Petryk*[1], Lynda Polgreen[2], Kenneth Beckman[3], Amy Calhoun[4]. [1]University of Minnesota, USA, [2]Division of Pediatric Endocrinology & Metabolism, Los Angeles Biomedical Research Institute at Harbor-UCLA Medical Center, USA, [3]University of Minnesota Genomics Center, USA, [4]Department of Pediatrics, Division of Genetics & Metabolism, University of Minnesota Masonic Children's Hospital, USA
Disclosures: Anna Petryk, None

MO0387 **Analysis of classical and non-classical Fibrodysplasia Ossificans Progressiva mutations using human induced pluripotent stem cells**
Laura Hildebrand*[1], Bella Rossbach[2], Andreas Kurtz[3], Manfred Gossen[4], Harald Stachelscheid[5], Petra Seemann[2]. [1]Charité - Universitätsmedizin Berlin, Germany, [2]Charité–Universitätsmedizin Berlin, Berlin-Brandenburg Center for Regenerative Therapies (BCRT), Berlin, Germany, Germany, [3]Seoul National University, College of Veterinary Medicine & Research Institute for Veterinary Science, Seoul, Republic of Korea, Charité – Universitätsmedizin Berlin, Berlin-Brandenburg Center for Regenerative Therapies (BCRT), Berlin, Germany, Germany, [4]Berlin-Brandenburg Center for Regenerative Therapies (BCRT) Berlin, Helmholtz-Zentrum Geesthacht (HZG), Institute of Biomaterial Science, Teltow, Germany, Germany, [5]Charité– Universitätsmedizin Berlin, Berlin-Brandenburg Center for Regenerative Therapies (BCRT), Berlin, Germany, Berlin Institute of Health, Berlin, Germany, Germany
Disclosures: Laura Hildebrand, None

MO0388 **Cranial base defects in a mouse model of Hereditary Multiple Exostoses are associated with ectopic hedgehog signaling**
Federica Sgariglia*[1], Paul Billings[2], Hyo-Bin Um[2], Kevin Jones[3], Eiki Koyama[2], Maurizio Pacifici[2]. [1]Children's Hospital of Philadelphia, USA, [2]CHOP, USA, [3]University go Utah, USA
Disclosures: Federica Sgariglia, None

MO0389 **Deformed cranial morphologies are caused by the combined roles of the maldevelopment of calvarias, cranial base and brain in FGFR2-P253R mice**
Yangli Xie[1], Xiaolan Du*[2], Fengtao Luo[2], Wei Xu[2], Junlan Huang[2], Siru Zhou[2], Zuqiang Wang[2], Wanling Jiang[2], Lin Chen[2]. [1]Third Military Medical University, Peoples republic of china, [2]Center of Bone Metabolism & Repair, Department of Rehabilitation Medicine, State Key Laboratory of Trauma, Burns & Combined Injury, Trauma Center, Institute of Surgery Research, Daping Hospital, Third Military Medical University, China
Disclosures: Xiaolan Du, None

MO0390 **Evaluation of FGF23 Levels and Related Factors in a Patient with Hereditary Vitamin D Resistant Rickets**
Keiko Yamamoto*[1], Makoto Fujiwara[2], Yasuhisa Ohata[2], Taichi Kitaoka[2], Takuo Kubota[2], Noriyuki Namba[2], Toshimi Michigami[3], Sachiko Kitanaka[4], Takehisa Yamamoto[5], Keiichi Ozono[2]. [1]Osaka University, Japan, [2]Department of Pediatrics, Osaka University Graduate School of Medicine, Japan, [3]Department of Bone & Mineral Research, Osaka Medical Center & Research Institute for Maternal & Child Health, Japan, [4]Department od Pediatrics, The University of Tokyo, Japan, [5]Department of Pediatrics, Minoh City Hospital, Japan
Disclosures: Keiko Yamamoto, None

MO0391 **Fracturing Without Apparent Skeletal Pathobiology In Congenital Insensitivity to Pain Caused By A Second Heterozygous Mutation in *SCN11A***
Voraluck Phatarakijnirund*[1], Steven Mumm[1], William H McAlister[2], Deborah Novack[1], Deborah Wenkert[3], Karen L. Clements[3], Michael Whyte[3]. [1]Washington University School of Medicine, USA, [2]Department of Pediatric Radiology, Mallinckrodt Institute of Radiology at St. Louis Children's Hospital, Washington University School of Medicine, USA, [3]Center for Metabolic Bone Disease & Molecular Research Shriners Hospitals for Children - St Louis, USA
Disclosures: Voraluck Phatarakijnirund, None

MO0392 **Induced Pluripotent Stem Cell (iPSC) Derived Mesenchymal Stem Cells (MSCs) for Studying Pathogenic Bone Formation in Spondyloarthritis (SpA)**
Gerlinde Layh-Schmitt*[1], Shajia Lu[2], Stephen R. Brooks[2], Emily Lazowick[3], Massimo Gadina[2], Robert A. Colbert[3]. [1]National Institutes of Health, USA, [2]Translational Immunology Section, Office of Science & Technology, NIAMS, NIH, USA, [3]Pediatric Translational Research Branch, NIAMS, NIH, USA
Disclosures: Gerlinde Layh-Schmitt, None

MO0393 **Inflammatory Cytokines are Potent Mediators of Ectopic Ossification Caused by a Novel Sca-1+/CD73+ Cell Type in Tissue Engineered Skeletal Muscle**
Owen Davies*[1], Mark Lewis[1], Liam Grover[2], Yang Liu[1]. [1]Loughborough University, United Kingdom, [2]University of Birmingham, United Kingdom
Disclosures: Owen Davies, None

MO0394 **Next Generation Sequencing for Hypophosphatasia and X-Linked Hypophosphatemia**
Steven Mumm*[1], Margaret Huskey[1], Shenghui Duan[1], Valerie Wollberg[2], Karen E Mack[2], C. Charles Gu[1], Katherine Madson[2], Gary Gottesman[2], Michael Whyte[2]. [1]Washington University School of Medicine, USA, [2]Center for Metabolic Bone Disease & Molecular Research Shriners Hospitals for Children - St Louis, USA
Disclosures: Steven Mumm, None

MO0395 **Twist and Turns in Anthrax 1-Dependent Regulation of Bone Tissue Maintenance**
Tatiana Besschetnova*[1], Negin Katebi[2]. [1]Harvard School of dental Medicine, USA, [2]HSDM, USA
Disclosures: Tatiana Besschetnova, None

SARCOPENIA, MUSCLE AND BONE (CLINICAL): GENERAL

MO0396 **Calciphylaxis In a Patient with Liver disease and Prior Gastric bypass: Case Report of an unusual combination**
Goral Panchal*[1], Catherine Anastasopoulou[2]. [1]Albert Einstein Medical Center, USA, [2]Division of Endocrinology, Albert Einstein Medical Center, USA
Disclosures: Goral Panchal, None

MO0397 **Dietary Protein Intake is Associated with Better Physical Function and Muscle Strength Among Elderly Women**
Masoud Isaneajd*[1], Arja Erkkilä[2], Joonas Sirola[3], Jaakko Mursu[4], Heikki Kröger[3], Toni Rikkonen[3], Marjo Tuppurainen[5]. [1]University of Eastern Finalnd, Finland, [2]Institute of Public Health & Clinical Nutrition, Finland, [3]Department of Orthopaedics & Traumatology, Kuopio University Hospital, Kuopio Finland, Finland, [4]Institute of Public Health & Clinical Nutrition, University of Eastern Finland, Finland, [5]Department of Obstetrics & Gynaegology, Kuopio University Hospital, Kuopio, Finland
Disclosures: Masoud Isaneajd, None

MO0398 **Focal cortical thinning is associated with lower thigh muscle area in hip fractures and controls**
Toni Rikkonen*[1], Graham Treece[2], Fjola Johannesdottir[3], Kenneth Poole[3]. [1]University of Eastern FinlandUniversity of Cambridge, Finland, [2]Engineering Division of the Department of Engineering, University of Cambridge, United Kingdom, [3]Department of Medicine, United Kingdom
Disclosures: Toni Rikkonen, None

MO0399 **Higher Amounts of Calf Inter- and Intra-muscular Adipose Tissue Determined by pQCT are Associated with Poorer Musculoskeletal Health in Older Adults**
David Scott*[1], Elizabeth Skinner[2], Ross Clark[3], Pazit Levinger[4], Terry Haines[5], Kerrie Sanders[3], Peter Ebeling[5]. [1]The University of Melbourne, Australia, [2]Western Health, Australia, [3]Australian Catholic University, Australia, [4]Victoria University, Australia, [5]Monash University, Australia
Disclosures: David Scott, None

MO0400 **HPLC-MS-MS 25OHvitaminD levels are associated with prognosis markers of Heart Failure**
Federica Saponaro*[1], Claudio Passino[2], Alessandro Saba[3], Riccardo Zucchi[4], Elena Pardi[5], Simona Borsari[6], Filomena Cetani[5], Claudio Marcocci[5]. [1]M.D., Italy, [2]Unit of Cardiology, Fondazione Toscana Gabriele Monasterio, Italy, [3] Unit of Biochemistry, University of Pisa, Italy, [4]Unit of Biochemistry, University of Pisa, Italy, [5]Unit of Endocrinology 2, Pisa, Italy, [6]U.O. Endocrinology 2, Pisa, Italy
Disclosures: Federica Saponaro, None

MO0401 **Increased Body Weight and Sarcopenic Obesity: Causes of Intertrochanteric Fracture in Non-Osteoporotic Female Patients**
Hyung Min JI*[1], Jun Han[2], Dong San Jin[3], Ye-Yeon Won[1]. [1]Ajou University Hospital, South korea, [2]Naver Corporation, South korea, [3]Mary Orthopedic Hospital of BeiJing, China
Disclosures: Hyung Min JI, None

MO0402 **Prevalence of Sarcopenia and Classification Agreement According to Different Operational Definitions**
Andrea Trombetti*, Mélany Hars, Emmanuel Biver, Thierry Chevalley, Serge Ferrari, Rene Rizzoli. Division of Bone Diseases, Geneva University Hospitals & Faculty of Medicine, Switzerland
Disclosures: Andrea Trombetti, None

MO0403 **Prevalence of Sarcopenia and Sarcopenic Obesity in Germany using established definitions: Baseline data of the FORMOsA-study**
Wolfgang Kemmler, Klaus Engelke*, Simon von Stengel, Ellen Freiberger. University of Erlangen-Nuremberg, Germany
Disclosures: Klaus Engelke, None

MO0404 **Sarcopenia is independently associated with knee pain**
Shigeyuki Muraki*[1], Toru Akune[2], Hiroyuki Oka[3], Sakae Tanaka[4], Hiroshi Kawaguchi[5], Kozo Nakamura[2], Noriko Yoshimura[6]. [1]22nd Century Medical & Research Center, University of Tokyo, Japan, [2]National Rehabilitation Center for Persons with Disabilities, Japan, [3]22nd Century Medical & Research Center, Faculty of Medicine, The University of Tokyo, Japan, [4]Department of Orthopaedic Surgery, Faculty of Medicine, The University of Tokyo, Japan, [5]Department of Orthopaedic Surgery, Japan Community Health care Organization Tokyo Shinjuku Medical Center, Japan, [6]22nd Century Medical & Research Center, The University of Tokyo, Japan
Disclosures: Shigeyuki Muraki, None

SKELETAL AGING: CELLULAR AND MOLECULAR MECHANISMS

MO0405 **Hydroxytyrosol Relieves Age-related Bone Formation Reduction Through Reversing of Adipogenesis Towards Osteogenesis**
Fan Zhao*[1], Zhihao Chen[2], Peihong Su[2], Wuxia Qiu[2], Xiaoli Ma[2], Dijie Li[2], Airong Qian[2]. [1]Northwestern Polytechnical University, Peoples republic of china, [2]Key Laboratory for Space Bioscience & Biotechnology, Institute of Special Environmental Biophysics, School of Life Sciences, Northwestern Polytechnical University, China
Disclosures: Fan Zhao, None

MO0406 **Modification of Systemic SDF-1 Levels or CXCR4 Signaling Alters Bone Formation with Age**
Alexandra Aguilar*[1], Sudharsan Periyasamy-Thandavan[2], Samuel Herberg[3], Brian Volkman[4], Galina Kondrikova[2], Mark Hamrick[2], Carlos Isales[2], William Hil[2]. [1]UCC School of MedicineGeorgia Regents University, USA, [2]Georgia Regernts University, USA, [3]Case Western University, USA, [4]Medical college of Wisconsin, USA
Disclosures: Alexandra Aguilar, None

SKELETAL AGING: FRAILTY AND SARCOPENIA

MO0407 **Hyperkyphosis and mortality risk in older men: the Osteoporotic Fractures in Men Study**
Deborah Kado*[1], Mei-Hua Huang[2], Peggy Cawthon[3], Kristine Ensrud[4], Wendy Katzman[5], Nancy Lane[6], Diane Schneider[7], John Schousboe[8], Eric Orwoll[9]. [1]University of California, San Diego, USA, [2]UCLA, USA, [3]CPMC, USA, [4]U. Minnesota, USA, [5]UCSF, USA, [6]UC Davis, USA, [7]4BoneHealth, USA, [8]Univ Minnesota, USA, [9]OHSU, USA
Disclosures: Deborah Kado, None

SKELETAL AGING: REHABILITATION AND EXERCISE

MO0408 **Diffuse Idiopathic Skeletal Hyperostosis (DISH) as a Predictor of Kyphosis in the Osteoporotic Fractures in Men Study (MrOS)**
Wendy Katzman*[1], Neeta Parimi[2], Ziba Mansoori[3], Lorenzo Nardo[3], Deborah Kado[4], Peggy Cawthon[2], Lynn Marshall[5], John Schousboe[6], Nancy Lane[7]. [1]University of California, San Francisco, USA, [2]San Francisco Coordinating Center, USA, [3]University of California, USA, [4]University of California San Diego, USA, [5]Oregon Health Science University, USA, [6]University of Minnesota, USA, [7]University of California Davis, USA
Disclosures: Wendy Katzman, None

MO0409 **Sedentary Behaviour, Sitting and Mortality in the Canadian Multicentre Osteoporosis Study (CaMOS)—cross-sectional and 10-year prospective data**
Jerilynn Prior*[1], Adrian Bauman[2], Ding Ding[2], Sarah Pont[2], Claudie Berger[3], Heather Macdonald[4], Jonathan D. Adachi[5], Wilma M. Hopman[6], Stephanie M. Kaiser[7], Christopher S. Kovacs[8], K. Shawn Davison[9], Lisa Langsetmo[3], David Goltzman[10], CaMOS Research Group[11]. [1]University of British Columbia, Canada, [2]University of Sydney, Epidemiology, Australia, [3]CaMOS Methods Centre, Canada, [4]Orthopedics, University of British Columbia, Canada, [5]Rheumatology, McMaster University, Canada, [6]Queens University, Canada, [7]Endocrinology, Dalhousie University, Canada, [8]Endocrinology, Memorial University, Canada, [9]University of Victoria, Canada, [10]Medicine/Endocrinology, McGill University, Canada, [11]McGill University, Canada
Disclosures: Jerilynn Prior, None

SKELETAL DEVELOPMENT: BONE MODELING

MO0410 **Partial Tail Amputation in Zebrafish: A Model of Chondral Bone Regeneration?**
Yael Govezensky*, Dalia David, Dafna Ben-Yosef, Chen Shochat, David Karasik. Faculty of Medicine in the Galilee, Bar Ilan University, Israel
Disclosures: Yael Govezensky, None

SKELETAL DEVELOPMENT: GROWTH AND DEVELOPMENT

MO0411 **A network connecting KAT6A and the miR-665 regulates the odontoblast differentiation program**
Mohammad Hassan*. University of Alabama, USA
Disclosures: Mohammad Hassan, None

MO0412 **Correlation between the Mineral Compositions and Bone Strength of Tibia bone in poultry**
Tengfei Dou[1], Lixian Liu[1], Hua Rong[1], Qihua Li[1], Dahai Gu[1], Zhiqiang Xu[1], Limei Huang[1], Ying Huang[2], Sumei Zhao[1], Hongyong Zhang[3], Marinus F.W.te Pas[4], Changrong Ge*[5], Junjing Jia[1]. [1]Yunnan Provincial Key Laboratory of Animal Nutrition & Feed Techology, Yunnan Agricultural University, China, [2]Yunnan Provincial Key Laboratory of Animal Nutrition & Feed Techology, China, [3]Department of Medicine, University of California at Davis Medical Center Sacramento, USA, [4]Animal Breeding & Genetics Centre, Wageningen UR Livestock Science, Netherlands, [5]Yunnan Agricultural University, China, Cn
Disclosures: Changrong Ge, None

MO0413 **Deletion of the Prolyl Hydroxylase Domain-containing Protein 2 (Phd2) Gene in Chondrocytes but not Osteoblasts Promotes Secondary Ossification at the Epiphysis**
Shaohong Cheng*[1], Chandrasekhar Kesavan[2], Sheila Pourteymoor[3], Catrina Alarcon[3], Subburaman Mohan[3]. [1]VA Loma Linda Health Care Systems, USA, [2]Jerry L Pettis VA Medical Center, USA, [3]Pourteymoor, USA
Disclosures: Shaohong Cheng, None

MO0414 **Identifying growth factors for improving the healing of the tendon-bone interface**
David Musson*[1], Mei Lin Tay[2], Karen Callon[2], Dorit Naot[2], Jillian Cornish[2]. [1]University of Auckland, New Zealand, New zealand, [2]University of Auckland, New zealand
Disclosures: David Musson, None

MO0415 **Inactivation of the progesterone receptor in Mx1+ cells potentiates osteogenesis in vitro but not in vivo**
Zhendong Zhong[1], Weihua Sun[2], Haiyan Chen[1], Hongliang Zhang[2], Nancy Lane[2], Wei Yao*[3]. [1] University of California Davis Medical Center, USA, [2]University of California Davis Medical Center, USA, [3]University of California, Davis Medical Center, USA
Disclosures: Wei Yao, None

MO0416 **Low Dose IGF-I Augments the Bone-Lengthening Effect of Targeted Heat in the Mouse Hindlimb**
Maria Serrat*, Gabriela Ion, Kaitlynn Hughes. Marshall University School of Medicine, USA
Disclosures: Maria Serrat, None

MO0417 **Motor Ability in Early Childhood is Positively Associated with Bone Strength in Late Adolescence**
Alex Ireland[1], Adrian Sayers[2], Kevin Deere[2], Alan Emond[3], Jon Tobias*[2]. [1]Manchester Metropolitan University, United Kingdom, [2]School of Clinical Sciences, University of Bristol, United Kingdom, [3]School of Social & Community Medicine, University of Bristol, United Kingdom
Disclosures: Jon Tobias, None

MO0418 **Physiological oxygen tension modulates the profiles of soluble growth factors in chondrocytes after co-culture with osteoblasts**
Tao Zhang*[1], Jing Xie[2]. [1]West China School of Stomatology; State Key Laboratory of Oral Disease, , [2]West China School of Stomatology; State Key Laboratory of Oral Disease, China
Disclosures: Tao Zhang, None

MO0419 **Raf Kinases regulate growth plate maturation**
Garyfallia Papaioannou*[1], Eva Liu[2], Adalbert Raimann[3], Byongsoo Timothy Chae[4], Marie Demay[1]. [1]Massachusetts General Hospital & Harvard Medical School, USA, [2]Brigham & Women's Hospital, Massachusetts General Hospital & Harvard Medical School, USA, [3]Medical University Vienna & Massachusetts General Hospital, Austria, [4]Massachusetts General Hospital, USA
Disclosures: Garyfallia Papaioannou, None

MO0420 **Runx2 is required for the osteo-anabolic effects of Sost-deficiency**
Meghan McGee-Lawrence*[1], Zachary Ryan[2], Rajiv Kumar[2], Jennifer Westendorf[2]. [1]Georgia Regents University, USA, [2]Mayo Clinic, USA
Disclosures: Meghan McGee-Lawrence, None

MO0421 **Trabecular Bone Parameters in the Distal Femur and L5 Spine are Differentially Influenced by Genetics and Dietary Calcium Restriction in Growing Mice**
James Fleet*, Perla Reyes Fernandez, Sarah Mace, Rebecca Replogle, Xu Lan. Purdue University, USA
Disclosures: James Fleet, None

LATE-BREAKING POSTER SESSION III

12:30 pm - 2:30 pm **Washington State Convention Center**
Discovery Hall - Hall 4BC

LB-MO0001 **Withdrawn**

LB-MO0002 **Unmasking tumor-induced osteomalacia with bisphosphonate therapy in metastatic prostate cancer, and its management**
Tiffany Kim*[1], Kelly Wentworth[1], Jennifer Park-Sigal[2], Anne Schafer[2], Daniel Bikle[2], Dolores Shoback[2]. [1]University of California, San Francisco, USA, [2]San Francisco General Hospital VA Medical Center, USA
Disclosures: Tiffany Kim, None

LB-MO0003 **Optineurin Negatively Regulates Osteoclast Differentiation by Modulating NFκB and Interferon signalling, Implications for Paget's Disease of Bone**
Rami Obaid[1], Sachin Wani[1], Asim Azfer[1], Ruth Jones[2], Philip Cohen[2], Stuart Ralston[1], Omar Albagha*[3]. [1]University of Edinburgh, [2]University of Dundee, [3]University of Edinburgh, United Kingdom
Disclosures: Omar Albagha, None

LB-MO0004 **Mechanical consequences of in vivo advanced glycation end-products in aging human bone: comparison of 3-point bending, cyclic reference point indentation, and impact reference point indentation**
Simon Tang*, Adam Abraham, Aditya Yadavalli, Avinesh Agarwalla, Jenny Liu. Washington University in St Louis, USA
Disclosures: Simon Tang, None

LB-MO0005 **Not only stiffness, but also yield strength of human trabecular bone is best predicted by bone volume fraction and fabric anisotropy**
Sarah Musy[1], Ghislain Maquer*[2], Jarunan Panyasantisuk[3], Philippe Zysset[2]. [1]Institute of Nursing Science, University of Basel / Nursing & Midwifery Research Unit, Inselspital Bern University Hospital, [2]Institute for Surgical Technology & Biomechanics, University of Bern, Switzerland, [3]Institute for Surgical Technology & Biomechanics, University of Bern
Disclosures: Ghislain Maquer, None

LB-MO0006 **Sequential treatments with alendronate, parathyroid hormone (1-34) and raloxifene alter cortical bone matrix composition and quality in ovariectomized rats by Raman spectroscopy**
Xiaomei Yao*[1], Amanuel Berhe[2], Xinyan Bai[2], Lucy Wang[2], Ying Liu[2], Amber Stern[3], Wei Yao[4], Mark Johnson[2], Yong Wang[2], Nancy Lane[4]. [1]University of Missouri-Kansas City, USA, [2]University of Missouri-Kansas City, [3]Engineering Systems Inc., [4]University of California Davis Medical Center
Disclosures: Xiaomei Yao, None

LB-MO0007 **Neonatal 25(OH)D3 Concentrations at Birth from Archived Dried Blood Spots and Future Risk of Fractures in Childhood - the D-tect study**
Mina Händel*[1], Peder Frderiksen[2], Cyrus Cooper[3], Berith Lilienthal Heitmann[4], Bo Abrahamsen[5]. [1]University of Southern Denmark, Dk, [2]Research Unit for Dietary Studies, The Parker Institute & the Institute of Preventive Medicine, [3]Medical Research Council Lifecourse Epidemiology Unit, University of Southampton, [4]Research Unit for Dietary Studies, The Parker Institute & the Institute of Preventive Medicine, Bispebjerg & Frederiksberg Hospital, [5]Institute of Clinical Research, Odense Patient Data Explorative Network, University of Southern Denmark
Disclosures: Mina Händel, None

LB-MO0008 Activation of IKKβ in Postnatal Articular Chondrocytes Leads to Catabolism of the Articular Cartilage Matrix
Sarah Catheline*, Martin Chang, Jennifer Jonason. University of Rochester, USA
Disclosures: Sarah CathelineNone

LB-MO0009 Absence of Adiponectin Enhances Exercise Training-Induced Improvements on Bone Structure in Mice
Sandra Sacco*[1], Abby Maybee[1], Ian Ritchie[2], Tara MacDonald[2], David Wright[2], David Dyck[2], Wendy Ward[1]. [1]Faculty of Applied Health Sciences & Center for Bone & Muscle Health, Brock University, [2]Department of Human Health & Nutritional Sciences, University of Guelph
Disclosures: Sandra Sacco, None

LB-MO0010 Intermittent administration of parathyroid hormone facilitates osteogenesis by different mechanisms in cancellous and cortical bone
Kenji Ogura*[1], Tadahiro Iimura[2], Toshinori Ishizuya[3], Keiji Moriyama[4], Akira Yamaguchi[5]. [1]Departments of Oral Pathology & Maxillofacial Orthognathics, Tokyo Medical & Dental University, [2]Division of Bio-Imaging, Proteo-Science Center, Ehime University, [3]Pharmaceuticals Research Center, Asahi Kasei Pharma Corporation, [4]Department of Maxillofacial Orthognathics, Tokyo Medical & Dental University, [5]Department of Oral Pathology, Tokyo Medical & Dental University, Oral Health Science center, Tokyo Dental College
Disclosures: Kenji Ogura, None

LB-MO0011 The Elevation of Renal Renin Production Does Not Necessarily Correlate with Blood Pressure in Vitamin D Receptor Gene Knockout Mice Fed Hypocalcemia Rescue Diet
Naoko Tsugawa*[1], Miku Wada[2], Kisato Kanao[2], Maya Kamao[2], Kimie Nakagawa[2], Toshio Okano[2]. [1]Osaka Shoin Women's University, Japan, [2]Kobe Pharmaceutical University
Disclosures: Naoko Tsugawa, None

LB-MO0012 Endothelin 1 Signaling is Required for SOST and IGF1 Secretion in Response to Mechanical Load
Everett Smith[1], Michael Johnson*[1], Luisa Meyer[1], Caitlyn Collins[1], Karen Hansen[1], Heidi Ploeg[1], Robert Blank[2]. [1]University of Wisconsin, USA, [2]Medical College of Milwaukee, USA
Disclosures: Michael Johnson, None

LB-MO0013 Periostin prevents cortical bone loss by increasing OPG levels in response to continuous PTH in mice
Nicolas Bonnet*[1], Serge Ferrari[2]. [1]University Geneva Hospital (HUG), Switzerland, [2]Division of Bone Diseases, Geneva University Hospital & Faculty of Medicine, Switzerland
Disclosures: Nicolas Bonnet, None

LB-MO0014 Alpha-1 antitrypsin (AAT) Gene Delivery by Recombinant Adeno Associated Virus Vector for the Treatment of Osteoporosis
Mohammad Akbar*[1], Yuanqing Lu[2], Ahmed Elshikha[2], Rubina Ahamed[2], Mark Brantly[2], Shannon Holliday[2], Jay Cao[3], Sihong Song[2]. [1]USA, [2]University of Florida, [3]US Department of Agriculture
Disclosures: Mohammad Akbar, None

LB-MO0015 The Oral Commensal Flora, a Dynamic Regulator of Alveolar Bone Remodeling
Chad Novince*[1], Keith Kirkwood[2], Caroline Westwater[2], Carolyn Whittow[2]. [1]Medical University of South Carolina - College of Dental Medicine, USA, [2]Medical University of South Carolina
Disclosures: Chad Novince, None

LB-MO0016 Withdrawn

LB-MO0017 Intravital Analysis of Neovascularization in Nanofiber-mediated Cranial Bone Defect Repair
Xinping Zhang*[1], Xiaochuan Yang[2], Tao Wang[2], Honjun Wang[3]. [1]University of Rochester Medical Center, USA, [2]University of Rochester, [3]Stevens Institute of Technology
Disclosures: Xinping Zhang, None

LB-MO0018 Wdfy3 Interacts with TRAF6 and Modulates RANKL-Induced Osteoclastogenesis
Dennis Wu*[1], Ran Gu[2], Ritu Sarin[2], Regina Zavodovskaya[3], Chia-Pei Chen[4], Konstantinos S. Zarbalis[5], Iannis E. Adamopoulos[6]. [1]University of California, Davis, Us, [2]Division of Rheumatology, Allergy & Clinical Immunology, University of California at Davis, [3]Department of Anatomy, Physiology & Cell Biology, University of California at Davis, [4]Department of Statistics, University of California at Davis, [5]Department of Pathology & Laboratory Medicine, University of California at Davis, Institute for Pediatric Regenerative Medicine, Shriners Hospitals for Children, Northern California, [6]Division of Rheumatology, Allergy & Clinical Immunology, University of California at Davis, Institute for Pediatric Regenerative Medicine, Shriners Hospitals for Children, Northern California
Disclosures: Dennis Wu, None

LB-MO0019 TBS change with different spine scan modes on Lunar Prodigy
Weiwen Chen*[1], Anthony Slattery[2], Jacqueline Center[3], Nicholas Pocock[3]. [1]Garvan Institute, Australia, [2]Department of Nuclear Medicine, St Vincent's Hospital, Australia, [3]Garvan Institute of Medical Research, Australia
Disclosures: Weiwen Chen, None

LB-MO0020 Excessive Bone Loss in Older Men: Effects on Trabecular and Cortical Bone Microarchitecture
Jane Cauley*[1], Andrew Burghardt[2], Stephanie Harrison[3], Peggy Mannen Cawthon[3], Andrew Yu[4], Ann Schwartz[3], Elizabeth Barrett Connor[5], Marcia Stefanick[6], Sharmila Majumdar[7], Eric Orwoll[8]. [1]University of Pittsburgh Graduate School of Public Health, USA, [2]Department of Radiology & Biomedical Imaging, University of California, San Francisco, USA, [3]California Pacific Medical Centre, [4]Department of Radiology & Biomedical Imaging, University of California, San Francisco, USA, [5]University of California, San Diego, USA, [6]School of Medicine, Stanford University, USA, [7]Department of Radiology & Biomedical Imaging, University of California, San Francisco, USA, [8]Oregon Health & Science University, USA
Disclosures: Jane Cauley, None

LB-MO0021 Prevalence and best skeletal areas to diagnose osteoporosis in women in Buenos Aires (Argentina)
Carlos Mautalen[1], Silvina Mastaglia*[2]. [1]Centro de Osteopatías Médicas, Argentina, [2]INIGEM, UBA-CONICET, Argentina
Disclosures: Silvina Mastaglia, None

LB-MO0022 Withdrawn

LB-MO0023 Higher femoral shaft density and thickness as measured using Hip Structural Analysis are risk factors for atypical femur fractures
Andy Kin On Wong*[1], Shawn Davison[2], Jonathan Adachi[3], Jacques Brown[4], Robert Josse[5], Aliya Khan[3], Angela MW Cheung[6]. [1]University Health Network, Ca, [2]University of Victoria, Canada, [3]McMaster University, Canada, [4]Centre Hospitalier de l'Université de Laval, Canada, [5]St. Michael's Hospital, Canada, [6]University Health Network, Canada
Disclosures: Andy Kin On Wong, None

LB-MO0024 Risk of Hip Fracture in Common Medical Conditions – Meta-Analyses Identify Patients who Warrant Treatment
Steven Cummings*[1], Richard Eastell[2]. [1]San Francisco Coordinating Center, USA, [2]Sheffield General Hospital, United Kingdom
Disclosures: Steven Cummings, None

LB-MO0025 National Fracture Risk Screening Finds Majority at High Risk Not Tested or Treated
Kathleen Cody*[1], David Karpf[2]. [1]American Bone Health, USA, [2]Stanford University School of Medicine, Division of Endocrinology, Gerontology & Metabolism, USA
Disclosures: Kathleen Cody, None

LB-MO0026 Simultaneous LC-MS/MS measurement of 24,25-dihydroxyvitamin D and 25-hydroxyvitamin D providing a new perspective in the assessment of vitamin D status
Jonathan Tang*[1], Holly Nicholls[2], John Dutton[2], Isabelle Piec[2], Christopher Washbourne[2], Lanja Saleh[3], D Nowak[3], Graeme Close[4], Helen Macdonald[5], Sarah Jackson[6], Julie Greeves[6], William Fraser[2]. [1]University of East Anglia, Norwich, UK, United Kingdom, [2]Univerisity of East Anglia, [3]University Hospital of Zurich, [4]Liverpool John Moore University, [5]University of Aberdeen, [6]HQ Army Recruiting & Training Division
Disclosures: Jonathan Tang, None

LB-MO0027 Absence of Complement Component 3 Protects Trabecular Structure and Stiffness of Femora in a Murine Model of Postmenopausal Osteoporosis
Danielle MacKay*[1], Thomas Kean[2], Kristina Bernardi[3], Heather Haeberle[4], Catherine Ambrose[5], Feng Lin[6], James Dennis[2]. [1]Baylor College of Medicine, United states, [2]Baylor College of Medicine, [3]Seattle Children's, [4]University of Texas, [5]University of Texas Health Science Center, [6]Cleveland Clinic Foundation
Disclosures: Danielle MacKay, None

LB-MO0028 The Effects of Vitamin D and Sarcopeniaon Bone Mineral Density in Korean women
Bom Taeck Kim*[1], Myat Kyi La Thein[2], Sanghoon Lee[2], Sungwon Yang[2], Dukjoo Lee[2]. [1]AJOU University School of Medicine, Kr, [2]Ajou University School Of Medicine
Disclosures: Bom Taeck Kim, None

LB-MO0029 Mice Expressing a Hypersensitive Form of the Glucocorticoid Receptor in Osteocytes Have High Cancellous Bone Mass and Reduced Cortical Thickness
Marilina Piemontese*[1], Jinhu Xiong[2], Yuko Fujiwara[2], Priscilla Baltz[2], Stuart Berryhill[2], Charles O'Brien[3]. [1]University of Arkansas for Medical Sciences, USA, [2]University of Arkansas for Medical Sciences, [3]UAMS
Disclosures: Marilina Piemontese, None

LB-MO0030 Romosozumab (Sclerostin Antibody) Increases Wall Thickness in Remodeling Units in Cynomolgus Monkeys After 28 Weeks
Qing-Tian Niu, Rogely Boyce, Michael Ominsky*. Amgen Inc., USA
Disclosures: Michael Ominsky, Amgen; Amgen

LB-MO0031 Effects of Ibuprofen Supplementation and Resistance Training on Bone and Marrow Properties in Postmenopausal Women
Whitney Duff*[1], Philip D. Chilibeck[1], Darren G. Candow[2], Julianne J. Rooke[1], Riley S. Mason[1], Regina Taylor-Gjevre[1], Bindu Nair[1], Michael Szafron[1], Adam D.G. Baxter-Jones[1], Gordon A. Zello[1], Anthony M. Kehrig[2], Saija A. Kontulainen[2]. [1]University of Saskatchewan, Canada, [2]University of Regina
Disclosures: Whitney Duff, None

LB-MO0032 Bisphosphonates and "Zebra lines": Relation to Fracture Risk and the Duration of Treatment in Osteogenesis Imperfecta
Jay Shapiro*[1], Evelise Brizola[2]. [1]Kennedy Krieger Institute, Johns Hopkins, USA, [2]Bone Disorders Program, Kennedy Krieger Institute, Johns Hopkins University School of Medicine
Disclosures: Jay Shapiro, None

LB-MO0033 Melorheostosis: Whole Exome Sequencing Of An Associated Dermatosis Implicates Post-Zygotic Mosaicism Involving The KRAS Oncogene
Michael P. Whyte*[1], Malachi Griffith[2], Lee Trani[2], Gary S. Gottesman[1], Susan Bayliss[3], Kilannin Krysiak[2], William H. McAlister[4], Brian A. Van Tine[5], Katherine L. Madson[1], Vinieth N. Bijanki[1], Carol Brinson[1], Angie Nenninger[1], Steven Mumm[6], Obi Griffith[7], Elaine R. Mardis[2]. [1]Center for Metabolic Bone Disease & Molecular Research, Shriners Hospital for Children, [2]The Genome Institute, Washington University School of Medicine, [3]Division of Dermatology, Washington University School of Medicine at Barnes-Jewish Hospital, [4]Department of Pediatric Radiology, Mallinckrodt Institute of Radiology at St. Louis Children's Hosptial, Washington University School of Medicine, [5]Division of Medical Oncology, Washington University School of Medicine at Barnes-Jewish Hospital, [6]Division of Bone & Mineral Diseases, Washington University School of Medicine at Barnes-Jewish Hospital, [7]Division of Bone Marrow Transplant, Washington University School of Medicine at Barnes-Jewish Hospital
Disclosures: Michael P. Whyte, None

LB-MO0034 Sclerostin Antibody Treatment Stimulates Bone Formation Without Increasing Bone Resorption to Normalize Bone Mass in Down Syndrome
Diarra Williams*[1], Sean Parham[1], Eric Schryver[1], Nisreen Akel[1], Jami Schmidt[1], Jessica Webber[1], Frances Swain[1], Dana Gaddy[1], Larry Suva[2]. [1]Dept Orthopaedic Surgery UAMS, [2]University of Arkansas for Medical Sciences, USA
Disclosures: Diarra Williams, None

LB-MO0035 Calcified Cartilage Islands in Mouse Bones
Victoria Ip[1], Zach Toth[2], Sarah McBride*[3]. [1]Cornell Univeristy, [2]Saint Louis University, [3]Saint Louis University, USA
Disclosures: Sarah McBride, None

LB-MO0036 Kindlin-2 Controls TGF-β signaling and Sox9 Expression to Regulate Chondrogenesis
Guozhi Xiao*[1], Chuanyue Wu[2], Yumei Lai[3], Ke Zhu[3], Huiling Cao[2], Di Chen[3]. [1]Rush University Medical Center, USA, [2]South University of Science & Technology of China, [3]Rush University, USA
Disclosures: Guozhi Xiao, None

PLENARY SYMPOSIUM – BONE HEALTH IN PATIENTS TREATED FOR CANCER

This program is supported by an educational grant from Lilly.

2:30 pm - 3:45 pm **Washington State Convention Center**
Room 6E

Co-Chairs
Diane Krueger, CCRC, CDT
University of Wisconsin, Madison, USA
Disclosures: Diane Krueger, None

Beatrice Edwards, M.D., FACP
MD Anderson Cancer Center, USA
Disclosures: Beatrice Edwards, None

2:30 pm Cancer Treatment Induces Bone Loss (CTIBL) in Women with Breast Cancer – Size of the Problem and Intervention Strategies
Peyman Hadji, M.D.
Krankenhaus Nordwest, Dept of Bone Oncology, Germany
Disclosures: Peyman Hadji, Amgen 15; Novartis 15

2:55 pm Prevention of Treatment and Disease-Related Skeletal Morbidity in Men with Prostate Cancer
Matthew Smith, M.D., Ph.D.
Massachusetts General Hospital, USA
Disclosures: Matthew Smith, None

3:20 pm **Patients with Bone Marrow Cancers**
Matthew Drake, M.D., Ph.D.
College of Medicine, Mayo Clinic, USA
Disclosures: Matthew Drake, None

CLOSING RECEPTION

4:00 pm - 5:00 pm **Washington State Convention Center**
Atrium Lobby - Level 4