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All ASBMR sessions will take place in the Colorado Convention Center, Denver, Colorado, USA, unless otherwise stated. The Colorado Convention Center is located at 700 14th St., Denver, CO, USA, 80202

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The ASBMR 2017 Annual Meeting Evaluation will be accessible online starting Thursday, September 14. An email will be sent to all meeting attendees who provided their email addresses at the time of registration. The email will provide a hyperlink to the online evaluation site. It will also to be accessible via the ASBMR website at www.asbmr2017.org. We strongly encourage and welcome all attendees to provide us with feedback on the meeting. Your input is very important to us.

Registration Hours

Registration desks will be open for new registrants and material pick-up in the Colorado Convention Center in the Registration Hall, Main Entrance during the following hours:

Thursday, September 7	7:00 am – 6:00 pm
Friday, September 8	7:00 am – 7:00 pm
Saturday, September 9	7:00 am – 5:00 pm
Sunday, September 10	7:30 am – 5:00 pm
Monday, September 11	7:30 am – 2:30 pm

Discovery Hall Hours

Exhibits are located in the ASBMR Discovery Hall inside Exhibit Hall A & B1 of the Denver Colorado Center. Please note that children aged 12 and under are not permitted in Discovery Hall at any time. Lunch will be available for purchase in the hall during Exhibit hours.

Friday, September 8	5:30 pm – 7:00 pm
Saturday, September 9	9:30 am – 4:30 pm
Sunday, September 10	9:30 am – 4:30 pm
Monday, September 11	9:30 am – 2:30 pm

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The ASBMR Press Office will be in operation to facilitate press-related activities during the meeting. The Press Office will be located in Room 101 in the Colorado Convention Center

Press Office - Hours of Operation

Thursday, September 7	2:00 pm – 5:00 pm
Friday, September 8	8:00 am – 6:00 pm
Saturday, September 9	8:00 am – 6:00 pm
Sunday, September 10	8:00 am – 5:00 pm
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Future ASBMR Annual Meeting Dates

ASBMR 2018 Annual Meeting
Palais des Congrès de Montréal, Montreal, Quebec, Canada September 28–October 1, 2018

ASBMR 2019 Annual Meeting
Orlando Convention Center, Orlando, FL, USA
September 20–23, 2019

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ASBMR expects that attendees respect each presenter's willingness to provide free exchange of scientific information without the abridgement of his or her rights or privacy and without the unauthorized copying and use of the scientific data shared during his or her presentation. In addition, ASBMR expects that attendees will respect exhibitors' desires not to have their products or booths photographed or video-recorded.

The use of mobile devices, tablets, cameras, audio-recording devices, and video-recording equipment is strictly prohibited within all Scientific Sessions, the Discovery Hall, and Poster Sessions without the express written permission of both the ASBMR and the presenter/exhibitor. Unauthorized use of the recording equipment may result in the confiscation of the equipment or the individual may be asked to leave the session or Discovery Hall. These rules are strictly enforced.

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No abstract presented at the ASBMR 2017 Annual Meeting may be released to the press before its official presentation date and time. Press releases must be embargoed until one hour after the presentation.

CONTINUING MEDICAL EDUCATION CREDITS

This activity has been planned and implemented by Creighton University Health Sciences Continuing Education (HSCE) and The American Society for Bone and Mineral Research (ASBMR) for the advancement of patient care. Creighton University Health Sciences Continuing Education is accredited by the American Nurses Credentialing Center (ANCC), the Accreditation Council for Pharmacy Education (ACPE), and the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing education for the healthcare team.

AMA PRA Statement

Creighton University Health Sciences Continuing Education designates this live activity for a maximum of 28.25 *AMA PRA Category 1 Credit(s)*^{TM}. Physicians should claim only the credit commensurate with the extent of their participation in the activity.
AAPA accepts AMA category 1 credit for the PRA from organizations accredited by ACCME.

Online Evaluation to Receive CME

The online evaluation to receive CME will be available beginning Thursday, September 14 *Please Note*: There is a $50 fee per application. This fee can be paid when you register for the Annual Meeting or added during the Meeting at the Registration Desk.

Meeting Objectives

Upon returning home from the meeting, participants should be able to:

- Identify and discuss the most current and significant advances in biomedical and clinical research in bone and mineral metabolism and better understand the interrelationship among basic research, clinical research and patient care.
- Improve the ability to treat and care for patients through an enhanced knowledge of osteoporosis, other diseases of bone, basic bone biology and its correlation to mineral metabolism.
- Develop and apply new and enhanced strategies for the assessment, diagnosis and treatment of patients at risk for or with osteoporosis and improve the ability to treat and care for patients.

Target Audience

The program is designed for researchers, physicians and other health and allied health professionals with interests in biomechanics, cell biology, dentistry, endocrinology, epidemiology, genetics, internal medicine, metabolism and musculoskeletal research, molecular biology, molecular genetics, nephrology, orthopaedics, pathology, pharmacology, physiology and rheumatology.

ASBMR Expectations of Authors and Presenters

Through ASBMR meetings, the Society promotes excellence in bone and mineral research. To that end, ASBMR expects that all authors and presenters affiliated with the ASBMR 2017 Annual Meeting and the 2017 Ancillary Program will provide informative and fully accurate content that reflects the highest level of scientific rigor and integrity.
ASBMR depends upon the honesty of the authors and presenters and relies on their assertions that they have had sufficient full access to the data and are convinced of its reliability.
Furthermore, ASBMR expects that:

- Authors and presenters will disclose any conflicts of interest, real or perceived.
- Authors of an abstract describing a study funded by an organization with a proprietary or financial interest must affirm that they had full access to all the data in the study. By so doing, they accept complete responsibility for the integrity of the data and the accuracy of the data analysis.
- The content of abstracts, presentations, slides and reference materials must remain the ultimate responsibility of the author(s) or faculty.
- The planning, content and execution of abstracts, speaker presentations, slides, abstracts and reference materials should be free from corporate influence, bias or control.
- All authors and presenters (invited and abstracts-based oral and poster presenters) should give a balanced view of therapeutic options by providing several treatment options, whenever possible, and by always citing the best available evidence.

In addition, ASBMR's meeting evaluations will seek feedback regarding commercial bias at ASBMR 2017 Annual Meeting sessions, including the 2017 Ancillary Program.

Disclosure Policy

The ASBMR is committed to ensuring the balance, independence, objectivity and scientific rigor of all its individually sponsored or industry-supported educational activities. Accordingly, the ASBMR adheres to the requirement set by ACCME that audiences at jointly-sponsored educational programs be informed of a presenter's (speaker, faculty, author, or planner) academic and professional affiliations, and the disclosure of the existence of any significant financial interest or other relationship a presenter or their spouse has with any proprietary entity over the past 12 months producing, marketing, re-selling or distributing health care goods or services, consumed by, or used on patients, with the exemption of non-profit or government organizations and non-health care related companies. When an unlabeled use of a commercial product, or an investigational use not yet approved for any purpose, is discussed during the presentation, it is required that presenters disclose that the product is not labeled for the use under discussion or that the product is still investigational. This policy allows the listener/attendee to be fully

knowledgeable in evaluating the information being presented. The On-Site Program book will note those speakers who have disclosed relationships, including the nature of the relationship and the associated commercial entity.

Disclosure should include any affiliation that may bias one's presentation or which, if known, could give the perception of bias. This includes relevant financial affiliations of a spouse or partner. If an affiliation exists that could represent or be perceived to represent a conflict of interest, this must be reported in the abstract submission program by listing the name of the commercial entity and selecting the potential conflict(s) by clicking in the box next to the relationship type. Disclosures will be printed in the program materials. These situations may include, but are not limited to: 13. Grant/Research Support; 14. Consultant; 15. Speakers' Bureau; 16. Major Stock Shareholder; 17. Other Financial or Material Support.

ANNUAL MEETING RESOURCE MATERIALS

Abstracts Book

The 2017 Abstracts Book is published as a supplement of the *Journal of Bone and Mineral Research* (*JBMR*®). Electronic copies are available on the ASBMR website, free of charge. Printed copies are only available to those who ordered in advance.

Abstracts On-line and Itinerary Builder

Only members and registered Annual Meeting attendees are able to access the 2017 Abstracts On-line Program. This tool can be used to help you search for and review abstract presentations, as well as plan your meeting itinerary. You may access this convenient program via the ASBMR website.

ASBMR Annual Meeting Mobile App

This free smartphone application is a mobile version of the on-site program book and includes the meeting abstracts. The app also features general meeting information, exhibitor listings and detailed maps of the convention center. To download the app, go to the app store on your smartphone or mobile device and search ASBMR 2017.

Meet-the-Professor Handout Booklet

The Meet-the-Professor Handout Booklet contains all the handouts supplied by the professors in one convenient booklet. The Handout Booklet is available in PDF format, free of charge, on the ASBMR website and in the mobile app.

ADDITIONAL RESOURCES

Special Notices and Safety Tips

- Remove your convention badge outside the meeting sites. Do not wear your badge outside or advertise that you're a visitor and not familiar with your surroundings.
- Walk with another person rather than alone. Avoid alleys, walkways between buildings, and deserted parking lots.
- Remain alert, be aware of your surroundings, and carry your handbag in front of you.
- While in your hotel room, always lock your door. Know where emergency exits are in your hotel.
- Place any valuables in a hotel safety deposit box rather than leaving them in your room or carrying them with you.
- Keep a copy of your passport and travel papers in a safe place.

ASBMR Career Center

The ASBMR Career Center Service is easily accessible year-round online. You can access the most up-to-date job and candidate listings using the ASBMR Career Center Website. Simply submit your resume or job announcement using the online forms at www.asbmr.org. After your forms are submitted and payment is received, you will be able to use your self-assigned login name and password to access the Online Placement Service database anytime you wish.

Employers enrolled in the service will be entitled to display unlimited job announcements online and onsite at the meeting in the ASBMR Networking Center. In addition, employers will have access to candidates' Curricula Vitae and to interview rooms.

Employers and candidates may request further information by accessing the ASBMR Career Center at www.asbmr.org.

Poster Tours

Annual Meeting Poster Session Tours will take place during each of the three poster sessions. These poster tours will be guided by a prominent scientist in the bone field to assist attendees in navigating the science within the poster hall. Participants will be able to choose between tours related to either basic or clinical science, or tours focused on specific research topics. Tours will begin near the ASBMR Young Investigators Lounge located in the Discovery Hall in the Colorado Convention Center and will last approximately 60 minutes.

Poster Session	Tour Start Time	Start Location
Poster Session I: Saturday, September 9	1:00 p.m.	ASBMR Booth, Discovery Hall
Poster Session II: Sunday, September 10	1:00 p.m.	ASBMR Booth, Discovery Hall

NIH Lounge

Representatives from the U.S. National Institutes of Health (NIH) and the Center for Scientific Review (CSR) will be available in the NIH Lounge in the ASBMR Networking Center to discuss grant proposals and ideas. Program staff from the following institutes and centers will be available to talk with you:

- National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)
- National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)
- National Cancer Institute (NCI)
- National Institute of Dental and Craniofacial Research (NIDCR)
- National Institute on Aging (NIA)
- National Institute of Child Health and Human Development (NICHD)
- Center for Scientific Review (CSR)

Young Investigator and New Member Lounge

All young investigator attendees are invited to drop by the Young Investigator and New Member Lounge located in Discovery Hall. Don't miss this opportunity to make new friends and expand your network of colleagues.

INFORMATION FOR SPEAKERS AND POSTER PRESENTERS

Speaker Ready Room

Speakers must check into the Speaker Ready Room 24 hours in advance of their presentation. At that time, speakers may review their slides. The Speaker Ready Room is located in Room 206 in the Colorado Convention Center. Review of slides must occur at least 24 hours prior to your presentation. The Speaker Ready Room will be open during the following times:

Speaker Ready Room Hours

Thursday, September 7 ..... 7:00 am – 5:00 pm
Friday, September 8 ..... 7:00 am – 5:00 pm
Saturday, September 9 ..... 7:00 am – 6:00 pm
Sunday, September 10 ..... 7:00 am – 5:30 pm
Monday, September 11 ..... 7:00 am – 2:30 pm

Poster Sessions

All poster sessions will be held in Discover Hall-Exhibit Hall A and B1 in the Colorado Convention Center. Authors must be at their posters for the designated poster sessions on Saturday through Monday and must be available to answer questions during this period. Please adhere to the presentation times to maximize interaction with other attendees.

Presenters should mount their posters on the board bearing their assigned numbers, disregarding the letter prefix. ASBMR accepts no liability for posters or poster materials and will not adjudicate disputes between abstract presenters.

Please note that children 12 years of age and under will not be permitted in the poster area or the Discovery Hall at any time.

Presenter Check-in:

Since only poster presenters are allowed in the ASBMR Discovery Hall during the below poster set-up and dismantle hours, please go to the Poster Presenter Check-in Table at the entrance door to Discovery Hall of the Colorado Convention Center to receive a security pass. To speed the check-in process, please have your poster board number ready.

- **NOTE: Posters remaining after Poster Dismantling times will be discarded.**
- **Young Investigator Award Posters remain up through Monday, September 11 at 3:00 pm.**

Please adhere to these scheduled times to maximize interaction for other attendees:

POSTER SESSION PRESENTATION SCHEDULE

Poster Set-Up	Posters Open	Presentation Time	Dismantle Posters
Friday, September 8 40th Anniversary Welcome Reception and Poster Session Colorado Convention Center, Discovery Hall			
3:00 pm–4:30 pm All Friday and Saturday Posters*	5:00 pm– 7:00 pm	5:00 pm–7:00 pm All Friday Poster Presenters Anyone with a "FR" poster number	**Do not dismantle. All posters remain on the poster boards through 5 pm Saturday, September 9**
Saturday, September 9 Poster Session Colorado Convention Center, Discovery Hall			
7:30 am–8:00 am	9:30 am– 4:30 pm	12:30 p.m. – 2:30 p.m. All Saturday Poster Presenters Anyone with a "SA" poster number	4:30 – 5:00 pm All Friday and Saturday posters must be removed from the boards at this time
Sunday, September 10 Poster Session Colorado Convention Center, Discovery Hall			
7:30 am–8:00 am All Sunday and Monday Posters*	9:30 am– 4:30 pm	12:30 p.m. – 2:30 p.m. All Sunday Poster Presenters Anyone with a "SU" poster number	**Do not dismantle. All posters remain on the poster boards through 2 pm Monday, September 11**
Monday, September 11 Poster Session Colorado Convention Center, Discovery Hall			
7:30 am–8:00 am	9:30 am– 2:00 pm	12:00 p.m. – 2:00 p.m. All Monday Poster Presenters Anyone with a "MO" poster number	2:00 – 2:30 pm All Sunday and Monday posters must be removed from the boards at this time

HOW THE PROGRAM WAS SELECTED

The Annual American Society for Bone and Mineral Research (ASBMR) meeting is the leading scientific program in the field of bone, mineral and musculoskeletal research where the best science is presented on a broad range of topics, and where attendees come together to collaborate and network. It is a time to meet with friends and colleagues and to renew the creative spirit. For many of us it is a "must attend" meeting.

As President of ASBMR, I have spent a major portion of my time organizing a team to plan the annual meeting to ensure that the best and most current science is represented. The following description of the process for creating the 2017 Annual Meeting program is outlined in the following paragraphs. This description will provide you with a sense of how the speakers were selected and how the scientific presentations were chosen from all of the thousands of abstract submissions. I want to emphasize that this meeting will only come alive because of you as attendees. Your engagement is fundamental to the success of a scientific meeting like this.

This is a historic year for ASBMR. We are celebrating **40 years** of scientific discovery in bone, mineral and musculoskeletal research. We invite you to help us celebrate our 40th anniversary. We have several special celebrations planned, including our 40th Anniversary welcome session and poster session and a plenary session on our 40th anniversary. This session will be chaired by 2 former Presidents of ASBMR: Dr. Steve Teitelbaum, President in 1992-1993 and Dr. Jane Aubin, president in 1998-1999. Dr. Paula Stern, one of the founders of ASBMR and President in 1984-1985 will give a historical overview. Dr. Steve Cummings will review 40 years of advances in clinical research and Dr. Jack Martin, 40 years of advances in basic/translational research. Please consider donating to our ASBMR Fund for Research and Education…**$40 for 40 Years**!! Donations are used exclusively to provide research grants and training opportunities for our members.

The Program Co-Chairs

Starting back a year ago, my first task was to nominate my meeting co-chairs. After speaking with various people and asking for advice from colleagues, I followed the lead of the previous two program teams and invited three outstanding scientists; a clinical co-chair, **Dr. Kenneth Saag**, a translational co-chair, **Dr. Teresita Bellido,** and a basic science co-chair, **Dr. Anna Teti**. The ASBMR Executive Committee approved these candidates and then off we went, working with our fearless advisor, **Angela Belusik**. My co-chairs were full of terrific ideas for every aspect of the meeting and this led to what I feel is a diverse, novel and creative program.

The Program Advisory Committee

In addition to the Program Committee, I followed our previous President's idea to convene a program advisory committee, whose role was to brainstorm and advise the Chair and Co-Chairs on the hot topics that should be covered and the speakers that could cover them appropriately. This committee was comprised of a large number of world leaders in our field. I am very grateful to all these colleagues for their generous help, which contributed significantly to establishing this year's program. Both US and International members helped us with the program and included:

- Dennis Black, PhD, University of California, San Francisco
- Angela Cheung, MD, PhD, University Health Network-University of Toronto (Canada)
- Richard Eastell, MD, FRCP, University of Sheffield (UK)
- Mike Econs, MD, Indiana University School of Medicine
- Kristine Ensrud, MD, MPH, University of Minnesota and Minneapolis VA Health Care System
- Ghada El-Hajj Fuleihan, MD, MPH, American University of Beirut-Medical Center (Lebanon)
- Steve Goldring, MD, Hospital for Special Surgery
- Henry Kronenberg, MD, Massachusetts General Hospital
- Brendan Lee, MD, PhD, Baylor College of Medicine
- Toshio Matsumoto, MD, University of Tokushima (Japan)
- Charles O'Brien, PhD, Central Arkansas VA Healthcare System, University of Arkansas for Medical Sciences
- Ian Reid, MD, MBChB, University of Auckland (New Zealand)
- Matt Warman, MD, Boston Children's Hospital
- Nelson Watts, MD, Mercy Health Osteoporosis and Bone Health Services
- Douglas Kiel, MD, Institute for Aging Research, Hebrew SeniorLife
- Jennifer Westendorf, PhD, Mayo Clinic
- Ernestina Schipani, MD, PhD, University of Michigan
- Serge Ferrari, MD, Geneva University Hospital and Faculty of Medicine (Switzerland)

Invited Program

Pre Meeting Symposium on "Current Concepts in Bone Fragility: from cells to Surrogates"

For several years, ASBMR has included in its Annual Meeting a one day symposium focusing on a specific "hot" topic in our field. This year the selected topic is "Current Concepts in Bone Fragility: from Cells to Surrogates". This symposium is the second of three consecutive years of funding through an R13 meeting grant from NIH. It was my great privilege that **Drs. Mary Bouxsein, Claus Glueer and Marjolean van der Meulen accepted** my invitation to serve on the organizing committee for this program and develop this symposium. They have worked very hard and have put together an outstanding cutting edge program and I have no doubt that this symposium will be an enormous success. The timing of this meeting coincides to the near completion of the Foundation for the NIH Biomarkers consortium focused on determining the utility of surrogate endpoints for randomized clinical trials of osteoporosis drugs.

Plenary Lectures

We are very privileged that **Dr. Judith Campisi, Professor of Bio-Gerontology, Buck Institute for Research on Aging**, will be delivering our Gerald D. Aurbach Lecture. The title of her talk is: Cellular Senescence: Yin and Yang". At both the Buck Institute and the Lawrence Berkley National Laboratory, she established a broad program designed to understand the relationship between aging and disease, with an emphasis on aging and cancer. Cellular senescence is the stress response that results in an irreversible arrest of cell proliferation accompanied by a multi-factorial senescence associated secretory phenotype (SASP). SASP includes multiple cytokines, chemokines, growth factors and damage associated molecular patterns. In her lecture she will discuss how these bioactive factors have a double edge sword.

Dr. Stavros Manolagas will deliver this year's Louis V. Avioli Lecture on the **Quest for Osteoporosis Mechanisms: how far we have come and how much further we need to go**. In his lecture he will highlight the latest state of knowledge of bone intrinsic and extrinsic mechanisms responsible for the development of osteoporosis, the differential effect of estrogen vs aging on the skeleton and the role of old osteocytes in the development of cortical porosity. In keeping with the theme of aging and cellular senescence, he will also highlight exciting advances toward the goal of developing drugs for several degenerative disease of aging including osteoporosis by targeting shared mechanism of aging

Plenary Symposia

Three additional symposia have been planned. Their themes have been selected by the co-chairs on the basis of their scientific impact, timeliness and potential interest to the ASBMR meeting attendees. The first basic science symposium will focus on **CRISPR-Cas9 gene editing and beyond** and will include a lecture by **Dr. Blake Wedenheft, CRISPR system: where it came from and how to use it. Dr. Lei (Stanley) Qi** will talk on **CRISPR mediated control of gene expression and activation. Finally, Dr. J. Wes Pike** will review **The Rapid analysis of Gene enhancers using CRISPR-Cas9.**

We have organized two symposia that combine basic/ translational science with clinical research in one session. We hope these types of sessions will encourage cross talk among our researchers across these 3 disciplines: The first one is entitled **Sleep, Energy Metabolism and Musculoskeletal Systems.** Speakers include **Dr. Paolo Sassone-Corsi** who will discuss circadian rhythms' and energy metabolism. **Dr. Christine Swanson** will review the basic science linking sleep with bone health. Finally **Dr. Kristine Ensrud** will review the evidence linking sleep parameters with fractures frailty and falls.

Similarly we have organized a plenary symposium on **Bone Muscle Interactions.** The first basic science talk by **Dr. Gerard Karsenty** will discuss osteocalcin, a bone derived hormone, and its involvement with muscle adaptation to exercise**. Dr. Karyn Esser** will review circadian rhythms, the molecular clock and skeletal muscle. The symposium will end with a clinical discussion of drug development and discovery in sarcopenia by **Dr. Roger Fielding**

Results of the National Institutes of Aging funded Testosterone Trials, a coordinated set of 7 randomized trials, have been recently published. Thus, we organized a session on **Testosterone Treatment in Older Men.** The first talk will review the skeletal effects of testosterone replacement by **Dr. Peter Snyder,** the overall Principal Investigator of the Testosterone Trials. **Dr. Shalendar Bhasin** will review the effects of testosterone replacement on physical function, vitality and body composition. Finally, **Dr. Fred Wu** will discuss testosterone treatment in older men: who should be targeted and safety considerations.

Clinical Sessions

The **Clinical Evening** will address the growing treatment gap in osteoporosis. **Drs. Abrahamson, Wright, Robinovich and Bauer will** present an international overview of changes in osteoporosis testing, treatment and fractures, an epidemiologic perspective on interpreting these data, fall prevention and whether the therapeutic horizon will fix the treatment gap. Complementing the Clinical Evening will be a **joint symposium with the International Osteoporosis Foundation** examining reducing the treatment gap. **Drs. Sundeep Khosla and Doug Kiel** will describe the strategic roadmap to prevent secondary fractures, results of the ASBMR multiple stakeholder's initiative to reduce the treatment gap. **Dr. Nicholas Harvey** will provide a global perspective on current and future strategies for the prevention of fractures. The American College of Physicians has recently released their update on the clinical guidelines for the

treatment of low bone mineral density or osteoporosis to prevent fractures in men and women. We have planned a discussion of these guidelines from both a primary care perspective**, Dr. Carolyn Crandall** and a specialist perspective, **Dr. Ben Leder.** We have also organized a clinical evening on the Management and Treatment of Rare Bone disease including a presentation on osteogenesis Imperfecta, by **Dr. Francis Glorieux**; XLH and Duchenne Muscular Dystrophy, **Dr. Maria Louisa Biachi** and Osteopetrosis, **Dr. Michael Econs**.

The topic of the **ASBMR- ECTS debate**, Anti-Resorptive Therapy During the Menopausal Transition Prevents Bone Fractures Later in Life is a key issue for understanding how menopausal changes may contribute to fractures at older ages. The debate features Dr. Eric Eriksen from ECTS supporting the motion and Dr. Gail Greendale, from ASBMR arguing against the motion.

Concurrent Basic Science Evening
The basic science evening session concurrent with the clinical evening was quite a success last year. Therefor we decided to continue with this tradition this year. The title of this session is Bone Marrow Niche and Hematopoiesis with 3 invited speakers: **Drs. Emmanuelle Passague, Paul Frenette, and Stavroula Kousteni.**

Hands on Workshops: Second Year
For the 2016 meeting, the Program Committee agreed that too much of the annual meeting has become a passive process of receiving vast amounts of information with only limited opportunities to interact with our acclaimed speakers. They introduced a set of **"Hands-On Workshops"** each day at 11:00 am that will engage members. This was quite popular last year and the 2017 Program committee elected to continue these Hands on Workshops. We decided to continue the more popular hands on workshops including workshops on Biomechanical Phenotyping, Histomorphometry and RNA Sequencing Computational Analysis Training. For the 2017 meeting we have added 2 new Hands on Workshops: Functional in Silico Assessment of Genomic Regions Influencing BMD and Skeletal Muscle Biology and Function.

We welcome your feedback on these hands on workshops and suggestions for other hands on workshops in future meetings.

Abstract Selection
Observing the abstract selection process from the perspective of the Program Committee was a unique experience. This part of the program features the cutting edge of new science. The process of abstract review and selection was a very objective and fair process. The committee relied on peer review to place the abstracts into the appropriate sessions of oral and poster presentations. As President this year I can ensure everyone that the process of selecting abstracts for the oral program depends on the scoring provided by the independent reviewers. Generally there were six reviewers per abstract, which ensures that the scores were not likely to be based on one or two opinions of reviewers. This system is as fair and unbiased as can be. The difficult job for the Program Committee was to try to fit as many abstracts into the oral sessions as we could. At the end of that process we were still left with many outstanding abstracts that will be part of a very good set of poster sessions. Based on the available slots for oral presentations, 13% of the 1,235 submitted abstracts made it to the oral presentations. The highest scoring abstracts will be presented in plenary oral sessions.

Similar to last year, we called for late breaking abstract submissions to ensure cutting edge research had a chance to be on the program. The Program Committee reviewed the 95 submissions and we created two late breaking concurrent abstract oral sessions (Clinical and basic/translational) on Monday, September 11 at 11:00 am.

Lastly, the ASBMR Annual Meeting would not be the most important and exciting meeting in our field without all the Working Group meetings in the evenings, the ancillary meetings organized by various groups and the many opportunities for informal networking with other investigators in the field.

Thank you all for coming to Denver to participate in the ASBMR 2017 Annual Meeting!

Jane A Cauley, DrPH
ASBMR President

Friday, September 8, 2017

Day-At-A-Glance

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

ASBMR REGISTRATION OPEN

7:00 am **Colorado Convention Center**
Registration Hall - Lobby A Foyer

GERALD D. AURBACH LECTURE AND THE PRESENTATION OF THE WILLIAM F. NEUMAN, LAWRENCE G. RAISZ, AND FREDERIC C. BARTTER AWARDS

8:00 am - 9:30 am **Colorado Convention Center**
Mile High Ballroom

8:00 am **Cellular Senescence: Yin and Yang**
Judith Campisi, Ph.D.
Buck Institute for Research on Aging, USA
Disclosures: Judith Campisi, None

NETWORKING BREAK

9:30 am - 10:00 am **Colorado Convention Center**
Mile High Ballroom Foyer and Four Seasons Ballroom Foyer

HIGHLIGHTS OF THE ASBMR 2017 ANNUAL MEETING

10:00 am - 11:30 am **Colorado Convention Center**
Mile High Ballroom

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
Teresita Bellido, Ph.D.
Indiana University School of Medicine, USA
Disclosures: Teresita Bellido, None

Kenneth Saag, M.D., MSc.
University of Alabama at Birmingham, USA
Disclosures: Kenneth Saag, None

Anna Teti, Ph.D.
University of L'Aquila, Italy
Disclosures: Anna Teti, None

10:00 am **Basic Science Meeting Overview**
Roland Baron, DDS, PhD
Harvard Medical School and School 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

MEET-THE-PROFESSOR SESSIONS

11:30 am - 12:30 pm **Colorado Convention Center**
Room 102-113

Meet the Professor: Bone Extracellular Matrix Assembly and Mineralization
Room 102

Marian Young, PhD
National Institutes of Health, USA
Disclosures: Marian Young, None

Meet the Professor: Bone Marrow Fat in Health and Disease
Room 103

Beata Lecka-Czernik, Ph.D.
University of Toledo College of Medicine, USA
Disclosures: Beata Lecka-Czernik, None

Meet the Professor: Diabetes and Bone
Room 104

Ann Schwartz, Ph.D.
University of California, San Francisco, USA
Disclosures: Ann Schwartz, None

Meet the Professor: Gene-editing in Cells and Mice
Room 105

Mark Meyer, PhD
University of Wisconsin-Madison, USA
Disclosures: Mark Meyer, None

Meet the Professor: How to Use Data and Specimens from the Large SOF (Study of Osteoporotic Fractures) and MrOS (Osteoporosis in Men) Studies to Do Your Research
Rooms 106

Peggy Cawthon, Ph.D., MPH
San Francisco Coordinating Center, USA
Disclosures: Peggy Cawthon, None

Steven R. Cummings, M.D.
San Francisco Coordinating Center, USA
Disclosures: Steven R. Cummings, None

Eric Orwoll, M.D.
Oregon Health & Science University, USA
Disclosures: Eric Orwoll, None

Meet the Professor: Stromal Support of Hematopoiesis
Room 107

Pamela Robey, PhD
National Institute of Dental and Craniofacial Research, USA
Disclosures: Pamela Robey, None

Meet the Professor: LRP Receptors in Bone
Room 108

Mei Wan, M.D., Ph.D.
Johns Hopkins University School of Medicine
Disclosures: Mei Wan, None

Meet the Professor: Osteocyte and Mechano-transduction
Room 109

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

Meet the Professor: Screening for Atypical Femur Fractures
Room 110/112

Angela Cheung, M.D., Ph.D.
University Health Network-University of Toronto, Canada
Disclosures: Angela Cheung, None

Meet the Professor: Interesting Cases in Metabolic Bone Disease
Room 111/113

Amy Warriner, MD
University of Alabama at Birmingham
Disclosures: Amy Warriner, None

HANDS-ON WORKSHOP: FUNCTIONAL IN-SILICO ASSESSMENT OF GENOMIC REGIONS INFLUENCING BONE MINERAL DENSITY

11:30 am - 1:00 pm **Colorado Convention Center**
Room 402

Hands-on Workshops are ticketed events and require advance registration. Registration is not available onsite.

HANDS-ON WORKSHOP: HISTOMORPHOMETRY: AN INTERACTIVE INTRODUCTION

11:30 am - 1:00 pm **Colorado Convention Center**
Room 403/404

Hands-on Workshops are ticketed events and require advance registration. Registration is not available onsite.

GRANT WRITING WORKSHOP: WHAT TO CHOOSE AND HOW TO FUND IT

Sponsored by the ASBMR Membership Engagement and Education Committee

11:30 am - 12:45 pm **Colorado Convention Center**
Mile High Ballroom 4A-B

As funding gets increasingly more difficult to secure, it becomes more vital to learn what will help your grant stand out in the field. Join your fellow researchers and colleagues in this interactive session to discuss potential obstacles to grant writing and the strategic ways to overcome them. The following topics will be covered in this unique, 75 minute session: International Funding, Choosing the Appropriate Grant Mechanism and/or Funding Agency, and NIH Requirements. Workshop attendees will have the opportunity to participate in one or multiple discussion roundtables in this session. This is a can't miss opportunity for researchers at any career stage who want to gain valuable insight and tips into getting their research funded.

NETWORKING BREAK

12:30 pm - 1:00 pm **Colorado Convention Center**
Mile High Ballroom Foyer and Four Seasons Ballroom Foyer

CONCURRENT ORALS: CHONDROCYTES

1:00 pm - 2:00 pm **Colorado Convention Center**
Four Seasons Ballroom I

Co-Chairs
Laurence Legeai-Mallet, PhD
INSERM U1163 - Imagine Institute-Paris Descartes University, Denmark
Disclosures: Laurence Legeai-Mallet, None

Stefano Zanotti, Ph.D.
University of Connecticut Health Center, USA
Disclosures: Stefano Zanotti, None

1:00 pm **ASBMR 2017 Annual Meeting Young Investigator Award**
1001 **Impairment of Mitochondrial Respiration Promotes Survival of Hypoxic Chondrocytes *In Vivo***
Qing Yao*[1], Edward LaGory[2], Laura Mangiavini[1], Jiarui Hu[1], Christophe Merceron[3], Krishna Vemulapalli[1], Mohd Parvez Khan[1], Zachary Tata[1], Amato J. Giaccia[2], Ernestina Schipani[1]. [1]University of Michigan, United States, [2]Stanford University, United States, [3]University of Michigan , United States
Disclosures: Qing Yao, None

1:15 pm **PiT1/Slc20a1-mediated endoplasmic reticulum homeostasis and cell survival in growth plate**
1002 **chondrocytes**
Greig Couasnay*[1], Nina Bon[1], Claire-Sophie Devignes[2], Sophie Sourice[1], Arnaud Bianchi[3], Joelle Veziers[1], Pierre Weiss[1], Sylvain Provot[4], Jerome Guicheux[1], Sarah Beck-Cormier[5], Laurent Beck[1]. [1]INSERM U1229, University of Nantes, France, [2]INSERM 1132, Paris Diderot University, France, [3]CNRS UMR 7365, University of Lorraine, France, [4]INSERM U1132, Paris Diderot University, France, [5]INSERM U1132, University of Nantes, France
Disclosures: Greig Couasnay, None

1:30 pm **HIF Prolyl Hydroxylase 2 Controls Chondrocyte Metabolism and Affects Endochondral**
1003 **Ossification**
Steve Stegen*[1], Kjell Laperre[1], Guy Eelen[2], Gianmarco Rinaldi[3], Sophie Torrekens[1], Sarah-Maria Fendt[3], Peter Carmeliet[2], Geert Carmeliet[1]. [1]Clinical and Experimental Endocrinology, KU Leuven, Belgium, [2]Angiogenesis and Vascular Metabolism, Vesalius Research Center, VIB/KU Leuven, Belgium, [3]Cellular Metabolism and Metabolic Regulation, Vesalius Research Center, VIB/KU Leuven, Belgium
Disclosures: Steve Stegen, None

1:45 pm **ASBMR 2017 Annual Meeting Young Investigator Award**
1004 **Therapeutic Targeting of GPCR Gbetagamma-GRK2 Signaling in Osteoarthritis**
Elijah Carlson*[1], Eric Schott[1], Heather Le Bleu[1], Monaliza El-Quadi[1], John Ketz[1], Reyad Elbarbary[1], Michael Zuscik[1], Fadia Kamal[1]. [1]University of Rochester, United States
Disclosures: Elijah Carlson, None

CONCURRENT ORALS: ENERGY METABOLISM, BONE AND FAT

1:00 pm - 2:00 pm **Colorado Convention Center**
Four Seasons Ballroom IV

Co-Chairs
Luigi Gennari, M.D.
University of Siena, Italy
Disclosures: Luigi Gennari, None

Melissa O. Premaor, M.D., Ph.D.
Federal University of Santa Maria
Disclosures: Melissa O. Premaor, None

1:00 pm **Fat Talks to Bone**

1005 Wei Zou*[1], Nidhi Rohatgi[2], Yan Zhang[2], Charles Harris[3], Steven L. Teitelbaum[4]. [1]Department of Pathology and Immunology, Washington University School of Medicine, United States, [2]Department of Pathology and Immunology, Washington University School of Medicine, United States, [3]Division of Endocrinology, Metabolism and Lipid Research, Department of Medicine, Washington University School of Medicine, United States, [4]Department of Pathology and Immunology; Division of Bone and Mineral Diseases, Department of Medicine, Department of Medicine, Washington University School of Medicine, United States

Disclosures: Wei Zou, None

1:15 pm **ASBMR 2017 Annual Meeting Young Investigator Award**

1006 **Forebrain neuronal ApoE regulates Trabecular Bone Mass in Mice in a superordinated Fashion and opposite to the Effect of Osteoblast ApoE on Bone**

Tobias Schmidt*[1], Christian Schlein[2], Brigitte Müller[2], Jörg Herren[2], Andreas Niemeier[3]. [1]Department of Osteology and Biomechanics, University Medical Center Hamburg Eppendorf, Germany, [2]Institute of Biochemistry and Molecular Cell Biology IBMZ, University Medical Center Hamburg-Eppendorf, Hamburg 20246, Germany., Germany, [3]Department of Orthopaedics, University Medical Center Hamburg-Eppendorf, Hamburg 20246, Germany, Germany

Disclosures: Tobias Schmidt, None

1:30 pm **ASBMR 2017 Annual Meeting Young Investigator Award**

1007 **Conditional deletion of the glucocorticoid receptor in osteoprogenitors inhibits lipid storage by BMSC-derived osteoblasts *in vitro* but promotes marrow fat *in vivo* following caloric restriction**

Jessica Pierce*[1], Kehong Ding[1], Jianrui Xu[1], Paul Bernard[1], Kanglun Yu[1], Carlos Isales[1], Xingming Shi[1], Meghan McGee-Lawrence[1]. [1]Medical College of Georgia, Augusta University, United States

Disclosures: Jessica Pierce, None

1:45 pm **ASBMR 2017 Annual Meeting Young Investigator Award**

1008 **PPARγ in Inflammation and Aging**

Raysa Rosario*[1], Babak Baban[1], Mark Hamrick[1], Carlos Isales[1], Xing-Ming Shi[1]. [1]Augusta University, United States

Disclosures: Raysa Rosario, None

CONCURRENT ORALS: GENETIC MODELS OF MUSCULOSKELETAL DISEASE AND AGING

1:00 pm - 2:00 pm **Colorado Convention Center**

Four Seasons Ballroom II-III

Co-Chairs

Laetitia Michou, M.D., Ph.D.
Université Laval, Canada
Disclosures: Laetitia Michou, None

Matthew Allen, Ph.D.
State University of New York Upstate Medical University, USA
Disclosures: Matthew Allen, None

1:00 pm **ASBMR 2017 Annual Meeting Young Investigator Award**

1009 **Inhibition of post-receptor TGFβ/BMP signaling activation rescues disc degeneration in *Flnb–/–* Spondylocarpotarsal Synostosis murine model**

Jennifer Zieba*[1], Kimberly Forlenza[2], Kelly Heard[2], Jorge Martin[2], Lukas Balek[3], Michaela Kunova Bosakova[3], Pavel Krejci[3], Deborah Krakow[2]. [1]Baylor College of Medicine, United States, [2]University of California, Los Angeles, United States, [3]Masaryk University, Czech Republic

Disclosures: Jennifer Zieba, None

1:15 pm **Phenotypic study of a novel mouse model for Crouzon syndrome with acanthosis nigricans**
1010 Maxence Cornille*[1], Roman H Khonsari[1], Morad Bensidhoum[2], Federico Di Rocco[3], Laurence Legeai-Mallet[1]. [1]INSERM U1163, France, [2]UMR CNRS 7052, France, [3]Lyon hospital, France
Disclosures: Maxence Cornille, None

1:30 pm **Absence of pannexin-1 in osteocytes leads to high bone mass due to distinct cellular mechanisms**
1011 **in cancellous versus cortical bone, and in young versus old mice**
Rafael Pacheco-Costa*[1], Emily Atkinson[1], Julian Dilley[1], Hannah Davis[1], Carmen Herrera[1], Roger Thompson[2], Teresita Bellido[1], Lilian Plotkin[1]. [1]Indiana University School of Medicine, United States, [2]Hotchkiss Brain Institute, Department of Cell Biology and Anatomy, University of Calgary, Canada
Disclosures: Rafael Pacheco-Costa, None

1:45 pm **Induction of the Hajdu Cheney Syndrome Mutation in B-cells Alters B-cell Allocation but not**
1012 **Skeletal Homeostasis**
Archana Sanjay*[1], Jungeun Yu[1], Lauren Schilling[1], Christopher Schoenherr[2], Aris Economides[2], Ernesto Canalis[1]. [1]UConn Health, United States, [2]Regeneron Pharmaceuticals, Inc., United States
Disclosures: Archana Sanjay, None

CONCURRENT ORALS: OSTEOPOROSIS TREATMENT - ADVERSE EFFECTS

1:00 pm - 2:00 pm **Colorado Convention Center**
Mile High Ballroom

Co-Chairs
Howard A. Fink, M.D., M.P.H.
GRECC, Minneapolis VA Medical Center, USA
Disclosures: Howard A. Fink, None

Pernille Hermann, M.D., Ph.D.
Odense University Hospital, Denmark
Disclosures: Pernille Hermann, None

1:00 pm **Antiresorptives Compromise Bone's Material Composition Predisposing to Atypical Femoral**
1013 **Fractures**
Cherie Chiang*[1], roger zebaze[2], Hanh Nguyen[3], Yu Peng[4], Maria Zanchetta[5], Peter Ebeling[6], Ego Seeman[7]. [1]Austin Hospital, Australia, [2]Department of Medicine, Austin Health, Australia, [3]Department of medicine, Monash University, Australia, [4]Straxcorp.com Pty Ltd, Australia, [5]IDIM, Instituto de Diagnóstico e Investigaciones Metabólicas, Buenos Aires, Argentina, Argentina, [6]Medecine, Monash University, Australia, [7]Department of Medecine, Austin Healtth, Australia
Disclosures: Cherie Chiang, None

1:15 pm **Screening for atypical femur fractures using extended femur scans by DXA**
1014 Denise van de Laarschot*[1], Sandra Smits[2], Sanne Buitendijk[2], Merel Stegenga[2], M. Carola Zillikens[2]. [1]Bone Center, Erasmus MC , Netherlands, [2]Bone Center, Erasmus MC, Netherlands
Disclosures: Denise van de Laarschot, None

1:30 pm 1015 **Characterization of > 100 Patients with Atypical Femur Fractures: The Quebec Atypical Femur Fracture Registry**

Suzanne Morin*[1], Michelle Wall[2], Etienne Belzile[3], Laetitia Michou[4], Louis-Georges Ste-Marie[5], Edward Harvey[1], Prism Schneider[6], Sonia Jean[7], Jacques Brown[3]. [1]McGill University, Canada, [2]Research Institute of the McGill University Health Center, Canada, [3]Laval University, Canada, [4]Centre de Recherche du CHU de Quebec, Canada, [5]University de Montreal, Canada, [6]University of Calgary, Canada, [7]Institut national de santé publique du Quebec, Canada

Disclosures: Suzanne Morin, Amgen, Grant/Research Support

1:45 pm 1016 **Evaluation of Invasive Oral Procedures and Events in Women With Postmenopausal Osteoporosis Treated for up to 10 Years With Denosumab: Results From the Phase 3 FREEDOM Open-label Extension**

Nelson B Watts*[1], Peter W Butler[2], Neil Binkley[3], John T Grbic[4], Michael McClung[5], Antoniette Tierney[2], Rachel B Wagman[2], Xiang Yin[2]. [1]Mercy Health, United States, [2]Amgen Inc., United States, [3]University of Wisconsin School of Medicine and Public Health, United States, [4]Columbia University, United States, [5]Oregon Osteoporosis Center, United States

Disclosures: Nelson B Watts, Shire, Grant/Research Support

Friday

NETWORKING BREAK

2:00 pm - 2:15 pm **Colorado Convention Center**
Mile High Ballroom Foyer and Four Seasons Ballroom Foyer

CONCURRENT ORALS: MUSCULOSKELETAL AGING

2:15 pm - 3:30 pm **Colorado Convention Center**
Four Seasons Ballroom IV

Co-Chairs
Mark Kotowicz, Ph.D.
University Hospital Geelong, Australia
Disclosures: Mark Kotowicz, None

Uma Sankar, Ph.D.
Indiana University Purdue University Indianapolis, USA
Disclosures: Uma Sankar, None

2:15 pm 1017 **ASBMR 2017 Annual Meeting Young Investigator Award**
Sustained IKKβ activation in postnatal chondrocytes accelerates the onset of age-associated murine osteoarthritis

Sarah Catheline*[1], Christopher Dean[1], Michael Zuscik[1], Brendan Boyce[1], Jennifer Jonason[1]. [1]University of Rochester Medical Center, United States

Disclosures: Sarah Catheline, None

2:30 pm 1018 **Multi-photon laser scanning microscopy reveals reduced angiogenesis and PDGFRβ-expressing mesenchymal progenitors in long bone fracture callus of aged mice**

Hengwei Zhang*[1], Jianguo Tao[1], Longze Zhang[1], Rana Gupta[2], Edward Schwarz[1], Brendan Boyce[1], Lianping Xing[1]. [1]University of Rochester, United States, [2] University of Texas Southwestern Medical Center, United States

Disclosures: Hengwei Zhang, None

2:45 pm **Bone Marrow Mesenchymal Cells Deficient in TRAF3 Attract RANKL-expressing B Cells via**
1019 **CXCL12/CXCR4 Signaling to Contribute to Age-related Bone Loss**
Jinbo Li*[1], Zhenqiang Yao[1], Lianping Xing[1], Brendan Boyce[1]. [1]URMC, United States
Disclosures: Jinbo Li, None

3:00 pm **Serum Amyloid A3 (SAA3) Causes Age-Related Bone Loss**
1020 Shilpa Choudhary*[1], Siu-Pok Yee[2], Douglas Adams[1], Renata Rydzik[1], Joseph Lorenzo[1], Carol Pilbeam[1]. [1]UConn Musculoskeletal Institute, UConn Health, United States, [2]Department of Cell Biology, UConn Health, United States
Disclosures: Shilpa Choudhary, None

3:15 pm **The NAD+ Precursor Nicotinamide Riboside Reverses the Age-dependent Decline of NAD+**
1021 **and Osteoprogenitor Differentiation**
Ha-Neui Kim*[1], Han Li[1], Srividhya Iyer[1], Aaron Warren[1], Stavros Manolagas[1], Maria Almeida[1]. [1]University of Arkansas for Medical Sciences and Central Arkansas Veterans Healthcare System, United States
Disclosures: Ha-Neui Kim, None

CONCURRENT ORALS: MUSCULOSKELETAL DETERMINANTS

2:15 pm - 3:30 pm **Colorado Convention Center**
Four Seasons Ballroom I

Co-Chairs
Mattia Capulli, Ph.D.
University of L'Aquila, Italy
Disclosures: Mattia Capulli, None

Michael Hadjiargyrou, Ph.D.
New York Institute of Technology, USA
Disclosures: Michael Hadjiargyrou, None

2:15 pm **Maternal genotype has life-long effects on bone mass, shape and strength in**
1022 ***Dmp1Cre.Pthlhflf*** **mice**
Niloufar Ansari*[1], Narelle McGregor[1], Christopher S Kovacs[2], Jonathan H Gooi[3], T John Martin[1], Natalie A Sims[1]. [1]St. Vincent's Institute of Medical Research, Australia, [2]Memorial University of Newfoundland, Canada, [3]The University of Melbourne, Australia
Disclosures: Niloufar Ansari, None

2:30 pm **ASBMR 2017 Fund for Research and Education Young Investigator Award**
1023 **Palmitoleoylation of WNTs is a Major Determinant of Both Trabecular and Cortical Bone Mass in Mice**
Thomas Funck-Brentano*[1], Karin Nilsson[1], Petra Henning[1], Ulf Lerner[1], Antti Koskela[2], Juha Tuukkanen[2], Robert Brommage[1], Sofia Movérare-Skrtic[1], Claes Ohlsson[1]. [1]Centre for Bone and Arthritis Research, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Sweden, [2]Unit of Cancer Research and Translational Medicine, MRC Oulu and Department of Anatomy and Cell Biology, University of Oulu, Finland
Disclosures: Thomas Funck-Brentano, None

2:45 pm **ASBMR 2017 Annual Meeting Young Investigator Award**
1024 **Loss of TIEG expression results in defective skeletal muscle structure and function with associated impairment of mitochondrial biogenesis.**
Malek Kammoun*[1], Vladimir Veksler[2], Jerome Piquereau[2], Gisele Bonne[3], Isabelle Nelson[3], Philippe Pouletaut[1], Molly Nelson Holte[4], Malayannan Subramaniam[4], Sabine Bensamoun[1], John Hawse[4]. [1]Université de Technologie de Compiègne, France, [2]University of Paris-Sud, France, [3]UPMC University Paris, France, [4]Mayo Clinic, United States
Disclosures: Malek Kammoun, None

3:00 pm 1025 **The Calcium-Sensing Receptor, a Class C GPCR, Spatially-Directs G-protein Selectivity via Endosomal Signaling**
Caroline Gorvin*[1], Angela Rogers[1], Benoit Hastoy[1], Andrei Tarasov[1], Morten Frost[1], Asuka Inoue[2], Michael Whyte[3], Patrik Rorsman[1], Aylin Hanyaloglu[4], Gerda Breitwieser[5], Rajesh Thakker[1]. [1]University of Oxford, United Kingdom, [2]Tohoku University, Japan, [3]Shriners Hospital for Children, United States, [4]Imperial College London, United Kingdom, [5]Geisinger Center, United States
Disclosures: Caroline Gorvin, None

3:15 pm 1026 **Extracellular vesicles (EVs) are biological and therapeutic tools in osteoblast communication**
Alfredo Cappariello*[1], Alexander Loftus[1], Argia Ucci[1], Maurizio Muraca[2], Nadia Rucci[1], Anna Teti[1]. [1]University of L'Aquila, Italy, [2]University of Padova, Italy
Disclosures: Alfredo Cappariello, None

CONCURRENT ORALS: OSTEOPOROSIS PATHOPHYSIOLOGY

2:15 pm - 3:30 pm **Colorado Convention Center**
Four Seasons Ballroom II-III

Friday

Co-Chairs
Willem Lems, M.D., Ph.D.
Vrije Universiteit Medical Centre, Netherlands
Disclosures: Willem Lems, None

Susan Bloomfield, PhD
Texas A&M University, USA
Disclosures: Susan Bloomfield, None

2:15 pm 1027 **The Senolytic ABT263 Eliminates Senescent Osteoprogenitors in Old Mice**
Ha-Neui Kim*[1], Srividhya Iyer[1], Jianhui Chang[2], Li Han[1], Aaron Warren[1], Stavros Manolagas[1], Robert Jilka[1], Charles O'Brien[1], Daohong Zhou[2], Maria Almeida[1]. [1]University of Arkansas for Medical Sciences and Central Arkansas Veterans Healthcare System, United States, [2]University of Arkansas for Medical Sciences , United States
Disclosures: Ha-Neui Kim, None

2:30 pm 1028 **Characterization of long- and short-range compositional and mechanical bone tissue heterogeneity in patients with atypical femoral fractures**
Ashley Lloyd*[1], Emma Luengo[1], Carmen Ngai[1], Amy Cao[1], Joseph Lane[2], Eve Donnelly[1]. [1]Cornell University, United States, [2]Hospital for Special Surgery, United States
Disclosures: Ashley Lloyd, None

2:45 pm 1029 **Life-long genetic Pyk2 deletion or short-term pharmacologic inhibition of Pyk2 prevents the increase in resorption by glucocorticoids and preserves bone mass and strength by promoting osteoclast apoptosis**
Amy Y. Sato*[1], Meloney Cregor[1], Kevin McAndrews[1], Keith W. Condon[1], Lilian I. Plotkin[1], Teresita Bellido[1]. [1]Indiana University School of Medicine, United States
Disclosures: Amy Y. Sato, None

3:00 pm 1030 **Bone-Targeted Pharmacological Inhibition of Notch Signaling Decreases Resorption and Induces Bone Gain in Skeletally Mature Mice**
Jesus Delgado-Calle*[1], Matthew E. Olson[1], Jessica H. Nelson[1], Emily G. Atkinson[1], Kevin McAndrews[1], Lifeng Xiao[2], Frank H. Ebetino[2], Robert K. Boeckman Jr[2], G. David Roodman[3], Teresita Bellido[1]. [1]Anatomy and Cell Biology, Indiana University School of Medicine, United States, [2]Department of Chemistry, University of Rochester, United States, [3]Department of Medicine, Indiana University School of Medicine, United States
Disclosures: Jesus Delgado-Calle, None

3:15 pm 1031 **Circulating MiR-338 and MiR-3065 as Novel Diagnosis and Treatment Markers for Postmenopausal Osteoporosis by Attenuating Estrogen-dependent Runx2 and Sox4 Regulation on Osteoblast Differentiation**

Chujiao Lin*[1], Huan Liu[2], Zhi Chen[2]. [1]State Key Laboratory Breeding Base of Basic Science of Stomatology (Hubei-MOST) and Key Laboratory for Oral Biomedicine of Ministry of Education (KLOBM), School and Hospital of Stomatology, Wuhan University, China, [2]State Key Laboratory Breeding Base of Basic Science of Stomatology (Hubei-MOST) and Key Laboratory for Oral Biomedicine of Ministry of Education (KLOBM), School and Hospital of Stomatology, Wuhan University., China

Disclosures: Chujiao Lin, None

CONCURRENT ORALS: OSTEOPOROSIS TREATMENT I

2:15 pm - 3:30 pm **Colorado Convention Center**

Mile High Ballroom

Chair

Karen Hansen, M.D.
University of Wisconsin, USA

Disclosures: Karen Hansen, None

2:15 pm 1032 **Teriparatide treatment decreases cortical bone material strength index (BMSi) assessed by impact microindentation in postmenopausal women**

Joy Tsai*[1], Linda Jiang[1], Mary Bouxsein[2], Benjamin Leder[1]. [1]Massachusetts General Hospital, United States, [2]Beth Israel Deaconess Medical Center, United States

Disclosures: Joy Tsai, None

2:30 pm 1033 **Denosumab Treatment in Women with Osteoporosis Rapidly Prevents Deterioration in Trabecular Microstructure at the Distal Tibia**

Bin Zhou*[1], Ji Wang[1], Ego Seeman[2], Arkadi Chines[3], Yifei Shi[3], Andrea T Wang[3], X Edward Guo[1]. [1]Bone Bioengineering Laboratory, Department of Biomedical Engineering, Columbia University, United States, [2]Austin Health, University of Melbourne, Australia, [3]Amgen Inc., United States

Disclosures: Bin Zhou, None

2:45 pm 1034 **Vertebral and Nonvertebral Fracture Risk in Subgroups of Patients Receiving Teriparatide in Real-World Clinical Practice: Integrated Analysis of Four Prospective Observational Studies**

Stuart Silverman*[1], Bente Langdahl[2], Saeko Fujiwara[3], Kenneth Saag[4], Nicola Napoli[5], Satoshi Soen[6], Damon Disch[7], Fernando Marin[8], Hiroyuki Enomoto[9], John Krege[10]. [1]Cedars-Sinai/UCLA Medical Center and OMC Clinical Research Center, United States, [2]Arhus University Hospital, Denmark, [3]Health Management and Promotion Center, Japan, [4]University of Alabama at Birmingham, United States, [5]University Campus Bio-Medico, Italy, [6]Department of Orthopaedic Surgery and Rheumatology, Kindai University Nara Hospital, Japan, [7]Eli Lilly and Company, United States, [8]Lilly Research Centre, United Kingdom, [9]Eli Lilly Japan K.K., Japan, [10]Elli Lilly and Company, United States

Disclosures: Stuart Silverman, Eli Lilly and Company, Grant/Research Support

3:00 pm 1035 **Medication Persistence and Risk of Fracture among Female Medicare Beneficiaries Diagnosed with Osteoporosis**

Jiannong Liu*[1], Haifeng Guo[1], Richard Barron[2], Lionel Pinto[2]. [1]Minneapolis Medical Research Foundation, United States, [2]Global Health Economics, Amgen Inc., United States

Disclosures: Jiannong Liu, None

3:15 pm **FEA-Estimated Proximal Femur Strength Increases Through 5-7 Year Follow-up in Osteoporotic**
1036 **Women Treated with a Local Osteo-Enhancement Procedure Involving Injection of a Resorbable, Triphasic Calcium-based Implant Material**
Tony Keaveny*[1], David Lee[2], Dominique Favell[3], Ronald Hill[3], James Howe[3], Bryan Huber[4], Mary Bouxsein[5]. [1]University of California, Berkeley, United States, [2]O.N. Diagnostics LLC, United States, [3]AgNovos Healthcare, United States, [4]Copley Hospital, United States, [5]Harvard University, United States
Disclosures: Tony Keaveny, AgNovos Healthcare, Consultant

NETWORKING BREAK

3:30 pm - 4:00 pm **Colorado Convention Center**
Mile High Ballroom Foyer and Four Seasons Ballroom Foyer

BASIC SCIENCE SESSION: CRISPR-CAS9: GENE EDITING AND BEYOND

3:45 pm - 5:00 pm **Colorado Convention Center**
Four Seasons Ballroom II-III

Co-Chairs
Martina Rauner
Medical Faculty of the TU Dresden, Germany
Disclosures: Martina Rauner, None

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

3:45 am **The CRISPR System: Where It Came From and How It Works**
Blake Wiedenheft, Ph.D.
Montana State University, USA
Disclosures: Blake Wiedenheft, None

4:10 pm **CRISPR-Mediated Control of Gene Repression and Activation**
Le (Stanley) Qi, Ph.D.
Stanford Medicine, USA
Disclosures: Le (Stanley) Qi, None

4:35 pm **Rapid Analysis of Gene Enhancers Using CRISPR-Cas9**
J. Pike, PhD
University of Wisconsin-Madison
Disclosures: J. Pike, None

ASBMR/ECTS CLINICAL DEBATE – ANTI-RESORPTIVE THERAPY DURING THE MENOPAUSAL TRANSITION PREVENTS BONE FRACTURES LATER IN LIFE

4:00 pm - 5:00 pm **Colorado Convention Center**
Mile High Ballroom

Co-Chairs
Richard Eastell, MD
University of Sheffield, United Kingdom
Disclosures: Richard Eastell, None

Dolores Shoback, M.D.
VA Medical Center, USA
Disclosures: Dolores Shoback, None

4:00 pm **Against the Motion**
Gail Greendale, MD
University of California, Los Angeles, USA
Disclosures: Gail Greendale, None

4:00 pm **For the Motion**
Erik Eriksen, M.D., DMSc
Oslo University Hospital, Norway
Disclosures: Erik Eriksen, None

ASBMR 40TH ANNIVERSARY WELCOME RECEPTION AND PLENARY POSTER SESSION

This activity is supported by a funding donation from AMGEN.

5:00 pm - 7:00 pm **Colorado Convention Center**
ASBMR Discovery Hall - Exhibit Hall A & B1

Attendees and registered guests are invited to celebrate ASBMR's 40th Anniversary during our Welcome Reception and Poster Session in the ASBMR Discovery Hall. Simply display your badge for admission. Guests may purchase a badge for $50 at the ASBMR Registration Counter for entrance to the Welcome Reception.

FR0001 **ASBMR 2017 Fund for Research and Education Young Investigator Award**
The Trabecular Bone Score is associated with bone mineral density, markers of bone turnover and prevalent fracture in patients with chronic kidney disease stages 5 and 5D
Jasna Aleksova*[1], Samantha Kurniawan[2], Grahame Elder[3]. [1]Centre for Endocrinology and Metabolism, Hudson Institude of Medical Research; School of Clinical Sciences, Monash University, Australia, [2]The University of Notre Dame , Australia, [3]Department of Renal Medicine, Westmead Hospital; Osteoporosis and Bone Biology Division, Garvan Institute of Medical Research, Australia
Disclosures: Jasna Aleksova, None

FR0003 **Retrospective Evaluation of Solid Tumor Patients with PTH-Independent Hypercalcemia and their Response to Bisphosphonates or Denosumab**
Tariq Chukir*[1], Yi Liu[2], Azeez Farooki[3]. [1]New York Presbyterian Hospital - Weill Cornell, United States, [2]Hospital for Special Surgery, United States, [3]Memorial Sloan Kettering, United States
Disclosures: Tariq Chukir, None

FR0004 **Phenotype assessment of adult offspring carriers of the *SQSTM1/P392L* mutation in familial forms of Paget's disease of bone**
Mariam Dessay*[1], François Jobin Gervais[1], Andréanne Samson[1], Jacques P. Brown[2], Laëtitia Michou[2]. [1]CHU de Québec-Université Laval research centre, Canada, [2]Division of rheumatology and research centre, CHU de Québec-Université Laval, Canada
Disclosures: Mariam Dessay, None

FR0007 **Primary Hyperparathyroidism: Role of Impaired Cerebrovascular Function in Cognitive Symptoms**
Melissa Sum*[1], Yunglin Gazes[1], Bucovsky Mariana[1], Colon Ivelisse[1], Kevin Slane[1], Arindam RoyChoudhury[1], Minghao Liu[1], Yu-Kwang Tay[1], Randolph Marshall[1], Ronald Lazar[1], Shonni Silverberg[1], Marcella Walker[1]. [1]Columbia University Medical Center, United States
Disclosures: Melissa Sum, None

FR0008 **Fracture risk in Dialysis and Kidney Transplantation patients: A Systematic Review**

Aboubacar Sidibé*[1], David Auguste[2], Catherine Fortier[3], Sonia Jean[4], Lynne Moore[5], Louis-Charles Desbiens[3], Yue Pei Wang[6], Fabrice Mac-Way[7]. [1]Centre de Recherche du CHU de Québec, Hôpital Hôtel-Dieu de Québec, Division of Nephrology, Endocrinology and Nephrology Axis, Faculty of Medicine, Department of Social and Preventive Medicine, Laval University, Quebec Canada, Canada, [2]Centre de Recherche du CHU de Québec, Hôpital Saint-Sacrement, Faculty of Medicine, Department of Social and Preventive Medicine, Laval University, Quebec Canada, Canada, [3]Centre de Recherche du CHU de Québec, Hôpital Hôtel-Dieu de Québec, Division of Nephrology, Endocrinology and Nephrology Axis, Faculty and Department of Medicine, Laval University, Quebec Canada, Canada, [4]Institut National de Santé Publique du Québec, Medicine Faculty, Department of social and preventive medicine, Laval University, Quebec Canada , Canada, [5]Centre de Recherche du CHU de Québec, Hôpital de l'Enfant-Jésus, Traumatology Axis, Medicine Faculty, Department of Social and Preventive Medicine, Laval University, Quebec Canada, Canada, [6]CHU de Québec Research Center, Hôtel-Dieu de Québec Hospital, Division of Nephrology, Endocrinology and Nephrology Axis, Faculty and Department of Medicine, Laval University, Quebec Canada, Canada, [7]3Centre de Recherche du CHU de Québec, Hôpital Hôtel-Dieu de Québec, Division of Nephrology, Endocrinology and Nephrology Axis, Faculty and Department of Medicine, Laval University, Quebec Canada, Canada

Disclosures: Aboubacar Sidibé, None

FR0011 **Alendronate Treatment Does Not Influence Resistance to Damage Accumulation in Femoral Cortical Bone in Hound Dogs**

Daniel Brooks*[1], Dimitrios Psaltos[1], Katherine Lo[1], Robert Urban[2], Sephanie McCarthy[2], Deborah Hall[2], Thomas Turner[2], Mary Bouxsein[1]. [1]Beth Israel Deaconess Medical Center, United States, [2]Rush University Medical Center, United States

Disclosures: Daniel Brooks, Merck, Grant/Research Support

FR0012 **Parathyroid Hormone (PTH) increased rod-shaped trabeculae and maintained modulus of cancellous bone before fatigue failure**

Julia T. Chen*[1], Remy Walk[1], Shefford Baker[1], G. Elizabeth Pluhar[2], Adele Boskey[3], Christopher Hernandez[1], Marjolein van der Meulen[1]. [1]Cornell University, United States, [2]University of Minnesota, United States, [3]Hospital for Special Surgery, United States

Disclosures: Julia T. Chen, None

FR0014 **Effects of Progressive Glycemic Derangement on Bone Tissue Composition in Postmenopausal Women**

Jared Pearl*[1], Nicholas Miller[1], Jing Han Zhang[1], Heather Hunt[1], Kendall Moseley[2], Eve Donnelly[1]. [1]Cornell University, United States, [2]Johns Hopkins University School of Medicine, United States

Disclosures: Jared Pearl, None

FR0017 **Peak Trabecular Bone Microarchitecture But Not Bone Mass Predicts Rate of Estrogen-Deficiency-Induced Bone Loss**

Yihan Li*[1], Wei-Ju Tseng[1], Chantal de Bakker[1], Hongbo Zhao[1], X. Sherry Liu[1]. [1]University of Pennsylvania, United States

Disclosures: Yihan Li, None

FR0020 **ASBMR 2017 Annual Meeting Young Investigator Award**
Zoledronate and Mechanical Loading Treatments During Simulated Weightlessness: Cancellous Structure and Osteocellular Responses

Ryan T. Scott*[1], Joshua Alwood[2], Mohit Nalavadi[3], Sulekha Anand[4], Yasaman Shirazi-Fard[2], Alesha Castillo[5]. [1]NASA Ames Research Center, San Jose State University, United States, [2]NASA Ames Research Center, United States, [3]Blue Marble Space Institute of Science, United States, [4]San Jose State University, United States, [5]New York University, United States

Disclosures: Ryan T. Scott, None

FR0023 **Mechanical stimulus upregulates IGF-1 levels, restores bone mass and microarchitecture on both non-fractured and fractured femurs in diabetic rats**

Ariane Zamarioli*[1], Maysa Campos[2], João P. B. Ximenez[3], Raquel A. Silva[4], José B. Volpon[2]. [1]Medical School of Ribeirão Preto, University of São Paulo, Brazil, [2]Medical School of Ribeirão Preto, Brazil, [3]School of Pharmaceutical Sciences of Ribeirão Preto, Brazil, [4]School of Dentistry of Ribeirão Preto, Brazil

Disclosures: Ariane Zamarioli, None

FR0027 **Maternal gestational vitamin D supplementation alters perinatal *RXRA* DNA methylation: findings from the MAVIDOS trial**

Elizabeth Curtis*[1], Nevena Krstic[2], Eloïse Cook[2], Stefania D'Angelo[1], Sarah Crozier[1], Rebecca Moon[3], Robert Murray[2], Emma Garratt[2], Paula Costello[2], Nicholas Bishop[4], Stephen Kennedy[5], Aris Papageorghiou[5], Inez Schoenmakers[6], Robert Fraser[7], Saurabh Gandhi[7], Ann Prentice[8], Kassim Javaid[9], Hazel Inskip[1], Keith Godfrey[10], Christopher Bell[11], Karen Lillycrop[2], Cyrus Cooper[12], Nicholas Harvey[10]. [1]MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, [2]Institute of Developmental Sciences, University of Southampton, United Kingdom, [3]MRC Lifecourse Epidemiology Unit, University of Southampton; Paediatric Endocrinology, University Hospitals Southampton NHS Foundation Trust, United Kingdom, [4]Academic Unit of Child Health, Sheffield Children's Hospital, University of Sheffield, United Kingdom, [5]Nuffield Department of Obstetrics and Gynaecology, John Radcliffe Hospital, University of Oxford, United Kingdom, [6]MRC Elsie Widdowson Laboratory; Department of Medicine, Faculty of Medicine and Health Sciences, University of East Anglia, United Kingdom, [7]Sheffield Hospitals NHS Trust, University of Sheffield, United Kingdom, [8]MRC Elsie Widdowson Laboratory, United Kingdom, [9]National Institute for Health Research (NIHR) Biomedical Research Centre, University of Oxford, United Kingdom, [10]MRC Lifecourse Epidemiology Unit, University of Southampton; NIHR Southampton Nutrition Biomedical Research Centre, University of Southampton and University Hospital Southampton NHS Foundation Trust, United Kingdom, [11]MRC Lifecourse Epidemiology Unit, University of Southampton; Institute of Developmental Sciences, University of Southampton, United Kingdom, [12]MRC Lifecourse Epidemiology Unit, University of Southampton; National Institute for Health Research (NIHR) Biomedical Research Centre, University of Oxford; , United Kingdom

Disclosures: Elizabeth Curtis, None

FR0029 **Multiple fractures in children is related to cortical bone dimensions**

Dana L. Duren*[1], Emily V. Leary[1], Dan G. Hoernschemeyer[1], Laura L. Tosi[2], Richard J. Sherwood[1]. [1]University of Missouri, United States, [2]Children's National Medical Center, United States

Disclosures: Dana L. Duren, None

FR0031 **Frequency of vigorous physical activity predicts bone strength accrual during adolescence**

Leigh Gabel*[1], Lindsay Nettlefold[1], Heather Macdonald[1], Heather McKay[2]. [1]Centre for Hip Health and Mobility, Canada, [2]University of British Columbia, Canada

Disclosures: Leigh Gabel, None

FR0032 **Does Peak Bone Mass Coincide with Peak Bone Strength?**

Erik Lindgren*[1], Bjorn Rosengren[1], Magnus Karlsson[1]. [1]Department of Clinical Sciences and Orthopaedics, Lund University, Malmo, Sweden

Disclosures: Erik Lindgren, None

FR0033 **Plate-like trabeculae increase with age and lean mass in healthy girls at the distal tibia**

Deborah Mitchell*[1], Signe Caksa[2], Amy Yuan[2], Mary Bouxsein[2], Madhusmita Misra[3], Sherri-Ann Burnett-Bowie[2]. [1]Pediatric Endocrine Unit, Massachusetts General Hospital, United States, [2]Endocrine Unit, Massachusetts General Hospital, United States, [3]Pediatric Endocrine and Neuroendocrine Units, Massachusetts General Hospital, United States

Disclosures: Deborah Mitchell, None

FR0034 **Increased FGF23 in chronic kidney disease results from osteocyte maturation delay**
Renata C Pereira*[1], Barbara Gales[1], Katheleen Noche[2], Isidro I Salusky[1], Kathereine Wesseling-Perry[1]. [1]David Geffen School of Medicine at UCLA, Los Angeles, California, United States of America, United States, [2]University of California, United States
Disclosures: Renata C Pereira, None

FR0037 **Effects of Sclerostin Depletion on Hematopoietic Stem Cells**
Cristine Donham*[1], Gabriela Loots[2], Jennifer Manilay[3], Aris Economides[4]. [1]University of California Merced, United States, [2]Lawrence Livermore National Laboratories, United States, [3]University of California, Merced, United States, [4]Regeneron Pharmaceuticals, United States
Disclosures: Cristine Donham, None

FR0038 **Targeting the Endosteal Niche in Myelodysplasia and Acute Myeloid Leukemia**
Marta Galán-Díez*[1], Govind Bhagat[1], Julie Teruya-Feldstein[2], Azra Raza[1], Ellin Berman[3], Stavroula Kousteni[1]. [1]Columbia University, United States, [2]Mount Sinai, United States, [3]Memorial Sloan Kettering Cancer Center, United States
Disclosures: Marta Galán-Díez, None

FR0040 **Deletion of TIEG in CD4+ T-cells results in a sexually dimorphic bone phenotype.**
Malayannan Subramaniam*[1], Abdulrahman Saadalla[1], Molly Nelson Holte[1], Megan Weivoda[1], Merry Jo Oursler[1], Khashayarsha Khazaie[1], Russell Turner[2], Urszula Iwaniec[2], John Hawse[1]. [1]Mayo Clinic, United States, [2]Oregon State University, United States
Disclosures: Malayannan Subramaniam, None

FR0041 **Erythropoietin regulates bone marrow stromal cell differentiation**
Sukanya Suresh*[1], Luis Fernandez De Castro Diaz[2], Soumyadeep Dey[1], Pamela Robey[2], Constance Noguchi[1]. [1]Molecular Medicine Branch, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, United States, [2]Skeletal Biology Section, National Institute of Dental and Craniofacial Research, National Institutes of Health, United States
Disclosures: Sukanya Suresh, None

FR0044 **CXCL14 Is a Pro-Bone Metastatic Chemokine with CXCR4 Dependent and Independent Actions**
Diondra Harris*[1], Alexander Dowell[2], Katrina Clines[1], Hyun Sik Moon[1], Charlotte Cialek[1], Alexander Smith[1], Hui Jiang[1], Colm Morrissey[3], Shi Wei[2], Riley Brien[1], Euisik Yoon[1], Yu-Chih Chen[1], Kathryn Luker[1], Gary Luker[1], Gregory Clines[1]. [1]University of Michigan, United States, [2]University of Alabama at Birmingham, United States, [3]University of Washington, United States
Disclosures: Diondra Harris, None

FR0045 **CaMKK2 Inhibition as a "Dual-Hit" Strategy against ADT-Induced Osteoporosis and Bone-Metastatic Prostate Cancer**
Ushashi Dadwal*[1], Eric Chang[1], Justin Williams[1], Austin Pucylowski[1], Khalid Mohammad[2], Theresa Guise[2], Uma Sankar[1]. [1]Department of Anatomy and Cell Biology, Indiana University School of Medicine, United States, [2]Division of Endocrinology and Metabolism, Department of Internal Medicine, Indiana University School of Medicine, United States
Disclosures: Ushashi Dadwal, None

FR0046 **Cancer cell-derived microRNA induces osteoblastic phenotype in bone metastasis microenvironment**

Kyoko Hashimoto*[1], Satoko Sunamura[1], Hiroki Ochi[1], Toru Fukuda[2], Atsushi Okawa[3], Mitsuru Futakuchi[4], Shu Takeda[5], Shingo Sato[1]. [1]Department of Physiology and Cell Biology, Graduate School and Faculty of Medicine, Tokyo Medical and Dental University, Japan, [2]Department of Foodscience, Tokyo Seiei College, Japan, [3]Department of Orthopaedic Surgery, Graduate School and Faculty of Medicine, Tokyo Medical and Dental University, Japan, [4]Department of Molecular Toxicology, Graduate School of Medical Sciences, Nagoya City University, Japan, [5]Division of Endocrinology, Toranomon Hospital Endocrine Center, Japan

Disclosures: Kyoko Hashimoto, None

FR0047 **Gfi1 Modulation of SphK1 Maintains Growth and Survival of Myeloma Cells**

Daniela N. Petrusca*[1], Cheolkyu Park[2], Colin Crean[2], Denise Toscani[3], Judith Anderson[2], Rebecca Silbermann[2], G. David Roodman[4]. [1]Indiana University, Department of Medicine/Hematology-Oncology, United States, [2]Department of Medicine/Hematology-Oncology, Indiana University School of Medicine, United States, [3]Myeloma Unit, Dept. of Clinical and Experimental Medicine, University of Parma, Italy, [4]Department of Medicine/Hematology-Oncology, Indiana University School of Medicine and Rodebush VA, United States

Disclosures: Daniela N. Petrusca, None

FR0051 **HDAC inhibitors promote LIFR expression and tumor dormancy in breast cancer cells that home to the bone**

Miranda Sowder*[1], Vera Mayhew[1], Samuel Dooyema[1], Rachelle W Johnson[2]. [1]Vanderbilt University, United States, [2]Vanderbilt University Medical Center, United States

Disclosures: Miranda Sowder, None

FR0052 **TAK1 inhibition impairs myeloma cell-bone marrow interaction to reduce myeloma tumor growth and bone destruction**

Jumpei Teramachi*[1], Masahiro Hiasa[2], Asuka Oda[3], Hirofumi Tenshin[4], Ryota Amachi[4], Takeshi Harada[3], Shingen Nakamura[3], Hirokazu Miki[5], Itsuro Endo[3], Tatsuji Haneji[1], Toshio Matsumoto[6], Masahiro Abe[3]. [1]Department of Histology and Oral Histology, Tokushima University, Japan, [2]Department of Biomaterials and Bioengineering, Tokushima University, Japan, [3]Department of Hematology, Endocrinology and Metabolism, Tokushima University, Japan, [4]Department of Orthodontics and Dentofacial Orthopedic, Tokushima University, Japan, [5]Division of Transfusion and Cell Therapy Medicine, Tokushima University Hospital, Japan, [6]Fujii Memorial Institute of Medical Sciences, Tokushima University, Japan

Disclosures: Jumpei Teramachi, None

FR0054 **KPNA4 modulates osteoclastogenesis during the skeletal metastasis of prostate cancer**

Jian Yang*[1], Liang Luo[1], Ruohan Zhang[1], Yuqi Guo[1], Xin Li[1]. [1]New York University College of Dentistry, United States

Disclosures: Jian Yang, None

FR0055 **Effect of Bone Allograft in Multiple Myeloma Spine Surgeries**

Meera Mohan*[1], Samant Rohan[1], Amy Buros[1], Daisy Alapat[1], Jerry Walters[1], Thomas G Pait[1], Nancy A. Ghaleb[1], Sharmilan Thanendrarajan[1], Frits van Rhee[1], Faith Davies[1], Gareth Morgan[1], Carolina Schinke[1], Larry J. Suva[2], Maurizio Zangari[1]. [1]University of Arkansas for Medical Sciences, United States, [2]Texas A&M University, United States

Disclosures: Meera Mohan, None

FR0058 **Periosteal chondrogenesis and temporal dynamics of BMP2-induced middle phalanx regeneration in the adult mouse.**

Lindsay Dawson*[1], Ling Yu[2], Mingquan Yan[2], Connor Dolan[2], Ken Muneoka[2]. [1]Texas A & M University, United States, [2]Texas A&M University, United States

Disclosures: Lindsay Dawson, None

FR0060 **Chondrocyte PTH1R Signaling is Essential for Articular Cartilage Maintenance and Protection Post-trauma**

Fadia Kamal*[1], Eric Schott[1], Elijah Carlson[1], Monaliza El-Quadi[1], Heather Le Bleu[1], Matthew Hilton[2], Jennifer Jonason[1], Michael Zuscik[1]. [1]University of Rochester, United States, [2]Duke University School of Medicine, United States

Disclosures: Fadia Kamal, None

FR0061 **Ghrelin Protects against Osteoarthritis through Interplaying with Akt and NF-κB Signaling Pathways**

Weiwei Li*[1], Wenhan Wang[2], Yunpeng Zhao[1]. [1]Shandong University Qilu Hospital, China, [2]Shandong University, China

Disclosures: Weiwei Li, None

FR0063 **Global and Chondrocyte-specific Deletion of FGF2 Contribute to Trauma-induced Osteoarthritis**

Patience Meo Burt*[1], Liping Xiao[1], Siu-Pok Yee[2], Brya G. Matthews[3], Marja Marie Hurley[1]. [1]Department of Medicine/Endocrinology, School of Medicine, Uconn Health, United States, [2]Department of Cell Biology, Uconn Health, United States, [3]Department of Reconstructive Sciences, School of Dental Medicine, Uconn Health, United States

Disclosures: Patience Meo Burt, None

FR0064 **Actions of PTHrP, HDAC4, and SIK3 to Regulate Chondrocyte Hypertrophy**

Shigeki Nishimori*[1], Marc N. Wein[1], Henry M. Kronenberg[1]. [1]Endocrine Unit, Massachusetts General Hospital and Harvard Medical School, United States

Disclosures: Shigeki Nishimori, None

FR0065 **Osteoglycin, an Osteoblast-derived Regulator of Bone Mass and Glucose Homeostasis**

Nikki Lee*[1], Herbert Herzog[1], Paul Baldock[2]. [1]Neuroscience Division, Garvan Institute of Medical Research, Australia, [2]The Division of Bone Biology, Garvan Institute of Medical Research, Australia

Disclosures: Nikki Lee, None

FR0070 **Vitamin K_2-Induced Carboxylation of Osteocalcin and Matrix Gla Protein Improves Bone and Lipid Metabolism in Overweight Children**

Mary Ellen Fain*[1], Celestine Williams[1], Allison Jasti[1], Reda Bassali[2], Catherine Davis[2], Norman Pollock[2]. [1]Georgia Prevention Institute, Medical College of Georgia, Augusta University, United States, [2]Department of Pediatrics, Medical College of Georgia, Augusta University, United States

Disclosures: Mary Ellen Fain, None

FR0073 **Suppression of undercarboxylated osteocalcin after acute prednisolone ingestion is associated with impaired post-exercise insulin sensitivity and attenuated mTOR protein signaling.**

Lewan Parker*[1], Andrew Garnham[2], Glenn McConell[1], Nigel Stepto[1], David Hare[3], Elizabeth Byrnes[4], Peter Ebeling[5], Ego Seeman[6], Tara Brennan-Speranza[7], Itamar Levinger[1]. [1]Clinical Exercise Science Research Program, Institute of Sport, Exercise and Active Living (ISEAL), Victoria University, Melbourne, Australia., Australia, [2]School of Exercise & Nutrition Sciences, Deakin University, Melbourne, Australia, Australia, [3]University of Melbourne and the Department of Cardiology, Austin Health, Melbourne Australia., Australia, [4]PathWest QEII Medical Centre, Perth, Australia, Australia, [5]Department of Medicine, School of Clinical Sciences, Faculty of Medicine, Nursing and Health Sciences, Monash University, Australia, Australia, [6]University of Melbourne and the Department of Endocrinology, Austin Health, Melbourne, Australia, Australia, [7]Department of Physiology, Bosch Institute for Medical Research, University of Sydney, Sydney, Australia, Australia

Disclosures: Lewan Parker, None

FR0074 **Improving Mitochondrial Function via CypD Genetic Deletion Promotes BMSC Osteogenicity and Fracture Repair**

Brianna Shares*[1], Laura Shum[2], Roman Eliseev[1]. [1]University of Rochester, United States, [2]University of Rochester , United States

Disclosures: Brianna Shares, None

FR0075 **Glucose metabolism and insulin release are impaired under conditions of excess TGF-β mediated high bone turnover**

Trupti Trivedi*[1], Jenna Regan[2], Sarah Tersey[3], Sutha John[1], Yun She[4], Sreemala Murthy[4], Xu Cao[5], Khalid Mohammad[4], Theresa Guise[4]. [1] Division of Endocrinology, Department of Medicine, Indiana University , United States, [2]Division of Endocrinology, Department of Medicine, Indiana University , United States, [3]Department of Pediatrics, Indiana University School of Medicine, United States, [4]Division of Endocrinology, Department of Medicine, Indiana University, United States, [5]Department of Orthopedic Surgery, Johns Hopkins University School of Medicine, United States

Disclosures: Trupti Trivedi, None

FR0076 **ASBMR 2017 Annual Meeting Young Investigator Award**
Par1/Mark3 functions in osteoblasts to coordinate bone mineral density and body mass

Qian Zhang*[1], Gina Calabrese[2], Angela Verado[1], Larry Mesner[2], Thomas Clemens[1], Charles Farber[2]. [1]Johns Hopkins University, United States, [2]University of Virginia, United States

Disclosures: Qian Zhang, None

FR0077 **Absence of ASXL2 only in Myeloid Lineage Cells Prevents Obesity while Increasing Bone Mass**

Wei Zou*[1], Nidhi Rohatgi*[1], Jesse Williams[1], Hua Pan[2], Terri Pietka[3], Nada A Abumrad[3], Samuel Wickline[2], Gwendalyn J Randolph[1], Steven L Teitelbaum[4]. [1]Department of Pathology and Immunology, Washington University School of Medicine, United States, [2]University of South Florida Morsani College of Medicine, United States, [3]Department of Internal Medicine, Division of Nutritional Science, Washington University School of Medicine, United States, [4]Department of Pathology and Immunology; Department of Internal Medicine, Division of of Bone and Mineral Diseases, Washington University School of Medicine, United States

Disclosures: Wei Zou, None

FR0078 **Similar increase in bone resorption and decrease in bone mass but opposite effects in osteocytic gene expression in female versus male mice with FMR1 deletion, a model of fragile X syndrome**

Hannah M. Davis*[1], Rafael Pacheco-Costa[1], Alexandra Aguilar-Perez[1], Carmen Herrera[1], Greg Smith[2], Joaquin Lugo[2], Lilian I. Plotkin[1]. [1]Indiana University School of Medicine, United States, [2]Baylor University, United States

Disclosures: Hannah M. Davis, None

FR0080 **ASBMR 2017 Annual Meeting Young Investigator Award**
MicroRNA miR-204 and miR-211 Control Runx2 Expression and Regulate Bone Mass

Jun Li*[1], Jian Huang[2], Lan Zhao[2], Ge Zhang[3], Guang-qian Zhou[4], Andre J. van Wijnen[5], Di Chen[2]. [1]Department of Orthopedic Surgery, Rush University Medical Centre, United States, [2]Department of Orthopedic Surgery, Rush University Medical Center, United States, [3]Institute for Advancing Translational Medicine in Bone & Joint Diseases, Hong Kong Baptist University, China, [4]Department of Medical Cell Biology and Genetics, Shenzhen Key Laboratory and the Center for Anti-Ageing and Regenerative Medicine, Shenzhen University Medical School, China, [5]Department of Orthopedic Surgery, Mayo Clinic, United States

Disclosures: Jun Li, None

FR0081 **Use of the CRISPRi/dCas9::KRAB system to suppress gene expression as an alternative to conditional gene deletion**

Ryan Macleod*[1], Charles OBrien[1]. [1]University of Arkansas for Medical Sciences, United States

Disclosures: Ryan Macleod, None

FR0084 **ASBMR 2017 Annual Meeting Young Investigator Award**
Regulation of phalangeal joint development by ACVR1 in fibrodysplasia ossificans progressiva
O. Will Towler*[1], Frederick S. Kaplan[2], Eileen M. Shore[3]. [1]Center for Research in FOP and Related Disorders, Department of Orthopaedic Surgery, Perelman School of Medicine, University of Pennsylvania, United States, [2]Center for Research in FOP and Related Disorders, Departments of Orthopaedic Surgery and Medicine, Perelman School of Medicine, University of Pennsylvania, United States, [3]Center for Research in FOP and Related Disorders, Departments of Orthopaedic Surgery and Genetics, Perelman School of Medicine, University of Pennsylvania, United States
Disclosures: O. Will Towler, None

FR0085 **Mutation Correction in OI iPSC Restores Bone Formation**
Xiaonan Xin*[1], Mark Kronenberg[1], Li Chen[1], Zhihua Wu[1], Liping Wang[1], Xi Jiang[2], David Rowe[1], Alexander Lichtler[1]. [1]UConn Health, United States, [2]University of Pennsylvania, United States
Disclosures: Xiaonan Xin, None

FR0087 **Identification of anabolic bone genes using whole genome sequencing in high bone mass families**
John Eisman*[1], Peter Croucher[2], Paul Baldock[2], Tuan Nguyen[2], Robert Brink[2], Daniel Hesselson[2], Sing Nguyen[2], Mohammad Moni[2], Scott Youlten[2]. [1]Garvan Institute of Medical Research; School of Medicine Sydney, University of Notre Dame Australia; St Vincents Hospital; UNSW Sydney, NSW, Australia, Australia, [2]Garvan Institute of Medical Research, Australia
Disclosures: John Eisman, None

FR0089 **ASBMR 2017 Annual Meeting Young Investigator Award**
Genetic Prediction of Lifetime Risk of Fracture
Thao P. Ho-Le*[1], Jackie R. Center[2], John A. Eisman[3], Hung T. Nguyen[1], Tuan V. Nguyen[4]. [1]Centre of Health Technologies, FEIT, University of Technology Sydney, Australia, [2]Bone Biology Division, Garvan Institute of Medical Research; St Vincent Clinical School, UNSW, Australia , Australia, [3]Bone Biology Division, Garvan Institute of Medical Research; St Vincent Clinical School, UNSW, Australia;School of Medicine, Sydney University of Notre Dame , Australia, [4]University of Technology, Sydney;Bone Biology Division, Garvan Institute of Medical Research, NSW;St Vincent Clinical School, UNSW;School of Public Health and Community Medicine, UNSW;School of Medicine, Sydney University of Notre Dame, Australia
Disclosures: Thao P. Ho-Le, None

FR0090 **A Whole Genome Association Meta-Analysis Study Identifies Novel Loci Associated with Bone Microarchitecture Assessed by HR-pQCT independent of aBMD**

Yi-Hsiang Hsu*[1], Fredrick Kinyua[2], Ching-Ti Liu[3], Maria Nethander[4], Emmaneul Biver[5], Elizabeth J. Atkinson[6], Elisabeth Sornay-Rendu[7], Claire Watson[8], Andy Kin On Wong[9], Shreyasee Amin[10], Elise Lim[3], Michelle Yau[11], Laiji Yang[12], Eric Lespessailles[13], Roby Joehanes[14], Kerry Broe[12], Jonathan D. Adachi[15], Serkalem Demissie[16], David Karasik[12], Blandine Merle[17], Dan Mellström[18], L. Adrienne Cupples[16], Brent Richards[19], David Goltzman[20], David A. Hanley[21], Steven K. Boyd[22], Mary L. Bouxsein[23], Ronald Y Kwon[8], Mattias Lorentzon[24], Claes Ohlsson[25], Pawel Szulc[26], Serge Ferrari[27], Roland D. Chapurlat[26], Sundeep Khosla[10], Douglas P. Kiel [14]. [1]HSL Institute for Aging Research, Harvard Medical School, Broad Institute of MIT and Harvard, United States, [2]Institute for Aging Research, Hebrew SeniorLife , United States, [3]Biostatistics, Boston University School of Public Health , United States, [4]University of Gothenberg, Sweden, [5]University of Geneva, Switzerland, [6]Mayo Clinic, United States, [7]INSERM and University of Lyon, France, [8]Musculoskeletal Systems Biology Lab, Orthopaedics and Sports Medicine, University of Washington, United States, [9]Toronto General Research Institute, University Health Network and McMaster University, Canada, [10]Mayo Clinic College of Medicine, United States, [11]Institute for Aging Research, Hebrew SeniorLife and Deparment of Medicine, Beth Israel Deaconess Medical Center and Harvard Medical School, United States, [12]Institute for Aging Research, Hebrew SeniorLife, United States, [13]University of Orleans, France, [14]Institute for Aging Research, Hebrew SeniorLife and Harvard Medical School, United States, [15]Charlton Medical Centre, McMaster University, Canada, [16]Biostatistics, Boston University School of Public Health, United States, [17]INSERM, University of Lyon, France, [18]Univ of Gothenburg, Sweden, [19]Lady Davis Institute and Department of Human Genetics, McGill University, Canada, [20]Departments of Medicine and Physiology, McGill University, Canada, [21]Cumming School of Medicine, University of Calgary, Canada, [22]University of Calgary, Canada, [23]Beth Isreal Deaconess Medical Center, Harvard Medical School , United States, [24]Sahlgrenska University Hospital, Sweden, [25]Center for Bone and Arthritis Research at the Sahlgrenski Academy, Sweden, [26]INSERM and University of Lyon, Hospital E. Herriot, France, [27]Geneva University Hospital, Switzerland

Disclosures: Yi-Hsiang Hsu, None

FR0092 **Genetic Profiling of Decreased Bone Mineral Density in an Independent Sample of Caucasian Women**

Xiangxue Xiao*[12], Darius Roohani[12], Qing Wu[12]. [1]University of Nevada, Las vegas, United States, [2]University of Nevada, Las Vegas, United States

Disclosures: Xiangxue Xiao, None

FR0095 **Lack of Fibroblast Growth Factor-23 (Fgf23) signaling improves cardiac function in a murine model of acute myocardial infarction**

Kristopher Ford*[1], Svetlana Slavic[1], Flora Klinger[1], Flora Klinger[1], Marlies Dolezal[1], Ute Zeitz[1], Karolina Hilse-Koller[1], Elena Pohl[1], Reinhold G Erben[1], Olena Andrukhova[1]. [1]Department of Biomedical Sciences University of Veterinary Medicine, Austria

Disclosures: Kristopher Ford, None

FR0096 **Inflammation, not Phosphate or Anemia, Stimulates the Initial Rise in FGF-23 at the Onset of Chronic Kidney Disease**

Jackie Fretz*[1], Xiuqi Li[1], Tracy Nelson[1], Karin Finberg[1]. [1]Yale School of Medicine, United States

Disclosures: Jackie Fretz, None

FR0098 **Phosphorylation of S122 in ERα Is Important for the Skeletal Response to Estrogen Treatment in Male Mice**

Karin Gustafsson*[1], Helen Farman[1], Sofia Movérare-Skrtic[1], Vikte Lionikaite[1], Jianyao Wu[1], Petra Henning[1], Sara Windahl[1], Klara Sjögren[1], Andree Krust[2], Pierre Chambon[2], Claes Ohlsson[1], Marie Lagerquist[1]. [1]Centre for Bone and Arthritis Research at Institute of Medicine, Sahlgrenska Academy at University of Gothenburg, Sweden, [2]Departement of Functional Genomics, Institut de Génétique et de Biologie Moléculaire et Cellulaire, Collège de France, Université de Strasbourg, France

Disclosures: Karin Gustafsson, None

FR0099 **Anabolic bone effects of soluble Frizzled1, 2 and 7 receptors in mice**

Hisashi Hasegawa*[1], Kengo Yamawaki[1], Takuya Murakami[1], Kenji Nagao[1], Makoto Kakitani[2], Kazuma Tomizuka[2]. [1]Nephrology Research Laboratories, Kyowa Hakko Kirin Co., Ltd., Japan, [2]Innovative Technology Laboratories, Kyowa Hakko Kirin Co., Ltd., Japan

Disclosures: Hisashi Hasegawa, None

FR0100 **Androgens Inhibit Renal Calcium and Phosphate Transporters Independent of Bone Resorption Through AR-mediated Effects**

Rougin Khalil*[1], Michaël Laurent[2], Na Ri Kim[1], Ferran Jardi[1], Frank Claessens[3], Brigitte Decallonne[1], Dirk Vanderschueren[1]. [1]Laboratory of Clinical and Experimental Endocrinology, KU Leuven, Belgium, [2]Center for Metabolic Bone Diseases, Geriatrics Department, University Hospitals Leuven, Belgium, [3]Laboratory of Molecular Endocrinology, KU Leuven, Belgium

Disclosures: Rougin Khalil, None

FR0102 **Conditional Silencing of IL-17 Receptor in Osteocytes Blocks the Bone Catabolic Activity of Continuous PTH Treatment by decreasing osteocytic RANKL production**

Jau-Yi Li*[1], Jonathan Adams[1], M.N. Weitzmann[1], Roberto Pacifici[1]. [1]Emory University, School of Medicine, United States

Disclosures: Jau-Yi Li, None

FR0104 **Parathyroid Hormone Increases EphrinB2/EphB4 of Osteoclast/Osteoblast Coupling Factor in Primary Hyperparathyroidism Model**

Yuki Nagata*[1], Yasuo Imanishi[1], Daichi Miyaoka[1], Noriyuki Hayashi[1], Tomomi Maeda[1], Masanori Emoto[1], Masaaki Inaba[1]. [1]Osaka City University Graduate School of Medicine, Department of Metabolism, Endocrinology, and Molecular Medicine, Japan

Disclosures: Yuki Nagata, None

FR0105 **Calcium Sensing Receptor and PTH Receptor responses are regulated by TRPC1 Ion Channel**

Marta Onopiuk*[1], Bonnie Eby[2], Vasyl Nesin[1], Peter Ngo[1], Maria Luisa Brandi[3], Wenhan Chang[4], Mary Beth Humphrey[1], Kai Lau[2], Leonidas Tsiokas[1]. [1]Department of Cell Biology, University of Oklahoma Health Sciences Center, Oklahoma City, OK73104, USA, United States, [2]Department of Medicine, Division of Nephrology, University of Oklahoma Health Sciences Center, Oklahoma City, OK73104, USA, United States, [3]Universita degli Studi di Firenze, CTO-SOD Malattie del Metabolismo Minerale e Osseo, Florence, Italy, Italy, [4]Department of Medicine, UCSF Endocrinology and Metabolism, UCSF, San Francisco, CA, USA, United States

Disclosures: Marta Onopiuk, None

FR0109 **ASBMR 2017 Annual Meeting Young Investigator Award**
RNA-Seq Based Transcriptome Profiling and Transformation of Mature Osteoblasts into Bone Lining Cells during Bone Loss Induced by Mechanical Unloading
A Ram Hong*[1], Kwangsoo Kim[2], Jae-yeon Yang[2], Ji-yeon Lee[2], Kyoung Min Kim[3], Jung Hee Kim[1], Chan Soo Shin[1], Sang Wan Kim[4]. [1]Seoul National University College of Medicine, Korea, Republic of, [2]Seoul National University Hospital Biomedical Research Institute, Korea, Republic of, [3]Seoul National University Bundang Hospital, Korea, Republic of, [4]Seoul National University College of Medicine, Seoul Metropolitan Government Boramae Medical Center, Korea, Republic of
Disclosures: A Ram Hong, None

FR0110 **Effect of Estrogen Receptor and β-Catenin Signaling Activation on Mechanically Induced Bone Formation in Ovariectomized Mice**
Astrid Liedert*[1], Claudia Nemitz[1], Anita Ignatius[1]. [1]University of Ulm, Germany
Disclosures: Astrid Liedert, None

FR0113 **Shared Molecular Mechanisms Contributing to PTOA in Loading-Mediated Injury Models**
Aimy Sebastian*[1], Jiun Chang[1], Nicholas Hum[1], Deepa Murugesh[1], Gabriela Loots[1], Blaine Christiansen[2]. [1]Lawrence Livermore National Laboratories, United States, [2]UC Davis Medical Center, Department of Orthopedic Surgery, United States
Disclosures: Aimy Sebastian, None

FR0114 **ASBMR 2017 Annual Meeting Young Investigator Award**
Cortical bone loss due to skeletal unloading in aldehyde dehydrogenase 2 gene knockout mice is associated with decreased expression of PTH receptors in osteocytes.
Takafumi Tajima*[1], Kunitaka Menuki[1], Kayoko Okuma[1], Manabu Tsukamoto[1], Hokuto Fukuda[1], Yasuaki Okada[1], Kenji Kosugi[1], Akinori Sakai[1]. [1]Department of Orthopaedic Surgery, University of Occupational and Environmental Health, Japan, Japan
Disclosures: Takafumi Tajima, None

FR0115 **Withdrawn**

FR0119 **Unloaded Mice Treated with the Myokine Irisin Are Protected from Bone Loss and Muscle Atrophy**
Graziana Colaianni*[1], Luciana Lippo[1], Paolo Pignataro[1], Lorenzo Sanesi[1], Giovanna Spiro[2], Ilenia Severi[3], Giovanni Passeri[4], Giacomina Brunetti[1], Umberto Tarantino[5], Silvia Colucci[1], Janne Reseland[6], Roberto Vettor[2], Saverio Cinti[3], Maria Grano[7]. [1]Department of Basic Medical Science, Neuroscience and Sense Organs, University of Bari, Italy, [2]Department of Medicine-DIMED, Internal Medicine 3, University of Padova, Italy, [3]Department of Experimental and Clinical Medicine, Center of Obesity, United Hospitals, University of Ancona, Italy, [4]Department of Clinical and Experimental Medicine, University of Parma, Italy, [5]Department of Orthopedics and Traumatology, Tor Vergata University of Rome, Italy, [6]Department of Biomaterials, Institute for Clinical Dentistry, University of Oslo, Blindern, Norway, [7]Department of Emergency and Organ Transplantation, University of Bari, Italy
Disclosures: Graziana Colaianni, None

FR0121 **Assessment of the Effect of two Myostatin Inhibitors on Body Composition using MRI and DXA in Non Human Primates**
Martin Guillot*[1], Sebastien Gariepy[1], Luc Tremblay[2], Aurore Varela[1]. [1]Charles River Laboratories Montreal, Canada, [2]CIMS-CRCHUS, University of Sherbrooke, Canada
Disclosures: Martin Guillot, Charles River Laboratories , Other Financial or Material Support

FR0122 **Long-term physiologic exercise maintains the protective effects of muscle-secreted factors on osteocyte viability**

Yukiko Kitase*[1], Hong Zhao[2], Jennifer Rosser[3], Michael J. Wacker[3], Julian Vallejo[3], Marco Brotto[4], Lynda F. Bonewald[2]. [1]Indiana Unversity, United States, [2]Indiana Unviersity, United States, [3]University of Missouri-Kansas City, United States, [4]University of Texas at Arlington , United States

Disclosures: Yukiko Kitase, None

FR0124 **An aging-associated decrease in periosteal osteoprogenitor populations accompanies attenuation of load-induced bone formation in mice tibiae**

Pamela Cabahug-Zuckerman*[1], Chao Liu[1], Cinyee Cai[2], Ian Mahaffey[3], Stephanie Norman[3], Whitney Cole[3], Alesha Castillo[1]. [1]Dept of Mechanical and Aerospace Engineering, Tandon School of Engineering, and Dept of Orthopaedic Surgery, School of Medicine, New York University; Veterans Affairs New York Harbor Healthcare System, United States, [2]Dept of Orthopaedic Surgery, School of Medicine, New York University, United States, [3]Veterans Affairs Palo Alto Healthcare System, United States

Disclosures: Pamela Cabahug-Zuckerman, None

FR0125 **Osteoporosis and Muscle Atrophy: Is Vitamin D Receptor an Unknown Determinant?**

monica celi*[1], Manuel scimeca[1], Federica Centofanti[1], maurizio feola[1], annalisa botta[1], Umberto Tarantino[1]. [1]University of Rome Tor Vergata, Italy

Disclosures: monica celi, None

FR0126 **Regulation of Protein Kinase A (PKA) by Protein Kinase Inhibitorγ (PKIγ) Reduces Osteogenesis in Aged Mice**

Bryan S. Hausman*[1], Xin Chen[2], Hyonmin Choe[3], Ozan Akkus[4], Edward M Greenfield[1]. [1]Department of Orthopaedics, Case Western Reserve University, United States, [2]Gene Therapy Center, University of North Carolina at Chapel Hill, United States, [3]Department of Orthopaedics, Yokohama City University, Japan, [4]Departments of Biomedical Engineering and Orthopaedics, Case Western Reserve University, United States

Disclosures: Bryan S. Hausman, None

FR0129 **Hydrogen Sulfide Epigenetically Attenuates Homocysteine Induced Bone Loss in CBS Deficient Mice**

Jyotirmaya Behera*[12], Akash George[12], Kimberly Kelly[12], Suresh Tyagi[12], Neetu Tyagi[12]. [1]University of Louisville, United States, [2]university of louisville, United States

Disclosures: Jyotirmaya Behera, None

FR0130 **The Novel Role of PINCH in Skeletogenesis**

Xin Liu*[1], Guozhi Xiao[1]. [1]SUSTech, China

Disclosures: Xin Liu, None

FR0132 **Identifying A Novel Regulator Of Anabolic Bone Metabolism**

Yu Shao*[1], Kylie Jacobs[2], James Hamilton[3], Thomas M O'Connell[4], Nickolay Brustovetsky[3], Jeanette McClintick[5], Ronald Wek[5], Joseph Bidwell[2]. [1]Medical & Molecular Genetics, Indiana University School of Medicine, United States, [2]Anatomy & Cell Biology, Indiana University School of Medicine, United States, [3]Pharmacology & Toxicology, Indiana University School of Medicine, United States, [4]Otolaryngology & Head/Neck Surgery, Indiana University School of Medicine, United States, [5]Biochemistry & Molecular Biology, Indiana University School of Medicine, United States

Disclosures: Yu Shao, None

FR0133 **TSC1 Regulates Bone Marrow Stromal Cell (BMSC) Lineage Commitment**

Han Kyoung Choi*[1], Hebao Yuan[2], Fang Fang[1], Fei Liu[1]. [1]University of Michigan School of Dentistry, United States, [2]University of Michigan, United States

Disclosures: Han Kyoung Choi, None

FR0135 **Identification of Murine Circulating CD34+ OCN+ Cells**

Ryan Kelly*[1], Lindsay McDonald[2], James Cray[1], Amanda LaRue[2]. [1]Medical University of South Carolina, United States, [2]Ralph H. Johnson Department of Veterans Affairs Medical Center, United States

Disclosures: Ryan Kelly, None

FR0136 **Transplantation of Human Skeletal Muscle-Derived Progenitor Cells Ameliorates Knee Osteoarthritis**

Shing-Hwa Liu*[1], Chen-Yuan Chiu[1], Ding-Cheng Chan[1], Rong-Sen Yang[1]. [1]National Taiwan University, Taiwan, Province of China

Disclosures: Shing-Hwa Liu, None

FR0138 **Intranuclear actin assembly is critical for extracellular matrix mediated osteogenic differentiation of mesenchymal stem cells**

Jeyantt Srinivas Sankaran*[1], Buer Sen[1], Zhihui Xie[1], Cody McGrath[1], Maya Styner[1], Rebekah Samsonraj[2], Andre van Wijnen[2], Janet Rubin[1]. [1]University of North Carolina, Chapel Hill, United States, [2]Mayo Clinic, United States

Disclosures: Jeyantt Srinivas Sankaran, None

FR0139 **Conditional ablation of Prx1 expressing cells and haploinsufficiency of Prrx1 gene lead to impaired fracture healing**

Lai Wang*[1], Alessandra Esposito[1], Joseph Temple[1], Ji Eun Han[1], Tieshi Li[1], Anna Spagnoli[1]. [1]Department of Pediatrics, Rush University Medical Center, Chicago, United States

Disclosures: Lai Wang, None

FR0140 **PDGFRβ signaling regulates osteogenesis of periosteal mesenchymal stem cells.**

Xi Wang*[1], Brya G Matthews[1], Jungeon Yu[2], Archana Sanjay[1], Danka Grcevic[3], Ivo Kalajzic[1]. [1]Uconn Health, United States, [2]Uconn Helath, United States, [3]University of Zagreb, United States

Disclosures: Xi Wang, None

FR0141 **The fracture Callus is Formed by Progenitors of Different Skeletal Origins in a Site Specific Manner**

Yongmei Wang*[1], Faming Tian[2], Lin Ling[2], Wasima Mayer[2], Ling Chen[3], Misun Kang[3], Sunita Ho[3], Daniel Bikle[4]. [1]Endocrine Unit, University of California, San Francisco/ San Francisco VA Health Care System, United States, [2]Endocrine Unit, University of California, San Francisco /San Francisco VA Health Care System, United States, [3]Bioengineering & Biomaterials Micro-CT and Imaging Facility, University of California, San Francisco, United States, [4]Endocrine Unit, University of California, San Francisco/San Francisco VA Health Care System, United States

Disclosures: Yongmei Wang, None

FR0145 **ASBMR 2017 Annual Meeting Young Investigator Award**
Bone mineral density is related to proximal femur shape: findings from a cross-sectional study in middle aged women

Monika Frysz*[1], Jenny Gregory[2], Denis Baird[3], Richard Aspden[2], Lavinia Paternoster [1], Jonathan Tobias[3]. [1]School of Social and Community Medicine, University of Bristol, UK; MRC Integrative Epidemiology Unit at the University of Bristol, UK, United Kingdom, [2]Arthritis and Musculoskeletal Medicine, Institute of Medical Sciences, University of Aberdeen, UK, United Kingdom, [3]Musculoskeletal Research Unit, School of Clinical Sciences, University of Bristol, UK, United Kingdom

Disclosures: Monika Frysz, None

FR0149 **Combining fractal- and entropy-based bone texture analysis for the prediction of Osteoarthritis: data from the Multicenter Osteoarthritis study (MOST)**

Zsolt Bertalan*[1], Richard Ljuhar[1], Stefan Nehrer[2], Davul Ljuhar[3], Astrid Fahrleitner-Pammer[4], Hans-Peter Dimai[4]. [1]ImageBiopsy Lab, Austria, [2]Danube University Krems, Austria, [3]Braincon Technologies Research , Austria, [4]Medical University Graz, Austria

Disclosures: Zsolt Bertalan, None

FR0150 **Focal Thickening Of Femoral Head Cortical Bone Predicts Total Hip Replacement For Osteoarthritis**

Ilya Burkov*[1], Graham Treece[1], Andrew Gee[1], Thomas Turmezei[2], Fjola Johannesdottir[3], Sigurdur Sigurdsson[4], Thor Aspelund[4], Vilmundur Gudnasson[4], Helgi Jonsson[5], Kenneth Poole[1]. [1]University of Cambridge, United Kingdom, [2]Addenbrooke's Hospital, Cambridge, United Kingdom, [3]Beth Israel Deaconess Medical Center, United States, [4]The Icelandic Heart Association, Iceland, [5]Landspitalinn University Hospital, Iceland

Disclosures: Ilya Burkov, None

FR0151 **Prevalence of Arthritis using a Job Exposure Matrix in Lower and Middle Income Countries: World Health Organization's Study on Global Ageing and Adult Health**

Brennan-Olsen Sharon*[1], Svetlana Solovieva[2], Eira Viikari-Juntura[3], Steven Bowe[4], Paul Kowal[5], Nirmala Naidoo[5], Ilana Ackerman[6], Anita Wluka[6], Michelle Leech[6], Richard Page[4], Gustavo Duque[7], Fernando Gomez[8], Mohammadreza Mohebbi[4]. [1]University of Melbourne, Australian Institute for Musculoskeletal Science (AIMSS), Australia, [2]Finnish Insitute of Occupational Health, Finland, [3]Finnish Institute of Occupational Health, Finland, [4]Deakin University, Australia, [5]World Health Organization, Switzerland, [6]Monash University, Australia, [7]University of Melbourne; Australian Institute for Musculoskeletal Science (AIMSS), Australia, [8]Facultad de Ciencias para la Salud Universidad de Caldas, Colombia

Disclosures: Brennan-Olsen Sharon, None

FR0155 **MicroRNA 23a cluster Maintains BAF-PRC2 Epigenetic Equilibrium to Preserve Bone Mass in vivo**

Tanner Godfrey*[1], Benjamin Wildman[1], Mohammad Rehan[1], Harunur Rashid[1], Mohammad Hassan[1], Chris Lengner[2], Amjad Javed[1]. [1]School of Dentistry, University of Alabama, United States, [2]School of Veterinary Medicine Member, Institute for Regenerative Medicine University of Pennsylvania, United States

Disclosures: Tanner Godfrey, None

FR0157 **The in Vivo Roles of Osteoblast AMP-activated Protein Kinase in Skeletal Development**

Ippei Kanazawa*[1], Ayumu Takeno[1], Ken-ichiro Tanaka[1], Masakazu Notsu[1], Toshitsugu Sugimoto[1]. [1]Shimane University Faculty of Medicine, Japan

Disclosures: Ippei Kanazawa, None

FR0158 **Murine model for type VI OI (*Serpinf1-/-*) reveals dynamic regulation of vascularization and mineralization in bone**

Heeseog Kang*[1], Smriti Aryal A.C.[1], Valentin David[2], Aline Martin[2], Susan Crawford[3], Joan Marini[1]. [1]NIH, United States, [2]Northwestern University, United States, [3]NorthShore University, United States

Disclosures: Heeseog Kang, None

FR0160 **A novel osteoblast subpopulation initiates endochondral ossification by forming osteogenic capillaries**

Yukiko Kuroda*[1], Ayako Sakamoto[1], Masaki Yoda[1], Yanlin Wu[2], Hidekazu Takano[2], Atsushi Momose[2], Koichi Matsuo[1]. [1]Keio University School of Medicine, Japan, [2]Tohoku University, Japan

Disclosures: Yukiko Kuroda, None

FR0163 **WNT16 Overexpression Protects Against Glucocorticoid-Induced Bone Loss**

Karin Nilsson*[1], Sofia Movérare-Skrtic[2], Petra Henning[2], Jianyao Wu[2], Karin Gustafsson[2], Matti Poutanen[2], Ulf Lerner[2], Claes Ohlsson[2]. [1]Centre for Bone and Arthritis Research, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden, [2]Centre for Bone and Arthritis Research, Institute of Medicine, Sahlgrenska Acadamy, University of Gothenburg, Gothenburg, Sweden

Disclosures: Karin Nilsson, None

FR0166 **Transcriptional Coactivator JAB1 Promotes Osteoblast Differentiation and Postnatal Bone Formation**

William Samsa*[1], Lindsay Bashur[1], Murali Mamidi[1], Guang Zhou[1]. [1]Case Western Reserve University, United States

Disclosures: William Samsa, None

FR0168 **Tgif1 Controls Bone Remodeling and Anabolic Response to Parathyroid Hormone**

Hanna Taipaleenmäki*[1], Hiroaki Saito[1], Andreas Gasser[1], Simona Bolamperti[1], Miki Maeda[1], Matthias Ring[1], Yang Shi[1], Levi Matthies[1], Hartmut Schlüter[2], Steven A. Johnsen[3], Katharina Jähn[1], Courtney L. Long[1], Carl Haasper[4], Thorsten Gehrke[5], Vaibhav Saini[6], Paola Divieti Pajevic[6], Teresita Bellido[7], Andre van Wijnen[8], Khalid S Mohammad[9], Theresa Guise[9], Eric Hesse[1]. [1]Molecular Skeletal Biology Laboratory, Department of Trauma, Hand and Reconstructive Surgery, University-Medical Center Hamburg-Eppendorf, Germany, [2]Institute of Clinical Chemistry and Laboratory Medicine, University Medical Center Hamburg-Eppendorf, Germany, [3] Department of General, Visceral and Pediatric Surgery, Göttingen Center for Molecular Biosciences, University Medical Center Göttingen, Germany, [4]HELIOS ENDO Hospital Hamburg, Germany, [5]HELIOS ENDO Hospital Hamburg , Germany, [6]Department of Molecular and Cell Biology, Boston University, School of Dental Medicine, United States, [7]Department of Anatomy and Cell Biology, Indiana University School of Medicine, United States, [8]Department of Biochemistry and Molecular Biology, Department of Orthopedic Surgery, Mayo Clinic, United States, [9]Division of Endocrinology, Department of Medicine, Indiana School of Medicine, United States

Disclosures: Hanna Taipaleenmäki, None

FR0169 **ASBMR 2017 Annual Meeting Young Investigator Award**
Cdk 1 is essential for bone formation and fracture repair

hiroyuki inose*[1], akira takahashi[2]. [1]orthopedics, Japan, [2]Kyushu University, Japan

Disclosures: hiroyuki inose, None

FR0170 **Bone loss in genetic Hfe-hemochromatosis is driven by the actions of Hfe in the osteoblasts and not by the excess of iron**

Maja Vujic Spasic*[1]. [1]Institute of Comparative Molecular Endocrinology, Ulm University, Germany

Disclosures: Maja Vujic Spasic, None

FR0172 **YAP and TAZ expression in mesenchymal progenitors versus mature osteoblasts and osteocytes plays distinct roles in osteoblastogenesis**

Jinhu Xiong*[1], Priscilla Baltz[1], Charles O'Brien[1]. [1]University of Arkansas for Medical Sciences, United States

Disclosures: Jinhu Xiong, None

FR0173 **Osteoblastic Lrp4 Promotes Osteoclastogenesis by Regulating ATP Release and Adenosine-A_{2A}R Signaling**

Lei Xiong*[1], Ji-Ung Jung[2], Hao-Han Guo[1], Jin-Xiu Pan[1], Xiang-Dong Sun[2], Lin Mei[1], Wen-Cheng Xiong[1]. [1]Department of Neuroscience and Regenerative Medicine, and Department of Neurology, Medical College of Georgia; Charlie Norwood VA Medical Center, United States, [2]Department of Neuroscience and Regenerative Medicine, and Department of Neurology, Medical College of Georgia, United States

Disclosures: Lei Xiong, None

FR0174 **Direct Reprogramming of Human Fibroblasts into Osteoblasts for Osteogenic Cell Therapy**

Kenta Yamamoto*[1], Toshihisa Kawai[1], Tsunao Kishida[2], Osam Mazda[2]. [1]Nova Southeastern University, United States, [2]Kyoto Prefectural University of Medicine, Japan

Disclosures: Kenta Yamamoto, None

FR0175 **Inactivation of Wnt Receptor Regulators, Rnf43 and Znrf3, in Osteoblasts Augments Bone Mass**
Zhendong A. Zhong*[1], Cheryl N. Christie[1], Mitch J. McDonald[1], Nicole J. Ethen[1], Cassandra R. Diegel[1], Bart O. Williams[2]. [1]Van Andel Research Institute, United States, [2]Van Andel Reserach Institute, United States
Disclosures: Zhendong A. Zhong, None

FR0176 **Osteoclast-specific TSC2 deletion increases bone mass via increasing CTHRC1 and bone formation by osteoblasts**
Nicola Alesi*[1], Julia F. Charles [2], Elizabeth P. Henske[1], David J. Kwiatkowski[1], Haoming Liu[2], Sabah Nobakhti[3], Sandra J. Shefelbine[3]. [1]Division of Pulmonary and Critical Care Medicine, Department of Medicine, Brigham and Women's Hospital and Harvard Medical School, Boston, Massachusetts, USA, United States, [2]Division of Rheumatology, Allergy, and Immunology, Department of Medicine, Brigham and Women's Hospital and Harvard Medical School, Boston, Massachusetts, USA, United States, [3]Department of Mechanical and Industrial Engineering, Northeastern University, Boston, Massachusetts, USA, United States
Disclosures: Nicola Alesi, None

FR0177 **Bone matrix components activate the NLRP3 inflammasome and promote osteoclast differentiation**
Yael Alippe*[1], Chung Wang[1], Biancamaria Ricci[2], Jianqiu Xiao[3], Wei Zou[4], Deborah Novack[5], Yousef Abu-Amer[2], Roberto Civitelli[3], Gabriel Mbalaviele[3]. [1]Division of Bone and Mineral Diseases - Washington University School of Medicine, United States, [2]Department of Orthopaedic Surgery-Washington University School of Medicine, United States, [3]Division of Bone and Mineral Diseases-Washington University School of Medicine, United States, [4]Department of Pathology and Immunology-Washington University School of Medicine, United States, [5]Division of Bone and Mineral Disease-Washington University School of Medicine, United States
Disclosures: Yael Alippe, None

FR0178 **MYC-dependent oxidative metabolism regulates osteoclastogenesis via nuclear receptor ERRα**
Seyeon Bae*[1], Min Joon Lee[1], Se Hwan Mun[1], Kyung-Hyun Park-Min[1]. [1]Hospital for special surgery, United States
Disclosures: Seyeon Bae, None

FR0180 **Regulation of Adhesion Signaling in Osteoclasts by Tetraspanin CD82**
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FR0185 **miR-182 regulates osteoclastogenesis and bone remodeling in both physiological and pathological conditions**
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FR0187 **MMP14 Derived From Macrophages Mediates TRAP+ Osteoclast-independent Inflammatory Bone Destruction In c-Fos-deficient SH3BP2 Cherubism Mice.**
Mizuho Kittaka*[1], Kotoe Mayahara[2], Tomoyuki Mukai[3], Tetsuya Yoshimoto[1], Teruhito Yoshitaka[1], Jeffery P Gorski[1], Yasuyoshi Ueki[1]. [1]University of Missouri-Kansas City, School of Dentistry, United States, [2]Nihon University School of Dentistry, Japan, [3]Department of Rheumatology, Kawasaki Medical School, Japan
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FR0188 **Tgif1-Deficiency Attenuates Aging-Related Bone Loss through ERK1/2 Signaling in Osteoclasts**

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FR0191 **Collagen Type VI α2 Chain Deficiency Causes Trabecular Bone Loss by Enhancing Osteoclast Differentiation**

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FR0192 **Identification of the signals provided by osteoclasts to induce FoxP3 in T cells**

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FR0193 **Critical role of Endothelin in Osteoclast Differentiation and Function**

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FR0194 **Transgenic expression of TBK1 In Osteoclast Lineage Cells Increased Both Osteoclasts and Bone Formation**

Quanhong Sun*[1], Peng Zhang[1], Juraj Adamik[1], Mark Subler[2], Jolene J. Windle[2], Laëtitia Michou[3], Jacques P. Brown[4], Noriyoshi Kurihara[5], G. David Roodman[5], David W. Dempster[6], Kostas Verdelis[7], Hua Zhou[6], Deborah L. Galson[1]. [1]Department of Medicine, Hematology-Oncology Division, University of Pittsburgh Cancer Institute, The McGowan Institute for Regenerative Medicine, University of Pittsburgh, PA, USA, United States, [2]Department of Human and Molecular Genetics, Virginia Commonwealth University, Richmond, VA, United States, [3]Department of Medicine, Laval University, CHU de Quebec Research Center and Department of Rheumatology, CHU de Quebec, Quebec City, Canada, Canada, [4]Department of Medicine, Laval University, CHU de Quebec Research Center and Department of Rheumatology, CHU de Quebec, Quebec City, Canada, United States, [5]Department of Medicine, Hem-Onc Division, Indiana University, Indianapolis, IN, United States, [6]Regional Bone Center, Helen Hayes Hospital, Route 9W, West Haverstraw, NY 10993, USA, United States, [7]The Center for Craniofacial Regeneration, Department of Oral Biology, The McGowan Institute for Regenerative Medicine, University of Pittsburgh, Pittsburgh, PA, USA, United States

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FR0197 **Deletion of the transferrin receptor 1 gene in murine osteoclasts attenuates mitochondria metabolism and cytoskeletal organization and increases trabecular bone mass**

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FR0198 **Kindlin-2 in Osteocytes Controls Bone Remodeling**
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FR0200 **Acute Increase in Osteocyte Oxidative Stress at Focal Microdamage Site in Bone**
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FR0201 **Autoregulation of osteocyte through estrogen-miRNA-Sema3A-Nrp1 axis**
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FR0202 **Changes in osteocyte calcium signaling *in vivo* due to estrogen withdrawal**
Karl Lewis*[1], Joyce Louie[1], Samuel Stephen[1], David C. Spray[2], Mia M. Thi[2], Zeynep Seref-Ferlengez[2], Robert J. Majeska[1], Sheldon Weinbaum[1], Mitchell B. Schaffler[1]. [1]The City College of New York, United States, [2]Albert Einstein College of Medicine, United States
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FR0205 **Unexpected decrease in osteoclast number and bone resorption with increased osteocyte apoptosis in the absence of osteocytic miR21**
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FR0208 **Finite Element Analysis of 3D-DXA Femur Reconstructions to Predict Hip Fracture**
Luis Del Rio*[1], Carlos Ruiz[2], Andy Luis Olivares[2], Silvana Di Gregorio[1], Simone Tassani[3], Silvia Martinez-Pardo[4], Mihail Gregorov[4], Jérôme Noailly[3], Miguel Angel Gonzalez[3]. [1]CETIR Grupo Medic, Spain, [2]Simulation, Imaging and Modelling for Biomedical Systems, Universitat Pompeu Fabra, Spain, Spain, [3]Simulation, Imaging and Modelling for Biomedical Systems, Universitat Pompeu Fabra, Spain, [4]Servicio reumatología, Hospital Universitarios Mutua de Terrassa, Spain
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FR0209 **Analyzing the cortical and trabecular bone of the femur of patients with vertebral fractures by 3D-DXA.**
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FR0211 **Prediction of Hip Fracture in Post-menopausal Women using Artificial Neural Network Approach**

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FR0212 **Vertebral Fracture Discrimination for QCT, HR-QCT, and CTXA based DXA**

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FR0214 **Associations of TBS and fractures differ among ethnicities: a study of NHANES 2005-2008**

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FR0216 **Adding Cortical Porosity to Garvan or FRAX tools Improve Identification of Postmenopausal Women with Nonvertebral Fracture: The Tromsø Study**

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Disclosures: Rita Kral, None

FR0217 **Are grade 1 vertebral fracture, fractures?**

Brian Lentle*[1], Claudie Berger[2], Linda Probyn[3], Jacques P. Brown[4], Lisa Langsetmo[5], Ben Fine[3], Kevin Lian[1], Arvind Shergill[3], Jacques Trollip[1], Stuart Jackson[6], William D. Leslie[7], Jerilynn C. Prior[1], Stephanie M. Kaiser[8], David A. Hanley[9], Angela M. Cheung[3], Jonathan D. Adachi[10], Tanveer Towheed[11], K. Shawn Davison[12], David Goltzman[13]. [1]University of British Columbia, Canada, [2]McGill University Health Centre- Researc Institute, Canada, [3]University of Toronto, Canada, [4]Université Laval, Canada, [5]University of Minnesota, United States, [6]University of Alberta, Canada, [7]University of Manitoba, Canada, [8]Dalhousie University, Canada, [9]University of Calgary, Canada, [10]McMaster University, Canada, [11]Queens University, Canada, [12]University of Victoria, Canada, [13]McGill University, Canada

Disclosures: Brian Lentle, None

FR0218 **"Risk-Equivalent" T-score Adjustment Using Lumbar Spine Trabecular Bone Score (TBS): The Manitoba BMD Registry**

William Leslie*[1], Enisa Shevroja[2], Helena Johansson[3], Anders Oden[3], Eugene McCloskey[3], John Kanis[3], Didier Hans[2]. [1]University of Manitoba, Canada, [2]Lausanne University Hospital, Switzerland, [3]University of Sheffield Medical School, United Kingdom

Disclosures: William Leslie, None

FR0220 **Cost-effectiveness of a program to identify patients at high risk of hip fracture utilizing pre-existing CT scans in managed-care systems**
Maria Pisu*[1], David Kopperdahl[2], Cora Lewis[1], Michael Saddekni[1], Kenneth Saag[1], Tony Keaveny[3]. [1]University of Alabama Birmingham, United States, [2]O.N. Diagnostics, United States, [3]University of California Berkeley, United States
Disclosures: Maria Pisu, None

FR0222 **Changes in Bone Marrow Fat Overestimate Trabecular Bone Loss by Single-Energy Quantitated Computed Tomography**
Jad Sfeir*[1], Matthew Drake[1], Elizabeth Atkinson[1], Jon Camp[1], Amanda Tweed[1], Louise McCready[1], Lifeng Yu[1], Mark Adkins[1], Shreyasee Amin[1], Sundeep Khosla[1]. [1]Mayo Clinic, United States
Disclosures: Jad Sfeir, None

FR0223 **Clinical Impact of Bone Microstructure Assessment by High Resolution Peripheral Quantitative CT Imaging in Adults with Recurrent Fractures and Normal or Near-Normal Bone Density**
Jad Sfeir*[1], Bart Clarke[1], Robert Wermers[1], Robert Tiegs[1], Ann Kearns[1], Kurt Kennel[1], Sundeep Khosla[1], Matthew Drake[1]. [1]Mayo Clinic, United States
Disclosures: Jad Sfeir, None

FR0224 **Urinary N-telopeptide as an Indicator of the Onset of Menopause-related Bone Loss in Pre- and Early Perimenopausal Women: Results from the Study of Women's Health Across the Nation (SWAN)**
Albert Shieh*[1], Gail Greendale[1], Jane Cauley[2], Joan Lo[3], Arun Karlamangla[1]. [1]UCLA, United States, [2]University of Pittsburgh, United States, [3]Kaiser, United States
Disclosures: Albert Shieh, None

FR0229 **Peripheral Arterial Disease Predicts Hip Fracture in Men.Results from the MrOS Sweden Study**
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FR0231 **Impact of Competing Risk of Mortality on Association of Cognitive Impairment with Risk of Hip Fracture in Older Women: Results from the Study of Osteoporotic Fractures (Sof)**
Susan Diem*[1], Tien Vo[1], Lisa Langsetmo[1], John Schousboe[2], Kristine Yaffe[3], Kristine Ensrud[4]. [1]University of Minnesota, United States, [2]Health Partners Research Foundation, United States, [3]University of California, United States, [4]Minneapolis Veterans Affairs Medical Center and University of Minnesota, United States
Disclosures: Susan Diem, None

FR0233 **Type 2 Diabetes Is Associated With Lower Prevalence Of Vertebral Fractures: A Meta-Analysis of Prospective Studies**
Fjorda Koromani*[1], Ling Oei[1], Taulant Muka[1], Enisa Shevroja[2], Josje Schoufour[1], Oscar Franco[1], Carola Zillikens[1], Eugene Mc Closkey[3], William Leslie[4], Olivier Lamy[2], Edwin Oei[1], Didier Hans[2], Fernando Rivadeneira[1]. [1]Erasmus MC, Netherlands, [2]University of Lausanne, Switzerland, [3]University of Sheffield, United Kingdom, [4]University of Manitoba, Canada
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FR0234 **Prevalence and Characteristics of Atypical Periprosthetic Femoral Fractures**

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FR0238 **Cathepsins B and S Are Novel Biomarkers for Bone Mineral Density: A Mendelian Randomization Study**

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FR0241 **The association between type 2 diabetes mellitus, hip fracture, and post-hip-fracture mortality: a multi-state cohort analysis**

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Disclosures: Cristian Tebé, Amgen, Other Financial or Material Support

FR0242 **Use of oral bisphosphonates and bone mineral density changes in moderate-severe (Stage 3B+) chronic kidney disease: an open cohort multivariable and propensity score analysis from Funen, Denmark**

Sanni Ali*[1], Martin Ernst[2], Fergus Caskey[3], Nigel Arden[4], Yoav Ben-Shlomo[3], Mads Nybo[5], Katrine Hass Rubin[2], Andrew Judge[1], Cyrus Cooper[1], M Kassim Javaid[4], Pernille Hermann[6], Bo Abrahamsen[2], Daniel Prieto-Alhambra[1]. [1]Centre for Statistics in Medicine and Nuffield Department of Orthopaedics, Rheumatology, and Musculoskeletal Sciences (NDORMS), University of Oxford, United Kingdom, [2]OPEN, Department of Health, University of Southern Denmark, Denmark, [3]School of Social and Community Medicine, University of Bristol, United Kingdom, [4]Nuffield Department of Orthopaedics, Rheumatology, and Musculoskeletal Sciences (NDORMS), University of Oxford, United Kingdom, [5]Department of Clinical Biochemistry, Odense University Hospital, Denmark, [6]Department of Endocrinology, Odense University Hospital, Denmark

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FR0243 **Older Men Who Sustain a Hip Fracture Experience Greater than Expected Declines in Bone Mineral Density at the Contralateral Hip**

Alan Rathbun*[1], Jay Magaziner[1], Michelle Shardell[2], Laura Yerges-Armstrong[3], Denise Orwig[1], Gregory Hicks[4], Marc Hochberg[1]. [1]University of Maryland School of Medicine, United States, [2]National Institute on Aging, United States, [3]GlaxoSmithKline, United States, [4]University of Delaware, United States

Disclosures: Alan Rathbun, None

FR0245 **The Utility of TBS-adjusted BMD T-score in the Vertebral Fractures Risk Estimation in the Postmenopausal Women of the OsteoLaus and the Rotterdam Studies**

Enisa Shevroja*[1], Fjorda Koromani[2], William Leslie[3], Berengere Aubry-Rozier[4], Edwin Oei[5], Olivier Lamy[6], Fernando Rivadeneira[7], Didier Hans[6]. [1]Center of Bone diseases, Bone and Joint Department, Lausanne University Hospital and Departments of Internal Medicine and Epidemiology, Erasmus MC, Rotterdam, The Netherlands, Switzerland, [2]Departments of Internal Medicine and Epidemiology, Erasmus MC, Rotterdam, The Netherlands, Netherlands, [3]Department of Internal Medicine, University of Manitoba, Winnipeg, Manitoba, Canada, Canada, [4]1 Center of Bone diseases, Bone and Joint Department, Lausanne University Hospital, Lausanne, Switzerland, Switzerland, [5]Department of Radiology, Erasmus Medical Center, Rotterdam, The Netherlands, Netherlands, [6]Center of Bone diseases, Bone and Joint Department, Lausanne University Hospital, Switzerland, [7]Departments of Internal Medicine and Epidemiology, Erasmus MC, Netherlands

Disclosures: Enisa Shevroja, None

FR0246 **Increased Mortality in Older Home-dwelling Men with High Serum Periostin Levels – the Prospective STRAMBO Study**

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Disclosures: Pawel Szulc, None

FR0247 **Does High Serum 25-Hydroxyvitamin D Prevent Falls in Older Women After All?**

Kirsti Uusi-Rasi*[1], Radhika Patil[1], Saija Karinkanta[1], Kari Tokola[1], Pekka Kannus[1], Christel Lamberg-Allardt[2], Harri Sievänen[1]. [1]The UKK Institute for Health Promotion Research, Finland, [2]University of Helsinki, Finland

Disclosures: Kirsti Uusi-Rasi, None

FR0248 **Older Men with Decreasing Hemoglobin Have a Higher Risk of Future Hip Fracture: The Cardiovascular Health Study**

Rodrigo J. Valderrabano*[1], Petra Buzkova[2], Po-Yin Chang[3], Neil A. Zakai[4], Howard A. Fink[5], John A. Robbins[6], Joy Y. Wu[1], Jennifer S. Lee[7]. [1]Division of Endocrinology, Stanford University School of Medicine, United States, [2]University of Washington , United States, [3]University of California, Davis, United States, [4]Department of Medicine and Department of Pathology and Laboratory Medicine, University of Vermont, United States, [5]GRECC, Veteran Affairs Health Care System, United States, [6]University of California, Davis , United States, [7]Division of Endocrinology, Stanford University School of Medicine and Palo Alto Veteran Affairs Health Care System, United States

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FR0249 **Prediction of Incident Fragility Fractures in Women with Peripheral CT Imaging – One Slice is Often Enough: the CaMos Bone Quality Study**

Andy Kin On Wong*[1], Lauren Burt[2], Eva Szabo[1], Steven K. Boyd[2], Shannon Reitsma[3], Hana Gillick[3], Hugo J.W. Fung[4], Tiffany Yan[5], Claudie Berger[6], Heather Macdonald[7], Leigh Gabel[7], Maureen C. Ashe[7], Danmei Liu[8], Jerilynn Prior[7], David A. Hanley[2], Chantal Kawalilak[9], Andrew Frank-Wilson[10], Saija Kontulainen[9], Shawn Davison[11], Wojciech Olszynski[9], George Ioannidis[3], Christopher L. Gordon[3], Colin E. Webber[3], Karen A. Beattie[3], Alexandra Papaioannou[3], Lora Giangregorio[12], Robert G. Josse[13], Norma MacIntyre[3], Tassos Anatassiades[14], David Goltzman[6], Angela M. Cheung[1], Jonathan D. Adachi[3], CaMos Bone Quality Study for the[3]. [1]University Health Network, Canada, [2]University of Calgary, Canada, [3]McMaster University, Canada, [4]University of Toronto, Canada, [5]Ryerson University, Canada, [6]McGill University, Canada, [7]University of British Columbia, Canada, [8]Centre for Hip Health and Mobility, Canada, [9]University of Saskatchewan, Canada, [10]National Institute on Aging, United States, [11]University of Victoria, Canada, [12]University of Waterloo, Canada, [13]St. Michael's Hospital, Canada, [14]Queen's University, Canada

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FR0250 **Trends in Post-fracture Care for Manitoba, Canada 2000-2014: A Population-Based Analysis**

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Disclosures: Yang Cui, None

FR0251 **Cost-effectiveness of a Bone Health Team for Screening and Treating Veterans at Risk for Fragility Fractures**

Karla Miller*[1], Jordan King[2], Phillip Lawrence[3], Richard Nelson[1], Joanne LaFleur[1], Grant Cannon[1], Scott Nelson[4]. [1]Salt Lake City Veterans Affairs Medical Center and University of Utah, United States, [2]Kaiser Permanente Colorado, United States, [3]Roseman University of Health Sciences, United States, [4]Vanderbilt University Medical Center, United States

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FR0252 **Opportunistic Identification of Vertebral Fractures from Cross-Sectional Imaging and Impact on Fracture Liaison Services**

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Disclosures: Emily Russell, Optasia Medical, Other Financial or Material Support

FR0254 **Predictors of Near-Term Non-Vertebral Fracture in Elderly Women with Osteoporosis, Osteopenia, or a History of Fracture, Based on Data from the Canadian Multicentre Osteoporosis Study (CaMos)**

Derek Weycker*[1], Jonathan Adachi[2], David Goltzman[2], Alexandra Papaioannou[2], Tanveer Towheed[2], Tassos Anastassiades[2], Rich Barron[3]. [1]Policy Analysis Inc. (PAI), United States, [2]Canadian Multicentre Osteoporosis Study (CaMos), Canada, [3]Amgen, United States

Disclosures: Derek Weycker, Amgen Inc., Grant/Research Support

FR0255 **Bone CYP27B1, CYP24A1 and Serum 25-Hydroxyvitamin D are Key Positive Factors for Trabecular Bone Architecture In Hip Fracture Patients**

Deepti Sharma*[1], Thomas Robertson[2], Roumen Stamenkov[3], Catherine Stapledon[2], Gerald Atkins[2], Peter Clifton[1], Lucian Solomon[4], Paul Anderson[1], Howard Morris[1]. [1]University of South Australia, Australia, [2]The University of Adelaide, Australia, [3]Royal Adelaide Hospital, Australia, [4]The University of Adelaide , Australia

Disclosures: Deepti Sharma, None

FR0256 **Effect of Exercise Modality during Weight Loss on Hip and Spine Bone Mineral Density in Older Adults with Obesity**

Kristen Beavers*[1], Michael Walkup[2], Walter Ambrosius[2], Stephen Kritchevsky[2], Leon Lenchik[2], Sue Shapses[3], Barbara Nicklas[2], Anthony Marsh[1], W. Jack Rejeski[1]. [1]Wake Forest University, United States, [2]Wake Forest School of Medicine, United States, [3]Rutgers University, United States

Disclosures: Kristen Beavers, None

FR0258 **High Dairy Protein Intake is Associated with Greater Bone Strength Parameters at the Distal Radius and Tibia in Older Men: A Cross-sectional Study**

Lisa Langsetmo*[1], James Shikany[2], Andrew Burghardt[3], Peggy Cawthon[3], Jane Cauley[4], Eric Orwoll[5], Douglas Bauer[3], John Schousboe[6], Brent Taylor[7], Tien Vo[1], Elizabeth Barrett-Connor[8], Kristine Ensrud[7]. [1]University of Minnesota, United States, [2]University of Alabama, United States, [3]University of California, San Francisco, United States, [4]University of Pittsburgh, United States, [5]Oregon Health and Science University, United States, [6]Park Nicollet Clinic and Health Partners Institute, United States, [7]University of Minnesota and VA Health Care System, United States, [8]University of California, San Diego, United States

Disclosures: Lisa Langsetmo, None

FR0260 **Protein Intake and Bone Mineral Density- A Systematic Review and Meta-Analysis of Randomized Controlled Trials**

Marissa Shams-White*[1], Zhuxuan Fu[1], Micaela Karlsen[1], Joachim Sackey[1], Jian Shi[1], Karl Insogna[2], Meryl LeBoff[3], Sue Shapses[4], Connie Weaver[5], Taylor Wallace[6], Mei Chung[1]. [1]Tufts University, United States, [2]Yale University, United States, [3]Harvard University, United States, [4]Rutgers University, United States, [5]Purdue University, United States, [6]George Mason University, United States

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FR0261 **Type of Sports Participation Modulates Risk For Low BMD in Athletes With Female Athlete Triad**

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Disclosures: Adam Tenforde, None

FR0264 **Blocking TNF-α action does not prevent the increase in serum sclerostin levels following estrogen withdrawal in postmenopausal women**

Matthew Drake*[1], Frank Blocki[2], Kim Hilgers[2], Jennifer Fenske[2], Brianne Thicke[1], Joshua Farr[1], Sundeep Khosla[1]. [1]Mayo Clinic, United States, [2]DiaSorin, United States

Disclosures: Matthew Drake, None

FR0265 **Interaction between *Porphyromonas gingivalis* (*P.gingivalis*) and Matrix Bound Bisphosphonates during Induction of Osteonecrosis**

Ranya Elsayed*[1], Ahmed Alawady[2], Mohamed Meghil[3], Pheba Abraham[4], Mohamed Awad[5], Christopher Cutler[6], Mohammed Elsalanty[7]. [1]Oral Biology Dept., graduate school, Augusta University, United States, [2]university of florida college of dentistry, United States, [3]Departments of Oral biology and Periodontics, Augusta University, United States, [4]oral biology, Augsta University, United States, [5]Augusta University, United States, [6]professor and chair Dept. of periodontics, Associate dean for research, dental college of Georgia, Augusta university, United States, [7]Associate professor, Dental College of Georgia, Augusta University, United States

Disclosures: Ranya Elsayed, None

FR0267 **A Novel Strategy to Rescue Osteogenesis of Impaired Bone Marrow Stromal Cells in Diabetes**

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Disclosures: Yuqi Guo, None

FR0268 **Type 2 Diabetes Impairs Insulin-Stimulated Blood Flow in Femur and Lumbar Vertebra of Hyperphagic OLETF Rats**

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Disclosures: Pamela Hinton, None

FR0270 **MFG-E8 deficiency: A model of inflamm-aging associated bone loss robustly rescued by teriparatide**

Megan Michalski*[1], Anna Seydel[1], Erica Siismets[1], Benjamin Sinder[1], Amy Koh[2], Kamran Atabai[3], Jose Aguirre[4], Hernan Roca[1], Laurie McCauley[1]. [1]University of Michigan, United States, [2]University of Michigan , United States, [3]University of California, San Francisco, United States, [4]University of Florida, United States

Disclosures: Megan Michalski, None

FR0271 **Activin A Signaling Is Critical For Renal Osteodystrophy in the CKD-MBD**

Toshi Sugatani*[1], Yi-Fu Fang[1], Hartmut Malluche[2], Keith Hruska[1]. [1]Department of Pediatrics, Nephrology, Washington University School of Medicine, United States, [2]Division of Nephrology, Bone and Mineral Metabolism, University of Kentucky, United States

Disclosures: Toshi Sugatani, None

FR0272 **Role of Progranulin in Skeletal Homeostasis in Female Mice**

Liping Wang*[1], Theresa Roth[1], Robert Nissenson[1]. [1]San Francisco VA Medical Center, United States

Disclosures: Liping Wang, None

FR0275 **Effects of Endogenous Hypercortisolism on bone specific microRNA in bone tissue samples of patients with Cushing's disease.**

Zhanna Belaya*[1], Tatjana Grebennikova[1], Alexey Nikitin[2], Olga Brovkina[2], Alexander Solodovnikov[3], Liudmila Rozhinskaya[1], Galina Melnichenko[1]. [1]Endocrinology Research Centre, Russian Federation, [2]Federal Research and Clinical Center FMBA, Russian Federation, [3]Ural State Medical Academy, Russian Federation

Disclosures: Zhanna Belaya, None

FR0276 **Risk Factors of Fractures in Patients With Stage 3 Chronic Kidney Disease : Analysis of Cartagene**

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Disclosures: Louis-Charles Desbiens, None

FR0280 **Alendronate ameliorates the risk of urinary stone formation of astronauts on the International Space Station for 6 months**

Atsushi Okada*[1], Takahiro Yasui[1], Kenjiro Kohri[2], Toshio Matsumoto[3], Adrian LeBlanc[4], Jean Sibonga[5], Elisabeth Spector[6], Jeff Jones[4], Jay Shapiro[7], Thomas Lang[8], Linda Shackelford[5], Scott Smith[5], Harlan Evans[9], Joyce Keyak[10], Hiroshi Ohshima[11]. [1]Department of Nephro-urology, Nagoya City University Graduate School of Medical Sciences, Japan, [2]Nagoya City University, Japan, [3]University of Tokushima Fujii Memorial Institute of Medical Sciences, Japan, [4]Baylor College of Medicine, United States, [5]NASA Johnson Space Center, United States, [6]KBRWyle , United States, [7]Kennedy Krieger Institute, United States, [8]UCSF, United States, [9]KBRWyle, United States, [10]University of California at Irvine, United States, [11]Japan Aerospace Exploration Agency, Japan

Disclosures: Atsushi Okada, None

FR0282 **Hip QCT for Assessment of Trabecular Bone Loss and Recovery after Space Flight: A Pilot Study**

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Disclosures: Jean Sibonga, None

FR0286 **Predictors of Improvement in Bone Mineral Density after Celiac Disease Diagnosis**

Haley M. Zylberberg*[1], Benjamin Lebwohl[1], Arindam RoyChoudhury[2], Minghao Liu[3], Marcella Walker[4], Peter H.R. Green[1]. [1]Celiac Disease Center at Columbia University, College of Physicians and Surgeons, United States, [2]Mailman School of Public Health, Columbia University, United States, [3]Dept of Medicine Endocrinology Columbia University, College of Physicians and Surgeons, United States, [4]Division of Endocrinology, Columbia University, College of Physicians and Surgeons, United States

Disclosures: Haley M. Zylberberg, None

FR0287 **Long-term effects of bisphosphonate therapy: perforations, microcracks and mechanical properties.**

Shaocheng Ma*[1], Ulrich Hansen[1], Justin Cobb[1], Richard Abel[1]. [1]Imperial College, United Kingdom

Disclosures: Shaocheng Ma, None

FR0290 **Denosumab Improves Glycemic Control of Type 2 Diabetic or Prediabetic Patients with Osteoporosis**

Chee Kian Chew*[1], Sundeep Khosla[1], Robert Rizza[1], Jennifer Geske[1], Bart Clarke[1]. [1]Mayo Clinic, United States

Disclosures: Chee Kian Chew, None

FR0292 **Rates of Mortality and Second Hip Fracture Following the Implementation of a Fracture Liaison Service (FLS): A Single Center Experience.**

Vitaly Medvedovsky*[1], Uri Yoel[1], Lior Baraf[1], Dayana Cohen[1], Tamar Eshkoli[1], Avital Blum[1], Vera Polischuk[1], Poliana Shamgar[1], Michal Lamberger[1], Dvora Lieberman[1], Victor Novack[1], Ethel Siris[2], Merav Fraenkel[1]. [1]Soroka University Medical Center and the Faculty of Health Sciences, Ben-Gurion University of the Negev, Israel, [2]Columbia University Medical Center, United States

Disclosures: Vitaly Medvedovsky, None

FR0293 **A Phase 1, Subject- and Investigator blinded, Sponsor unblinded, Placebo-controlled, Randomized, 2 part, Sequential, Single Ascending Dose Study to Assess the Safety, Tolerability, Pharmacokinetics, and Pharmacodynamics of DS 1501a in Healthy Young Subjects and Healthy Postmenopausal Women**

Victor Dishy*[1], Dongwoo Kang[1], Vance Warren[1], William Maxwell[1], Benjamin Levinson[1], Jarema Kochan[1], Ling He[1], Merav Baz-Hecht[1], Chie Fukuda[2], Junichi Koga[2], Eisuke Tsuda[2], Ko Watanabe[2]. [1]Daiichi Sankyo, Inc, United States, [2]Daiichi Sankyo, Inc, Japan

Disclosures: Victor Dishy, None

FR0295 **Factors affecting fracture location in atypical femoral fractures: a cross-sectional study with 147 patients**

Ji Wan Kim*[1], Jung Jae Kim[2], Jae Suk Chang[2], Jai Hyung Park[3], Hyun Chul Shon[4], Kwang Hwan Jung[5], Chul-Ho Kim[2], Seong-Eun Byun[6], Chang-wug Oh[7]. [1]Haeundae Paik Hospital, Inje University, Korea, Republic of, [2]Asan Medical Center, University of Ulsan, Korea, Republic of, [3]Kangbuk Samsung Hospital, Sungkyunkwan University, Korea, Republic of, [4]Chungbuk National University Hospital, Korea, Republic of, [5]Ulsan University Hospital, Korea, Republic of, [6]CHA Bundang Medical Center, CHA university, Korea, Republic of, [7]Kyungpook National Hospital, Kyungpook National University, Korea, Republic of

Disclosures: Ji Wan Kim, None

FR0298 **The effect of teriparatide on fracture healing of vertebral compression fracture in post menopausal women**

Seung Woo Suh*[1], Si Young Park[2], Jae Young Hong[1], Tae Wook Kang[1]. [1]Korea Univeresity Hospital, Korea, Republic of, [2]Korea University Hospital, Korea, Republic of

Disclosures: Seung Woo Suh, None

FR0299 **Effect of fracture risk assessment on anti-osteoporosis medication use and adherence: Findings from the SCOOP Trial**

C. Cooper*[1], C. Parsons[2], N. C Harvey[1], L. Shepstone[3], J. A. Kanis[4], E. Lenaghan[3], S. Clarke[5], R. Fordham[3], N. Gittoes[6], I. Harvey[3], R. Holland[3], A. Heawood[5], N. Redmond[5], A. Howe[3], T. Marshall[3], T.J. Peters[5], D. Torgerson[7], T.W. O'Neill[8], E. McCloskey[9]. [1]MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, [2]RC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, [3]University of East Anglia, United Kingdom, [4]Centre for Metabolic Bone Diseases, University of Sheffield and Institute for Health and Ageing, Catholic University of Australia , United Kingdom, [5]University of Bristol, United Kingdom, [6]Queen Elizabeth Hospital, United Kingdom, [7]University of York, United Kingdom, [8]University of Manchester, United Kingdom, [9]Centre for Metabolic Bone Diseases, University of Sheffield, United Kingdom

Disclosures: C. Cooper, None

FR0300 **Prevalence of severe suppression of bone turnover (SSBT) in patients on long-term bisphosphonate (BP) therapy**

Shijing Qiu*[1], Elizabeth Warner[1], Pooja Kulkarni[1], Mahalakshi Honasoge[1], Arti Bhan[1], Shiri Levy[1], George Divine[1], D. Sudhaker Rao[1]. [1]Henry Ford Hospital, United States

Disclosures: Shijing Qiu, NIAMS, Grant/Research Support

FR0301 **Effect of Denosumab Compared With Risedronate on Percentage Change in Lumbar Spine BMD at 12 Months in Subgroups of Glucocorticoid-treated Individuals**

K Saag*[1], N Pannacciulli[2], P Geusens[3], J Adachi[4], E Lespessailles[5], J Malouf-Serra[6], O Messina[7], A Wang[2], RB Wagman[2], WF Lems[8]. [1]University of Alabama, United States, [2]Amgen Inc., United States, [3]Maastricht University, Netherlands, [4]McMaster University, Canada, [5]University Hospital Orleans, France, [6]Hospital San Pablo, Spain, [7]Cosme Argerich Hospital, Argentina, [8]VU University Medical Centre, Netherlands

Disclosures: K Saag, Amgen, Merck, Consultant

FR0302 **Credible Intervals of The Rates of Osteonecrosis of The Jaw (ONJ) In Patients Treated With Denosumab**

Abdulhafez Selim *[1], Paula Karabelas[2], Ahmed Kaseb[3]. [1]Philadelphia College of Osteopathic Medicine (PCOM), United States, [2]Private Investigator, United States, [3]Department of Gastrointestinal Medical Oncology, M. D. Anderson Cancer Center, United States

Disclosures: Abdulhafez Selim , None

FR0303 **The Effects of Teriparatide, Vibration and the Combination on Bone Mass, Architecture and Metabolism in Chronic Spinal Cord Injury**

Narina Simonian*[1], Brent Edwards[2], Elaine Gregory[1], Keith Gordon[1], Rama Parachuri[3], Ifaz Haider[2], Karen Troy[4], Thomas Schnitzer[1]. [1]Northwestern University, United States, [2]University of Calgary, Canada, [3]Edward Hines Jr. VA Hospital, United States, [4]Worchester Polytechnic Institute, United States

Disclosures: Narina Simonian, None

FR0305 **Combination treatment with teriparatide and denosumab improves spine trabecular microarchicture in DATA-Switch: a randomized controlled trial**

Joy Tsai*[1], Linda Jiang[1], Hang Lee[1], Didier Hans[2], Benjamin Leder[1]. [1]Massachusetts General Hospital, United States, [2]Lausanne University Hospital, Switzerland

Disclosures: Joy Tsai, None

FR0310 **MicroRNA-125b Derived from Osteoblasts Exerts its Anti-Osteolytic Effect through Targeting Preosteoclasts**

Faisal Ahmed*[1], Tomoko Minamizaki[1], Shota Ito[2], Nushrat Sarmin[1], Chise Fujimoto[1], Yuko Nakao[2], Kotaro Tanimoto[2], Shinji Hiyama[3], Yuji Yoshiko[1]. [1]Department of Calcified Tissue Biology, Graduate School of Biomedical & Health Sciences, Hiroshima University, Japan, Japan, [2]Department of Orthodontics and Craniofacial Developmental Biology, Hiroshima University Graduate School of Biomedical & Health Sciences, Hiroshima, Japan, Japan, [3]Department of Oral Biology, Graduate School of Biomedical & Health Sciences, Hiroshima University, Japan, Japan

Disclosures: Faisal Ahmed, None

FR0312 **Vitamin D deficiency promotes breast cancer invasion and metastasis through the regulation of the CXCR4/CXCL12 axis in the MMTV-PYmT mouse model**

Jiarong Li*[1], Richard Kremer[1]. [1]McGill University, Canada

Disclosures: Jiarong Li, None

FR0313 **Exosomes Derived from Mesenchymal Stem Cells Promotes Osteogenesis and Angiogenesis during Hyperhomocysteinemia in Bone**

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Disclosures: Neetu Tyagi, None

FR0314 **The Deleterious Effects of IGF1 Signaling on the Development of Post-Traumatic Osteoarthritis**
Yongmei Wang*[1], Faming Tian[1], Alexis Dang[2], Zara Butte[3], Ling Chen[4], Misun Kang[4], Sunita Ho[4], Daniel Bikle[1]. [1]Endocrine Unit, University of California, San Francisco/ San Francisco VA Health Care System, United States, [2]Department of Orthopaedic Surgery, University of California, San Francisco/San Francisco VA Health Care System, United States, [3]Department of Orthopaedic Surgery, University of California, San Francisco/ San Francisco VA Health Care System, United States, [4]Bioengineering & Biomaterials Micro-CT and Imaging Facility, University of California, San Francisco, United States
Disclosures: Yongmei Wang, None

FR0316 **Parathyroid hormone (1-34) ameliorated knee osteoarthritis and function in rats by decreasing chondrocyte terminal differentiation and apoptosis via autophagy**
Chung-Hwan Chen*[1], Ling-Hua Chang[1], Lin Kang[2], Yi-Shan Lin[1], Sung-Yen Lin[3], Je-Ken Chang[3], Shih-Tse Chen[4], Mei-Ling Ho[1]. [1]Kaohsiung Medical University, Taiwan, Province of China, [2]National Cheng Kung University Hospital, Taiwan, Province of China, [3]Kaohsiung Medical University Hospital, Taiwan, Province of China, [4]National Taiwan University Hospital Hsin-Chu Branch, Taiwan, Province of China
Disclosures: Chung-Hwan Chen, None

FR0317 **Effects of ferric citrate administration in a murine model of Chronic Kidney Disease**
Connor Francis*[1], Samantha Neuburg[1], Claire Gerber[1], Xueyan Wang[1], Corey Dussold[1], Lixin Qi[1], Guillaume Courbon[1], Aline Martin[1], Myles Wolf[2], Valentin David[1]. [1]Division of Nephrology and Hypertension, Department of Medicine, and Center for Translational Metabolism and Health, Institute for Public Health and Medicine, Northwestern University Feinberg School of Medicine, United States, [2]Division of Nephrology and Hypertension, Duke University, United States
Disclosures: Connor Francis, None

FR0318 **A novel bone formation-sparing anti-resorptive agent, DS-1501a, increased BMD and bone biomechanical properties of cortical bone in ovariectomized cynomolgus monkeys**
Chie Fukuda*[1], Akiko Okada[1], Tsuyoshi Karibe[1], Yoshiharu Hiruma[1], Seiichiro Kumakura[1], Eisuke Tsuda[2]. [1]R&D Division, Daiichi Sankyo Co., Ltd, Japan, [2]R&D Division, Daiichi Sankyo Co., Ltd., Japan
Disclosures: Chie Fukuda, Daiichi Sankyo Co., Ltd., Grant/Research Support

FR0319 **Anti-Siglec-15 antibody reduces bone resorption while maintaining bone formation in ovariectomized (OVX) rats and monkeys**
Chie Fukuda*[1], Eisuke Tsuda[1], Akiko Okada[1], Norio Amizuka[2], Tomoka Hasegawa[2], Tsuyoshi Karibe[1], Yoshiharu Hiruma[1], Nana Takagi[1], Seiichiro Kumakura[1]. [1]R&D Division, Daiichi Sankyo Co., Ltd, Japan, [2]Department of Developmental Biology of Hard Tissue, Faculty of Dental Medicine, Hokkaido University, Japan
Disclosures: Chie Fukuda, None

FR0320 **A Novel H_2S-releasing Amino-Bisphosphonate Which Combines Bone Anti-Catabolic And Anabolic Functions**
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Disclosures: Francesco Grassi, None

FR0324 **Pharmacokinetics of TransCon PTH in Rat and Cynomolgus Monkey: a Sustained-Release PTH Prodrug for Treatment of Hypoparathyroidism**
Susanne Pihl*[1], Mathias Krusch[2], Lars Holten-Andersen[1], Joachim Zettler[2], Felix Cleemann[2], Caroline Rasmussen[1], Kennett Sprogoe[1], David Karpf[3], Vibeke Miller Breinholt[1]. [1]Ascendis Pharma A/S, Denmark, [2]Ascendis Pharma GmbH, Germany, [3]Ascendis Pharma Inc., United States
Disclosures: Susanne Pihl, None

FR0325 **High-throughput Genetic Screens Reveal Targets of Nitrogen-containing Bisphosphonates**
Lauren Surface*[1], Zhou Yu[1], Ji Woong Park[2], Erin O'Shea[3], Timothy Peterson[2]. [1]Harvard University, United States, [2]Washington University School of Medicine, United States, [3]Harvard University, Howard Hughes Medical Institute, United States
Disclosures: Lauren Surface, None

FR0326 **Cyclic Treatment Regimen Rescues Parathyroid Hormone (PTH) Discontinuation-Induced Bone Loss and Microarchitecture Deterioration**
Wei-Ju Tseng*[1], Hongbo Zhao[1], Wonsae Lee[1], Yang Liu[1], Yihan Li[1], Chantal de Bakkar[1], Ling Qin[1], X. Sherry Liu[1]. [1]University of Pennsylvania, United States
Disclosures: Wei-Ju Tseng, None

FR0331 **Effects of Burosumab (KRN23), a Fully Human Anti-FGF23 Monoclonal Antibody, on Functional Outcomes in Children with X-linked Hypophosphatemia (XLH): Final Results from a Randomized, 64-week, Open-label Phase 2 Study**
Thomas Carpenter*[1], Erik Imel[2], Agnès Linglart[3], Annemieke Boot[4], Wolfgang Högler[5], Raja Padidela[6], William van't Hoff[7], Anthony Portale[8], Meng Mao[9], Alison Skrinar[10], Javier San Martin[10], Michael Whyte[11]. [1]Yale University School of Medicine, United States, [2]Indiana University School of Medicine, United States, [3]Hôpital Bicêtre, France, [4]University of Groningen, Netherlands, [5]Birmingham Children's Hospital, United Kingdom, [6]Royal Manchester Children's Hospital, United Kingdom, [7]Great Ormond Street Hospital, United Kingdom, [8]University of Californa, San Francisco School of Medicine, United States, [9]Ultragenyx Pharmaceutical Inc., United States, [10]Ultragenyx Pharmaceutical Inc, United States, [11]Shriners Hospital for Children, United States
Disclosures: Thomas Carpenter, Ultragenyx Pharmaceutical Inc, Other Financial or Material Support

FR0334 **Efficacy and Safety of Palovarotene in Fibrodysplasia Ossificans Progressiva (FOP): A Randomized, Placebo-Controlled, Double-Blind Study**
Frederick S. Kaplan*[1], Edward C. Hsiao[2], Genevieve Baujat[3], Richard Keen[4], Donna R. Grogan[5], Robert J. Pignolo[6]. [1]The University of Pennsylvania, United States, [2]Institute of Human Genetics and the Division of Endocrinology & Metabolism, University of California, San Francisco, United States, [3]Laboratoire de Génétique Moléculaire, Institut de Recherche and Hôpital Necker-Enfants Malades, France, [4]The Royal National Orthopaedic Hospital (Stanmore), United Kingdom, [5]Clementia Pharmaceuticals Inc., United States, [6]Geriatric Medicine & Gerontology, Mayo Clinic, United States
Disclosures: Frederick S. Kaplan, None

FR0336 **Transient Osteoporosis: Clinical Spectrum and Associated Risk Factors**
Anupam Kotwal*[1], Daniela Hurtado[1], Jad Sfeir[1], Robert Wermers[1]. [1]Division of Endocrinology, Mayo Clinic, United States
Disclosures: Anupam Kotwal, None

FR0337 **Clinical, Biochemical and Genetic Features of 41 Families with Primary Hypertrophic Osteoarthropathy, and Their Therapeutic Response to Etoricoxib: Results from a 6 Months Prospective Clinical Intervention**
Shan-Shan Li*[1], Jin-We He[1], Wen-Zhen Fu[1], Zhen-Lin Zhang[1]. [1]Metabolic Bone Disease and Genetics Research Unit, Department of Osteoporosis and Bone Diseases, Shanghai Jiao Tong University Affiliated Sixth People's Hospital, China
Disclosures: Shan-Shan Li, None

FR0340 **Incidence of mutations in the *TNSALP, GGPS1* and *CYP1A1* genes in patients with atypical femoral fractures.**
Pilar Peris*[1], Eva Gonzalez[2], Sebastian Rodriguez[3], Ana Monegal[3], Ana Monegal[3], Nuria Guañabens[3]. [1]Rheumatology Department, Hospital Clinic. University of Barcelona, Spain, [2]Immunology Department. Hospital Clinic., Spain, [3]Rheumatology Department. Hospital Clinic, Spain
Disclosures: Pilar Peris, None

FR0342 **Risk of complications in hypoparathyroidism are associated with disturbances in calcium-phosphate homeostasis: a case-control study**

Line Underbjerg*[1], Tanja Sikjaer[2], Lars Rejnmark[3]. [1]MD/Ph.D.-student, Denmark, [2]MD, Ph.D., Denmark, [3]Clinical professor, consultant, PhD, DMSc, Denmark

Disclosures: Line Underbjerg, NPS pharmaceuticals, Shire, Speakers' Bureau

FR0343 **TransCon CNP, a Sustained-Release Prodrug of C-type natriuretic Peptide, exerts Positive Effects on Bone Growth in Juvenile Cynomolgus Monkeys and in a Mouse Model of Achondroplasia**

Vibeke Miller Breinholt*[1], Nabil Kaci[2], Oliver Keil[3], Susann Aderman[3], Ulrich Hersel[3], Maxence Cornille[4], Martin Guillot[5], Nancy Doyle[5], Per Mygind[1], Aurore Valera[6], Kennett Sprogoe[1], Laurence Legeai-Mallet[2]. [1]Ascendis Pharma A/S, Denmark, [2]Imagine Institute, Denmark, [3]Ascendis Pharma GmBH, Denmark, [4]Imagine Institute, France, [5]Charles River Laboratories, Canada, [6]Charles River Laboratories, France

Disclosures: Vibeke Miller Breinholt, None

FR0346 **Prevention of zoledronate-induced MRONJ in a mouse model of Bisphosphonate Displacement (BPD) prophylaxis therapy**

Akishige Hokugo*[1], Shuting Sun[2], Yujie Sun[3], Kenzo Morinaga[3], QingQing Wu[3], Mark Lundy[4], Charles McKenna[5], Frank Ebetino[2], Ichiro Nishimura[3]. [1]David Geffen School of Medicine at UCLA, United States, [2]BioVinc LLC, United States, [3]UCLA School of Dentistry, United States, [4]Indiana University, United States, [5]University of Southern California, United States

Disclosures: Akishige Hokugo, None

FR0347 **Inflammation and increased osteoclastogenesis in osteogenesis imperfecta murine**

Ivo Kalajzic*[12], Emilie Roeder[12], Xi Wang[12], Hector Leonardo Aguila[12], Sun Kyeong Lee[12], Danka Grcevic[3], Brya Matthews[12]. [1]UConn Health, United States, [2]Uconn Health, United States, [3]University of Zagreb, Croatia

Disclosures: Ivo Kalajzic, None

FR0348 **Reduced autophagy increases OI severity in mice with Gly610 to Cys substitution in the triple helical region of the α2(I) collagen chain**

Elena Makareeva*[1], Shakib Omari[1], Anna Roberts-Pilgrim[1], Laura Gorrell[1], Edward Mertz[1], Sergey Leikin[1]. [1]SPB, NICHD, NIH, United States

Disclosures: Elena Makareeva, None

FR0349 **Enthesopathy in the Hyp mouse model of XLH is characterized by enhanced BMP and IHH signaling**

Eva Liu*[1], Janaina da Silva Martins[2], Marie Demay[3]. [1]Brigham and Women's Hospital and MGH, United States, [2]Massachusetts General Hospital, United States, [3]Massachusetts General Hospital, Harvard Medical School, United States

Disclosures: Eva Liu, None

FR0351 **Identification of the Mechanism Underlying Growth Deficiency in Osteogenesis Imperfecta**

Satoru Otsuru*[1], Adam Guess[1], Kathryn Cheah[2], Masahiro Iwamoto[3], Edwin Horwitz[1]. [1]Center for Childhood Cancer and Blood Diseases, The Research Institute at Nationwide Children's Hospital, United States, [2]Department of Biochemistry, and Centre for Reproduction, Development and Growth, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong, [3]Department of Orthopaedics, University of Maryland School of Medicine, United States

Disclosures: Satoru Otsuru, None

FR0354 ***SIRT1*** **SNPs Associated with Bisphosphonate-related Osteonecrosis of the Jaw (ONJ)**
Guang Yang*[1], Taimour Y Langaee[1], Issam Hamadeh[2], Joseph Katz[3], Alberto Riva[4], Jan S Moreb[5], Yan Gong[1]. [1]Department of Pharmacotherapy and Translational Research and Center for Pharmacogenomics, College of Pharmacy, University of Florida, United States, [2]Cancer Pharmacology Department, Levine Cancer Institute, Charlotte NC, USA., United States, [3]Department of Oral Medicine, College of Dentistry, University of Florida, Gainesville FL, USA., United States, [4]Bioinformatics Core, Interdisciplinary Center for Biotechnology Research, University of Florida, Gainesville FL, USA., United States, [5]Department of Medicine, College of Medicine, University of Florida, Gainesville FL, USA., United States
Disclosures: Guang Yang, None

FR0355 **Lateral Meningocele Syndrome Causes Marked Osteopenia**
Ernesto Canalis*[1], Lauren Schilling[1], Stefano Zanotti[1]. [1]UConn Musculoskeletal Institute, UConn Health, United States
Disclosures: Ernesto Canalis, None

FR0356 **ASBMR 2017 Annual Meeting Young Investigator Award**
Distinctive Impact of Peak Jump Power on the 3D Geometry of the Proximal Femur assessed by Asynchronous Quantitative Computed Tomography in Elderly
Namki Hong*[1], Chang Oh Kim[2], Yoosik Youm[3], Hyeon Chang Kim[4], Yumie Rhee[1]. [1]Department of Internal Medicine, Severance Hospital, Endocrine Research Institute, Yonsei University College of Medicine, Korea, Republic of, [2]Division of Geriatrics, Department of Internal Medicine, Severance Hospital, Yonsei University College of Medicine, Korea, Republic of, [3]Department of Sociology, Yonsei University College of Social Sciences, Korea, Republic of, [4]Department of Preventive Medicine, Yonsei University College of Medicine, Korea, Republic of
Disclosures: Namki Hong, None

FR0357 **A Quantitative Frailty Index Predicts Falls and Fractures in 75y Old Community Dwelling Women – A 10 Year Longitudinal Study**
Kristina Akesson*[1], Patrik Bartosch[1], Linnea Malmgren[1], David Buchebner[1], Fiona E McGuigan[1]. [1]Lund University, Sweden
Disclosures: Kristina Akesson, None

FR0358 **Greater abdominal adiposity is associated with lower muscle quality, but not with muscle strength or performance in men and women: The Framingham Study**
Robert McLean*[1], Xiaochun Zhang[2], Shivani Sahni[1], Thomas Travison[1], Marian Hannan[1], Douglas Kiel[1]. [1]Hebrew SeniorLife Institute for Aging Research and Harvard Medical School, United States, [2]Hebrew SeinorLife Institute for Aging Resarch, United States
Disclosures: Robert McLean, None

FR0364 **Effect of Physical Activity on Frailty: A Secondary Analysis of the LIFE Randomized Controlled Trial**

Andrea Trombetti*[1], Mélany Hars[1], Fang-Chi Hsu[2], Kieran Reid[3], Timothy Church[4], Thomas Gill[5], Abby King[6], Christine Liu[7], Todd Manini[8], Mary McDermott[9], Anne Newman[10], W. Jack Rejeski[11], Jack Guralnik[12], Marco Pahor[8], Roger Fielding[3]. [1]Division of Bone Diseases, Department of Internal Medicine Specialties, Geneva University Hospitals and Faculty of Medicine, Switzerland, [2]Department of Biostatistical Sciences, Wake Forest School of Medicine, United States, [3]Nutrition, Exercise Physiology and Sarcopenia Laboratory, Jean Mayer USDA Human Nutrition Research Center on Aging, Tufts University, United States, [4]Department of Preventative Medicine, Pennington Biomedical Research Center, United States, [5]Department of Internal Medicine, Yale School of Medicine, United States, [6]Department of Health Research and Policy and Department of Medicine, Stanford University, School of Medicine, United States, [7]Department of Medicine, Boston University School of Medicine, United States, [8]Department of Aging and Geriatric Research, University of Florida, United States, [9]Department of Medicine and Preventive Medicine, Northwestern University, Feinberg School of Medicine, United States, [10]Department of Epidemiology, Graduate School of Public Health, University of Pittsburgh, United States, [11]Department of Internal Medicine, Wake Forest University and School of Medicine, United States, [12]Department of Epidemiology and Public Health, University of Maryland School of Medicine, United States

Disclosures: Andrea Trombetti, None

NEW INVESTIGATOR RECEPTION

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

5:00 pm - 7:00 pm **Colorado Convention Center**

ASBMR Discovery Hall - Exhibit Hall A & B1

The ASBMR Membership Engagement and Education Committee and Young Investigator Subcommittee members will be in attendance for this meet-and-greet networking event. The reception has been organized to promote interactions among young investigators and ASBMR leadership so that they may beginbuilding a network of career-long contacts. The New Investigator Reception will be held concurrently with the Welcome Reception and the Plenary Poster Session in the Young Investigator Lounge in the ASBMR Networking Center in the Discovery Hall.

YOUNG INVESTIGATOR NETWORKING HAPPY HOUR

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

7:15 pm - 8:30 pm **Hyatt Regency Denver**

Capitol Ballroom 1

Young Investigators who wish to continue building connections with peers in a fun and informal setting are invited to attend this event. Participants are encouraged to participate in Networking Bingo! Participants will get a chance to win drink tickets and be entered into a raffle drawing for a prize!

RARE BONE DISEASE WORKING GROUP

Supported by a grant from The Rare Bone Disease Alliance

7:15 pm - 9:45 pm **Colorado Convention Center**
Room 205/207

7:15 pm Registration, Dinner and Welcome
Program Chair – Matthew Drake, MD, PhD, Mayo Clinic

7:30 pm Update
– Brittle Bone Disease Consortium
– Brendan Lee, MD, Baylor

Skeletal Disorders with High Bone Mass

7:40 pm Sclerostin: Discovery in Human Disease - Socrates Papapoulos, MD, Leiden Center for Bone Quality

8:00 pm Sclerostin: An Evolving Understanding of Sclerostin's Role in Bone Biology – Alex Robling, PhD, Indiana University

8:20 pm Sclerostin: Harnessing Sclerostin Biology to Improve Bone Health – Michael McClung, MD, Oregon Osteoporosis Center

8:40 pm Melorheostosis : An Overview – Timothy Bhattacharyya, MD, NIH

Bone Pain

9:00 pm Basic Mechanisms - Patrick Mantyh, Ph.D, University of Arizona

9:20 pm Approach to the Patient - Richard Payne, MD, Duke University

Discussion

Disclosures
Timothy Bhattacharyya, MD, Nothing to disclose; Matthew Drake, MD, PhD, Nothing to disclose; Brendan Lee, MD, Genzyme, Sanofi, 9; Patrick Mantyh, PhD, Pfizer 5; Michael McClung, Amgen, 5, 8, Radius, 5, 8; Socrates Papapoulos, MD, Amgen 5, 9, Gador, 5, Mereo Pharma, 5, UCB, 5, 9, Axsome, 5, Merck, 5, 9, Radius Health, 5, Teva, 9; Richard Payne, Vitas Hospice 5, Union Springs Integrative Medicine, 1, Bristol Myers Squibb Foundation, 5, 6; Alex Robling, PhD, Nothing to disclose.

MUSCLE AND BONE WORKING GROUP

Supported by educational grants from Novotec Medical GmbH

7:15 pm - 9:45 pm **Colorado Convention Center**
Room 210/212

7:15 pm Opening Remarks (Bjoern Buehring, MD) and Dinner

7:30 pm The Impact of Muscle Function and Muscle Mass on Fracture Risk and Bone Health
Neil Binkley, MD
University of Wisconsin-Madison

8:00 pm The Complementary Role of pQCT in Identifying Fracture Patients in a Cohort Attending Fracture Clinics
John Wark PhD
Royal Melbourne Hospital

8:30 pm Is Muscle Density Linked to Bone Health?
Saja Kontulainen PhD
University of Saskatchewan

9:00 pm Assessing Postural Control in Youth with Pediatric Bone Disorders
Louis-Nicolas Veilleux PhD
Department of Kinesiology, University of Montréal

9:30 pm Concluding Remarks

WOMEN IN BONE AND MINERAL RESEARCH EVENING NETWORKING RECEPTION

This activity is supported by a donation provided by UCB

8:00 pm - 9:30 pm **Hyatt Regency Denver**
Capitol Ballroom 3

The Women in Bone and Mineral Research invite all colleagues to attend a special evening networking reception designed to foster conversations and connections among attendees. Participants will also have the opportunity to engage in a discussion about the career challenges faced by women in science.

Saturday, September 9, 2017

Day-At-A-Glance

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

ASBMR NETWORKING BREAKFAST

Sponsored by the ASBMR Membership Engagement and Education Committee

6:45 am - 8:00 am **Colorado Convention Center**
Room 205/207

New Investigators (early-career stage), new ASBMR members and young and diverse investigators are invited to join ASBMR leadership, senior investigators and NIH Representatives for an informal networking breakfast. New Investigators and first-time attendees will have the opportunity to network with multiple senior investigators at tables assigned by topic. Breakfast will be provided.

ASBMR REGISTRATION OPEN

7:00 am - 5:00 pm **Colorado Convention Center**
Registration Hall - Lobby A Foyer

LOUIS V. AVIOLI LECTURE AND PRESENTATION OF THE LOUIS V. AVIOLI FOUNDERS, PAULA STERN, AND GIDEON A. RODAN AWARDS

8:00 am - 9:30 am **Colorado Convention Center**
Mile High Ballroom

8:00 am **The Quest for Osteoporosis Mechanisms: How Far We've Come, How Much Further We Need to Go**
Stavros Manolagas, M.D., Ph.D.
Central Arkansas VA Healthcare System, Univ of Arkansas for Medical Sciences
Disclosures: Stavros Manolagas, None

POSTERS OPEN

9:30 am - 4:30 pm **Colorado Convention Center**
ASBMR Discovery Hall - Exhibit Hall A & B1

NETWORKING BREAK

9:30 am - 9:45 am **Colorado Convention Center**
Mile High Ballroom Foyer and Four Seasons Ballroom Foyer

DISCOVERY HALL OPEN

9:30 am - 4:30 pm **Colorado Convention Center**
ASBMR Discovery Hall - Exhibit Hall A & B1

PLENARY ORALS: BASIC PLENARY I

9:45 am - 11:00 am **Colorado Convention Center**
Four Seasons Ballroom II-III

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

Christopher Kovacs, M.D.
Memorial University of Newfoundland, Australia
Disclosures: Christopher Kovacs, None

9:45 am **ASBMR 2017 Felix Bronner Award**

1037 **Gsα Is Required for Craniofacial Bone Formation by Regulating Hedgehog Signaling in a Hedgehog Ligand Independent Manner**
Ruoshi Xu*[1], Yingzi Yang[1], Sanjoy Khan[1]. [1]Department of Developmental Biology, Harvard School of Dental Medicine, 188 Longwood Ave. Boston, MA 02215, USA, United States
Disclosures: Ruoshi Xu, None

10:00 am **Notch signaling activity identifies an early perichondrial population of skeletal progenitor cells in**

1038 **endochondral bone development**
Yuki Matsushita*[1], Sunny Wong[2], Noriaki Ono[1]. [1]University of Michigan School of Dentistry, United States, [2]University of Michigan Medical School, United States
Disclosures: Yuki Matsushita, None

10:15 am **ASBMR 2017 Most Outstanding Basic Abstract Award**

1039 **Resting Zone of the Growth Plate Harbors a Unique Class of Skeletal Stem Cells**
Noriaki Ono*[1], Koji Mizuhashi[1], Henry Kronenberg[2], Wanida Ono[1]. [1]University of Michigan School of Dentistry, United States, [2]Massachusetts General Hospital / Harvard Medical School, United States
Disclosures: Noriaki Ono, None

10:30 am **A Novel Cell Population Contributing to Appositional Growth of Growth Plate in Postnatal**

1040 **Mice**
Yu Usami*[1], Aruni Gunawardena[2], Noelle Francois[2], Hajime Takano[2], Satoru Otsuru[3], Masahiro Iwamoto[4], Wentian Yang[5], Satoru Toyosawa[1], Motomi Enomoto-Iwamoto[4]. [1]Osaka University, Japan, [2]Children's Hospital of Philadelphia, United States, [3]Nationwide Children's Hospital , United States, [4]University of Maryland Baltimore, United States, [5]Brown University, United States
Disclosures: Yu Usami, None

10:45 am **ASBMR 2017 Annual Meeting Young Investigator Award**

1041 **Involvement of 24, 25-dihydroxyvitamin D during the endochondral phase of bone fracture repair in mice**
Corine Martineau*[1], Roy-Pascal Naja[1], Abdallah Husseini[1], Bachar Hamade[1], Alice Arabian[1], René St-Arnaud[1]. [1]Shriners Hospitals for Children - Canada, Canada
Disclosures: Corine Martineau, None

PLENARY ORALS: TRANSLATIONAL PLENARY 1

9:45 am - 11:00 am **Colorado Convention Center**

Mile High Ballroom

Co-Chairs
Hiroshi Takayanagi, M.D., Ph.D.
The University of Tokyo, Japan
Disclosures: Hiroshi Takayanagi, None

Beate Lanske, PhD
Harvard School of Dental MedicineHarvard Medical School, USA
Disclosures: Beate Lanske, None

9:45 am **ASBMR 2017 Most Outstanding Translational Abstract Award**

1042 **Causal Role of Senescent Cells in Mediating Age-Related Bone Loss**

Joshua Farr*[1], Megan Weivoda[1], Ming Xu[1], David Monroe[1], Jad Sfeir[1], Mikolaj Ogrodnik[1], Nathan LeBrasseur[1], Matthew Drake[1], Robert Pignolo[1], Tamar Tchkonia[1], James Kirkland[1], Sundeep Khosla[1]. [1]Mayo Clinic, United States

Disclosures: Joshua Farr, None

10:00 am **The soluble form of RANKL contributes to cancellous bone remodeling in adult mice but is**

1043 **dispensable for ovariectomy-induced bone loss**

Jinhu Xiong*[1], Keisha Cawley[1], Marilina Piemontese[1], Yuko Fujiwara[1], Ryan Macleod[1], Joseph Goellner[1], Haibo Zhao[1], Charles OBrien[1]. [1]University of Arkansas for Medical Sciences, United States

Disclosures: Jinhu Xiong, None

10:15 am **ENPP1 Enzyme Replacement Prevents Bone Loss and Corrects Fracture Susceptibility in a**

1044 **Murine Model of Autosomal Recessive Hypophastphatemic Rickets Type 2**

Mark Horowitz*[1], Dillon Kavanagh[1], Xiaofeng Li[1], Tracy Nelson[1], Steven Tommasini[1], Demetrios Braddock[1]. [1]Yale University School of Medicine, United States

Disclosures: Mark Horowitz, Inozyme, Consultant

10:30 am **ASBMR 2017 Annual Meeting Young Investigator Award**

1045 **Accelerated Aging in 1, 25-Dihydroxyvitamin D Deficiency and the Role of Oxidative Stress and Cellular Senescence**

Lulu Chen*[1], Renlei Yang[1], Wei Zhang[1], Jie Chen[1], Wanxin Qiao[1], Li Mao[1], David Goltzman[2], Dengshun Miao[1]. [1]Nanjing Medical University, China, [2]McGill, Canada

Disclosures: Lulu Chen, None

10:45 am **ASBMR 2017 Annual Meeting Young Investigator Award**

1046 **A New Bone Seeking Anabolic Protein, Bisphosphonate-Modified NELL-PEG, Can Effectively Reverse Osteoporosis by Systemic Administration**

Yulong Zhang*[1], Jiayu Shi[2], Jin Hee Kwak[3], Justine Tanjaya[4], Mengliu Yu[2], Pin Ha[5], Chenchao Wang[5], Dan Pan[2], Eric Chen[2], Xinli Zhang[2], Chia Soo[6], Benjamin Wu[7], Kang Ting[8]. [1]Division of Advanced Prosthodontics, School of Dentistry, UCLA; Department of Bioengineering, UCLA, United States, [2]Division of Growth and Development, Section of Orthodontics, School of Dentistry, UCLA, United States, [3]Division of Growth and Development, Section of Orthodontics, School of Dentistry, UCLA; Department of Orthodontics, College of Dentistry, Yonsei University, United States, [4]Division of Growth and Development, Section of Orthodontics, School of Dentistry, United States, [5]Orthopaedic Hospital Department of Orthopaedic Surgery and the Orthopaedic Hospital Research Center, UCLA, United States, [6]Orthopaedic Hospital Department of Orthopaedic Surgery and the Orthopaedic Hospital Research Center, UCLA; Division of Plastic and Reconstructive Surgery, Department of Surgery, David Geffen School of Medicine, UCLA, United States, [7]Division of Advanced Prosthodontics, School of Dentistry, UCLA; Weintraub Center for Reconstructive Biotechnology, School of Dentistry, UCLA; Department of Bioengineering, UCLA, United States, [8]Division of Growth and Development, Section of Orthodontics, School of Dentistry, UCLA; Orthopaedic Hospital Department of Orthopaedic Surgery and the Orthopaedic Hospital Research Center, UCLA, United States

Disclosures: Yulong Zhang, None

MEET-THE-PROFESSOR SESSIONS

11:00 am - 12:00 pm **Colorado Convention Center**
Rooms 102-113

Meet the Professor: Aging Bone and MiRs
Rooms 102

Johannes Grillari, PhD
University of Natural Resources and Life Sciences Vienna, Austria
Disclosures: Johannes Grillari, None

Meet the Professor: Osteocytes and Bone Resorption
Room 103

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

Meet the Professor: Chondrocyte Biology and Osteoarthritis
Room 104

Martine Cohen-Solal, M.D.
Centre Viggo Petersen
Disclosures: Martine Cohen-Solal, None

Meet the Professor: Notch Signaling
Room 105

Ernesto Canalis, M.D.
UConn Health, USA
Disclosures: Ernesto Canalis, None

Meet the Professor: Osteocytes in Myeloma
Room 106

G. David Roodman, M.D., Ph.D.
Indiana University, USA
Disclosures: G. David Roodman, None

Meet the Professor: Paracrine Actions of IL-6 Family Cytokines from Bone, Marrow and Muscle
Room 107

Natalie Sims, Ph.D.
St. Vincent's Institute of Medical Research, Australia
Disclosures: Natalie Sims, None

Meet the Professor: Managing an Osteoporosis Practice in an Era of Healthcare Reform
Room 110/112

Robin Dore, M.D.
Robin K Dore M.D., Inc.
Disclosures: Robin Dore, None

Meet the Professor: What's Next in the Treatment of Osteoporosis?
Room 111/113

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

HANDS-ON WORKSHOP: PRACTICAL BIOMECHANICAL PHENOTYPING: HOW TO GET THE MOST OUT OF A PHENOTYPE

11:00 am - 12:30 pm **Colorado Convention Center**
Room 402

Hands-on Workshops are ticketed events and require advance registration.

UPDATE ON THE AMERICAN COLLEGE OF PHYSICIANS (ACP) OSTEOPOROSIS GUIDELINES

11:00 am - 12:00 pm **Colorado Convention Center**

Four Seasons Ballroom 1

This session will feature an in-depth discussion from the perspectives of the primary care physician and the specialist on a new clinical practice guideline for treating osteoporosis.

Chair
Kenneth Saag, MD
University of Alabama, Birmingham, USA
Disclosures: Kenneth Saag, None

Speakers
Carolyn Crandall, MD
UCLA School of Medicine, USA
Disclosures: Carolyn Crandall, None

Benjamin Leder, MD
Massachusetts General Hospital and Harvard Medical School, USA
Disclosures: Benjamin Leder, None

PUBLICATIONS WORKSHOP: INCREASE YOUR CHANCES OF GETTING PUBLISHED

11:00 am - 12:00 pm **Colorado Convention Center**

Room 205/207

Meet with JBMR® Editor-in-Chief Dr. Juliet Compston and JBMR® Plus Editor-in-Chief Dr. Peter Ebeling at this year's Publications Workshop. You'll learn how to improve the quality of your journal manuscripts, what JBMR® and JBMR® Plus are looking for and how to increase your chances of getting published. Wiley Publisher 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 ASBMR Journal editors.

NETWORKING BREAK

12:00 pm - 12:30 pm **Colorado Convention Center**

Mile High Ballroom Foyer and Four Seasons Ballroom Foyer

POSTER SESSION I & POSTER TOURS

12:30 pm - 2:30 pm **Colorado Convention Center**

ASBMR Discovery Hall - Exhibit Hall A & B1

SA0001 **The Trabecular Bone Score is associated with bone mineral density, markers of bone turnover and prevalent fracture in patients with chronic kidney disease stages 5 and 5D**

Jasna Aleksova*[1], Samantha Kurniawan[2], Grahame Elder[3]. [1]Centre for Endocrinology and Metabolism, Hudson Institude of Medical Research; School of Clinical Sciences, Monash University, Australia, [2]The University of Notre Dame , Australia, [3]Department of Renal Medicine, Westmead Hospital; Osteoporosis and Bone Biology Division, Garvan Institute of Medical Research, Australia

Disclosures: Jasna Aleksova, None

SA0002 **Exome analysis of a large family with Familial Isolated Primary Hyperparathyroidism (FIHP) and multiple cancers**

Filomena Cetani*[1], Elena Pardi[2], Simona Borsari[2], Federica Saponaro[2], Liborio Torregrossa[3], Chiara Mazzanti[4], Paolo Aretini[4], Marco La Ferla[4], Sara Franceschi[4], Francesca Lessi[4], Prospero Civita[4], Claudio Marcocci[2]. [1]University-Hospital of Pisa, Italy, [2]Departmet of Clinical and Experimental Medicine, University of Pisa, Italy, [3]Department of of Surgical, Medical and Molecular Pathology and Critical Area, University of Pisa, Italy, [4]Fondazione Pisana per la Scienza ONLUS, Pisa, Italy

Disclosures: Filomena Cetani, None

SA0003 **Retrospective Evaluation of Solid Tumor Patients with PTH-Independent Hypercalcemia and their Response to Bisphosphonates or Denosumab**

Tariq Chukir*[1], Yi Liu[2], Azeez Farooki[3]. [1]New York Presbyterian Hospital - Weill Cornell, United States, [2]Hospital for Special Surgery, United States, [3]Memorial Sloan Kettering, United States

Disclosures: Tariq Chukir, None

SA0004 **ASBMR 2017 Annual Meeting Young Investigator Award**
Phenotype assessment of adult offspring carriers of the *SQSTM1/P392L* mutation in familial forms of Paget's disease of bone

Mariam Dessay*[1], François Jobin Gervais[1], Andréanne Samson[1], Jacques P. Brown[2], Laëtitia Michou[2]. [1]CHU de Québec-Université Laval research centre, Canada, [2]Division of rheumatology and research centre, CHU de Québec-Université Laval, Canada

Disclosures: Mariam Dessay, None

SA0005 **Relationship between muscle strength and bone mineral density in patients with class III obesity**

Florêncio Diniz-Sousa*[1], Giorjines Boppre[1], Leandro Machado[2], João Vilas-Boas[2], Vitor Devezas[3], John Preto[3], Hugo Sousa[3], José Oliveira[1], Hélder Fonseca[1]. [1]CIAFEL, Faculty of Sport, University of Porto, Portugal, [2]CIFI2D, Faculty of Sport, University of Porto, Portugal, [3]Department of Surgery, Centro Hospitalar de São João, Portugal

Disclosures: Florêncio Diniz-Sousa, None

SA0006 **Incidence and Prevalence of Post-surgical Hypoparathyroidism in Korea**

Eunhyun Jee*[1], So Young Park[2], Song Vogue Ahn[3], Sihoon Lee[1]. [1]Gachon University School of Medicine, Korea, Republic of, [2]Cheil General Hospital, Dankook University College of Medicine, Korea, Republic of, [3]Yonsei University Wonju College of Medicine, Korea, Republic of

Disclosures: Eunhyun Jee, None

SA0007 **Primary Hyperparathyroidism: Role of Impaired Cerebrovascular Function in Cognitive Symptoms**
Melissa Sum*[1], Yunglin Gazes[1], Bucovsky Mariana[1], Colon Ivelisse[1], Kevin Slane[1], Arindam RoyChoudhury[1], Minghao Liu[1], Yu-Kwang Tay[1], Randolph Marshall[1], Ronald Lazar[1], Shonni Silverberg[1], Marcella Walker[1]. [1]Columbia University Medical Center, United States
Disclosures: Melissa Sum, None

SA0008 **Fracture risk in Dialysis and Kidney Transplantation patients: A Systematic Review**
Aboubacar Sidibé*[1], David Auguste[2], Catherine Fortier[3], Sonia Jean[4], Lynne Moore[5], Louis-Charles Desbiens[3], Yue Pei Wang[6], Fabrice Mac-Way[7]. [1]Centre de Recherche du CHU de Québec, Hôpital Hôtel-Dieu de Québec, Division of Nephrology, Endocrinology and Nephrology Axis, Faculty of Medicine, Department of Social and Preventive Medicine, Laval University, Quebec Canada, Canada, [2]Centre de Recherche du CHU de Québec, Hôpital Saint-Sacrement, Faculty of Medicine, Department of Social and Preventive Medicine, Laval University, Quebec Canada, Canada, [3]Centre de Recherche du CHU de Québec, Hôpital Hôtel-Dieu de Québec, Division of Nephrology, Endocrinology and Nephrology Axis, Faculty and Department of Medicine, Laval University, Quebec Canada, Canada, [4]Institut National de Santé Publique du Québec, Medicine Faculty, Department of social and preventive medicine, Laval University, Quebec Canada, Canada, [5]Centre de Recherche du CHU de Québec, Hôpital de l'Enfant-Jésus, Traumatology Axis, Medicine Faculty, Department of Social and Preventive Medicine, Laval University, Quebec Canada, Canada, [6]CHU de Québec Research Center, Hôtel-Dieu de Québec Hospital, Division of Nephrology, Endocrinology and Nephrology Axis, Faculty and Department of Medicine, Laval University, Quebec Canada, Canada, [7]3Centre de Recherche du CHU de Québec, Hôpital Hôtel-Dieu de Québec, Division of Nephrology, Endocrinology and Nephrology Axis, Faculty and Department of Medicine, Laval University, Quebec Canada, Canada
Disclosures: Aboubacar Sidibé, None

SA0009 **Influence of obesity on Trabecular Bone Score remains after parathyroidectomy in Primary hyperparathyroidism**
Donovan Tay*[1], Natalie Cusano[1], John Williams[1], Beatriz Omeragic[1], John Bilezikian[1]. [1]Columbia University Medical Center, Dept of Medicine Endocrinology, United States
Disclosures: Donovan Tay, None

SA0010 **Hypophosphatemic Ostemalacia: a Diagnosis Often Overlooked**
Annegreet Veldhuis-Vlug*[1], Marlous Rotman[2], Peter Bisschop[1], Natasha Appelma-Dijkstra[2]. [1]Academic Medical Center Amsterdam, Netherlands, [2]Leiden University Medical Center, Netherlands
Disclosures: Annegreet Veldhuis-Vlug, None

SA0011 **Alendronate Treatment Does Not Influence Resistance to Damage Accumulation in Femoral Cortical Bone in Hound Dogs**
Daniel Brooks*[1], Dimitrios Psaltos[1], Katherine Lo[1], Robert Urban[2], Sephanie McCarthy[2], Deborah Hall[2], Thomas Turner[2], Mary Bouxsein[1]. [1]Beth Israel Deaconess Medical Center, United States, [2]Rush University Medical Center, United States
Disclosures: Daniel Brooks, Merck, Grant/Research Support

SA0012 **Parathyroid Hormone (PTH) increased rod-shaped trabeculae and maintained modulus of cancellous bone before fatigue failure**
Julia T. Chen*[1], Remy Walk[1], Shefford Baker[1], G. Elizabeth Pluhar[2], Adele Boskey[3], Christopher Hernandez[1], Marjolein van der Meulen[1]. [1]Cornell University, United States, [2]University of Minnesota, United States, [3]Hospital for Special Surgery, United States
Disclosures: Julia T. Chen, None

SA0013 **Relationship between cortical and trabecular microstructure and estimated strength of vertebral bone: an ex vivo HR-pQCT study**
Ko Chiba*[1], Narihiro Okazaki[1], Kazuaki Yokota[1], Kazuteru Shiraishi[1], Makoto Osaki[1]. [1]Nagasaki University, Japan
Disclosures: Ko Chiba, None

SA0014 **Effects of Progressive Glycemic Derangement on Bone Tissue Composition in Postmenopausal Women**

Jared Pearl*[1], Nicholas Miller[1], Jing Han Zhang[1], Heather Hunt[1], Kendall Moseley[2], Eve Donnelly[1]. [1]Cornell University, United States, [2]Johns Hopkins University School of Medicine, United States

Disclosures: Jared Pearl, None

SA0015 **A Novel Measurement of Regional Bone Mineral Density Around the Pedicle Screw Using QCT Has a Positive Correlation with Screw Insertional Torque in Posterior Lumber Fixation**

Koji Ishikawa*[1], Tomoaki Toyone[1], Toshiyuki Shirahata[1], Yoshifumi Kudo[1], Akira Matsuoka[1], Hiroshi Maruyama[1], Soji Tani[2], Koki Tstuchiya[1], Takashi Nagai[1], Katsunori Inagaki[1]. [1]Department of Orthopaedic Surgery, Showa University School of Medicine, Japan, [2]Department of Orthopaedic Surgery, Showa University School of Medicine, Tokyo, Japan, Japan

Disclosures: Koji Ishikawa, None

SA0016 **Voluntary Jumping Exercise in Rats Prior to Unloading Prevents Unloading-related Bone Loss**

Scott Lenfest*[1], Jennifer Kosniewski[1], Corinne Metzger[2], Jessica Brezicha[3], Jon Elizondo[1], Amelia Looper[4], Susan Bloomfield[2], Harry Hogan[5]. [1]Texas A&M University Department of Mechanical Engineering, United States, [2]Texas A&M University Department of Health & Kinesiology, United States, [3]Texas A&M University Department of Biomedical Engineering, United States, [4]Texas A&M University College of Veterinary Medicine, United States, [5]Texas A&M University Departments of Mechanical Engineering and Biomedical Engineering, United States

Disclosures: Scott Lenfest, None

SA0017 **ASBMR 2017 Annual Meeting Young Investigator Award**
Peak Trabecular Bone Microarchitecture But Not Bone Mass Predicts Rate of Estrogen-Deficiency-Induced Bone Loss

Yihan Li*[1], Wei-Ju Tseng[1], Chantal de Bakker[1], Hongbo Zhao[1], X. Sherry Liu[1]. [1]University of Pennsylvania, United States

Disclosures: Yihan Li, None

SA0018 **Sex-Related Differences in Endplate Porosity and its Correspondence to Vertebral Strength**

Elise Morgan*[1], Timothy Jackman[1], Amira Hussein[1], Cameron Curtiss[1]. [1]Boston University, United States

Disclosures: Elise Morgan, None

SA0019 **Multiscale characteristics of toughness in Lrp5A214v/A214v mice**

Sabah Nobakhti*[1], Sandra Shefelbine[1]. [1]Northeastern University, United States

Disclosures: Sabah Nobakhti, None

SA0020 **Zoledronate and Mechanical Loading Treatments During Simulated Weightlessness: Cancellous Structure and Osteocellular Responses**

Ryan T. Scott*[1], Joshua Alwood[2], Mohit Nalavadi[3], Sulekha Anand[4], Yasaman Shirazi-Fard[2], Alesha Castillo[5]. [1]NASA Ames Research Center, San Jose State University, United States, [2]NASA Ames Research Center, United States, [3]Blue Marble Space Institute of Science, United States, [4]San Jose State University, United States, [5]New York University, United States

Disclosures: Ryan T. Scott, None

SA0021 **Streptomycin attenuates the effects of electrical stimulation-induced muscle contraction on reducing trabecular bone loss in the early stages of disuse in old rats**

Hiroyuki TAMAKI*[1], Kengo YOTANI[2], Futoshi OGITA[2], Hikari KIRIMOTO[1], Kaishi HAYAO[1], Hideaki TAKAHASHI[1], Keigo TAMAKOSHI[1], Atsuhiro TSUBAKI[1], Hideaki ONISHI[1], Norikatsu KASUGA[3], Noriaki YAMAMOTO[4]. [1]Niigata University of Health and Welfare, Japan, [2]National Institute of Fitness and Sports in Kanoya, Japan, [3]Aichi University of Education, Japan, [4]Niigata Rehabilitation Hospital, Japan

Disclosures: Hiroyuki TAMAKI, None

SA0022 **Prediction of Distal Radius Failure Load Using Finite Element Modeling of Peripheral Quantitative Computed Tomography (pQCT-FE): A Validation Study**

Hongyuan Jiang*[1], Dale L Robinson[1], Saija Kontulainen[2], James D Johnston[2], Peter VS Lee[1], John D Wark[1], Matthew McDonald[3]. [1]The University of Melbourne, Australia, [2]University of Saskatchewan, Canada, [3]Department of Engineering, College of Engineering, University of Saskatchewan, Canada

Disclosures: Hongyuan Jiang, None

SA0023 **Mechanical stimulus upregulates IGF-1 levels, restores bone mass and microarchitecture on both non-fractured and fractured femurs in diabetic rats**

Ariane Zamarioli*[1], Maysa Campos[2], João P. B. Ximenez[3], Raquel A. Silva[4], José B. Volpon[2]. [1]Medical School of Ribeirão Preto, University of São Paulo, Brazil, [2]Medical School of Ribeirão Preto, Brazil, [3]School of Pharmaceutical Sciences of Ribeirão Preto, Brazil, [4]School of Dentistry of Ribeirão Preto, Brazil

Disclosures: Ariane Zamarioli, None

SA0024 **Bone quality and mechanical competence during pediatric skeletal growth**

Elizabeth Zimmermann*[1], Christoph Riedel[1], Kilian Stockhausen[2], Yuriy Chushkin[3], Eric Schaible[4], Felix Schmidt[1], Bernd Gludovatz[5], Eik Vettorazzi[6], Frederico Zontone[3], Klaus Püschel[7], Michael Amling[2], Robert Ritchie[8], Björn Busse[1]. [1]Department of Osteology and Biomechanics, University Medical Center Hamburg, Germany, [2]Department of Osteology and Biomechanics, University of Medical Center Hamburg, Germany, [3]European Synchrotron Radiation Facility, Grenoble, France, [4]Advanced Light Source, Berkeley, United States, [5]Lawrence Berkeley National Laboratory, United States, [6]Department of Medical Biometry and Epidemiology, University Medical Center Hamburg, Germany, [7]Department of Forensic Medicine, University Medical Center Hamburg, Germany, [8]Department of Materials Science and Engineering, University of California, Berkeley, United States

Disclosures: Elizabeth Zimmermann, None

SA0025 **Bone Strength and Microarchitectural Deficits in Children with Cystinosis**

Andrew Burghardt*[1], Kyla Kent[2], Jin Long[2], Jessica Whalen[2], Mary Leonard[2]. [1]University of California, San Francisco, United States, [2]Stanford University, United States

Disclosures: Andrew Burghardt, None

SA0026 **Incidence of Metabolic Bone Disease in Children Receiving Elemental Formula**

Ana Creo, MD*[1], Lisa Epp, RDN LD[2], Julie Buchholtz, RDN LD[3], Peter Tebben, MD[4]. [1]Mayo Clinic Department of Pediatric Endocrinology, United States, [2]Mayo Clinic Home Enteral Nutrition, United States, [3]Mayo Clinic Clinical Nutrition, United States, [4]Mayo Clinic Deprtment of Pediatric Endocrinology, United States

Disclosures: Ana Creo, MD, None

SA0027 **Maternal gestational vitamin D supplementation alters perinatal *RXRA* DNA methylation: findings from the MAVIDOS trial**

Elizabeth Curtis*[1], Nevena Krstic[2], Eloïse Cook[2], Stefania D'Angelo[1], Sarah Crozier[1], Rebecca Moon[3], Robert Murray[2], Emma Garratt[2], Paula Costello[2], Nicholas Bishop[4], Stephen Kennedy[5], Aris Papageorghiou[5], Inez Schoenmakers[6], Robert Fraser[7], Saurabh Gandhi[7], Ann Prentice[8], Kassim Javaid[9], Hazel Inskip[1], Keith Godfrey[10], Christopher Bell[11], Karen Lillycrop[2], Cyrus Cooper[12], Nicholas Harvey[10]. [1]MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, [2]Institute of Developmental Sciences, University of Southampton, United Kingdom, [3]MRC Lifecourse Epidemiology Unit, University of Southampton; Paediatric Endocrinology, University Hospitals Southampton NHS Foundation Trust, United Kingdom, [4]Academic Unit of Child Health, Sheffield Children's Hospital, University of Sheffield, United Kingdom, [5]Nuffield Department of Obstetrics and Gynaecology, John Radcliffe Hospital, University of Oxford, United Kingdom, [6]MRC Elsie Widdowson Laboratory; Department of Medicine, Faculty of Medicine and Health Sciences, University of East Anglia, United Kingdom, [7]Sheffield Hospitals NHS Trust, University of Sheffield, United Kingdom, [8]MRC Elsie Widdowson Laboratory, United Kingdom, [9]National Institute for Health Research (NIHR) Biomedical Research Centre, University of Oxford, United Kingdom, [10]MRC Lifecourse Epidemiology Unit, University of Southampton; NIHR Southampton Nutrition Biomedical Research Centre, University of Southampton and University Hospital Southampton NHS Foundation Trust, United Kingdom, [11]MRC Lifecourse Epidemiology Unit, University of Southampton; Institute of Developmental Sciences, University of Southampton, United Kingdom, [12]MRC Lifecourse Epidemiology Unit, University of Southampton; National Institute for Health Research (NIHR) Biomedical Research Centre, University of Oxford, United Kingdom

Disclosures: Elizabeth Curtis, None

SA0028 **Etiology Identification and Serum FGF-23 Measurement in Ten Patients with Fanconi Syndrome**

Juan Du*[1], Cong Zhang[1], Qian-qian Pang[1], Yan Jiang[1], Ou Wang[1], Mei Li[1], Xiaoping Xing[1], Weibo Xia[1]. [1]Peking Union Medical College Hospital, Peking Union Medical College, Chinese Academy of Medical Sciences, China

Disclosures: Juan Du, None

SA0029 **Multiple fractures in children is related to cortical bone dimensions**

Dana L. Duren*[1], Emily V. Leary[1], Dan G. Hoernschemeyer[1], Laura L. Tosi[2], Richard J. Sherwood[1]. [1]University of Missouri, United States, [2]Children's National Medical Center, United States

Disclosures: Dana L. Duren, None

SA0030 **Withdrawn**

SA0031 **Frequency of vigorous physical activity predicts bone strength accrual during adolescence**

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Disclosures: Leigh Gabel, None

SA0032 **Does Peak Bone Mass Coincide with Peak Bone Strength?**

Erik Lindgren*[1], Bjorn Rosengren[1], Magnus Karlsson[1]. [1]Department of Clinical Sciences and Orthopaedics, Lund University, Malmo, Sweden

Disclosures: Erik Lindgren, None

SA0033 **Plate-like trabeculae increase with age and lean mass in healthy girls at the distal tibia**

Deborah Mitchell*[1], Signe Caksa[2], Amy Yuan[2], Mary Bouxsein[2], Madhusmita Misra[3], Sherri-Ann Burnett-Bowie[2]. [1]Pediatric Endocrine Unit, Massachusetts General Hospital, United States, [2]Endocrine Unit, Massachusetts General Hospital, United States, [3]Pediatric Endocrine and Neuroendocrine Units, Massachusetts General Hospital, United States

Disclosures: Deborah Mitchell, None

SA0034 **Increased FGF23 in chronic kidney disease results from osteocyte maturation delay**
Renata C Pereira*[1], Barbara Gales[1], Katheleen Noche[2], Isidro I Salusky[1], Kathereine Wesseling-Perry[1]. [1]David Geffen School of Medicine at UCLA, Los Angeles, California, United States of America, United States, [2]University of California, United States
Disclosures: Renata C Pereira, None

SA0035 **Severe bone loss and multiple fractures in *SCN8A*-related epileptic encephalopathy**
Tim Rolvien*[1], Sebastian Butscheidt[1], Anke Jeschke[1], Axel Neu[2], Jonas Denecke[2], Christian Kubisch[3], Miriam Meisler[4], Klaus Püschel[5], Florian Barvencik[1], Timur Yorgan[1], Ralf Oheim[1], Thorsten Schinke[1], Michael Amling[1]. [1]Department of Osteology and Biomechanics, University Medical Center Hamburg-Eppendorf, Germany, [2]Department of Neuropediatrics, University Medical Center Hamburg-Eppendorf, Germany, [3]Department of Human Genetics, University Medical Center Hamburg-Eppendorf, Germany, [4]Department of Human Genetics, University of Michigan, Ann Arbor, MI, USA, United States, [5]Department of Legal Medicine, University Medical Center Hamburg-Eppendorf, Germany
Disclosures: Tim Rolvien, None

SA0036 **A Role for Apolipoprotein E in Fracture Healing**
Puviindran Nadesan*[1], Gurpreet Baht[2]. [1]Department of Orthopaedic Surgery, United States, [2]Duke Molecular Physiology Institute, Department of Orthopaedic Surgery, United States
Disclosures: Puviindran Nadesan, None

SA0037 **Effects of Sclerostin Depletion on Hematopoietic Stem Cells**
Cristine Donham*[1], Gabriela Loots[2], Jennifer Manilay[3], Aris Economides[4]. [1]University of California Merced, United States, [2]Lawrence Livermore National Laboratories, United States, [3]University of California, Merced, United States, [4]Regeneron Pharmaceuticals, United States
Disclosures: Cristine Donham, None

SA0038 **Targeting the Endosteal Niche in Myelodysplasia and Acute Myeloid Leukemia**
Marta Galán-Díez*[1], Govind Bhagat[1], Julie Teruya-Feldstein[2], Azra Raza[1], Ellin Berman[3], Stavroula Kousteni[1]. [1]Columbia University, United States, [2]Mount Sinai, United States, [3]Memorial Sloan Kettering Cancer Center, United States
Disclosures: Marta Galán-Díez, None

SA0039 **Parathyroid Hormone Rescues Bone Loss and Marrow Fat Expansion Induced by Calorie Restriction**
David Maridas*[1], Elizabeth Rendina-Ruedy[1], Ron Helderman[1], Anyonya Guntur[1], Victoria DeMambro[1], Beate Lanske[2], Daniel Brooks[3], Mary Bousxein[3], Clifford Rosen[1]. [1]Maine Medical Center Research Institute, United States, [2]Harvard School of Dental Medicine, United States, [3]Beth Israel Deaconess Medical Center, United States
Disclosures: David Maridas, None

SA0040 **Deletion of TIEG in CD4+ T-cells results in a sexually dimorphic bone phenotype.**
Malayannan Subramaniam*[1], Abdulrahman Saadalla[1], Molly Nelson Holte[1], Megan Weivoda[1], Merry Jo Oursler[1], Khashayarsha Khazaie[1], Russell Turner[2], Urszula Iwaniec[2], John Hawse[1]. [1]Mayo Clinic, United States, [2]Oregon State University, United States
Disclosures: Malayannan Subramaniam, None

SA0041 **ASBMR 2017 Annual Meeting Young Investigator Award**
Erythropoietin regulates bone marrow stromal cell differentiation
Sukanya Suresh*[1], Luis Fernandez De Castro Diaz[2], Soumyadeep Dey[1], Pamela Robey[2], Constance Noguchi[1]. [1]Molecular Medicine Branch, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, United States, [2]Skeletal Biology Section, National Institute of Dental and Craniofacial Research, National Institutes of Health, United States
Disclosures: Sukanya Suresh, None

SA0042 **PTH stimulation of osteoblasts protects against immunodeficiency**

Asuka Terashima*[1], Kazuo Okamoto[1], Hiroshi Takayanagi[2]. [1]Department of Osteoimmunology, Graduate School of Medicine and Faculty of Medicine, The University of Tokyo, Japan, [2]Department of Immunology, Graduate School of Medicine and Faculty of Medicine, The University of Tokyo, Japan

Disclosures: Asuka Terashima, Noevir Co., Ltd., Grant/Research Support

SA0043 **Mesenchymal stem cells promote B cells to produce inflammatory factors under chronic inflammation**

Xichao Zhou*[1], Wen Sun[2], Nida Meednu[3], Hengwei Zhang[1], Brendan F Boyce[1], Jennifer H Anolik[4], Lianping Xing[1]. [1]Department of Pathology and Laboratory Medicine, University of Rochester Medical Center, United States, [2]Department of Pathology and Laboratory Medicine, University of Rochester Medical Center; Nanjing Medical University, Nanjing 210029, People's Republic of China, United States, [3]Department of Medicine, Division of Allergy, Immunology and Rheumatology, University of Rochester Medical Center, United States, [4]DDepartment of Medicine, Division of Allergy, Immunology and Rheumatology, University of Rochester Medical Center, United States

Disclosures: Xichao Zhou, None

SA0044 **CXCL14 Is a Pro-Bone Metastatic Chemokine with CXCR4 Dependent and Independent Actions**

Diondra Harris*[1], Alexander Dowell[2], Katrina Clines[1], Hyun Sik Moon[1], Charlotte Cialek[1], Alexander Smith[1], Hui Jiang[1], Colm Morrissey[3], Shi Wei[2], Riley Brien[1], Euisik Yoon[1], Yu-Chih Chen[1], Kathryn Luker[1], Gary Luker[1], Gregory Clines[1]. [1]University of Michigan, United States, [2]University of Alabama at Birmingham, United States, [3]University of Washington, United States

Disclosures: Diondra Harris, None

SA0045 **CaMKK2 Inhibition as a "Dual-Hit" Strategy against ADT-Induced Osteoporosis and Bone-Metastatic Prostate Cancer**

Ushashi Dadwal*[1], Eric Chang[1], Justin Williams[1], Austin Pucylowski[1], Khalid Mohammad[2], Theresa Guise[2], Uma Sankar[1]. [1]Department of Anatomy and Cell Biology, Indiana University School of Medicine, United States, [2]Division of Endocrinology and Metabolism, Department of Internal Medicine, Indiana University School of Medicine, United States

Disclosures: Ushashi Dadwal, None

SA0046 **Cancer cell-derived microRNA induces osteoblastic phenotype in bone metastasis microenvironment**

Kyoko Hashimoto*[1], Satoko Sunamura[1], Hiroki Ochi[1], Toru Fukuda[2], Atsushi Okawa[3], Mitsuru Futakuchi[4], Shu Takeda[5], Shingo Sato[1]. [1]Department of Physiology and Cell Biology, Graduate School and Faculty of Medicine, Tokyo Medical and Dental University, Japan, [2]Department of Foodscience, Tokyo Seiei College, Japan, [3]Department of Orthopaedic Surgery, Graduate School and Faculty of Medicine, Tokyo Medical and Dental University, Japan, [4]Department of Molecular Toxicology, Graduate School of Medical Sciences, Nagoya City University, Japan, [5]Division of Endocrinology, Toranomon Hospital Endocrine Center, Japan

Disclosures: Kyoko Hashimoto, None

SA0047 **Gfi1 Modulation of SphK1 Maintains Growth and Survival of Myeloma Cells**

Daniela N. Petrusca*[1], Cheolkyu Park[2], Colin Crean[2], Denise Toscani[3], Judith Anderson[2], Rebecca Silbermann[2], G. David Roodman[4]. [1]Indiana University, Department of Medicine/Hematology-Oncology, United States, [2]Department of Medicine/Hematology-Oncology, Indiana University School of Medicine, United States, [3]Myeloma Unit, Dept. of Clinical and Experimental Medicine, University of Parma, Italy, [4]Department of Medicine/Hematology-Oncology, Indiana University School of Medicine and Rodebush VA, United States

Disclosures: Daniela N. Petrusca, None

SA0048 **Multiple Myeloma and Bone Marrow Adipose: Exploring An Unknown Relationship**
Michaela Reagan*[1], Heather Fairfield[1], Clifford Rosen[1], Carolyne Falank[1]. [1]Maine Medical Center Research Institute, United States
Disclosures: Michaela Reagan, None

SA0049 **Withdrawn**

SA0050 **BSP Deficiency Reduces Osteolytic Bone Metastasis of Breast Cancer**
Yu Shi*[1], Qisheng Tu[1], Jake Chen[1]. [1]Division of Oral Biology, Tufts University School of Dental Medicine, United States
Disclosures: Yu Shi, None

SA0051 **HDAC inhibitors promote LIFR expression and tumor dormancy in breast cancer cells that home to the bone**
Miranda Sowder*[1], Vera Mayhew[1], Samuel Dooyema[1], Rachelle W Johnson[2]. [1]Vanderbilt University, United States, [2]Vanderbilt University Medical Center, United States
Disclosures: Miranda Sowder, None

SA0052 **TAK1 inhibition impairs myeloma cell-bone marrow interaction to reduce myeloma tumor growth and bone destruction**
Jumpei Teramachi*[1], Masahiro Hiasa[2], Asuka Oda[3], Hirofumi Tenshin[4], Ryota Amachi[4], Takeshi Harada[3], Shingen Nakamura[3], Hirokazu Miki[5], Itsuro Endo[3], Tatsuji Haneji[1], Toshio Matsumoto[6], Masahiro Abe[3]. [1]Department of Histology and Oral Histology, Tokushima University, Japan, [2]Department of Biomaterials and Bioengineering, Tokushima University, Japan, [3]Department of Hematology, Endocrinology and Metabolism, Tokushima University, Japan, [4]Department of Orthodontics and Dentofacial Orthopedic, Tokushima University, Japan, [5]Division of Transfusion and Cell Therapy Medicine, Tokushima University Hospital, Japan, [6]Fujii Memorial Institute of Medical Sciences, Tokushima University, Japan
Disclosures: Jumpei Teramachi, None

SA0053 **MET/VEGFR/FMS signaling contributes prostate cancer-induced osteoclast differentiation and bone resorption**
Kenta Watanabe*[1], Michiko Hirata[1], Tsukasa Tominari[1], Chiho Matsumoto[1], Hidenori Fujita[2], Kazuhiko Yonekura[2], Gillian Murphy[3], Hideaki Nagase[4], Chisato Miyaura[1], Masaki Inada[1]. [1]Tokyo University of Agriculture and Technology, Japan, [2]Taiho Pharmaceutical Co., Ltd., Japan, [3]University of Cambridge, United Kingdom, [4]Kennedy Institute of Rheumatology, United Kingdom
Disclosures: Kenta Watanabe, None

SA0054 **KPNA4 modulates osteoclastogenesis during the skeletal metastasis of prostate cancer**
Jian Yang*[1], Liang Luo[1], Ruohan Zhang[1], Yuqi Guo[1], Xin Li[1]. [1]New York University College of Dentistry, United States
Disclosures: Jian Yang, None

SA0055 **Effect of Bone Allograft in Multiple Myeloma Spine Surgeries**
Meera Mohan*[1], Samant Rohan[1], Amy Buros[1], Daisy Alapat[1], Jerry Walters[1], Thomas G Pait[1], Nancy A. Ghaleb[1], Sharmilan Thanendrarajan[1], Frits van Rhee[1], Faith Davies[1], Gareth Morgan[1], Carolina Schinke[1], Larry J. Suva[2], Maurizio Zangari[1]. [1]University of Arkansas for Medical Sciences, United States, [2]Texas A&M University, United States
Disclosures: Meera Mohan, None

SA0056 **Attenuation of Inflammatory Responses May be Critical in PTOA Development in MRL/MpJ and Str/ort Strains**
Jiun Chiun Chang*[1], Aimy Sebastian[2], Deepa Murugesh[2], Sarah Hatsell[3], Aris Economides[3], Blaine Christiansen[4], Gabriela Loots[1]. [1]Lawrence Livermore National Laboratories and University of California Merced, United States, [2]Lawrence Livermore National Laboratories, United States, [3]Regeneron Pharmaceuticals, United States, [4]University of California Davis Medical Center, United States
Disclosures: Jiun Chiun Chang, None

SA0057 **Global Analysis of Runx2 Regulated Genes During Chondrocytes Differentiation**
Haiyan Chen*[1], Jessica Boni[1], Harunur Rashid[1], Mohammad Hassan[1], Amjad Javed[1]. [1]University of Alabama at Birmingham, United States
Disclosures: Haiyan Chen, None

SA0058 **Periosteal chondrogenesis and temporal dynamics of BMP2-induced middle phalanx regeneration in the adult mouse.**
Lindsay Dawson*[1], Ling Yu[2], Mingquan Yan[2], Connor Dolan[2], Ken Muneoka[2]. [1]Texas A & M University, United States, [2]Texas A&M University, United States
Disclosures: Lindsay Dawson, None

SA0059 ***In vitro*** **evidence for a role of the phosphatidylinositol-5-phosphatase SHIP2 in matrix mineralization**
Anais Fradet*[1], Jamie Fitzgerald[1]. [1]Henry Ford Hospital - Bone and Joint Center, United States
Disclosures: Anais Fradet, None

SA0060 **Chondrocyte PTH1R Signaling is Essential for Articular Cartilage Maintenance and Protection Post-trauma**
Fadia Kamal*[1], Eric Schott[1], Elijah Carlson[1], Monaliza El-Quadi[1], Heather Le Bleu[1], Matthew Hilton[2], Jennifer Jonason[1], Michael Zuscik[1]. [1]University of Rochester, United States, [2]Duke University School of Medicine, United States
Disclosures: Fadia Kamal, None

SA0061 **Ghrelin Protects against Osteoarthritis through Interplaying with Akt and NF-κB Signaling Pathways**
Weiwei Li*[1], Wenhan Wang[2], Yunpeng Zhao[1]. [1]Shandong University Qilu Hospital, China, [2]Shandong University, China
Disclosures: Weiwei Li, None

SA0062 **Epigenetic Regulation of Articular Chondrocytes by Vitamin C Involving Prolyl Hydroxylase Domain-containing Protein 2 (PHD2): Role of Vitamin C Deficiency in the Pathogenesis of Osteoarthritis**
Richard Lindsey*[1], Shaohong Cheng[1], Sheila Pourteymoor[1], Catrina Godwin[1], Subburaman Mohan[1]. [1]VA Loma Linda Healthcare System, United States
Disclosures: Richard Lindsey, None

SA0063 **Global and Chondrocyte-specific Deletion of FGF2 Contribute to Trauma-induced Osteoarthritis**
Patience Meo Burt*[1], Liping Xiao[1], Siu-Pok Yee[2], Brya G. Matthews[3], Marja Marie Hurley[1]. [1]Department of Medicine/Endocrinology, School of Medicine, Uconn Health, United States, [2]Department of Cell Biology, Uconn Health, United States, [3]Department of Reconstructive Sciences, School of Dental Medicine, Uconn Health, United States
Disclosures: Patience Meo Burt, None

SA0064 **Actions of PTHrP, HDAC4, and SIK3 to Regulate Chondrocyte Hypertrophy**
Shigeki Nishimori*[1], Marc N. Wein[1], Henry M. Kronenberg[1]. [1]Endocrine Unit, Massachusetts General Hospital and Harvard Medical School, United States
Disclosures: Shigeki Nishimori, None

SA0065 **Osteoglycin, an Osteoblast-derived Regulator of Bone Mass and Glucose Homeostasis**
Nikki Lee*[1], Herbert Herzog[1], Paul Baldock[2]. [1]Neuroscience Division, Garvan Institute of Medical Research, Australia, [2]The Division of Bone Biology, Garvan Institute of Medical Research, Australia
Disclosures: Nikki Lee, None

SA0066 **Are Benefits from an 8-Month Exercise Intervention in Pre- and Peri-pubertal Children Maintained After 1 Year of Detraining? Follow-Up Data from the CAPO Kids Trial**
Belinda Beck*[1], Benjamin Weeks[1], Rossana Nogueira[1]. [1]Griffith University, Australia
Disclosures: Belinda Beck, None

SA0067 **Circulating Fibroblast Growth Factor 23 Levels Decline Following Sleeve Gastrectomy**
Emma Billington*[1], Rinki Murphy[2], Karen Callon[2], Greg Gamble[2], Michael Booth[3], Ian Reid[2]. [1]University of Calgary, Canada, [2]University of Auckland, New Zealand, [3]Waitemata District Health Board, New Zealand
Disclosures: Emma Billington, None

SA0068 **Cold stress challenge enhances NGF mRNA level in brown fat and testis and regulates BDNF and Osteocalcin mRNA in bone and brain of mice**
Claudia Camerino*[1], Elena Conte[2], Adriano Fonzino[2], Kejla Musaraj[2], Roberta Caloiero[2], Domenico Tricarico[2]. [1]Dept. of Biomedical Sciences & Human Oncology, University of Bari, Italy, [2]Dept. of Pharmacy – Drug Sciences, University of Bari, Italy
Disclosures: Claudia Camerino, None

SA0069 **FGF23 is associated with adiposity in dialysis patients: crosstalk between bone and adipose**
Janet Chiang*[1], George Kaysen[2], Anne Schafer[1], Kirsten Johansen[1]. [1]University of California, San Francisco, United States, [2]University of California, Davis, United States
Disclosures: Janet Chiang, None

SA0070 **Vitamin K_2-Induced Carboxylation of Osteocalcin and Matrix Gla Protein Improves Bone and Lipid Metabolism in Overweight Children**
Mary Ellen Fain*[1], Celestine Williams[1], Allison Jasti[1], Reda Bassali[2], Catherine Davis[2], Norman Pollock[2]. [1]Georgia Prevention Institute, Medical College of Georgia, Augusta University, United States, [2]Department of Pediatrics, Medical College of Georgia, Augusta University, United States
Disclosures: Mary Ellen Fain, None

SA0071 **The Phosphate Hypothesis: an expanding role for FGF23**
Robert Fredericks*[1]. [1]Endocrine Associates, United States
Disclosures: Robert Fredericks, None

SA0072 **Upregulation of Lipocalin 2 is a Protective Mechanism to Counteract Insulin Resistance**
Ioanna Mosialou*[12], Steven Shikhel[12], Stavroula Kousteni[12]. [1]Columbia University, United States, [2]Columbia university, United States
Disclosures: Ioanna Mosialou, None

SA0073 **Suppression of undercarboxylated osteocalcin after acute prednisolone ingestion is associated with impaired post-exercise insulin sensitivity and attenuated mTOR protein signaling.**
Lewan Parker*[1], Andrew Garnham[2], Glenn McConell[3], Nigel Stepto[3], David Hare[4], Elizabeth Byrnes[5], Peter Ebeling[6], Ego Seeman[7], Tara Brennan-Speranza[8], Itamar Levinger[3]. [1]Clinical Exercise Science Research Program, Institute of Sport, Exercise and Active Living (ISEAL), Victoria University, Melbourne, Australia, Australia, [2]School of Exercise & Nutrition Sciences, Deakin University, Melbourne, Australia, Australia, [3]Clinical Exercise Science Research Program, Institute of Sport, Exercise and Active Living (ISEAL), Victoria University, Melbourne, Australia., Australia, [4]University of Melbourne and the Department of Cardiology, Austin Health, Melbourne Australia., Australia, [5]PathWest QEII Medical Centre, Perth, Australia, Australia, [6]Department of Medicine, School of Clinical Sciences, Faculty of Medicine, Nursing and Health Sciences, Monash University, Australia, Australia, [7]University of Melbourne and the Department of Endocrinology, Austin Health, Melbourne, Australia, Australia, [8]Department of Physiology, Bosch Institute for Medical Research, University of Sydney, Sydney, Australia, Australia
Disclosures: Lewan Parker, None

SA0074 **Improving Mitochondrial Function via CypD Genetic Deletion Promotes BMSC Osteogenicity and Fracture Repair**
Brianna Shares*[1], Laura Shum[1], Roman Eliseev[1]. [1]University of Rochester, United States
Disclosures: Brianna Shares, None

SA0075 **Glucose metabolism and insulin release are impaired under conditions of excess TGF-β mediated high bone turnover**
Trupti Trivedi*[1], Jenna Regan[2], Sarah Tersey[3], Sutha John[1], Yun She[2], Sreemala Murthy[2], Xu Cao[4], Khalid Mohammad[2], Theresa Guise[2]. [1] Division of Endocrinology, Department of Medicine, Indiana University, United States, [2]Division of Endocrinology, Department of Medicine, Indiana University, United States, [3]Department of Pediatrics, Indiana University School of Medicine, United States, [4]Department of Orthopedic Surgery, Johns Hopkins University School of Medicine, United States
Disclosures: Trupti Trivedi, None

SA0076 **ASBMR 2017 Annual Meeting Young Investigator Award**
Par1/Mark3 functions in osteoblasts to coordinate bone mineral density and body mass
Qian Zhang*[1], Gina Calabrese[2], Angela Verado[1], Larry Mesner[2], Thomas Clemens[1], Charles Farber[2]. [1]Johns Hopkins University, United States, [2]University of Virginia, United States
Disclosures: Qian Zhang, None

SA0077 **Absence of ASXL2 only in Myeloid Lineage Cells Prevents Obesity while Increasing Bone Mass**
Wei Zou**[1], Nidhi Rohatgi*[1], Jesse Williams[1], Hua Pan[2], Terri Pietka[3], Nada A Abumrad[3], Samuel Wickline[2], Gwendalyn J Randolph[1], Steven L Teitelbaum[4]. [1]Department of Pathology and Immunology, Washington University School of Medicine, United States, [2]University of South Florida Morsani College of Medicine, United States, [3]Department of Internal Medicine, Division of Nutritional Science, Washington University School of Medicine, United States, [4]Department of Pathology and Immunology; Department of Internal Medicine, Division of of Bone and Mineral Diseases, Washington University School of Medicine, United States
Disclosures: Wei Zou, None*

SA0078 **Similar increase in bone resorption and decrease in bone mass but opposite effects in osteocytic gene expression in female versus male mice with FMR1 deletion, a model of fragile X syndrome**
Hannah M. Davis*[1], Rafael Pacheco-Costa[1], Alexandra Aguilar-Perez[1], Carmen Herrera[1], Greg Smith[2], Joaquin Lugo[2], Lilian I. Plotkin[1]. [1]Indiana University School of Medicine, United States, [2]Baylor University, United States
Disclosures: Hannah M. Davis, None

SA0079 **The Skeletal Phenotype of Mice Deficient in Liver Fatty Acid Binding Protein-1 (L-FABP-1) is Increased Bone Marrow Fat and Bone Mass**

Claire Watson*[1], Diarra Williams[1], Shannon Huggins[1], Alyssa Falck[1], Avery McIntosh[1], Friedhelm Schroeder[1], Ann Kier[1], Larry Suva[1], Dana Gaddy[1]. [1]Texas A&M University College of Medicine, United States

Disclosures: Claire Watson, None

SA0080 **MicroRNA miR-204 and miR-211 Control Runx2 Expression and Regulate Bone Mass**

Jun Li*[1], Jian Huang[2], Lan Zhao[2], Ge Zhang[3], Guang-qian Zhou[4], Andre J. van Wijnen[5], Di Chen[2]. [1]Department of Orthopedic Surgery, Rush University Medical Centre, United States, [2]Department of Orthopedic Surgery, Rush University Medical Center, United States, [3]Institute for Advancing Translational Medicine in Bone & Joint Diseases, Hong Kong Baptist University, China, [4]Department of Medical Cell Biology and Genetics, Shenzhen Key Laboratory and the Center for Anti-Ageing and Regenerative Medicine, Shenzhen University Medical School, China, [5]Department of Orthopedic Surgery, Mayo Clinic, United States

Disclosures: Jun Li, None

SA0081 **Use of the CRISPRi/dCas9::KRAB system to suppress gene expression as an alternative to conditional gene deletion**

Ryan Macleod*[1], Charles OBrien[1]. [1]University of Arkansas for Medical Sciences, United States

Disclosures: Ryan Macleod, None

SA0082 **What can be discovered by an unstructured screening of KOMP lines?**

David Rowe*[1], Douglas Adams[1], Renata Rydzik[1], Li Chen[1], Zhihua Wu[1], Seung-Hyun Hong[2], Gaven Garland[3], Caibin Zhang[1], Dong-Guk Shin[2], John Sundberg[3], Cheryl Ackert-Bicknell[4]. [1]University of Connecticut Health, United States, [2]University of Connecticut, United States, [3]The Jackson Laboratory, United States, [4]University of Rochester School of Medicine, United States

Disclosures: David Rowe, None

SA0083 **TRAC: a Novel Gene Expression Quantification Method Compared to qPCR**

Francesco Rossignolo*[1], Stefano Fontana[1], Jani Salmivaara[2], Oona Kivelä[2], Piia Tiirola[2], Hinnerk Boriss[2]. [1]Aptuit, Italy, [2]ValiFinn, Finland

Disclosures: Francesco Rossignolo, None

SA0084 **Regulation of phalangeal joint development by ACVR1 in fibrodysplasia ossificans progressiva**

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Disclosures: O. Will Towler, None

SA0085 **Mutation Correction in OI iPSC Restores Bone Formation**

Xiaonan Xin*[1], Mark Kronenberg[1], Li Chen[1], Zhihua Wu[1], Liping Wang[1], Xi Jiang[2], David Rowe[1], Alexander Lichtler[1]. [1]UConn Health, United States, [2]University of Pennsylvania, United States

Disclosures: Xiaonan Xin, None

SA0086 **Wnt signals control development of the periodontium.**

xue yuan*[1], Yan Wu[2], yuan zhao[3], Kristy Perez[1], G Pellegrini[4], K Condon[5], K McAndrews[5], M Cregor[5], Teresita Bellido[5], Jill Helms[1]. [1]Stanford University, United States, [2]Stanford University & Stomatology Hospital of Chongqing Medical University, China, [3]Stanford University & Lanzhou University, United States, [4]Indiana Universtiy, United States, [5]Indiana University, United States

Disclosures: xue yuan, None

SA0087 **Identification of anabolic bone genes using whole genome sequencing in high bone mass families**

John Eisman*[1], Peter Croucher[2], Paul Baldock[2], Tuan Nguyen[2], Robert Brink[2], Daniel Hesselson[2], Sing Nguyen[2], Mohammad Moni[2], Scott Youlten[2]. [1]Garvan Institute of Medical Research; School of Medicine Sydney, University of Notre Dame Australia; St Vincents Hospital; UNSW Sydney, NSW, Australia, Australia, [2]Garvan Institute of Medical Research, Australia

Disclosures: John Eisman, None

SA0088 **Genome-Wide Association Study Identifies Three Novel Genetic Determinants of Dental Maturation**

Olja Grgic*[1], Carolina Medina-Gomez[2], Brunilda Dhamo[3], Katerina Trajanoska[4], Strahinja Vucic[3], Edwin M Ongkosuwito[5], Vincent W V Jaddoe[6], Andre G Uitterlinden[7], Marjo-Riitta Jarvelin[8], Nicholas Timpson[9], David M Evans[10], Eppo B Wolvius[3], Fernando Rivadeneira[11]. [1]EMC, The Generation R Study Group, EMC, Internal Medicine, EMC, Oral & maxillofacial surgery, special dental care and orthodontics, Netherlands, [2]EMC, The Generation R Study Group, EMC, Internal Medicine, EMC, Department of Epidemiology, Netherlands, [3]EMC, The Generation R Study Group, EMC, Oral & maxillofacial surgery, special dental care and orthodontics, Netherlands, [4]EMC, Internal Medicine, EMC, Department of Epidemiology, Netherlands, [5]EMC, The Generation R Study Group, 3EMC, Oral & maxillofacial surgery, special dental care and orthodontics, Netherlands, [6]EMC, The Generation R Study Group, Netherlands, [7]EMC, The Generation R Study Group, 2EMC, Internal Medicine, Netherlands, [8]NFBC1966/Lifecourse Epidemiology, Imperial College London/U.K, United Kingdom, [9]ALSPAC/MRC Integrative Epidemiology Unit, Bristol University/U.K., United Kingdom, [10]ALSPAC/MRC Integrative Epidemiology Unit, Bristol University/U.K., Diamantina Institute, University of Queensland/AU, United Kingdom, [11]EMC, The Generation R Study Group, EMC, Internal Medicine, Netherlands

Disclosures: Olja Grgic, None

SA0089 **Genetic Prediction of Lifetime Risk of Fracture**

Thao P. Ho-Le*[1], Jackie R. Center[2], John A. Eisman[3], Hung T. Nguyen[1], Tuan V. Nguyen[4]. [1]Centre of Health Technologies, FEIT, University of Technology Sydney, Australia, [2]Bone Biology Division, Garvan Institute of Medical Research; St Vincent Clinical School, UNSW, Australia, Australia, [3]Bone Biology Division, Garvan Institute of Medical Research; St Vincent Clinical School, UNSW, Australia; School of Medicine, Sydney University of Notre Dame, Australia, [4]University of Technology, Sydney; Bone Biology Division, Garvan Institute of Medical Research, NSW; St Vincent Clinical School, UNSW; School of Public Health and Community Medicine, UNSW; School of Medicine, Sydney University of Notre Dame, Australia

Disclosures: Thao P. Ho-Le, None

SA0090 **A Whole Genome Association Meta-Analysis Study Identifies Novel Loci Associated with Bone Microarchitecture Assessed by HR-pQCT independent of aBMD**

Yi-Hsiang Hsu*[1], Fredrick Kinyua[2], Ching-Ti Liu[3], Maria Nethander[4], Emmaneul Biver[5], Elizabeth J. Atkinson[6], Elisabeth Sornay-Rendu[7], Claire Watson[8], Andy Kin On Wong[9], Shreyasee Amin[10], Elise Lim[3], Michelle Yau[11], Laiji Yang[12], Eric Lespessailles[13], Roby Joehanes[14], Kerry Broe[12], Jonathan D. Adachi[15], Serkalem Demissie[16], David Karasik[12], Blandine Merle[17], Dan Mellström[18], L. Adrienne Cupples[16], Brent Richards[19], David Goltzman[20], David A. Hanley[21], Steven K. Boyd[22], M ary L. Bouxsein[23], Ronald Y Kwon[8], Mattias Lorentzon[24], Claes Ohlsson[25], Pawel Szulc[26], Serge Ferrari[27], Roland D. Chapurlat[26], Sundeep Khosla[10], Douglas P. Kiel [14]. [1]HSL Institute for Aging Research, Harvard Medical School, Broad Institute of MIT and Harvard, United States, [2]Institute for Aging Research, Hebrew SeniorLife , United States, [3]Biostatistics, Boston University School of Public Health , United States, [4]University of Gothenberg, Sweden, [5]University of Geneva, Switzerland, [6]Mayo Clinic, United States, [7]INSERM and University of Lyon, France, [8]Musculoskeletal Systems Biology Lab, Orthopaedics and Sports Medicine, University of Washington, United States, [9]Toronto General Research Institute, University Health Network and McMaster University, Canada, [10]Mayo Clinic College of Medicine, United States, [11]Institute for Aging Research, Hebrew SeniorLife and Deparment of Medicine, Beth Israel Deaconess Medical Center and Harvard Medical School, United States, [12]Institute for Aging Research, Hebrew SeniorLife, United States, [13]University of Orleans, France, [14]Institute for Aging Research, Hebrew SeniorLife and Harvard Medical School, United States, [15]Charlton Medical Centre, McMaster University, Canada, [16]Biostatistics, Boston University School of Public Health, United States, [17]INSERM, University of Lyon, France, [18]Univ of Gothenburg, Sweden, [19]Lady Davis Institute and Department of Human Genetics, McGill University, Canada, [20]Departments of Medicine and Physiology, McGill University, Canada, [21]Cumming School of Medicine, University of Calgary, Canada, [22]University of Calgary, Canada, [23]Beth Isreal Deaconess Medical Center, Harvard Medical School , United States, [24]Sahlgrenska University Hospital, Sweden, [25]Center for Bone and Arthritis Research at the Sahlgrenski Academy, Sweden, [26]INSERM and University of Lyon, Hospital E. Herriot, France, [27]Geneva University Hospital, Switzerland

Disclosures: Yi-Hsiang Hsu, None

SA0091 **Correlations between Transcriptomic Gene Expression and Bone Phenotype in a Phosphate-Deficient, Mouse Fracture Healing Model**

Zi Jun Deng*[1], Amira Hussein[1], Kyle Lybrand[1], Deven Carrol[1], Alexander Wulff[1], Heather Matheny[1], Brenna Hogue[1], Serkalem Demissie[2], Elise Morgan[3], Louis Gerstenfeld[1]. [1]Boston University School of Medicine, United States, [2]Boston University School of Public Health, United States, [3]Boston University, United States

Disclosures: Zi Jun Deng, None

SA0092 **Genetic Profiling of Decreased Bone Mineral Density in an Independent Sample of Caucasian Women**

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Disclosures: Xiangxue Xiao, None

SA0093 **Risedronate could reduce the glomerular basement membrane thickening in Pit-1 overexpressing transgenic rat**

Yohei Asada*[1], Takeshi Takayanagi[1], Shogo Nakayama[1], Eisuke Tomatsu[1], Yasumasa Yoshino[1], Sahoko Sekiguchi-Ueda[1], Megumi Shibata[1], Atsushi Suzuki[1]. [1]Fujita Health University, Japan

Disclosures: Yohei Asada, None

SA0094 **Membrane Estrogen Receptor-α is Essential for Estrogen Signaling in Bone of Male Mice**
Helen Farman*[1], Karin Gustafsson[1], Petra Henning[1], Vikte Lionikaite[1], Sofia Movérare-Skrtic [1], Jianyao Wu[1], Henrik Rybery[1], Ellis Levin[2], Claes Ohlsson[1], Marie Lagerquist[1]. [1]Centre for Bone and Arthritis Research at Institute of Medicine, Sahlgrenska Academy at University of Gothenburg, SE-41345 Gothenburg, Sweden, Sweden, [2]Division of Endocrinology, Departments of Medicine and Biochemistry, University of California, Irvine, Irvine, California, and the Long Beach VA Medical Center, Long Beach, CA, USA, United States
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SA0095 **Lack of Fibroblast Growth Factor-23 (Fgf23) signaling improves cardiac function in a murine model of acute myocardial infarction**
Kristopher Ford*[1], Svetlana Slavic[1], Flora Klinger[1], Flora Klinger[1], Marlies Dolezal[1], Ute Zeitz[1], Karolina Hilse-Koller[1], Elena Pohl[1], Reinhold G Erben[1], Olena Andrukhova[1]. [1]Department of Biomedical Sciences University of Veterinary Medicine, Austria
Disclosures: Kristopher Ford, None

SA0096 **Inflammation, not Phosphate or Anemia, Stimulates the Initial Rise in FGF-23 at the Onset of Chronic Kidney Disease**
Jackie Fretz*[1], Xiuqi Li[1], Tracy Nelson[1], Karin Finberg[1]. [1]Yale School of Medicine, United States
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SA0097 **A Calcium-Sensing Receptor (*CASR*) Mutation Causes Hypocalcemia by Disrupting a Transmembrane Salt Bridge that Modulates β-arrestin Signaling**
Caroline Gorvin*[1], Valerie Babinsky[1], Tomas Malinauskas[1], Peter Nissen[2], Anders Schou[3], Christian Siebold[1], E. Yvonne Jones[1], Fadil Hannan[4], Rajesh Thakker[1]. [1]University of Oxford, United Kingdom, [2]Aarhus University Hospital, Denmark, [3]Odense University Hospital, Denmark, [4]University of Liverpool, United Kingdom
Disclosures: Caroline Gorvin, None

SA0098 **Phosphorylation of S122 in ERα Is Important for the Skeletal Response to Estrogen Treatment in Male Mice**
Karin Gustafsson*[1], Helen Farman[1], Sofia Movérare-Skrtic[1], Vikte Lionikaite[1], Jianyao Wu[1], Petra Henning[1], Sara Windahl[1], Klara Sjögren[1], Andree Krust[2], Pierre Chambon[2], Claes Ohlsson[1], Marie Lagerquist[1]. [1]Centre for Bone and Arthritis Research at Institute of Medicine, Sahlgrenska Academy at University of Gothenburg, Sweden, [2]Departement of Functional Genomics, Institut de Génétique et de Biologie Moléculaire et Cellulaire, Collège de France, Université de Strasbourg, France
Disclosures: Karin Gustafsson, None

SA0099 **Anabolic bone effects of soluble Frizzled1, 2 and 7 receptors in mice**
Hisashi Hasegawa*[1], Kengo Yamawaki[1], Takuya Murakami[1], Kenji Nagao[1], Makoto Kakitani[2], Kazuma Tomizuka[2]. [1]Nephrology Research Laboratories, Kyowa Hakko Kirin Co., Ltd., Japan, [2]Innovative Technology Laboratories, Kyowa Hakko Kirin Co., Ltd., Japan
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SA0100 **Androgens Inhibit Renal Calcium and Phosphate Transporters Independent of Bone Resorption Through AR-mediated Effects**
Rougin Khalil*[1], Michaël Laurent[2], Na Ri Kim[1], Ferran Jardi[1], Frank Claessens[3], Brigitte Decallonne[1], Dirk Vanderschueren[1]. [1]Laboratory of Clinical and Experimental Endocrinology, KU Leuven, Belgium, [2]Center for Metabolic Bone Diseases, Geriatrics Department, University Hospitals Leuven, Belgium, [3]Laboratory of Molecular Endocrinology, KU Leuven, Belgium
Disclosures: Rougin Khalil, None

SA0101 **Estrogens decrease osteoclastogenesis in vitro by stimulating Bak\Bax-dependent apoptosis of early progenitors**
Ha-Neui Kim*[1], Li Han[1], Aaron Warren[1], Stavros Manolagas[1], Maria Almeida[1], Robert Jilka[1]. [1]Division of Endocrinology and Metabolism, Center for Osteoporosis and Metabolic Bone Diseases, Central Arkansas Veterans Healthcare System, United States
Disclosures: Ha-Neui Kim, None

SA0102 **Conditional Silencing of IL-17 Receptor in Osteocytes Blocks the Bone Catabolic Activity of Continuous PTH Treatment by decreasing osteocytic RANKL production**
Jau-Yi Li*[1], Jonathan Adams[1], M.N. Weitzmann[1], Roberto Pacifici[1]. [1]Emory University, School of Medicine, United States
Disclosures: Jau-Yi Li, None

SA0103 **Discovery of the Genomic and Homeostatic Circuitry Controlling *Cyp27b1* Expression through *in vivo* Manipulation**
Mark Meyer*[1], Nancy Benkusky[1], Seong min Lee[1], Melda Onal[1], Martin Kaufmann[2], Glenville Jones[2], John Wesley Pike[1]. [1]University of Wisconsin - Madison, United States, [2]Queen's University, Canada
Disclosures: Mark Meyer, None

SA0104 **Parathyroid Hormone Increases EphrinB2/EphB4 of Osteoclast/Osteoblast Coupling Factor in Primary Hyperparathyroidism Model**
Yuki Nagata*[1], Yasuo Imanishi[1], Daichi Miyaoka[1], Noriyuki Hayashi[1], Tomomi Maeda[1], Masanori Emoto[1], Masaaki Inaba[1]. [1]Osaka City University Graduate School of Medicine, Department of Metabolism, Endocrinology, and Molecular Medicine, Japan
Disclosures: Yuki Nagata, None

SA0105 **Calcium Sensing Receptor and PTH Receptor responses are regulated by TRPC1 Ion Channel**
Marta Onopiuk*[1], Bonnie Eby[2], Vasyl Nesin[1], Peter Ngo[1], Maria Luisa Brandi[3], Wenhan Chang[4], Mary Beth Humphrey[1], Kai Lau[2], Leonidas Tsiokas[1]. [1]Department of Cell Biology, University of Oklahoma Health Sciences Center, Oklahoma City, OK73104, USA, United States, [2]Department of Medicine, Division of Nephrology, University of Oklahoma Health Sciences Center, Oklahoma City, OK73104, USA, United States, [3]Universita degli Studi di Firenze, CTO-SOD Malattie del Metabolismo Minerale e Osseo, Florence, Italy, Italy, [4]Department of Medicine, UCSF Endocrinology and Metabolism, UCSF, San Francisco, CA, USA, United States
Disclosures: Marta Onopiuk, None

SA0106 **Estrogen via Estrogen Receptor Alpha Inhibits Mandibular Condylar Fibrocartilage Degeneration through Upregulation of Protease Inhibitors**
Jennifer Robinson*[1], Paola Soria[1], Jing Chen[1], Helen Lu[1], Sunil Wadhwa[1]. [1]Columbia University, United States
Disclosures: Jennifer Robinson, None

SA0107 **Ethnic Differences in the Diurnal Rhythms of Calcium and Phosphate Metabolism**
Inez Schoenmakers*[1], Jean Redmond[2], Landing Jarjou[3], Bo Zhou[4], Ann Prentice[2], Tony Fulford[5]. [1]Medical Research Council (MRC) Human Nutrition Research, Cambridge, UK and Department of Medicine, University of East Anglia, Norwich, UK, United Kingdom, [2]Medical Research Council (MRC) Human Nutrition Research, Cambridge, UK, United Kingdom, [3]MRC Keneba, The Gambia, Gambia, [4]Department of Public Health, Shenyang Medical College, Shenyang, PR China, China, [5]MRC International Nutrition Group, London School of Hygiene and Tropical Medicine, London, UK, United Kingdom
Disclosures: Inez Schoenmakers, None

SA0108 **The influence of scaffold stiffness on murine fracture healing: an *in silico* study**
Duncan Betts*[1], Esther Wehrle[1], Gisela Kuhn[1], Sandra Hofmann[2], Ralph Müller[1]. [1]Institute for Biomechanics, ETH Zurich, Switzerland, [2]Institute for Biomechanics, ETH Zurich, Zurich, Switzerland, Department of Biomedical Engineering and, Institute for Complex Molecular Systems, Eindhoven University of Technology, Eindhoven, The Netherlands, Netherlands
Disclosures: Duncan Betts, None

SA0109 **RNA-Seq Based Transcriptome Profiling and Transformation of Mature Osteoblasts into Bone Lining Cells during Bone Loss Induced by Mechanical Unloading**
A Ram Hong*[1], Kwangsoo Kim[2], Jae-yeon Yang[2], Ji-yeon Lee[2], Kyoung Min Kim[3], Jung Hee Kim[1], Chan Soo Shin[1], Sang Wan Kim[4]. [1]Seoul National University College of Medicine, Korea, Republic of, [2]Seoul National University Hospital Biomedical Research Institute, Korea, Republic of, [3]Seoul National University Bundang Hospital, Korea, Republic of, [4]Seoul National University College of Medicine, Seoul Metropolitan Government Boramae Medical Center, Korea, Republic of
Disclosures: A Ram Hong, None

SA0110 **Effect of Estrogen Receptor and β-Catenin Signaling Activation on Mechanically Induced Bone Formation in Ovariectomized Mice**
Astrid Liedert*[1], Claudia Nemitz[2], Anita Ignatius[2]. [1]University of Ulm, Germany, [2]University of Ulm , Germany
Disclosures: Astrid Liedert, None

SA0111 **Microtubule-dependent regulation of a signaling relay that tunes the osteocyte mechanical load response**
James Lyons*[1], Humberto Joca[1], Robert Law[2], Jaclyn Kerr[1], Guoli Shi[1], Ramzi Khairallah[3], Konstantinos Konstantopoulos[2], Christopher Ward[1], Joseph Stains[1]. [1]University of Maryland, Baltimore, United States, [2]Johns Hopkins University, United States, [3]Myologica, LLC., United States
Disclosures: James Lyons, None

SA0112 **TIEG1 is a Critical Mediator of Wnt Signaling in Calcific Aortic Valve Disease**
Nalini Rajamannan*[1]. [1]Mayo Clinic, United States
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SA0113 **Shared Molecular Mechanisms Contributing to PTOA in Loading-Mediated Injury Models**
Aimy Sebastian*[1], Jiun Chang[1], Nicholas Hum[1], Deepa Murugesh[1], Gabriela Loots[1], Blaine Christiansen[2]. [1]Lawrence Livermore National Laboratories, United States, [2]UC Davis Medical Center, Department of Orthopedic Surgery, United States
Disclosures: Aimy Sebastian, None

SA0114 **ASBMR 2017 Annual Meeting Young Investigator Award**
Cortical bone loss due to skeletal unloading in aldehyde dehydrogenase 2 gene knockout mice is associated with decreased expression of PTH receptors in osteocytes.
Takafumi Tajima*[1], Kunitaka Menuki[1], Kayoko Okuma[1], Manabu Tsukamoto[1], Hokuto Fukuda[1], Yasuaki Okada[1], Kenji Kosugi[1], Akinori Sakai[1]. [1]Department of Orthopaedic Surgery, University of Occupational and Environmental Health, Japan, Japan
Disclosures: Takafumi Tajima, None

SA0115 **Low Magnitude Mechanical Signals Decrease Invasion and Expression of Osteolytic Factors in MDA-MD-231 Breast Cancer cells, with subsequent Suppression of Osteoclastogenesis**
Xin Yi*[1], Laura Wright[1], Gabriel Pagnotti[1], Jenna Reagan[1], Gunes Uzer[2], Clinton Rubin[3], Khalid Mohammad[1], Theresa Guise[1], William Thompson[1]. [1]Indiana University, United States, [2]Boise State University, United States, [3]State University of New York Stony Brook, United States
Disclosures: Xin Yi, None

SA0116 **Fast Fourier Transform Analysis Showed Morphological Change of Bone Structure and Change of Periodicity of Sclerostin Expression during Orthodontic Tooth Movement**

Ziyi Wang*[1], Yoshihito Ishihara[1], Naoya Odagaki[1], Masahiro Nakamura[1], Ei Ei Hsu Hlaing[1], Hiroshi Kamioka[1]. [1]Okayama University, Japan

Disclosures: Ziyi Wang, None

SA0117 **Loss of GORAB Leads to an Impaired Anabolic Cortical and Cancellous Bone Response to Mechanical Loading**

Haisheng Yang*[1], Anne Seliger[2], Wing-Lee Chan[2], Michael Thelen[2], Uwe Kornak[2], Bettina Willie[3]. [1]Beijing University of Technology, China, [2]Charité-Universitätsmedizin Berlin, Germany, [3]Shriners Hospital for Children-Canada, McGill University, Canada

Disclosures: Haisheng Yang, None

SA0118 **Effects of Low-intensity Aerobic Exercise and Activated Vitamin D, Alfacarcidol, on Blood Glucose, Bone, and Muscle in Diabetic Model Rats**

Manabu Akagawa*[12], Naohisa Miyakoshi[12], Yuji Kasukawa[12], Hiroyuki Tsuchie[12], Yuichi Ono[12], Masazumi Suzuki[12], Tetsuya Kawano[12], Yusuke Yuasa[12], Itsuki Nagahata[12], Yoichi Shimada[12]. [1]Akita university hospital, Japan, [2]Akita university Hospital, Japan

Disclosures: Manabu Akagawa, None

SA0119 **Unloaded Mice Treated with the Myokine Irisin Are Protected from Bone Loss and Muscle Atrophy**

Graziana Colaianni*[1], Luciana Lippo[1], Paolo Pignataro[1], Lorenzo Sanesi[1], Giovanna Spiro[2], Ilenia Severi[3], Giovanni Passeri[4], Giacomina Brunetti[1], Umberto Tarantino[5], Silvia Colucci[1], Janne Reseland[6], Roberto Vettor[2], Saverio Cinti[3], Maria Grano[7]. [1]Department of Basic Medical Science, Neuroscience and Sense Organs, University of Bari, Italy, [2]Department of Medicine-DIMED, Internal Medicine 3, University of Padova, Italy, [3]Department of Experimental and Clinical Medicine, Center of Obesity, United Hospitals, University of Ancona, Italy, [4]Department of Clinical and Experimental Medicine, University of Parma, Italy, [5]Department of Orthopedics and Traumatology, Tor Vergata University of Rome, Italy, [6]Department of Biomaterials, Institute for Clinical Dentistry, University of Oslo, Blindern, Norway, [7]Department of Emergency and Organ Transplantation, University of Bari, Italy

Disclosures: Graziana Colaianni, None

SA0120 **Postmenopausal Osteoporosis is Characterized by a Distinct Muscle Transcription Profile Which Can Be Markedly Changed Through Heavy-load Strength Training**

Ole K. Olstad*[1], Sjur Reppe[1], Håvard Wiig[2], Nils Helge Kvamme[2], Camilla Kirkegaard[3], Truls Raastad[2], Vigdis T. Gautvik[4], Karl J. Kvernevik[5], Tor P. Utheim[1], Kaare M. Gautvik[6]. [1]Oslo University Hospital, Department of Medical Biochemistry, Norway, [2]Norwegian School of Sport Sciences, Department of Physical Performance, Norway, [3]Norwegian School of Sports Sciences, Department of Physical Performance, Norway, [4]University of Oslo, Institute of Basic Medical Sciences, Norway, [5]Lovisenberg Diakonale Hospital, Norway, [6]Lovisenberg Diakonale Hospital, Unger-Vetlesen Institute, Norway

Disclosures: Ole K. Olstad, None

SA0121 **Assessment of the Effect of two Myostatin Inhibitors on Body Composition using MRI and DXA in Non Human Primates**

Martin Guillot*[1], Sebastien Gariepy[1], Luc Tremblay[2], Aurore Varela[1]. [1]Charles River Laboratories Montreal, Canada, [2]CIMS-CRCHUS, University of Sherbrooke, Canada

Disclosures: Martin Guillot, Charles River Laboratories , Other Financial or Material Support

SA0122 **Long-term physiologic exercise maintains the protective effects of muscle-secreted factors on osteocyte viability**

Yukiko Kitase*[1], Hong Zhao[2], Jennifer Rosser[3], Michael J. Wacker[3], Julian Vallejo[3], Marco Brotto[4], Lynda F. Bonewald[2]. [1]Indiana Unversity, United States, [2]Indiana Unviersity, United States, [3]University of Missouri-Kansas City, United States, [4]University of Texas at Arlington, United States

Disclosures: Yukiko Kitase, None

SA0123 **Bone morphogenetic proteins and myostatin: key mediators of Sarcopenia-Osteoporosis connection**
Umberto Tarantino*[1], Maurizio Feola[1], Cecilia Rao[1], Monica Celi[1], Manuel Scimeca[1]. [1]University of Rome Tor Vergata, Policlinic Tor Vergata Foundation, Italy
Disclosures: Umberto Tarantino, None

SA0124 **An aging-associated decrease in periosteal osteoprogenitor populations accompanies attenuation of load-induced bone formation in mice tibiae**
Pamela Cabahug-Zuckerman*[1], Chao Liu[1], Cinyee Cai[2], Ian Mahaffey[3], Stephanie Norman[3], Whitney Cole[3], Alesha Castillo[1]. [1]Dept of Mechanical and Aerospace Engineering, Tandon School of Engineering, and Dept of Orthopaedic Surgery, School of Medicine, New York University; Veterans Affairs New York Harbor Healthcare System, United States, [2]Dept of Orthopaedic Surgery, School of Medicine, New York University, United States, [3]Veterans Affairs Palo Alto Healthcare System, United States
Disclosures: Pamela Cabahug-Zuckerman, None

SA0125 **Osteoporosis and Muscle Atrophy: Is Vitamin D Receptor an Unknown Determinant?**
monica celi*[1], Manuel scimeca[1], Federica Centofanti[1], maurizio feola[1], annalisa botta[1], Umberto Tarantino[1]. [1]University of Rome Tor Vergata, Italy
Disclosures: monica celi, None

SA0126 **Regulation of Protein Kinase A (PKA) by Protein Kinase Inhibitorγ (PKIγ) Reduces Osteogenesis in Aged Mice**
Bryan S. Hausman*[1], Xin Chen[2], Hyonmin Choe[3], Ozan Akkus[4], Edward M Greenfield[1]. [1]Department of Orthopaedics, Case Western Reserve University, United States, [2]Gene Therapy Center, University of North Carolina at Chapel Hill, United States, [3]Department of Orthopaedics, Yokohama City University, Japan, [4]Departments of Biomedical Engineering and Orthopaedics, Case Western Reserve University, United States
Disclosures: Bryan S. Hausman, None

SA0127 **Intermittent High Dietary Protein Feeding Is As Effective In Increasing Bone Mass As Continuous High Protein Diet**
Kehong Ding*[1], Priyanka Thakur[1], Walter Ramsey[1], Ying Han[2], Jianrui Xu[1], Qing Zhong[1], Wendy Bollag[1], Meghan McGee-Lawrence[1], William Hill[1], Xingming Shi[1], Monte Hunter[1], Mohammed Elsalanty[3], Mark Hamrick[1], Carlos Isales[1]. [1]Medical College of Georgia, United States, [2]Jiaotong University, China, [3]Augusta University, United States
Disclosures: Kehong Ding, None

SA0128 **125-150 kDa TSP2 appears during post-natal endochondral ossification and it is sensitive to matrix metalloproteinase inhibition**
Andrea Alford*[1], Anita Reddy[1]. [1]University of Michigan, United States
Disclosures: Andrea Alford, None

SA0129 **Hydrogen Sulfide Epigenetically Attenuates Homocysteine Induced Bone Loss in CBS Deficient Mice**
Jyotirmaya Behera*[1], Akash George[1], Kimberly Kelly[1], Suresh Tyagi[1], Neetu Tyagi[1]. [1]University of Louisville, United States
Disclosures: Jyotirmaya Behera, None

SA0130 **The Novel Role of PINCH in Skeletogenesis**
Xin Liu*[1], Guozhi Xiao[1]. [1]SUSTech, China
Disclosures: Xin Liu, None

SA0131 **Thyroid hormone locally interacts with the Sympathetic Nervous System to control bone linear growth.**
Manuela Rodrigues*[1], Bianca Papi[1]. [1]University of Sao Paulo, Brazil
Disclosures: Manuela Rodrigues, None

SA0132 **Identifying A Novel Regulator Of Anabolic Bone Metabolism**
Yu Shao*[1], Kylie Jacobs[2], James Hamilton[3], Thomas M O'Connell[4], Nickolay Brustovetsky[3], Jeanette McClintick[5], Ronald Wek[5], Joseph Bidwell[2]. [1]Medical & Molecular Genetics, Indiana University School of Medicine, United States, [2]Anatomy & Cell Biology, Indiana University School of Medicine, United States, [3]Pharmacology & Toxicology, Indiana University School of Medicine, United States, [4]Otolaryngology & Head/Neck Surgery, Indiana University School of Medicine, United States, [5]Biochemistry & Molecular Biology, Indiana University School of Medicine, United States
Disclosures: Yu Shao, None

SA0133 **TSC1 Regulates Bone Marrow Stromal Cell (BMSC) Lineage Commitment**
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Disclosures: Han Kyoung Choi, None

SA0134 **miR-146a Is An Endogenous Regulator of Both Hematopoiesis And Bone Mass**
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Disclosures: Jennifer Geisler, None

SA0135 **Identification of Murine Circulating CD34+ OCN+ Cells**
Ryan Kelly*[1], Lindsay McDonald[2], James Cray[1], Amanda LaRue[2]. [1]Medical University of South Carolina, United States, [2]Ralph H. Johnson Department of Veterans Affairs Medical Center, United States
Disclosures: Ryan Kelly, None

SA0136 **Transplantation of Human Skeletal Muscle-Derived Progenitor Cells Ameliorates Knee Osteoarthritis**
Shing-Hwa Liu*[1], Chen-Yuan Chiu[1], Ding-Cheng Chan[1], Rong-Sen Yang[1]. [1]National Taiwan University, Taiwan, Province of China
Disclosures: Shing-Hwa Liu, None

SA0137 **Specification of Sclerotome Cells via Axial Skeletal Lineage Differentiation of Human Pluripotent Stem Cells**
Ryan Russell*[1], Peter Maye[1]. [1]UConn Health, United States
Disclosures: Ryan Russell, None

SA0138 **Intranuclear actin assembly is critical for extracellular matrix mediated osteogenic differentiation of mesenchymal stem cells**
Jeyantt Srinivas Sankaran*[1], Buer Sen[1], Zhihui Xie[1], Cody McGrath[1], Maya Styner[1], Rebekah Samsonraj[2], Andre van Wijnen[2], Janet Rubin[1]. [1]University of North Carolina, Chapel Hill, United States, [2]Mayo Clinic, United States
Disclosures: Jeyantt Srinivas Sankaran, None

SA0139 **Conditional ablation of Prx1 expressing cells and haploinsufficiency of Prrx1 gene lead to impaired fracture healing**
Lai Wang*[1], Alessandra Esposito[1], Joseph Temple[1], Ji Eun Han[1], Tieshi Li[1], Anna Spagnoli[1]. [1]Department of Pediatrics, Rush University Medical Center, Chicago, United States
Disclosures: Lai Wang, None

SA0140 **PDGFRβ signaling regulates osteogenesis of periosteal mesenchymal stem cells.**
Xi Wang*[1], Brya G Matthews[1], Jungeon Yu[2], Archana Sanjay[1], Danka Grcevic[3], Ivo Kalajzic[1]. [1]Uconn Health, United States, [2]Uconn Helath, United States, [3]University of Zagreb, United States
Disclosures: Xi Wang, None

SA0141 **The fracture Callus is Formed by Progenitors of Different Skeletal Origins in a Site Specific Manner**

Yongmei Wang*[1], Faming Tian[1], Lin Ling[2], Wasima Mayer[2], Ling Chen[3], Misun Kang[3], Sunita Ho[3], Daniel Bikle[1]. [1]Endocrine Unit, University of California, San Francisco/San Francisco VA Health Care System, United States, [2]Endocrine Unit, University of California, San Francisco /San Francisco VA Health Care System, United States, [3]Bioengineering & Biomaterials Micro-CT and Imaging Facility, University of California, San Francisco, United States

Disclosures: Yongmei Wang, None

SA0142 **The Power and Potential of Alternative Splicing to Dictate Stem Cell Fates in Bone**

Yuanyuan Wang*[1], Emad Bahrami-Samani[2], Rene Chun[3], John Adams[3], Yi Xing[2]. [1]Bioinformatic Interdepartmental Graduate Program, University of California, Los Angeles, United States, [2]Department of Microbiology, Immunology and Molecular Genetics, University of California, Los Angeles, United States, [3]Department of Orthopaedic Surgery, University of California, Los Angeles, United States

Disclosures: Yuanyuan Wang, None

SA0143 **Conditional Knockout of FGF2 in Progenitor Cells in Mice is Associated with Impaired Periosteal Proliferation During Fracture Repair**

Liping Xiao*[1], Siu-Pok Yee[1], Ivo Kalajzic[1], Marja Hurley[2]. [1]UConn Health, United States, [2]UConn Health School of Medicine, United States

Disclosures: Liping Xiao, None

SA0144 **LOXL2 has a protective role in human and mouse cartilage in vivo**

Mustafa Tashkandi*[1], Saqer Alsaqer[1], Weam Alshenibr[2], Pushkar Mehra[1], Mary B. Goldring[3], Louis C. Gerstenfeld[4], Manish V Bais[1]. [1]Boston University Henry M. Goldman School of Dental Medicine, Boston, MA, United States, [2]1Boston University Henry M. Goldman School of Dental Medicine, Boston, MA, United States, [3]Weill Cornell Medical College, New York, NY, United States, [4]Boston University School of Medicine, Boston, MA, United States

Disclosures: Mustafa Tashkandi, None

SA0145 **Bone mineral density is related to proximal femur shape: findings from a cross-sectional study in middle aged women**

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Disclosures: Monika Frysz, None

SA0146 **Novel Role of High Molecular Weight Fibroblast Growth Factor 2 and FGF23 in Osteoarthropathy in HMWTg Mice.**

Marja Hurley*[1], Patience Meo Burt[1], Liping Xiao[1]. [1]UConn Health, United States

Disclosures: Marja Hurley, None

SA0147 **Age-related synovial lymphatic dysfunction is associated with the development of osteoarthritis**

Xi Lin*[1], Richard D Bell[1], Edward M Schwarz[1], Brendan F Boyce[1], Lianping Xing[1]. [1]University of Rochester Medical Center, United States

Disclosures: Xi Lin, None

SA0148 **Serum Levels of Tartrate-Resistant Acid Phosphatase 5b (TRACP-5b) and the Risk for the Radiographic Medial Knee Joint Space Narrowing in Men in Early Forties without Knee Pain -A Three Years Prospective Observational Study**

Muneaki Ishijima*[1], Lizu Liu[1], Mayuko Kinoshita[1], Masashi Nagao[1], Haruka Kaneko[1], Ryo Sadatsuki[1], Shinnosuke Hada[1], Anwarjan Yusup[1], Hitoshi Arita[1], Jun Shiozawa[1], Yoshinori Tamura[1], Hirotaka Watada[1], Kazuo Kaneko[2]. [1]Juntendo Univ. Graduate Sch. of Med., Japan, [2]Juntendo Univ. Graduate Sch. of Med.t, Japan

Disclosures: Muneaki Ishijima, None

SA0149 **Combining fractal- and entropy-based bone texture analysis for the prediction of Osteoarthritis: data from the Multicenter Osteoarthritis study (MOST)**

Zsolt Bertalan *[1], Richard Ljuhar[1], Stefan Nehrer[2], Davul Ljuhar[3], Astrid Fahrleitner-Pammer[4], Hans-Peter Dimai[4]. [1]ImageBiopsy Lab, Austria, [2]Danube University Krems, Austria, [3]Braincon Technologies Research , Austria, [4]Medical University Graz, Austria

Disclosures: Zsolt Bertalan , None

SA0150 **Focal Thickening Of Femoral Head Cortical Bone Predicts Total Hip Replacement For Osteoarthritis**

Ilya Burkov*[1], Graham Treece[1], Andrew Gee[1], Thomas Turmezei[2], Fjola Johannesdottir[3], Sigurdur Sigurdsson[4], Thor Aspelund[4], Vilmundur Gudnasson[4], Helgi Jonsson[5], Kenneth Poole[1]. [1]University of Cambridge, United Kingdom, [2]Addenbrooke's Hospital, Cambridge, United Kingdom, [3]Beth Israel Deaconess Medical Center, United States, [4]The Icelandic Heart Association, Iceland, [5]Landspitalinn University Hospital, Iceland

Disclosures: Ilya Burkov, None

SA0151 **Prevalence of Arthritis using a Job Exposure Matrix in Lower and Middle Income Countries: World Health Organization's Study on Global Ageing and Adult Health**

Brennan-Olsen Sharon*[1], Svetlana Solovieva[2], Eira Viikari-Juntura[3], Steven Bowe[4], Paul Kowal[5], Nirmala Naidoo[5], Ilana Ackerman[6], Anita Wluka[6], Michelle Leech[6], Richard Page[4], Gustavo Duque[7], Fernando Gomez[8], Mohammadreza Mohebbi[4]. [1]University of Melbourne, Australian Institute for Musculoskeletal Science (AIMSS), Australia, [2]Finnish Insitute of Occupational Health, Finland, [3]Finnish Institute of Occupational Health, Finland, [4]Deakin University, Australia, [5]World Health Organization, Switzerland, [6]Monash University, Australia, [7]University of Melbourne; Australian Institute for Musculoskeletal Science (AIMSS), Australia, [8]Facultad de Ciencias para la Salud Universidad de Caldas, Colombia

Disclosures: Brennan-Olsen Sharon, None

SA0152 **Effects of Osteoporosis with Osteoarthritis on the Microstructure and Mechanical Properties of Subchondral Bone**

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Disclosures: Xinhua Qu, None

SA0153 **Up-regulation of inhibitors of DNA binding/differentiation gene during alendronate-induced osteoblast differentiation**

hoon choi*[1], heung yeol kim[2]. [1]Department of Ob/Gyn, Inje university Sanggyepaik Hospital, Korea, Republic of, [2]Department of Ob/Gyn, College of Medicine, Kosin University, Korea, Republic of

Disclosures: hoon choi, None

SA0154 **Synergistic Effects of 1α, 25-Dihydroxyvitamin D and 17β-Estradiol on Mesenchymal Stem Cells from Pre-pubertal Children**

Jing Li*[1], Bonnie Padwa[2], Shuanhu Zhou[3], Julia Mullokandova[4], Meryl LeBoff[5], Julie Glowacki[5]. [1]Brigham and Women's Hospital, United States, [2]Boston Children's Hospital, United States, [3]Brigham and Women' Hospital, United States, [4]Brigam and Women's Hopsital, United States, [5]Brigham and Women's Hospital, United States

Disclosures: Jing Li, None

SA0155 **MicroRNA 23a cluster Maintains BAF-PRC2 Epigenetic Equilibrium to Preserve Bone Mass in vivo**

Tanner Godfrey*[1], Benjamin Wildman[1], Mohammad Rehan[1], Harunur Rashid[1], Mohammad Hassan[1], Chris Lengner[2], Amjad Javed[1]. [1]School of Dentistry, University of Alabama, United States, [2]School of Veterinary Medicine Member, Institute for Regenerative Medicine University of Pennsylvania, United States

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SA0156 **Analysis of the role of Fam20C in Fam20C-transgenic mice**

Katsutoshi Hirose*[1], Yu Usami[2], Sunao Sato[1], Kaori Oya[1], Toshihisa Komori[3], Satoru Toyosawa[1]. [1]Department of Oral Pathology, Osaka University Graduate School of Dentistry, Osaka, Japan , Japan, [2]Department of Oral Pathology, Osaka University Graduate School of Dentistry, Osaka, Japan, Japan, [3]Department of Cell Biology, Unit of Basic Medical Sciences, Nagasaki University Graduate School of Biomedical Sciences, Nagasaki, Japan, Japan

Disclosures: Katsutoshi Hirose, None

SA0157 **The in Vivo Roles of Osteoblast AMP-activated Protein Kinase in Skeletal Development**

Ippei Kanazawa*[1], Ayumu Takeno[1], Ken-ichiro Tanaka[1], Masakazu Notsu[1], Toshitsugu Sugimoto[1]. [1]Shimane University Faculty of Medicine, Japan

Disclosures: Ippei Kanazawa, None

SA0158 **Murine model for type VI OI (*Serpinf1-/-*) reveals dynamic regulation of vascularization and mineralization in bone**

Heeseog Kang*[1], Smriti Aryal A.C.[1], Valentin David[2], Aline Martin[2], Susan Crawford[3], Joan Marini[1]. [1]NIH, United States, [2]Northwestern University, United States, [3]NorthShore University, United States

Disclosures: Heeseog Kang, None

SA0159 **Direct delivery of recombinant Pin1 protein rescued osteoblast differentiation of Pin1 deficient cells**

Woo Jin Kim*[1], Hyun Mo Ryoo[1]. [1]Seoul National University, Korea, Republic of

Disclosures: Woo Jin Kim, None

SA0160 **A novel osteoblast subpopulation initiates endochondral ossification by forming osteogenic capillaries**

Yukiko Kuroda*[1], Ayako Sakamoto[1], Masaki Yoda[1], Yanlin Wu[2], Hidekazu Takano[2], Atsushi Momose[2], Koichi Matsuo[1]. [1]Keio University School of Medicine, Japan, [2]Tohoku University, Japan

Disclosures: Yukiko Kuroda, None

SA0161 **Connexins form distinct complexes with signaling machinery that differentially affect osteoblast signaling and gene expression**

Megan Moorer*[1], Carla Hebert[2], Joseph Stains[3]. [1]graduate student, United States, [2]lab technician, United States, [3]PI, United States

Disclosures: Megan Moorer, None

SA0162 **Proteomic comparison of extracellular vesicles secreted from osteogenic and vascular smooth muscle cells.**
Sandeep Chaudhary*[1], Victoria Smethurst[2], Daisy Monier[2], James Mobley[1], Dobrawa Napierala[2]. [1]University of Alabama at Birmingham, United States, [2]University of Pittsburgh, United States
Disclosures: Sandeep Chaudhary, None

SA0163 **WNT16 Overexpression Protects Against Glucocorticoid-Induced Bone Loss**
Karin Nilsson*[1], Sofia Movérare-Skrtic[2], Petra Henning[2], Jianyao Wu[2], Karin Gustafsson[2], Matti Poutanen[2], Ulf Lerner[2], Claes Ohlsson[2]. [1]Centre for Bone and Arthritis Research, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden, [2]Centre for Bone and Arthritis Research, Institute of Medicine, Sahlgrenska Acadamy, University of Gothenburg, Gothenburg, Sweden
Disclosures: Karin Nilsson, None

SA0164 **Bone Structure and Function in Osteocalcin-null Rats on a High Fat Diet**
Aidi Niu*[1], Jeffry Nyman[2], Lihua Zhou[1], Laura Lambert[1], Robert Kesterson[1], Jayleen Grams[1]. [1]University of Alabama at Birmingham, United States, [2]University of Vanderbilt, United States
Disclosures: Aidi Niu, None

SA0165 **Alpha-lipoic Acid (ALA) Pre-treatment Specifically Prevents the Suppression of *Lgr4* Expression by TGF-beta**
Chantida Pawaputanon na Mahasarakham*[1], Yoichi Ezura[1], Masaki Noda[1]. [1]Tokyo Medical and Dental University, Japan
Disclosures: Chantida Pawaputanon na Mahasarakham, None

SA0166 **Transcriptional Coactivator JAB1 Promotes Osteoblast Differentiation and Postnatal Bone Formation**
William Samsa*[1], Lindsay Bashur[1], Murali Mamidi[1], Guang Zhou[1]. [1]Case Western Reserve University, United States
Disclosures: William Samsa, None

SA0167 **Superior bone quality in MRL/MpJ mice is attributed to high bone formation and remodeling**
Xuying Sun*[1], Xueqin Gao[2], Aiping Lu[2], Sarah Amra[3], Xiaodong Mu[4], Johnny Huard[2], Charles Huard[5]. [1]Department of Orthopaedic Surgery, University of Texas Health Science Center at Houston; McGovern Medical School, Brown Foundation Institute of Molecular Medicine Center for Tissue Engineering and Aging, United States, [2]1.Department of Orthopaedic Surgery, University of Texas Health Science Center at Houston; McGovern Medical School 2. Brown Foundation Institute of Molecular Medicine Center for Tissue Engineering and Aging 3.Steadman Philippon Research Institute, United States, [3]1. Department of Orthopaedic Surgery, University of Texas Health Science Center at Houston; McGovern Medical School 2. Brown Foundation Institute of Molecular Medicine Center for Tissue Engineering and Aging, United States, [4]1.Department of Orthopaedic Surgery, University of Texas Health Science Center at Houston; McGovern Medical School 2. Brown Foundation Institute of Molecular Medicine Center for Tissue Engineering and Aging, 3. Steadman Philippon Research Institute, United States, [5]Department of Orthopaedic Surgery, University of Texas Health Science Center at Houston; McGovern Medical School, United States
Disclosures: Xuying Sun, None

SA0168 **Tgif1 Controls Bone Remodeling and Anabolic Response to Parathyroid Hormone**
Hanna Taipaleenmäki*[1], Hiroaki Saito[1], Andreas Gasser[1], Simona Bolamperti[1], Miki Maeda[1], Matthias Ring[1], Yang Shi[1], Levi Matthies[1], Hartmut Schlüter[2], Steven A. Johnsen[3], Katharina Jähn[1], Courtney L. Long[1], Carl Haasper[4], Thorsten Gehrke[4], Vaibhav Saini[5], Paola Divieti Pajevic[5], Teresita Bellido[6], Andre van Wijnen[7], Khalid S Mohammad[8], Theresa Guise[8], Eric Hesse[1]. [1]Molecular Skeletal Biology Laboratory, Department of Trauma, Hand and Reconstructive Surgery, University-Medical Center Hamburg-Eppendorf, Germany, [2]Institute of Clinical Chemistry and Laboratory Medicine, University Medical Center Hamburg-Eppendorf, Germany, [3] Department of General, Visceral and Pediatric Surgery, Göttingen Center for Molecular Biosciences, University Medical Center Göttingen, Germany, [4]HELIOS ENDO Hospital Hamburg, Germany, [5]Department of Molecular and Cell Biology, Boston University, School of Dental Medicine, United States, [6]Department of Anatomy and Cell Biology, Indiana University School of Medicine, United States, [7]Department of Biochemistry and Molecular Biology, Department of Orthopedic Surgery, Mayo Clinic, United States, [8]Division of Endocrinology, Department of Medicine, Indiana School of Medicine, United States
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SA0169 **ASBMR 2017 Annual Meeting Young Investigator Award**
Cdk 1 is essential for bone formation and fracture repair
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Disclosures: hiroyuki inose, None

SA0170 **Bone loss in genetic Hfe-hemochromatosis is driven by the actions of Hfe in the osteoblasts and not by the excess of iron**
Maja Vujic Spasic*[1]. [1]Institute of Comparative Molecular Endocrinology, Ulm University, Germany
Disclosures: Maja Vujic Spasic, None

SA0171 ***Tsc1* Deletion Increases Craniofacial Bone Mass by Increasing Extracellular Matrix (ECM) Production and Enhancing Osteoblast Differentiation**
Xiaoxi Wei*[1], Min Hu[2], Han Kyoung Choi[1], Andrea Alford[3], Erin M.R. Bigelow[3], Karl Jepsen[3], Fei Liu[1]. [1]University of Michigan School of Dentistry, United States, [2]Jilin University School and Hospital of Stomatology, China, [3]University of Michigan Medical School, United States
Disclosures: Xiaoxi Wei, None

SA0172 **YAP and TAZ expression in mesenchymal progenitors versus mature osteoblasts and osteocytes plays distinct roles in osteoblastogenesis**
Jinhu Xiong*[1], Priscilla Baltz[1], Charles O'Brien[1]. [1]University of Arkansas for Medical Sciences, United States
Disclosures: Jinhu Xiong, None

SA0173 **Osteoblastic Lrp4 Promotes Osteoclastogenesis by Regulating ATP Release and Adenosine-A_{2A}R Signaling**
Lei Xiong*[1], Ji-Ung Jung[2], Hao-Han Guo[1], Jin-Xiu Pan[1], Xiang-Dong Sun[2], Lin Mei[1], Wen-Cheng Xiong[1]. [1]Department of Neuroscience and Regenerative Medicine, and Department of Neurology, Medical College of Georgia; Charlie Norwood VA Medical Center, United States, [2]Department of Neuroscience and Regenerative Medicine, and Department of Neurology, Medical College of Georgia, United States
Disclosures: Lei Xiong, None

SA0174 **Direct Reprogramming of Human Fibroblasts into Osteoblasts for Osteogenic Cell Therapy**
Kenta Yamamoto*[1], Toshihisa Kawai[1], Tsunao Kishida[2], Osam Mazda[2]. [1]Nova Southeastern University, United States, [2]Kyoto Prefectural University of Medicine, Japan
Disclosures: Kenta Yamamoto, None

SA0175 **Inactivation of Wnt Receptor Regulators, Rnf43 and Znrf3, in Osteoblasts Augments Bone Mass**

Zhendong A. Zhong*[1], Cheryl N. Christie[1], Mitch J. McDonald[1], Nicole J. Ethen[1], Cassandra R. Diegel[1], Bart O. Williams[2]. [1]Van Andel Research Institute, United States, [2]Van Andel Reserach Institute, United States

Disclosures: Zhendong A. Zhong, None

SA0176 **Osteoclast-specific TSC2 deletion increases bone mass via increasing CTHRC1 and bone formation by osteoblasts**

Nicola Alesi*[1], Julia F. Charles [2], Elizabeth P. Henske[1], David J. Kwiatkowski[1], Haoming Liu[2], Sabah Nobakhti[3], Sandra J. Shefelbine[3]. [1]Division of Pulmonary and Critical Care Medicine, Department of Medicine, Brigham and Women's Hospital and Harvard Medical School, Boston, Massachusetts, USA, United States, [2]Division of Rheumatology, Allergy, and Immunology, Department of Medicine, Brigham and Women's Hospital and Harvard Medical School, Boston, Massachusetts, USA, United States, [3]Department of Mechanical and Industrial Engineering, Northeastern University, Boston, Massachusetts, USA, United States

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SA0177 **Bone matrix components activate the NLRP3 inflammasome and promote osteoclast differentiation**

Yael Alippe*[1], Chung Wang[1], Biancamaria Ricci[2], Jianqiu Xiao[3], Wei Zou[4], Deborah Novack[5], Yousef Abu-Amer[2], Roberto Civitelli[3], Gabriel Mbalaviele[3]. [1]Division of Bone and Mineral Diseases - Washington University School of Medicine, United States, [2]Department of Orthopaedic Surgery-Washington University School of Medicine, United States, [3]Division of Bone and Mineral Diseases-Washington University School of Medicine, United States, [4]Department of Pathology and Immunology-Washington University School of Medicine, United States, [5]Division of Bone and Mineral Disease-Washington University School of Medicine, United States

Disclosures: Yael Alippe, None

SA0178 **MYC-dependent oxidative metabolism regulates osteoclastogenesis via nuclear receptor ERRα**

Seyeon Bae*[1], Min Joon Lee[1], Se Hwan Mun[1], Kyung-Hyun Park-Min[1]. [1]Hospital for special surgery, United States

Disclosures: Seyeon Bae, None

SA0179 **Development of an ELISA for the quantification of human soluble Semaphorin 4D in plasma**

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Disclosures: Anna Laber, None

SA0180 **Regulation of Adhesion Signaling in Osteoclasts by Tetraspanin CD82**

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Disclosures: Alexis Bergsma, None

SA0181 **Phlpp1 Deficiency Reduces Bone Mineral Density by Enhancing M-CSF Responsiveness of Osteoclast Progenitors**

Anna M. Mattson*[1], Jennifer J. Westendorf[1], Merry Jo Oursler[1], Elizabeth W. Bradley[1]. [1]Mayo Clinic, United States

Disclosures: Anna M. Mattson, None

SA0182 **Diet-derived phenolic acids inhibit osteoclastogenesis and bone resorption through GPR109A**

Jin-Ran Chen*[1], Oxana P. Lazarenko[1], Matthew E. Ferguson[1]. [1]Arkansas Children's Nutrition Center and the Department of Pediatrics, University of Arkansas for Medical Sciences, United States

Disclosures: Jin-Ran Chen, None

SA0183 **Phytoncide reduces differentiation and stimulates apoptosis of osteoclasts**

In-Jin Cho*[1], You Cheol Hwang[1], In-Kyung Jeong[1], Kyu Jeung Ahn[1], Hyoung-Moo Park[2], Ho-Yeon Chung[3]. [1]Kyung Hee Univ, Korea, Republic of, [2]Chung-Ang, Korea, Republic of, [3]Kyung Hee University, Korea, Republic of

Disclosures: In-Jin Cho, None

SA0184 **Lrrk1 regulation of actin assembly in osteoclasts involves serine phosphorylation of L-plastin**

Helen Goodluck*[1], Songqin Pan[2], Sharon Morley[3], Subburaman Mohan[1], Weirong Xing[1]. [1]Musculoskeletal Disease Center, VA Loma Linda Healthcare System, United States, [2]Proteomics Core Facility, University of California, United States, [3]Department of Pediatrics; 5Department of Pathology and Immunology, Washington University School of Medicine, United States

Disclosures: Helen Goodluck, None

SA0185 **miR-182 regulates osteoclastogenesis and bone remodeling in both physiological and pathological conditions**

Kazuki Inoue*[1], Christine Miller[2], Gregory Vitone[2], Mahmoud Elguindy[2], Liang Zhao[3], Baohong Zhao[1]. [1]Hospital for Special Surgery/Weill Cornell Medicine, United States, [2]Hospital for Special Surgery, United States, [3]Nanfang Hospital, The Southern Medical University, China

Disclosures: Kazuki Inoue, None

SA0186 **A Jumonji C(Jmj) domain-containing protein negatively regulates RANKL-mediated osteoclastogenesis**

Seon-Young Kim*[1], Hye-Jin Kim[1], Do Won Jung[1], Jong-Wan Park[1], Yang-Sook Chun[1]. [1]Seoul National University College of Medicine, Korea, Republic of

Disclosures: Seon-Young Kim, None

SA0187 **MMP14 Derived From Macrophages Mediates TRAP+ Osteoclast-independent Inflammatory Bone Destruction In c-Fos-deficient SH3BP2 Cherubism Mice.**

Mizuho Kittaka*[1], Kotoe Mayahara[2], Tomoyuki Mukai[3], Tetsuya Yoshimoto[1], Teruhito Yoshitaka[1], Jeffery P Gorski[1], Yasuyoshi Ueki[1]. [1]University of Missouri-Kansas City, School of Dentistry, United States, [2]Nihon University School of Dentistry, Japan, [3]Department of Rheumatology, Kawasaki Medical School, Japan

Disclosures: Mizuho Kittaka, None

SA0188 **Tgif1-Deficiency Attenuates Aging-Related Bone Loss through ERK1/2 Signaling in Osteoclasts**

Miki Maeda*[1], Hiroaki Saito[1], Hanna Taipaleenmäki[1], Eric Hesse[1]. [1]Molecular Skeletal Biology Laboratory, Department of Trauma, Hand and Reconstructive Surgery, University-Medical Center Hamburg-Eppendorf, Germany

Disclosures: Miki Maeda, None

SA0189 **OFS-1, a Sentinel Probe for Early Detection of Disease-induced Osteolysis by Multiple Myeloma in Humanized BLT Mice**

Kenzo Morinaga*[1], Akishige Hokugo[2], Eric Richard[3], Kimberly Hui[3], Boris Kashemirov[3], Charles McKenna[3], Ichiro Nishimura[1]. [1]Weintraub Center for Reconstructive Biotechnology, UCLA School of Dentistry, United States, [2]Division of Plastic Surgery, David Geffen School of Medicine at UCLA, United States, [3]Department of Chemistry, Dornsife College of Letters, Arts and Sciences, USC, United States

Disclosures: Kenzo Morinaga, None

SA0190 **Negative Regulation of Canine Osteoclastogenesis and Mitf-E Expression by Transforming Growth Factor-β**

Masaru Murakami*[1], Kumiko Asai[1], Fumie Shimokawa[1], Masaharu Hisasue[2], Masayuki Funaba[3]. [1]Laboratory of Molecular Biology, Azabu University School of Veterinary Medicine, Japan, [2]Laboratory of Veterinary Internal Medicine II, Azabu University School of Veterinary Medicine, Japan, [3]Division of Applied Biosciences, Kyoto University Graduate School of Agriculture, Japan

Disclosures: Masaru Murakami, None

SA0191 **Collagen Type VI α2 Chain Deficiency Causes Trabecular Bone Loss by Enhancing Osteoclast Differentiation**

Hai Pham*[1], Ainnie Dar[1], Vardit Kram[1], Li Li[1], Tina Kilts[1], Marian Young[1]. [1]Craniofacial and Skeletal Diseases Branch, National Institute of Dental and Craniofcial Research, National Institutes of Health, United States

Disclosures: Hai Pham, None

SA0192 **Identification of the signals provided by osteoclasts to induce FoxP3 in T cells**

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Disclosures: Elena Shashkova, None

SA0193 **Critical role of Endothelin in Osteoclast Differentiation and Function**

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SA0194 **Transgenic expression of TBK1 In Osteoclast Lineage Cells Increased Both Osteoclasts and Bone Formation**

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Disclosures: Quanhong Sun, None

SA0195 **Monocyte-Specific Knockout of C/Ebpα Results in Osteopetrosis Phenotype, Blocks Bone Loss in Ovariectomized Mice and Reveals the Indispensable Function of C/EBPα in Osteoclast Differentiation and Function**

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Disclosures: Jun Tang, None

SA0196 **Characterization of a Novel TCIRG1 Mutation Responsible for a Mild Form of Autosomal Recessive Osteopetrosis**

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Disclosures: Andrew Wang, None

SA0197 **Deletion of the transferrin receptor 1 gene in murine osteoclasts attenuates mitochondria metabolism and cytoskeletal organization and increases trabecular bone mass**
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SA0198 **Kindlin-2 in Osteocytes Controls Bone Remodeling**
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SA0199 **The role of osteocytes in regulating bone marrow fat: insight into large and small animal models of osteoporosis**
Thaqif El Khassawna*[1], Deeksha Malhan[1], Diaa Eldin Daghma[1], Sabine Stoetzel[1], Stefanie Kern[1], Fathi Hassan[1], Katrin Susanne Lips[1], Christian Heiss[2]. [1]Experimental Trauma Surgery, Faculty of Medicine, Justus-Liebig University of Giessen, Germany, [2]Department of Trauma, Hand and Reconstructive Surgery, University Hospital of Giessen - Marburg, Germany
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SA0200 **Acute Increase in Osteocyte Oxidative Stress at Focal Microdamage Site in Bone**
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SA0201 **Autoregulation of osteocyte through estrogen-miRNA-Sema3A-Nrp1 axis**
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SA0202 **Changes in osteocyte calcium signaling *in vivo* due to estrogen withdrawal**
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SA0203 **Osteocyte role in osteoporotic sheep model: cell-specific gene profiling**
Deeksha Malhan*[1], Diaa Eldin S. Daghma[1], Sabine Stoetzel[1], Stefanie Kern[1], Fathi Hassan[1], Katrin Susanne Lips[1], Thaqif El Khassawna[1], Christian Heiss[2]. [1]Experimental Trauma Surgery, Faculty of Medicine, Justus Liebig University of Giessen, Germany, [2]Department of Trauma, Hand and Reconstructive Surgery, University Hospital of Giessen-Marburg, Germany
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SA0204 **Profiling the composition of osteocyte pericellular matrix (PCM) in vivo and in vitro**
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SA0205 **Unexpected decrease in osteoclast number and bone resorption with increased osteocyte apoptosis in the absence of osteocytic miR21**
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SA0206 **Effects of Glucose Uptake Inhibition by Phloretin on Expressions of RANKL and Osteocalcin in Osteocytic MLO-Y4-A2 Cells**
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Disclosures: Ayumu Takeno, None

SA0207 **Diagnostic Error Rates of Bone Mineral Density and Other Proxies for Bone Strength**
Lyn Bowman*[1], Gabriel C. Hausfeld[1], Emily R. Ellerbrock[1], Jennifer M. Neumeyer[1], Tyler C. Beck[1], Maureen A. Dean[1], McKenzie L. Nelson[1], Anne B. Loucks[1]. [1]Ohio University, United States
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SA0208 **Finite Element Analysis of 3D-DXA Femur Reconstructions to Predict Hip Fracture**
Luis Del Rio*[1], Carlos Ruiz[2], Andy Luis Olivares[2], Silvana Di Gregorio[1], Simone Tassani[3], Silvia Martinez-Pardo[4], Mihail Gregorov[4], Jérôme Noailly[3], Miguel Angel Gonzalez[3]. [1]CETIR Grupo Medic, Spain, [2]Simulation, Imaging and Modelling for Biomedical Systems, Universitat Pompeu Fabra, Spain, Spain, [3]Simulation, Imaging and Modelling for Biomedical Systems, Universitat Pompeu Fabra, Spain, [4]Servicio reumatología, Hospital Universitarios Mutua de Terrassa, Spain
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SA0209 **Analyzing the cortical and trabecular bone of the femur of patients with vertebral fractures by 3D-DXA.**
AM Galich*[1], L Humbert[2], R Winzenrieth[2], L Maffei[1], V Premrou[1], A Frigeri[1], E Vega[1]. [1]Endocrinologist, Argentina, [2]Researcher, Spain
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SA0210 **Older Age and Higher Body Mass Index are Associated with more Microarchitectural Degradation in Trabecular Bone Score Compared to Bone Mineral Density**
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SA0211 **Prediction of Hip Fracture in Post-menopausal Women using Artificial Neural Network Approach**
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SA0212 **Vertebral Fracture Discrimination for QCT, HR-QCT, and CTXA based DXA**

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SA0213 **Preliminary Computed Tomography (CT) Multi-scale Investigation of Cortical Bone Quality in Non-osteoporotic Males**

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SA0214 **Associations of TBS and fractures differ among ethnicities: a study of NHANES 2005-2008**

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SA0215 **A comparative study of evaluation of bone mineral density using DXA and QCT in the post-menopausal patients under thyrotropin suppressive therapy**

Yun Kyung Jeon *[1], Keunyoung Kim[1], In Joo Kim[1], Kyoungjune Park[1], Myung-Jun Shin[1], Tae Sik Goh[2]. [1]Pusan national University Hospital, Korea, Republic of, [2]Pusan National Univeristy , Korea, Republic of

Disclosures: Yun Kyung Jeon , None

SA0216 **Adding Cortical Porosity to Garvan or FRAX tools Improve Identification of Postmenopausal Women with Nonvertebral Fracture: The Tromsø Study**

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Disclosures: Rita Kral, None

SA0217 **Are grade 1 vertebral fracture, fractures?**

Brian Lentle*[1], Claudie Berger[2], Linda Probyn[3], Jacques P. Brown[4], Lisa Langsetmo[5], Ben Fine[3], Kevin Lian[1], Arvind Shergill[3], Jacques Trollip[1], Stuart Jackson[6], William D. Leslie[7], Jerilynn C. Prior[1], Stephanie M. Kaiser[8], David A. Hanley[9], Angela M. Cheung[3], Jonathan D. Adachi[10], Tanveer Towheed[11], K. Shawn Davison[12], David Goltzman[13]. [1]University of British Columbia, Canada, [2]McGill University Health Centre- Researc Institute, Canada, [3]University of Toronto, Canada, [4]Université Laval, Canada, [5]University of Minnesota, United States, [6]University of Alberta, Canada, [7]University of Manitoba, Canada, [8]Dalhousie University, Canada, [9]University of Calgary, Canada, [10]McMaster University, Canada, [11]Queens University, Canada, [12]University of Victoria, Canada, [13]McGill University, Canada

Disclosures: Brian Lentle, None

SA0218 **"Risk-Equivalent" T-score Adjustment Using Lumbar Spine Trabecular Bone Score (TBS): The Manitoba BMD Registry**

William Leslie*[1], Enisa Shevroja[2], Helena Johansson[3], Anders Oden[3], Eugene McCloskey[3], John Kanis[3], Didier Hans[2]. [1]University of Manitoba, Canada, [2]Lausanne University Hospital, Switzerland, [3]University of Sheffield Medical School, United Kingdom

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SA0219 **Trabecular Bone Score and Fracture Risk Prediction in HIV and Hepatitis C Infection**
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Disclosures: Roger Bedimo, Bristol Myers Squibb, Grant/Research Support

SA0220 **Cost-effectiveness of a program to identify patients at high risk of hip fracture utilizing pre-existing CT scans in managed-care systems**
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Disclosures: Maria Pisu, None

SA0221 **Normative Distribution of Multirow Detector CT-Based Bone Measures and their Relationships with Dual-Energy X-ray Absorptiometry-Based Measures**
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Disclosures: Punam K Saha, None

SA0222 **Changes in Bone Marrow Fat Overestimate Trabecular Bone Loss by Single-Energy Quantitated Computed Tomography**
Jad Sfeir*[1], Matthew Drake[1], Elizabeth Atkinson[1], Jon Camp[1], Amanda Tweed[1], Louise McCready[1], Lifeng Yu[1], Mark Adkins[1], Shreyasee Amin[1], Sundeep Khosla[1]. [1]Mayo Clinic, United States
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SA0223 **Clinical Impact of Bone Microstructure Assessment by High Resolution Peripheral Quantitative CT Imaging in Adults with Recurrent Fractures and Normal or Near-Normal Bone Density**
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SA0224 **Urinary N-telopeptide as an Indicator of the Onset of Menopause-related Bone Loss in Pre- and Early Perimenopausal Women: Results from the Study of Women's Health Across the Nation (SWAN)**
Albert Shieh*[1], Gail Greendale[1], Jane Cauley[2], Joan Lo[3], Arun Karlamangla[1]. [1]UCLA, United States, [2]University of Pittsburgh, United States, [3]Kaiser, United States
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SA0225 **TBS is associated with biomechanical properties of human vertebrae, ex-vivo**
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SA0226 **The Wards Region shows proportionately greater osteoporosis by DXA**
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SA0227 **Utilization of Trabecular Bone Score in Fracture Risk Assessment Tool (FRAX)**
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SA0228 **Role of bone mineral density and trabecular bone score in the identification of bone fragility in postmenopausal women with vitamin D deficiency/insufficiency**

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Disclosures: Mika Yamauchi, None

SA0229 **Peripheral Arterial Disease Predicts Hip Fracture in Men.Results from the MrOS Sweden Study**

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SA0230 **Factors Associated with Readiness for Adopting Osteoporosis Treatment Change**

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Disclosures: Maria Danila, None

SA0231 **Impact of Competing Risk of Mortality on Association of Cognitive Impairment With Risk of Hip Fracture in Older Women: Results from the Study of Osteoporotic Fractures (SOF)**

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Disclosures: Susan Diem, None

SA0232 **Association of High-Resolution Peripheral Quantitative CT (HRpQCT) Bone Microarchitectural Parameters with Previous Clinical Fracture in Older Men: the Osteoporotic Fractures in Men (MrOS) Study**

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Disclosures: Howard Fink, None

SA0233 **Type 2 Diabetes Is Associated With Lower Prevalence Of Vertebral Fractures: A Meta-Analysis of Prospective Studies**

Fjorda Koromani*[1], Ling Oei[1], Taulant Muka[1], Enisa Shevroja[2], Josje Schoufour[1], Oscar Franco[1], Carola Zillikens[1], Eugene Mc Closkey[3], William Leslie[4], Olivier Lamy[2], Edwin Oei[1], Didier Hans[2], Fernando Rivadeneira[1]. [1]Erasmus MC, Netherlands, [2]University of Lausanne, Switzerland, [3]University of Sheffield, United Kingdom, [4]University of Manitoba, Canada

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SA0234 **Prevalence and Characteristics of Atypical Periprosthetic Femoral Fractures**

Jean-Thomas Leclerc*[1], Laëtitia Michou[2], François Vaillancourt[1], Stéphane Pelet[1], David Simonyan[3], Etienne Belzile[1]. [1]Division of orthopedic surgery, CHU de Québec-Université Laval, Canada, [2]Division of rheumatology, CHU de Québec-Université Laval, Canada, [3]CHU de Québec-Université Laval, research centre, Canada

Disclosures: Jean-Thomas Leclerc, None

SA0235 **Gender-different association between age-related body composition change and hip bone loss: Ansung cohort study**

Ji Hyun Lee *[1], Jung Hee Kim[1], Seo Young Lee[1], A Ram Hong[1], Hyung Jin Choi[2], Sang Wan Kim[3], Nam H. Choi [4], Chan Soo Shin[3]. [1]Department of Internal Medicine, Seoul National University College of Medicine, Korea, Republic of, [2]Department of Anatomy, Seoul National University College of Medicine, Korea, Republic of, [3]Department of Internal Medicine, Seoul National University Hospital, Korea, Republic of, [4]Department of Preventive Medicine, Ajou University School of Medicine, Korea, Republic of

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SA0236 **Characteristics and Consequences of Hip Fracture in an Elderly Irish Population**

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SA0237 **Bone-Formers and Bone-Losers in a 200yr old Archaeological Population**

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SA0238 **Cathepsins B and S Are Novel Biomarkers for Bone Mineral Density: A Mendelian Randomization Study**

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Disclosures: John Morris, None

SA0239 **Preceding and subsequent high- and low-trauma fracture patterns – A 13-year epidemiological study in females and males in Austria**

Christian Muschitz*[1], Roland Kocijan[1], Andreas Baierl[2], Rainer Dormann[1], Xaver Feichtinger[3], Judith Haschka[1], Gabriela Katharina Muschitz[4], Jakob Schanda[5], Peter Pietschmann[6], Heinrich Resch[1], Hans Peter Dimai[7]. [1]St. Vincent Hospital - VINFORCE, Austria, [2]Department of Statistics and Operations Research, the University of Vienna, Austria, [3]AUVA Trauma Center Meidling - Department of Surgery, Austria, [4]Division of Plastic and Reconstructive Surgery, Department of Surgery, the Medical University of Vienna, Austria, [5]AUVA Trauma Center Meidling, Austria, [6]Department of Pathophysiology and Allergy Research, Center for Pathophysiology, Infectiology and Immunology, the Medical University of Vienna, Austria, [7]Department of Internal Medicine, Division of Endocrinology and Metabolism, the Medical University of Graz, Austria

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SA0240 **Relationship between bone turnover and bone microstructure: an HR-pQCT study in healthy Japanese women**

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SA0241 **The association between type 2 diabetes mellitus, hip fracture, and post-hip-fracture mortality: a multi-state cohort analysis**

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SA0242 **Use of oral bisphosphonates and bone mineral density changes in moderate-severe (Stage 3B+) chronic kidney disease: an open cohort multivariable and propensity score analysis from Funen, Denmark**

Sanni Ali*[1], Martin Ernst[2], Fergus Caskey[3], Nigel Arden[4], Yoav Ben-Shlomo[3], Mads Nybo[5], Katrine Hass Rubin[2], Andrew Judge[1], Cyrus Cooper[1], M Kassim Javaid[4], Pernille Hermann[6], Bo Abrahamsen[2], Daniel Prieto-Alhambra[1]. [1]Centre for Statistics in Medicine and Nuffield Department of Orthopaedics, Rheumatology, and Musculoskeletal Sciences (NDORMS), University of Oxford, United Kingdom, [2]OPEN, Department of Health, University of Southern Denmark, Denmark, [3]School of Social and Community Medicine, University of Bristol, United Kingdom, [4]Nuffield Department of Orthopaedics, Rheumatology, and Musculoskeletal Sciences (NDORMS), University of Oxford, United Kingdom, [5]Department of Clinical Biochemistry, Odense University Hospital, Denmark, [6]Department of Endocrinology, Odense University Hospital, Denmark

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SA0243 **Older Men Who Sustain a Hip Fracture Experience Greater than Expected Declines in Bone Mineral Density at the Contralateral Hip**

Alan Rathbun*[1], Jay Magaziner[1], Michelle Shardell[2], Laura Yerges-Armstrong[3], Denise Orwig[1], Gregory Hicks[4], Marc Hochberg[1]. [1]University of Maryland School of Medicine, United States, [2]National Institute on Aging, United States, [3]GlaxoSmithKline, United States, [4]University of Delaware, United States

Disclosures: Alan Rathbun, None

SA0244 **Rest-activity circadian rhythm and bone mineral density in older men**

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Disclosures: Tara S Rogers, None

SA0245 **The Utility of TBS-adjusted BMD T-score in the Vertebral Fractures Risk Estimation in the Postmenopausal Women of the OsteoLaus and the Rotterdam Studies**

Enisa Shevroja*[1], Fjorda Koromani[2], William Leslie[3], Berengere Aubry-Rozier[4], Edwin Oei[5], Olivier Lamy[6], Fernando Rivadeneira[7], Didier Hans[6]. [1]Center of Bone diseases, Bone and Joint Department, Lausanne University Hospital and Departments of Internal Medicine and Epidemiology, Erasmus MC, Rotterdam, The Netherlands, Switzerland, [2]2Departments of Internal Medicine and Epidemiology, Erasmus MC, Rotterdam, The Netherlands, Netherlands, [3]Department of Internal Medicine, University of Manitoba, Winnipeg, Manitoba, Canada, Canada, [4]1 Center of Bone diseases, Bone and Joint Department, Lausanne University Hospital, Lausanne, Switzerland, Switzerland, [5]Department of Radiology, Erasmus Medical Center, Rotterdam, The Netherlands, Netherlands, [6]Center of Bone diseases, Bone and Joint Department, Lausanne University Hospital, Switzerland, [7]2Departments of Internal Medicine and Epidemiology, Erasmus MC, Netherlands

Disclosures: Enisa Shevroja, None

SA0246 **Increased Mortality in Older Home-dwelling Men with High Serum Periostin Levels – the Prospective STRAMBO Study**

Pawel Szulc*[1], Jean Charles Rousseau[1], Cindy Bertholon[1], Roland Chapurlat[1]. [1]INSERM UMR1033, University of Lyon, Hospices Civils de Lyon, France

Disclosures: Pawel Szulc, None

SA0247 **Does High Serum 25-Hydroxyvitamin D Prevent Falls in Older Women After All?**

Kirsti Uusi-Rasi*[1], Radhika Patil[1], Saija Karinkanta[1], Kari Tokola[1], Pekka Kannus[1], Christel Lamberg-Allardt[2], Harri Sievänen[1]. [1]The UKK Institute for Health Promotion Research, Finland, [2]University of Helsinki, Finland

Disclosures: Kirsti Uusi-Rasi, None

SA0248 **Older Men with Decreasing Hemoglobin Have a Higher Risk of Future Hip Fracture: The Cardiovascular Health Study**

Rodrigo J. Valderrabano*[1], Petra Buzkova[2], Po-Yin Chang[3], Neil A. Zakai[4], Howard A. Fink[5], John A. Robbins[3], Joy Y. Wu[1], Jennifer S. Lee[6]. [1]Division of Endocrinology, Stanford University School of Medicine, United States, [2]University of Washington, United States, [3]University of California, Davis, United States, [4]Department of Medicine and Department of Pathology and Laboratory Medicine, University of Vermont, United States, [5]GRECC, Veteran Affairs Health Care System, United States, [6]Division of Endocrinology, Stanford University School of Medicine and Palo Alto Veteran Affairs Health Care System, United States

Disclosures: Rodrigo J. Valderrabano, None

SA0249 **Prediction of Incident Fragility Fractures in Women with Peripheral CT Imaging – One Slice is Often Enough: the CaMos Bone Quality Study**

Andy Kin On Wong*[1], Lauren Burt[2], Eva Szabo[1], Steven K. Boyd[2], Shannon Reitsma[3], Hana Gillick[3], Hugo J.W. Fung[4], Tiffany Yan[5], Claudie Berger[6], Heather Macdonald[7], Leigh Gabel[7], Maureen C. Ashe[7], Danmei Liu[8], Jerilynn Prior[7], David A. Hanley[2], Chantal Kawalilak[9], Andrew Frank-Wilson[10], Saija Kontulainen[9], Shawn Davison[11], Wojciech Olszynski[9], George Ioannidis[3], Christopher L. Gordon[3], Colin E. Webber[3], Karen A. Beattie[3], Alexandra Papaioannou[3], Lora Giangregorio[12], Robert G. Josse[13], Norma MacIntyre[3], Tassos Anatassiades[14], David Goltzman[6], Angela M. Cheung[1], Jonathan D. Adachi[3], CaMos Bone Quality Study for the[3]. [1]University Health Network, Canada, [2]University of Calgary, Canada, [3]McMaster University, Canada, [4]University of Toronto, Canada, [5]Ryerson University, Canada, [6]McGill University, Canada, [7]University of British Columbia, Canada, [8]Centre for Hip Health and Mobility, Canada, [9]University of Saskatchewan, Canada, [10]National Institute on Aging, United States, [11]University of Victoria, Canada, [12]University of Waterloo, Canada, [13]St. Michael's Hospital, Canada, [14]Queen's University, Canada

Disclosures: Andy Kin On Wong, None

SA0250 **Trends in Post-fracture Care for Manitoba, Canada 2000-2014: A Population-Based Analysis**

Yang Cui*[1], Shuman Yang[2], Colleen Metge[3], William Leslie[2]. [1]George & Fay Yee Centre for Healthcare Innovation, University of Manitoba, Canada, [2]University of Manitoba, Canada, [3]George & Fay Yee Centre for Healthcare Innovation, Canada

Disclosures: Yang Cui, None

SA0251 **Cost-effectiveness of a Bone Health Team for Screening and Treating Veterans at Risk for Fragility Fractures**

Karla Miller*[1], Jordan King[2], Phillip Lawrence[3], Richard Nelson[1], Joanne LaFleur[1], Grant Cannon[1], Scott Nelson[4]. [1]Salt Lake City Veterans Affairs Medical Center and University of Utah, United States, [2]Kaiser Permanente Colorado, United States, [3]Roseman University of Health Sciences, United States, [4]Vanderbilt University Medical Center, United States

Disclosures: Karla Miller, None

SA0252 **Opportunistic Identification of Vertebral Fractures from Cross-Sectional Imaging and Impact on Fracture Liaison Services**

Emily Russell*[1], Emma Fower[2], Kassim Javaid[2]. [1]Oxford Medical School, United Kingdom, [2]Oxford University Hospitals, United Kingdom

Disclosures: Emily Russell, Optasia Medical, Other Financial or Material Support

SA0253 **Assessment of vitamin D status using MitraTM volumetric absorptive microsampling (VAMS) device**

Jonathan Tang*[1], Holly Nicholls[1], Nicole Ball[1], John Dutton[1], Isabelle Piec[1], James Rudge[2], Christopher Washbourne[1], William Fraser[1]. [1]University of East Anglia, United Kingdom, [2]Neoteryx, United States

Disclosures: Jonathan Tang, None

SA0254 **Predictors of Near-Term Non-Vertebral Fracture in Elderly Women with Osteoporosis, Osteopenia, or a History of Fracture, Based on Data from the Canadian Multicentre Osteoporosis Study (CaMos)**

Derek Weycker*[1], Jonathan Adachi[2], David Goltzman[2], Alexandra Papaioannou[2], Tanveer Towheed[2], Tassos Anastassiades[2], Rich Barron[3]. [1]Policy Analysis Inc. (PAI), United States, [2]Canadian Multicentre Osteoporosis Study (CaMos), Canada, [3]Amgen, United States

Disclosures: Derek Weycker, Amgen Inc., Grant/Research Support

SA0255 **Bone CYP27B1, CYP24A1 and Serum 25-Hydroxyvitamin D are Key Positive Factors for Trabecular Bone Architecture in Hip Fracture Patients**

Deepti Sharma*[1], Thomas Robertson[2], Roumen Stamenkov[3], Catherine Stapledon[2], Gerald Atkins[2], Peter Clifton[1], Lucian Solomon[4], Paul Anderson[1], Howard Morris[1]. [1]University of South Australia, Australia, [2]The University of Adelaide, Australia, [3]Royal Adelaide Hospital, Australia, [4]The University of Adelaide , Australia

Disclosures: Deepti Sharma, None

SA0256 **Effect of Exercise Modality during Weight Loss on Hip and Spine Bone Mineral Density in Older Adults with Obesity**

Kristen Beavers*[1], Michael Walkup[2], Walter Ambrosius[2], Stephen Kritchevsky[2], Leon Lenchik[2], Sue Shapses[3], Barbara Nicklas[2], Anthony Marsh[1], W. Jack Rejeski[1]. [1]Wake Forest University, United States, [2]Wake Forest School of Medicine, United States, [3]Rutgers University, United States

Disclosures: Kristen Beavers, None

SA0257 **25-hydroxyvitamin D Levels, Bone Mineral Density and Vertebral Fractures In Patients With Type 2 Diabetes Mellitus**

María Lorena Brance*[1], Luis Agustín Ramírez Stieben[2], Raquel Dobry[3], Lilian Anca[3], Adrián González[3], María Isabel López[3], Salvador Bayo[3], Ariel Sánchez[4], Lucas R Brun[5]. [1]Centro de Reumatología de Rosario, Argentina, [2]Servicio de Endocrinología del Hospital Español , Argentina, [3]Servicio de Endocrinología del Hospital Español, Argentina, [4]Centro de Endocrinología, Argentina, [5]Laboratorio de Biología sea. Facultad de Ciencias Médicas UNR, Argentina

Disclosures: María Lorena Brance, None

SA0258 **High Dairy Protein Intake is Associated with Greater Bone Strength Parameters at the Distal Radius and Tibia in Older Men: A Cross-sectional Study**

Lisa Langsetmo*[1], James Shikany[2], Andrew Burghardt[3], Peggy Cawthon[3], Jane Cauley[4], Eric Orwoll[5], Douglas Bauer[3], John Schousboe[6], Brent Taylor[7], Tien Vo[1], Elizabeth Barrett-Connor[8], Kristine Ensrud[7]. [1]University of Minnesota, United States, [2]University of Alabama, United States, [3]University of California, San Francisco, United States, [4]University of Pittsburgh, United States, [5]Oregon Health and Science University, United States, [6]Park Nicollet Clinic and Health Partners Institute, United States, [7]University of Minnesota and VA Health Care System, United States, [8]University of California, San Diego, United States

Disclosures: Lisa Langsetmo, None

SA0259 **Higher dairy food intake favorably influences spine Quantitative Computed Tomography (QCT) bone measures in the Framingham Study**

Shivani Sahni*[1], Laura H. van Dongen[2], Douglas Kiel[1], Marian Hannan[1]. [1]Institute for Aging Research, Hebrew SeniorLife, Harvard Medical School, United States, [2]Wageningen University and Research Centre, Netherlands

Disclosures: Shivani Sahni, Dairy Management Inc., Grant/Research Support

SA0260 **Protein Intake and Bone Mineral Density- A Systematic Review and Meta-Analysis of Randomized Controlled Trials**

Marissa Shams-White*[1], Zhuxuan Fu[1], Micaela Karlsen[1], Joachim Sackey[1], Jian Shi[1], Karl Insogna[2], Meryl LeBoff[3], Sue Shapses[4], Connie Weaver[5], Taylor Wallace[6], Mei Chung[1]. [1]Tufts University, United States, [2]Yale University, United States, [3]Harvard University, United States, [4]Rutgers University, United States, [5]Purdue University, United States, [6]George Mason University, United States

Disclosures: Marissa Shams-White, None

SA0261 **Type of Sports Participation Modulates Risk For Low BMD in Athletes With Female Athlete Triad**

Adam Tenforde*[1], Kristin Sainani[2], Jennifer Carlson[2], Neville Golden[2], Michael Fredericson[2]. [1]Spaulding Rehabilitation Hospital, Harvard University, United States, [2]Stanford University, United States

Disclosures: Adam Tenforde, None

SA0262 **Local glucocorticoid metabolism regulates the effects of therapeutic glucocorticoids on bone**

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Disclosures: Chloe Fenton, None

SA0263 **Disruption of Energy Metabolism in Postmenopausal Osteoporosis (PMO): Altered Fat Metabolism and Adipokines**

Kaare Gautvik*[1], Michael Prediger[2], Yi-Hsiang Hsu[3], Rachel Saunders[4], Ole Olstad[5], Marie Appleton[4], Vigdis Gautvik[6], Marco Ponzetti[7], Yngve Bliksrud[8], Nadia Rucci[9], Mark Walker[10], Anna Teti[11], Dermot Neely[12], Mark Birch-Machin[4], Joseph Brain[13], Sjur Reppe[14], Harish Datta[15]. [1]Lovisenberg Diakonale Hospital, Unger-Vetlesen Institute, Oslo, Norway, Norway, [2]Blood Sciences, Royal Victoria Infirmary, Newcastle Upon Tyne, United Kingdom, [3]Institute of Ageing Research 1200 Centre Street, United States, [4]Institute of Cellular Medicine, Faculty of Medicine, Newcastle University, United Kingdom, [5]Oslo University Hospital, Department of Biochemistry , Norway, [6]University of Oslo, Institute of Basic Medical Science, Norway, [7]University of L'Aquila, Department of Biotechnological and Applied Clinical Sciences , Italy, [8]Oslo University Hospital, Department of Medical Bichemistry, Norway, [9]University of L'Aquila, Department of Biotechnological and Applied Sciences , Italy, [10]Institute of Cellular Medicine (Diabetes), Faculty of Medicine, Newcastle University, United Kingdom, [11]University of L'Aquila, Department of Biotechnological and Applied Sciences, Italy, [12]Blood Science (Biochemistry Section), The Newcastle Upon Tyne Hospitals, United Kingdom, [13]Harvard T.H Chan School of Public Health, Department of Health Sciences, United States, [14]Lovisenberg Diakonale Hospital, Unger-Vetlesen Institute, Norway, [15]Institute of Cellular Medicine, Faculty of Medicine, Newcastle University and Pathology Department, James Cook University Hospital, United Kingdom

Disclosures: Kaare Gautvik, None

SA0264 **Blocking TNF-α action does not prevent the increase in serum sclerostin levels following estrogen withdrawal in postmenopausal women**

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Disclosures: Matthew Drake, None

SA0265 **Interaction between *Porphyromonas gingivalis* (*P.gingivalis*) and Matrix Bound Bisphosphonates during Induction of Osteonecrosis**

Ranya Elsayed*[1], Ahmed Alawady[2], Mohamed Meghil[3], Pheba Abraham[4], Mohamed Awad[5], Christopher Cutler[6], Mohammed Elsalanty[7]. [1]Oral Biology Dept., graduate school, Augusta University, United States, [2]university of florida college of dentistry, United States, [3]Departments of Oral biology and Periodontics, Augusta University, United States, [4]oral biology, Augsta University, United States, [5]Augusta University, United States, [6]professor and chair Dept. of periodontics, Associate dean for research, dental college of Georgia, Augusta university, United States, [7]Associate professor, Dental College of Georgia, Augusta University, United States

Disclosures: Ranya Elsayed, None

SA0266 **Novel ELISA for the detection of circulating bioactive Sclerostin**

Jacqueline Wallwitz*[1], Elisabeth Gadermaier[1], Gabriela Berg[1], Venugopal Bhaskara[2], Emilio Casanova[3], Gottfried Himmler[1]. [1]The Antibody Lab GmbH, Austria, [2]Medical University of Vienna, Austria, [3]Ludwig Boltzmann Institute for Cancer Research, Austria

Disclosures: Jacqueline Wallwitz, None

SA0267 **A Novel Strategy to Rescue Osteogenesis of Impaired Bone Marrow Stromal Cells in Diabetes**

Yuqi Guo*[1], Jian Yang[1], Xin Li[1]. [1]New York University, United States

Disclosures: Yuqi Guo, None

SA0268 **Type 2 Diabetes Impairs Insulin-Stimulated Blood Flow in Femur and Lumbar Vertebra of Hyperphagic OLETF Rats**

Pamela Hinton*[1], Rebecca Dirkes[1], T. Dylan Olver[1]. [1]University of Missouri, United States

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SA0269 **Smoking in men after peak bone mass acquisition is associated with faster trabecular bone loss**
Bruno Lapauw*[1], Charlotte Verroken[1], Stefan Goemaere[1], Jean-Marc Kaufman[1], Hans-Georg Zmierczak[1]. [1]Unit for Osteoporosis and Metabolic Bone Diseases, Department of Endocrinology, Ghent University Hospital, Belgium
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SA0270 **MFG-E8 deficiency: A model of inflamm-aging associated bone loss robustly rescued by teriparatide**
Megan Michalski*[1], Anna Seydel[1], Erica Siismets[1], Benjamin Sinder[1], Amy Koh[1], Kamran Atabai[2], Jose Aguirre[3], Hernan Roca[1], Laurie McCauley[1]. [1]University of Michigan, United States, [2]University of California, San Francisco, United States, [3]University of Florida, United States
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SA0271 **Activin A Signaling Is Critical For Renal Osteodystrophy in the CKD-MBD**
Toshi Sugatani*[1], Yi-Fu Fang[1], Hartmut Malluche[2], Keith Hruska[1]. [1]Department of Pediatrics, Nephrology, Washington University School of Medicine, United States, [2]Division of Nephrology, Bone and Mineral Metabolism, University of Kentucky, United States
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SA0272 **Role of Progranulin in Skeletal Homeostasis in Female Mice**
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SA0273 **BMP2 Impaired Mineralization Potential in Primary Human Osteoblasts Isolated from Osteoporotic Patients**
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SA0274 **HPMA Copolymer Dexamethasone Conjugates Prevent Osteoporosis induced by Traumatic Brain Injury**
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Disclosures: Gang Zhao, None

SA0275 **Effects of Endogenous Hypercortisolism on bone specific microRNA in bone tissue samples of patients with Cushing's disease.**
Zhanna Belaya*[1], Tatjana Grebennikova[1], Alexey Nikitin[2], Olga Brovkina[2], Alexander Solodovnikov[3], Liudmila Rozhinskaya[1], Galina Melnichenko[1]. [1]Endocrinology Research Centre, Russian Federation, [2]Federal Research and Clinical Center FMBA, Russian Federation, [3]Ural State Medical Academy, Russian Federation
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SA0276 **Risk Factors of Fractures in Patients With Stage 3 Chronic Kidney Disease : Analysis of Cartagene**
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SA0277 **Relationship between depression and anxiety and low bone mineral density in patients hospitalized with severe anorexia nernosa.**

Julia Herrou*[1], Adrien Etcheto[1], Sami Kolta[1], Nathalie Godart[2], Nicole Barthe[3], Alain Daragon[4], Yves Maugars[5], Thierry Thomas[6], Christian Roux[1], Karine Briot[1]. [1]Cochin Hospital, Rheumatology Department, France, [2]INSERM U1178, Psychiatry Unit, Institut Mutualiste Montsouris, France, [3]Médecine Nucléaire, Centre Hospitalier de Bordeaux, France, [4]Rheumatology, CHU Rouen, France, [5]Rheumatology, CHU Nantes, France, [6]Rheumatology, CHU Saint Etienne, France

Disclosures: Julia Herrou, None

SA0278 **The Predictors for 24 Months Efficacy of Denosumab, an Anti-RANKL Antibody, on Osteoporosis in Rheumatoid Arthritis Patients from Japanese Multicenter Study (TBCRBONE)**

Yuji Hirano*[1], Yasuhide Kanayama[2], Kyosuke Hattori[1], Nobunori Takahashi[3], Naoki Ishiguro[3], Toshihisa Kojima[3]. [1]Department of Rheumatology, Toyohashi Municipal Hospital, Japan, [2]Department of Orthopaedic Surgery and Rheumatology, Toyota Kosei Hospital, Japan, [3]Department of Orthopaedic Surgery, Nagoya University Graduate School of Medicine, Japan

Disclosures: Yuji Hirano, None

SA0279 **Denosumab increased bone mineral density but did not affect trabecular bone score (TBS) during first year after kidney transplantation**

Shogo Nakayama*[1], Yasumasa Yoshino[1], Izumi Hiratsuka[1], Megumi Shibata[1], Taihei Ito[2], Hitomi Sasaki[3], Midori Hasegawa[4], Mamoru Kusaka[3], Ryoichi Shiroki[3], Takashi Kenmochi[2], Yukio Yuzawa[4], Kiyotaka Hoshinaga[3], Atsushi Suzuki[1]. [1]Division of Endocrinology and Metabolism, Department of Internal Medicine, Fujita Health University, Japan, [2]Department of Organ Transplant Surgery, Fujita Health University, Japan, [3]Department of Urology, Fujita Health University, Japan, [4]Division of Nephrology, Department of Internal Medicine, Fujita Health University, Japan

Disclosures: Shogo Nakayama, None

SA0280 **Alendronate ameliorates the risk of urinary stone formation of astronauts on the International Space Station for 6 months**

Atsushi Okada*[1], Takahiro Yasui[1], Kenjiro Kohri[2], Toshio Matsumoto[3], Adrian LeBlanc[4], Jean Sibonga[5], Elisabeth Spector[6], Jeff Jones[4], Jay Shapiro[7], Thomas Lang[8], Linda Shackelford[5], Scott Smith[5], Harlan Evans[6], Joyce Keyak[9], Hiroshi Ohshima[10]. [1]Department of Nephro-urology, Nagoya City University Graduate School of Medical Sciences, Japan, [2]Nagoya City University, Japan, [3]University of Tokushima Fujii Memorial Institute of Medical Sciences, Japan, [4]Baylor College of Medicine, United States, [5]NASA Johnson Space Center, United States, [6]KBRWyle, United States, [7]Kennedy Krieger Institute, United States, [8]UCSF, United States, [9]University of California at Irvine, United States, [10]Japan Aerospace Exploration Agency, Japan

Disclosures: Atsushi Okada, None

SA0281 **Bilirubin and lithocholic acid induce osteocyte damage which may partially explain the development of osteoporosis in cholestatic disease.**

Silvia Ruiz-Gaspà*[1], Núria Guañabens[1], Andres Combalia[1], Pilar Peris[1], Ana Monegal[1], Albert Parés[1]. [1]Liver and Metabolic Bone Diseases Units, Hospital Clínic, IDIBAPS, CIBERehd, University of Barcelona, Barcelona, Spain., Spain

Disclosures: Silvia Ruiz-Gaspà, None

SA0282 **Hip QCT for Assessment of Trabecular Bone Loss and Recovery after Space Flight: A Pilot Study**

Jean Sibonga*[1], Thomas Lang[2], Harlan Evans[3], Elisabeth Spector[3]. [1]NASA-Johnson Space Center, United States, [2]UCSF, United States, [3]KBRwyle, United States

Disclosures: Jean Sibonga, None

SA0283 **The role of Trabecular Bone Structure Analysis in predicting Incidental Fracturtes in Rheumatoid Arthritis**

Ikuko Tanaka*[1], Motokazu Kai[2], Kunikazu Ogawa[2], Shigenori Tamaki[1], Mari Ushikubo[3], Keisuke Izumi[4], Kumiko Akiya[3], Hisaji Oshima[3]. [1]Nagoya Rheumatology Clinic, Japan, [2]Mie Rheumatology Clinic, Japan, [3]Tokyo Medical Center, Japan, [4]Tokyo Medical Center, Jersey

Disclosures: Ikuko Tanaka, None

SA0284 **Risk factors for reduced bone mineral density in patients with rheumatoid arthritis.**

Jun Hashimoto*[1], Shoichi Kaneshiro[2], Yoshio Nagayama[3], Hideki Tsuboi[2]. [1]Osaka Minami Medical Center, Japan, [2]Osaka Rosai Hospital, Japan, [3]Nagayana Rheumatic/Orthopaedic clinic, Japan

Disclosures: Jun Hashimoto, None

SA0285 **Efficacy and safety of denosumab on post-kidney transplantation recipients**

Yasumasa Yoshino*[1], Shogo Nakayama[1], Izumi Hiratsuka[1], Megumi Shibata[1], Taihei Ito[2], Hitomi Sasaki[3], Midori Hasegawa[4], Ryoichi Shiroki[3], Takashi Kenmochi[2], Yukio Yuzawa[4], Kiyotaka Hoshinaga[3], Atsushi Suzuki[1]. [1]Division of Endocrinology and Metabolism, Department of Internal Medicine, Fujita Health University, Japan, [2]Department of Organ Transplant Surgery, Fujita Health University, Japan, [3]Department of Urology, Fujita Health University, Japan, [4]Division of Nephrology, Department of Internal Medicine, Fujita Health University, Japan

Disclosures: Yasumasa Yoshino, None

SA0286 **Predictors of Improvement in Bone Mineral Density after Celiac Disease Diagnosis**

Haley M. Zylberberg*[1], Benjamin Lebwohl[1], Arindam RoyChoudhury[2], Minghao Liu[3], Marcella Walker[4], Peter H.R. Green[1]. [1]Celiac Disease Center at Columbia University, College of Physicians and Surgeons, United States, [2]Mailman School of Public Health, Columbia University, United States, [3]Dept of Medicine Endocrinology Columbia University, College of Physicians and Surgeons, United States, [4]Division of Endocrinology, Columbia University, College of Physicians and Surgeons, United States

Disclosures: Haley M. Zylberberg, None

SA0287 **Long-term effects of bisphosphonate therapy: perforations, microcracks and mechanical properties.**

Shaocheng Ma*[1], Ulrich Hansen[1], Justin Cobb[1], Richard Abel[1]. [1]Imperial College, United Kingdom

Disclosures: Shaocheng Ma, None

SA0288 **Patients without prior zoledronic acid (ZOL) infusion show increased Trabecular Bones Score (TBS) after one year on denosumab (Dmab)**

Mohammed Almohaya*[1], Naveen Sami[2], Stephen Robertson[2], David Kendler[3]. [1]King Fahad Medical City, Saudi Arabia, [2]Prohealth clinical research, Canada, [3]University of British Columbia, Canada

Disclosures: Mohammed Almohaya, None

SA0289 **Changes in Bone Mineral Density (BMD): A Longitudinal Study of Osteoporosis Patients**

Sarah Berry*[1], Hao Zhu[1], Thomas Travison[2], Alyssa B. Dufour[1], John Caloyeras[3], Rich Barron[3], Elizabeth Samelson[1]. [1]Hebrew SeniorLife, Institute for Aging Research, United States, [2]Hebrew SeniorLife, United States, [3]Amgen, United States

Disclosures: Sarah Berry, Amgen, Grant/Research Support

SA0290 **Denosumab Improves Glycemic Control of Type 2 Diabetic or Prediabetic Patients with Osteoporosis**

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Disclosures: Chee Kian Chew, None

SA0291 **Retrospective-prospective Observational Study in rEal life treatment in Mexican patients with denosumAb queRY database**

Fidencio Cons*[1], Salomon Jasqui [2], Carlos Salinas [3], Amador E Macias [4], Alfonso J Zarain[5], Alfredo Reza[6], Hugo D Pena[7], Jorge Morales [8], Lucio J Balcazar[9], Jaime Elizondo[10], Pilar de la Pena[11]. [1]Centro Investigacion Artritis y Osteoporosis, Mexico, [2]Clinica Osteoporosis Dr. Salomon Jasqui, Mexico, [3]Clinica Menopausia Dr.Carlos Salinas Dorantes, Mexico, [4]Centro Medico San Francisco, Mexico, [5]Centro de Climaterio y Osteoporosis, Mexico, [6]Clinica Osteoporosis Dr Alfredo Reza, Mexico, [7]Centro Diagnostico de Osteoporosis, Mexico, [8]Hospital Aranda de la Parra, Mexico, [9]Hospital Regional "Dr. Manuel Cárdenas de la Vega", Mexico, [10]Centro de Investigación Clinica, Mexico, [11]Clinica de Osteoporosis Dra Pilar de la Pena, Mexico

Disclosures: Fidencio Cons, None

SA0292 **Rates of Mortality and Second Hip Fracture Following the Implementation of a Fracture Liaison Service (FLS): A Single Center Experience.**

Vitaly Medvedovsky*[1], Uri Yoel[1], Lior Baraf[1], Dayana Cohen[1], Tamar Eshkoli[1], Avital Blum[1], Vera Polischuk[1], Poliana Shamgar[1], Michal Lamberger[1], Dvora Lieberman[1], Victor Novack[1], Ethel Siris[2], Merav Fraenkel[1]. [1]Soroka University Medical Center and the Faculty of Health Sciences, Ben-Gurion University of the Negev, Israel, [2]Columbia University Medical Center, United States

Disclosures: Vitaly Medvedovsky, None

SA0293 **A Phase 1, Subject- and Investigator blinded, Sponsor unblinded, Placebo-controlled, Randomized, 2 part, Sequential, Single Ascending Dose Study to Assess the Safety, Tolerability, Pharmacokinetics, and Pharmacodynamics of DS 1501a in Healthy Young Subjects and Healthy Postmenopausal Women**

Victor Dishy*[1], Dongwoo Kang[1], Vance Warren[1], William Maxwell[1], Benjamin Levinson[1], Jarema Kochan[1], Ling He[1], Merav Baz-Hecht[1], Chie Fukuda[2], Junichi Koga[2], Eisuke Tsuda[2], Ko Watanabe[2]. [1]Daiichi Sankyo, Inc, United States, [2]Daiichi Sankyo, Inc, Japan

Disclosures: Victor Dishy, None

SA0294 **The effect of once-weekly teriparatide administration on prevention of vertebral collapse in new thoracolumbar vertebral fractures – T-WRAP prospective randomized controlled study –**

Satoshi Ikeda*[1]. [1]Ken-Ai Memorial Hospital, Orthopedic Surgery, Japan

Disclosures: Satoshi Ikeda, None

SA0295 **Factors affecting fracture location in atypical femoral fractures: a cross-sectional study with 147 patients**

Ji Wan Kim*[1], Jung Jae Kim[2], Jae Suk Chang[2], Jai Hyung Park[3], Hyun Chul Shon[4], Kwang Hwan Jung[5], Chul-Ho Kim[2], Seong-Eun Byun[6], Chang-wug Oh[7]. [1]Haeundae Paik Hospital, Inje University, Korea, Republic of, [2]Asan Medical Center, University of Ulsan, Korea, Republic of, [3]Kangbuk Samsung Hospital, Sungkyunkwan University, Korea, Republic of, [4]Chungbuk National University Hospital, Korea, Republic of, [5]Ulsan University Hospital, Korea, Republic of, [6]CHA Bundang Medical Center, CHA university, Korea, Republic of, [7]Kyungpook National Hospital, Kyungpook National University, Korea, Republic of

Disclosures: Ji Wan Kim, None

SA0296 **Effects of 1-year treatment of anti-resorptive agents on trabecular bone score and hip geometry**

Ji Hyun Lee*[1], Kyoung Min Kim[1], Young Ji Kim[1], Sunghwan Suh[2], Su Jin Lee[3], Sang Wan Kim[4], Chan Soo Shin[5]. [1]Seoul National University Bundang Hospital and Seoul National University College of Medicine, Korea, Republic of, [2]Dong-A University Medical Center, Dong-A University College of Medicine, Korea, Republic of, [3]Division of Endocrinology, Department of Internal Medicine, National Health Insurance Service Ilsan Hospital, Korea, Republic of, [4]Borame Hospital and Seoul National University College of Medicine, Korea, Republic of, [5]Seoul National University Hospital and Seoul National University College of Medicine, Korea, Republic of

Disclosures: Ji Hyun Lee, None

SA0297 **Effect of Bisphosphonate and Teriparatide on Vertebral Bone Microarchitecture and Strength *in Vivo* Assessed by Clinical Computed Tomography**

Taro Mawatari*[1], Koichiro Kawano[1], Shinkichi Arisumi[1], Muneyuki Takahashi[1], Satoshi Ikemura[2], Satoshi Hamai[2], Gen Matsui[1], Takahiro Iguchi[1], Hiroaki Mitsuyasu[1], Shinya Kawahara[1], Yasuharu Nakashima[2]. [1]Hamanomachi Hospital, Japan, [2]Kyushu University, Japan

Disclosures: Taro Mawatari, None

SA0298 **The effect of teriparatide on fracture healing of vertebral compression fracture in post menopausal women**

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Disclosures: Seung Woo Suh, None

SA0299 **Effect of fracture risk assessment on anti-osteoporosis medication use and adherence: Findings from the SCOOP Trial**

C. Cooper*[1], C. Parsons[2], N. C Harvey[1], L. Shepstone[3], J. A. Kanis[4], E. Lenaghan[3], S. Clarke[5], R. Fordham[3], N. Gittoes[6], I. Harvey[3], R. Holland[3], A. Heawood[5], N. Redmond[5], A. Howe[3], T. Marshall[3], T.J. Peters[5], D. Torgerson[7], T.W. O'Neill[8], E. McCloskey[9]. [1]MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, [2]RC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, [3]University of East Anglia, United Kingdom, [4]Centre for Metabolic Bone Diseases, University of Sheffield and Institute for Health and Ageing, Catholic University of Australia, United Kingdom, [5]University of Bristol, United Kingdom, [6]Queen Elizabeth Hospital, United Kingdom, [7]University of York, United Kingdom, [8]University of Manchester, United Kingdom, [9]Centre for Metabolic Bone Diseases, University of Sheffield, United Kingdom

Disclosures: C. Cooper, None

SA0300 **Prevalence of severe suppression of bone turnover (SSBT) in patients on long-term bisphosphonate (BP) therapy**

Shijing Qiu*[1], Elizabeth Warner[1], Pooja Kulkarni[1], Mahalakshi Honasoge[1], Arti Bhan[1], Shiri Levy[1], George Divine[1], D. Sudhaker Rao[1]. [1]Henry Ford Hospital, United States

Disclosures: Shijing Qiu, NIAMS, Grant/Research Support

SA0301 **Effect of Denosumab Compared With Risedronate on Percentage Change in Lumbar Spine BMD at 12 Months in Subgroups of Glucocorticoid-treated Individuals**

K Saag*[1], N Pannacciulli[2], P Geusens[3], J Adachi[4], E Lespessailles[5], J Malouf-Serra[6], O Messina[7], A Wang[2], RB Wagman[2], WF Lems[8]. [1]University of Alabama, United States, [2]Amgen Inc., United States, [3]Maastricht University, Netherlands, [4]McMaster University, Canada, [5]University Hospital Orleans, France, [6]Hospital San Pablo, Spain, [7]Cosme Argerich Hospital, Argentina, [8]VU University Medical Centre, Netherlands

Disclosures: K Saag, Amgen, Merck, Consultant

SA0302 **Credible Intervals of The Rates of Osteonecrosis of The Jaw (ONJ) In Patients Treated With Denosumab**

Abdulhafez Selim *[1], Paula Karabelas[2], Ahmed Kaseb[3]. [1]Philadelphia College of Osteopathic Medicine (PCOM), United States, [2]Private Investigator, United States, [3]Department of Gastrointestinal Medical Oncology, M. D. Anderson Cancer Center, United States

Disclosures: Abdulhafez Selim , None

SA0303 **The Effects of Teriparatide, Vibration and the Combination on Bone Mass, Architecture and Metabolism in Chronic Spinal Cord Injury**

Narina Simonian*[1], Brent Edwards[2], Elaine Gregory[1], Keith Gordon[1], Rama Parachuri[3], Ifaz Haider[2], Karen Troy[4], Thomas Schnitzer[1]. [1]Northwestern University, United States, [2]University of Calgary, Canada, [3]Edward Hines Jr. VA Hospital, United States, [4]Worchester Polytechnic Institute, United States

Disclosures: Narina Simonian, None

SA0304 **Teriparatide regains the bone of the patients who has failed in bisphosphonate therapy.**
Katsuya Kanesaki*[1], Shinya Tanaka[2], Hiromi Oda[2]. [1]Nagata orthopedic hospital, Japan, [2]Saitama medical university, Japan
Disclosures: Katsuya Kanesaki, None

SA0305 **Combination treatment with teriparatide and denosumab improves spine trabecular microarchicture in DATA-Switch: a randomized controlled trial**
Joy Tsai*[1], Linda Jiang[1], Hang Lee[1], Didier Hans[2], Benjamin Leder[1]. [1]Massachusetts General Hospital, United States, [2]Lausanne University Hospital, Switzerland
Disclosures: Joy Tsai, None

SA0306 **Acute phase reactions after intravenous infusion of zoledronic acid in Japanese patients with osteoporosis: sub-analysis of the phase III (ZONE) study**
Tatsuhiko Kuroda*[1], Masataka Shiraki[2], Satoko Ueda[3], Yasuhiro Takeuchi[4], Toshitsugu Sugimoto[5], Toshitaka Nakamura[6]. [1]Corporate Research & development, Asahi Kasei Corporation, Japan, [2]Department of Internal Medicine, Research Institute and Practice for Involutional Diseases, Japan, [3]Medical Affairs, Asahi Kasei Pharma Corporation, Japan, [4]Toranomon Hospital Endocrine Center, Japan, [5]Internal Medicine 1, Shimane University Faculty of Medicine, Japan, [6]Aoba Hospital, Japan
Disclosures: Tatsuhiko Kuroda, Asahi Kasei, Other Financial or Material Support

SA0307 **24-month follow up of teriparatide treatment in GIOP patients and postmenopausal osteoporosis after bisphosphonate treatment failure**
Vaclav Vyskocil*[1], Zuzana Zbozinkova[2]. [1]Charles university hospital, Bone disease center, Czech Republic, [2]Institute of Biostatistics and Analyses, Faculty of Medicine, Masaryk University, Czech Republic
Disclosures: Vaclav Vyskocil, None

SA0308 **Cortical and trabecular compartments behavior in patients under bone treatments using 3D parameters obtained from DXA.**
Renaud Winzenrieth*[1], Silvana Di Gregorio[2], E. Bonel[2], Ludovic Humbert[1], M. García [2], Luis Del Rio[2]. [1]Galgo Medical, Spain, [2]CETIR Grup Mèdic, Spain
Disclosures: Renaud Winzenrieth, Galgo Medical, Other Financial or Material Support

SA0309 **Trabecular bone score and hip structural analysis in patients with atypical femoral fractures**
Sanne Buitendijk*[1], Denise van de Laarschot[1], Sandra Smits[1], Fjorda Koromani[1], Fernando Rivadeneira Ramirez[2], Thomas Beck[3], M. Carola Zillikens[1]. [1]Bone Center, Erasmus MC, Netherlands, [2]Epidemiology, Erasmus MC, Netherlands, [3]Beck Radiological Innovations, United States
Disclosures: Sanne Buitendijk, None

SA0310 **MicroRNA-125b Derived from Osteoblasts Exerts its Anti-Osteolytic Effect through Targeting Preosteoclasts**
Faisal Ahmed*[1], Tomoko Minamizaki[1], Shota Ito[2], Nushrat Sarmin[1], Chise Fujimoto[1], Yuko Nakao[2], Kotaro Tanimoto[2], Shinji Hiyama[3], Yuji Yoshiko[1]. [1]Department of Calcified Tissue Biology, Graduate School of Biomedical & Health Sciences, Hiroshima University, Japan, Japan, [2]Department of Orthodontics and Craniofacial Developmental Biology, Hiroshima University Graduate School of Biomedical & Health Sciences, Hiroshima, Japan, Japan, [3]Department of Oral Biology, Graduate School of Biomedical & Health Sciences, Hiroshima University, Japan, Japan
Disclosures: Faisal Ahmed, None

SA0311 **Serum exosome-mediated resistance to the intracrine actions of 25-hydroxyvitamin D in human macrophages**

Rene Chun*[1], Carter Gottlieb[2], Kathryn Zavala[2], Albert Shieh[3], Andrea Salinas[2], Vahe Yacoubian[2], Samya Konda[2], Martin Hewison[4], Philip Liu[2], John Adams[5]. [1]Department of Orthopaedic Surgery, University of California, Los Angeles, United States, [2]Department Orthopaedic Surgery, University of California, Los Angeles, United States, [3]Department of Medicine, University of California, Los Angeles, United States, [4]University of Birmingham, United Kingdom, [5]Departments of Molecular, Cell and Developmental Biology and Orthopaedic Surgery, University of California, Los Angeles, United States

Disclosures: Rene Chun, None

SA0312 **Vitamin D deficiency promotes breast cancer invasion and metastasis through the regulation of the CXCR4/CXCL12 axis in the MMTV-PYmT mouse model**

Jiarong Li*[12], Richard Kremer[12]. [1]McGill university, Canada, [2]McGill University, Canada

Disclosures: Jiarong Li, None

SA0313 **Exosomes Derived from Mesenchymal Stem Cells Promotes Osteogenesis and Angiogenesis during Hyperhomocysteinemia in Bone**

Neetu Tyagi*[123], jyotirmaya behera[123], Kimberly E. Kelly Kimberly E. Kelly[123], Akash George[123], Suresh Tyagi[123]. [1]University of Louisville, United States, [2]University of louisville, United States, [3]university of louisville, United States

Disclosures: Neetu Tyagi, None

SA0314 **The Deleterious Effects of IGF1 Signaling on the Development of Post-Traumatic Osteoarthritis**

Yongmei Wang*[1], Faming Tian[1], Alexis Dang[2], Zara Butte[3], Ling Chen[4], Misun Kang[4], Sunita Ho[4], Daniel Bikle[1]. [1]Endocrine Unit, University of California, San Francisco/ San Francisco VA Health Care System, United States, [2]Department of Orthopaedic Surgery, University of California, San Francisco/San Francisco VA Health Care System, United States, [3]Department of Orthopaedic Surgery, University of California, San Francisco/ San Francisco VA Health Care System, United States, [4]Bioengineering & Biomaterials Micro-CT and Imaging Facility, University of California, San Francisco, United States

Disclosures: Yongmei Wang, None

SA0315 **Abaloparatide-SC Improved Cortical Bridging and Increased Callus Mass and Strength in a Rat Closed Femur Fracture Model**

Heidi Chandler*[1], Allen Pierce[1], Jeffery Brown[1], Michael Ominsky[1], Gary Hattersley[1]. [1]Radius Health Inc, United States

Disclosures: Heidi Chandler, Radius Health , Other Financial or Material Support

SA0316 **Parathyroid hormone (1-34) ameliorated knee osteoarthritis and function in rats by decreasing chondrocyte terminal differentiation and apoptosis via autophagy**

Chung-Hwan Chen*[1], Ling-Hua Chang[1], Lin Kang[2], Yi-Shan Lin[1], Sung-Yen Lin[3], Je-Ken Chang[3], Shih-Tse Chen[4], Mei-Ling Ho[1]. [1]Kaohsiung Medical University, Taiwan, Province of China, [2]National Cheng Kung University Hospital, Taiwan, Province of China, [3]Kaohsiung Medical University Hospital, Taiwan, Province of China, [4]National Taiwan University Hospital Hsin-Chu Branch, Taiwan, Province of China

Disclosures: Chung-Hwan Chen, None

SA0317 **Effects of ferric citrate administration in a murine model of Chronic Kidney Disease**

Connor Francis*[1], Samantha Neuburg[1], Claire Gerber[1], Xueyan Wang[1], Corey Dussold[1], Lixin Qi[1], Guillaume Courbon[1], Aline Martin[1], Myles Wolf[2], Valentin David[1]. [1]Division of Nephrology and Hypertension, Department of Medicine, and Center for Translational Metabolism and Health, Institute for Public Health and Medicine, Northwestern University Feinberg School of Medicine, United States, [2]Division of Nephrology and Hypertension, Duke University, United States

Disclosures: Connor Francis, None

SA0318 **A novel bone formation-sparing anti-resorptive agent, DS-1501a, increased BMD and bone biomechanical properties of cortical bone in ovariectomized cynomolgus monkeys**
Chie Fukuda*[1], Akiko Okada[1], Tsuyoshi Karibe[1], Yoshiharu Hiruma[1], Seiichiro Kumakura[1], Eisuke Tsuda[2]. [1]R&D Division, Daiichi Sankyo Co., Ltd, Japan, [2]R&D Division, Daiichi Sankyo Co., Ltd., Japan
Disclosures: Chie Fukuda, Daiichi Sankyo Co., Ltd., Grant/Research Support

SA0319 **Anti-Siglec-15 antibody reduces bone resorption while maintaining bone formation in ovariectomized (OVX) rats and monkeys**
Chie Fukuda*[1], Eisuke Tsuda[1], Akiko Okada[1], Norio Amizuka[2], Tomoka Hasegawa[2], Tsuyoshi Karibe[1], Yoshiharu Hiruma[1], Nana Takagi[1], Seiichiro Kumakura[1]. [1]R&D Division, Daiichi Sankyo Co., Ltd, Japan, [2]Department of Developmental Biology of Hard Tissue, Faculty of Dental Medicine, Hokkaido University, Japan
Disclosures: Chie Fukuda, None

SA0320 **A Novel H_2S-releasing Amino-Bisphosphonate Which Combines Bone Anti-Catabolic And Anabolic Functions**
Francesco Grassi*[1], Laura Gambari[1], Gina Lisignoli[2]. [1]Lab RAMSES, Istituto Ortopedico Rizzoli, Italy, [2]Lab Immunoreumatologia e Rigenerazione Tissutale, Istituto Ortopedico Rizzoli, Italy
Disclosures: Francesco Grassi, None

SA0321 **Controlling Targeted Bone Growth by Retinoic Acid Receptor Gamma Agonist**
Masatake Matsuoka*[1], Kenta Uchibe[2], Ivan Alferiev[3], Joshua M Abzug[1], Min Liu[4], Motomi Enomoto-Iwamoto[1], Michael Chorny[3], Masahiro Iwamoto[1]. [1]Department of Orthopaedics, University of Maryland School of Medicine, United States, [2]Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Japan, [3]Pediatrics, The Children's Hospital of Philadelphia , United States, [4]University of Pennsylvania School of Dentistry, United States
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SA0322 **Effects of Eldecalcitol and Ibandronate on Bone Mineral Density, Arthritis and Muscle Atrophy in Rats with Adjuvant-induced Arthritis**
Yuichi Ono*[1], Naohisa Miyakoshi[1], Yuji Kasukawa[1], Manabu Akagawa[1], Masazumi Suzuki[1], Tetsuya Kawano[1], Itsuki Nagahata[1], Yusuke Yuasa[1], Yoichi Shimada[1]. [1]Department of Orthopedic Surgery, Akita University Graduate School of Medicine, Japan
Disclosures: Yuichi Ono, None

SA0323 **Macrolactin A attenuates RANKL-induced osteoclastogenesis via MAPKs and NFATc1 signaling pathways in BMMs and promotes osteoblastogenesis through Runx2, BMP-2 and MAPKs signaling pathways in MC3T3-E1 cells**
Yunjo Soh*[1], Mahesh Sapkota[2], Liang Li[2], Sewoong Kim[2]. [1]Department of Dental Pharmacology, School of Dentistry, Chonbuk National University, Korea, Republic of, [2]Department of Dental Pharmacology, School of Dentistry, Korea, Republic of
Disclosures: Yunjo Soh, None

SA0324 **Pharmacokinetics of TransCon PTH in Rat and Cynomolgus Monkey: a Sustained-Release PTH Prodrug for Treatment of Hypoparathyroidism**
Susanne Pihl*[1], Mathias Krusch[2], Lars Holten-Andersen[1], Joachim Zettler[2], Felix Cleemann[2], Caroline Rasmussen[1], Kennett Sprogoe[1], David Karpf[3], Vibeke Miller Breinholt[1]. [1]Ascendis Pharma A/S, Denmark, [2]Ascendis Pharma GmbH, Germany, [3]Ascendis Pharma Inc., United States
Disclosures: Susanne Pihl, None

SA0325 **High-throughput Genetic Screens Reveal Targets of Nitrogen-containing Bisphosphonates**
Lauren Surface*[1], Zhou Yu[1], Ji Woong Park[2], Erin O'Shea[3], Timothy Peterson[2]. [1]Harvard University, United States, [2]Washington University School of Medicine, United States, [3]Harvard University, Howard Hughes Medical Institute, United States
Disclosures: Lauren Surface, None

SA0326 **Cyclic Treatment Regimen Rescues Parathyroid Hormone (PTH) Discontinuation-Induced Bone Loss and Microarchitecture Deterioration**

Wei-Ju Tseng*[1], Hongbo Zhao[1], Wonsae Lee[1], Yang Liu[1], Yihan Li[1], Chantal de Bakkar[1], Ling Qin[1], X. Sherry Liu[1]. [1]University of Pennsylvania, United States

Disclosures: Wei-Ju Tseng, None

SA0327 **Bone Structure and Bone Mineral Density in Growing Male Mice is Largely Unchanged when Calcium and Vitamin D is Fed at Levels Lower Than Those Present in the AIN93G Reference Diet**

C. Brent Wakefield*[1], Jenalyn L. Yumol[1], Sandra M. Sacco[1], Phillip J. Sullivan[1], Elena M. Comelli[2], Wendy E. Ward[1]. [1]Brock University, Canada, [2]University of Toronto, Canada

Disclosures: C. Brent Wakefield, None

SA0328 **Enhancement of ghrelin signaling by Rikkunshi-To attenuates teriparatide-induced nausea in rats**

Kouichi Yamamoto*[1], Yukihiro Isogai[2], Takayuki Ishida[1], Keisuke Hagihara[3]. [1]Department of Medical Science and Technology, Division of Health Sciences, Graduate School of Medicine, Osaka University, Japan, [2]Medical Affairs Department, Pharmaceutical Business Administration Division, Asahi Kasei Pharma Corporation, Japan, [3]Department of Advanced Hybrid Medicine, Graduate School of Medicine, Osaka University, Japan

Disclosures: Kouichi Yamamoto, None

SA0329 **PTH (1-34) prevents glucocorticoid-induced reduction in blood flow and bone formation**

Wei Yao*[1], Abhijit Chaudhari[2], Yuan Lay[1], Mie Jin Lim [1], Alexander Kot[1], Donald Kimmel[3], Nancy Lane[1]. [1]UC Davis Medical Center, United States, [2]UC Davis, United States, [3]University of Florida, United States

Disclosures: Wei Yao, None

SA0330 **Significance of DXA and HR-pQCT for the Diagnosis of Osteopetrosis (ADO II) – Establishment of a Diagnostic Threshold**

Sebastian Butscheidt*[1], Tim Rolvien[2], Uwe Kornak[3], Felix N. Schmidt[4], Thorsten Schinke[5], Michael Amling[6], Ralf Oheim[7]. [1]SB, Germany, [2]TR, Germany, [3]UK, Germany, [4]FNS, Germany, [5]TS, Germany, [6]MA, Germany, [7]RO, Germany

Disclosures: Sebastian Butscheidt, None

SA0331 **Effects of Burosumab (KRN23), a Fully Human Anti-FGF23 Monoclonal Antibody, on Functional Outcomes in Children with X-linked Hypophosphatemia (XLH): Final Results from a Randomized, 64-week, Open-label Phase 2 Study**

Thomas Carpenter*[1], Erik Imel[2], Agnès Linglart[3], Annemieke Boot[4], Wolfgang Högler[5], Raja Padidela[6], William van't Hoff[7], Anthony Portale[8], Meng Mao[9], Alison Skrinar[10], Javier San Martin[10], Michael Whyte[11]. [1]Yale University School of Medicine, United States, [2]Indiana University School of Medicine, United States, [3]Hôpital Bicêtre, France, [4]University of Groningen, Netherlands, [5]Birmingham Children's Hospital, United Kingdom, [6]Royal Manchester Children's Hospital, United Kingdom, [7]Great Ormond Street Hospital, United Kingdom, [8]University of Californa, San Francisco School of Medicine, United States, [9]Ultragenyx Pharmaceutical Inc., United States, [10]Ultragenyx Pharmaceutical Inc, United States, [11]Shriners Hospital for Children, United States

Disclosures: Thomas Carpenter, Ultragenyx Pharmaceutical Inc, Other Financial or Material Support

SA0332 **Diagnostic value of [18F]-NaF PET/CT as an early marker in fibrodysplasia ossificans progressiva**

Elisabeth Eekhoff*[1], Esmée Botman[1], Coen Netelenbos[1], Pim de Graaf[2], Pieter Raijmakers[1]. [1]VU University Medical Center (VUmc), Netherlands, [2]VU University Medical Center, Netherlands

Disclosures: Elisabeth Eekhoff, None

SA0333 **New Skeletal Dysplasia Associated with a Heterozygous De Novo Mutation in *MMP24***
Gary S. Gottesman*[1], William H. McAlister[2], Angela Nenninger[1], Rebecca Green[3], Steven Mumm[4], Michael P. Whyte[4]. [1]Shriners Hospital for Children - St. Louis, United States, [2]Mallinckrodt Institute of Radiology, Washington University School of Medicine, United States, [3]Springfield Clinic, United States, [4]Shriners Hospital for Children and Washington University School of Medicine, United States
Disclosures: Gary S. Gottesman, None

SA0334 **Efficacy and Safety of Palovarotene in Fibrodysplasia Ossificans Progressiva (FOP): A Randomized, Placebo-Controlled, Double-Blind Study**
Frederick S. Kaplan*[1], Edward C. Hsiao[2], Genevieve Baujat[3], Richard Keen[4], Donna R. Grogan[5], Robert J. Pignolo[6]. [1]The University of Pennsylvania, United States, [2]Institute of Human Genetics and the Division of Endocrinology & Metabolism, University of California, San Francisco, United States, [3]Laboratoire de Génétique Moléculaire, Institut de Recherche and Hôpital Necker-Enfants Malades, France, [4]The Royal National Orthopaedic Hospital (Stanmore), United Kingdom, [5]Clementia Pharmaceuticals Inc., United States, [6]Geriatric Medicine & Gerontology, Mayo Clinic, United States
Disclosures: Frederick S. Kaplan, None

SA0335 **Bone Mineral Density but not Bone Microstructure is impaired in Adult Patients with Hypophosphatasia**
Roland Kocijan*[1], Ursula Renner[1], Martin Kuzma[2], Christian Muschitz[1], Judith Haschka[1], Daniel Kirchdörfer[1], Juraj Payer[3], Heinrich Resch[1]. [1]St. Vincent Hospital Vienna - Medical Department II, the VINforce study group, Austria, [2]Comenius University Faculty for Medicine, 5th Department of Internal Medicine, University Hospital Bratislava, Slovakia, [3]Comenius University Faculty of Medicine, 5th department of Internal Medicine, University Hospital Bratislava, Slovakia
Disclosures: Roland Kocijan, None

SA0336 **Transient Osteoporosis: Clinical Spectrum and Associated Risk Factors**
Anupam Kotwal*[1], Daniela Hurtado[1], Jad Sfeir[1], Robert Wermers[1]. [1]Division of Endocrinology, Mayo Clinic, United States
Disclosures: Anupam Kotwal, None

SA0337 **Clinical, Biochemical and Genetic Features of 41 Families with Primary Hypertrophic Osteoarthropathy, and Their Therapeutic Response to Etoricoxib: Results from a 6 Months Prospective Clinical Intervention**
Shan-Shan Li*[1], Jin-We He[1], Wen-Zhen Fu[1], Zhen-Lin Zhang[1]. [1]Metabolic Bone Disease and Genetics Research Unit, Department of Osteoporosis and Bone Diseases, Shanghai Jiao Tong University Affiliated Sixth People's Hospital, China
Disclosures: Shan-Shan Li, None

SA0338 **Asfotase alfa therapy heals recalcitrant bilateral pathologic femoral fractures in a patient with Hypophosphatasia after 1 year of treatment, that were previously non-healing up to 9 years.**
Paul Miller, MD*[1], Deborah Aggers, CCRP[2], Erin Carrithers, NP[3], Philostratos Klidaras, RPH, MRPharmS[1], Jared R.H. Foran, MD[4]. [1]Colorado Center for Bone Research, United States, [2]Centura Health Physician Group Colorado Center for Bone Research, United States, [3]Cenutra Health Physician Group Colorado Center for Bone Research, United States, [4]Panorama Orthopedics, United States
Disclosures: Paul Miller, MD, Alexion Pharmaceutical, Inc, Grant/Research Support

SA0339 **Assessing Outcomes of Joint Replacement in Patients with X-Linked Hypophosphatemia**
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Disclosures: Emily Mills, None

SA0340 **Incidence of mutations in the *TNSALP, GGPS1 and CYP1A1* genes in patients with atypical femoral fractures.**

Pilar Peris*[1], Eva Gonzalez[2], Sebastian Rodriguez[3], Ana Monegal[3], Ana Monegal[3], Nuria Guañabens[3]. [1]Rheumatology Department, Hospital Clinic. University of Barcelona, Spain, [2]Immunology Department. Hospital Clinic., Spain, [3]Rheumatology Department. Hospital Clinic, Spain

Disclosures: Pilar Peris, None

SA0341 **Negative Illness Perceptions are associated with impairments in Quality of Life in patients with Fibrous Dysplasia**

Marlous Rotman*[1], Bas Majoor[1], Casper Quispel[1], Neveen Hamdy[1], Sander Dijkstra[1], Ad Kaptein[1], Natasha Appelman-Dijkstra[1]. [1]Leiden University Medical Center, Netherlands

Disclosures: Marlous Rotman, None

SA0342 **Risk of complications in hypoparathyroidism are associated with disturbances in calcium-phosphate homeostasis: a case-control study**

Line Underbjerg*[1], Tanja Sikjaer[2], Lars Rejnmark[3]. [1]MD/Ph.D.-student, Denmark, [2]MD, Ph.D., Denmark, [3]Clinical professor, consultant, PhD, DMSc, Denmark

Disclosures: Line Underbjerg, NPS pharmaceuticals, Shire , Speakers' Bureau

SA0343 **TransCon CNP, a Sustained-Release Prodrug of C-type natriuretic Peptide, exerts Positive Effects on Bone Growth in Juvenile Cynomolgus Monkeys and in a Mouse Model of Achondroplasia**

Vibeke Miller Breinholt*[1], Nabil Kaci[2], Oliver Keil[34], Susann Aderman[34], Ulrich Hersel[34], Maxence Cornille[5], Martin Guillot[6], Nancy Doyle[6], Per Mygind[1], Aurore Valera[7], Kennett Sprogoe[1], Laurence Legeai-Mallet[2]. [1]Ascendis Pharma A/S, Denmark, [2]Imagine Institute, Denmark, [3]Ascendis Pharma GmBH, Denmark, [4]Ascendis Pharma GmbH, Denmark, [5]Imagine Institute, France, [6]Charles River Laboratories, Canada, [7]Charles River Laboratories, France

Disclosures: Vibeke Miller Breinholt, None

SA0344 **Serum Glycosylation Characterization of Osteonecrosis of the Femoral Head for Potential Biomarker Discovery**

Ting Song*[1], Peng Chen[2], Ziqi Li[3], Wei He[2], Carlito Lebrilla[4]. [1]Department of Chemistry, United States, [2]First Affiliated Hospital of Guangzhou University of Chinese Medicine, China, [3]Guangdong Provical Hospital of Chinese Medicne, China, [4]Department of Biochemistry(School of Medicine), United States

Disclosures: Ting Song, None

SA0345 ***ZNF687* gene is recurrently mutated in PDB patients from a geographic area of South Italy**

Giuseppina Divisato*[1], Nadia Petrillo[1], Federica Scotto di Carlo[1], Teresa Esposito[2], Fernando Gianfrancesco[1]. [1]Institute of Genetics and Biophysics, National Research Council of Italy, Italy, [2]Institute of Genetics and Biophysics, National Research Council of Italy; IRCCS INM Neuromed, Pozzilli, Italy , Italy

Disclosures: Giuseppina Divisato, None

SA0346 **Prevention of zoledronate-induced MRONJ in a mouse model of Bisphosphonate Displacement (BPD) prophylaxis therapy**

Akishige Hokugo*[1], Shuting Sun[2], Yujie Sun[3], Kenzo Morinaga[3], QingQing Wu[3], Mark Lundy[4], Charles McKenna[5], Frank Ebetino[2], Ichiro Nishimura[3]. [1]David Geffen School of Medicine at UCLA, United States, [2]BioVinc LLC, United States, [3]UCLA School of Dentistry, United States, [4]Indiana University, United States, [5]University of Southern California, United States

Disclosures: Akishige Hokugo, None

SA0347 **Inflammation and increased osteoclastogenesis in osteogenesis imperfecta murine**
Ivo Kalajzic*[1], Emilie Roeder[1], Xi Wang[1], Hector Leonardo Aguila[1], Sun Kyeong Lee[1], Danka Grcevic[2], Brya Matthews[1]. [1]UConn Health, United States, [2]University of Zagreb, Croatia
Disclosures: Ivo Kalajzic, None

SA0348 **Reduced autophagy increases OI severity in mice with Gly610 to Cys substitution in the triple helical region of the α2(I) collagen chain**
Elena Makareeva*[1], Shakib Omari[1], Anna Roberts-Pilgrim[1], Laura Gorrell[1], Edward Mertz[1], Sergey Leikin[1]. [1]SPB, NICHD, NIH, United States
Disclosures: Elena Makareeva, None

SA0349 **Enthesopathy in the Hyp mouse model of XLH is characterized by enhanced BMP and IHH signaling**
Eva Liu*[1], Janaina da Silva Martins[2], Marie Demay[3]. [1]Brigham and Women's Hospital and MGH, United States, [2]Massachusetts General Hospital, United States, [3]Massachusetts General Hospital, Harvard Medical School, United States
Disclosures: Eva Liu, None

SA0350 **Visualization of Immune Response During Initiation and Progression of Heterotopic Ossification in Mouse Model of Fibrodysplasia Ossificans Progressiva (FOP)**
Kalyan Nannuru*[1], Johanna Jimenez[2], LiQin Xie[1], Lily Huang[1], Xialing Wen[1], Lili Wang[1], Vincent Idone[1], Andrew Murphy[1], Sarah Hatsell[1], Aris Economides[1]. [1]Regeneron Pharmaceuticals Inc, United States, [2]Regeneron Pharmaceutical Inc, United States
Disclosures: Kalyan Nannuru, Regeneron Pharmaceuticals Inc, Other Financial or Material Support

SA0351 **Identification of the Mechanism Underlying Growth Deficiency in Osteogenesis Imperfecta**
Satoru Otsuru*[1], Adam Guess[1], Kathryn Cheah[2], Masahiro Iwamoto[3], Edwin Horwitz[1]. [1]Center for Childhood Cancer and Blood Diseases, The Research Institute at Nationwide Children's Hospital, United States, [2]Department of Biochemistry, and Centre for Reproduction, Development and Growth, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong, [3]Department of Orthopaedics, University of Maryland School of Medicine, United States
Disclosures: Satoru Otsuru, None

SA0352 **A Role for TGF-β Signaling in Cherubism**
Tulika Sharma*[1], Yaling Liu[1], Peter Maye[1], Yasuyoshi Ueki[2], Ernst Reichenberger[1], Iping Chen[1]. [1]UConn Health, United States, [2]University of Missouri Kansas City, United States
Disclosures: Tulika Sharma, None

SA0353 **Deletion of *B3glct* disrupts craniofacial and skeletal development in mice: a model for Peters Plus syndrome**
Sardar Uddin*[1], Richard Grady[2], Diana Rubel[3], Takashi Sato[4], Hisashi Narimatsu[5], Robert Haltiwanger[6], David Komatsu[1], Bernadette Holdener[2]. [1]Department of Orthopaedics, Stony Brook University, United States, [2]Department of Biochemistry and Cell Biology, Stony Brook University , United States, [3]Department of Biochemistry and Cell Biology, Stony Brook Univeristy, United States, [4]National Institute of Advanced Industrial Science and Technology in Japan, Japan, [5]National Institute of Advanced Industrial Science and Technology, Japan, Japan, [6]Complex Carbohydrate Research Center, University of , United States
Disclosures: Sardar Uddin, None

SA0354 ***SIRT1* SNPs Associated with Bisphosphonate-related Osteonecrosis of the Jaw (ONJ)**
Guang Yang*[1], Taimour Y Langaee[1], Issam Hamadeh[2], Joseph Katz[3], Alberto Riva[4], Jan S Moreb[5], Yan Gong[1]. [1]Department of Pharmacotherapy and Translational Research and Center for Pharmacogenomics, College of Pharmacy, University of Florida, United States, [2]Cancer Pharmacology Department, Levine Cancer Institute, Charlotte NC, USA., United States, [3]Department of Oral Medicine, College of Dentistry, University of Florida, Gainesville FL, USA., United States, [4]Bioinformatics Core, Interdisciplinary Center for Biotechnology Research, University of Florida, Gainesville FL, USA., United States, [5]Department of Medicine, College of Medicine, University of Florida, Gainesville FL, USA., United States
Disclosures: Guang Yang, None

SA0355 **Lateral Meningocele Syndrome Causes Marked Osteopenia**
Ernesto Canalis*[1], Lauren Schilling[1], Stefano Zanotti[1]. [1]UConn Musculoskeletal Institute, UConn Health, United States
Disclosures: Ernesto Canalis, None

SA0356 **Distinctive Impact of Peak Jump Power on the 3D Geometry of the Proximal Femur assessed by Asynchronous Quantitative Computed Tomography in Elderly**
Namki Hong*[1], Chang Oh Kim[2], Yoosik Youm[3], Hyeon Chang Kim[4], Yumie Rhee[1]. [1]Department of Internal Medicine, Severance Hospital, Endocrine Research Institute, Yonsei University College of Medicine, Korea, Republic of, [2]Division of Geriatrics, Department of Internal Medicine, Severance Hospital, Yonsei University College of Medicine, Korea, Republic of, [3]Department of Sociology, Yonsei University College of Social Sciences, Korea, Republic of, [4]Department of Preventive Medicine, Yonsei University College of Medicine, Korea, Republic of
Disclosures: Namki Hong, None

SA0357 **A Quantitative Frailty Index Predicts Falls and Fractures in 75y Old Community Dwelling Women – A 10 Year Longitudinal Study**
Kristina Akesson*[1], Patrik Bartosch[1], Linnea Malmgren[1], David Buchebner[1], Fiona E McGuigan[1]. [1]Lund University, Sweden
Disclosures: Kristina Akesson, None

SA0358 **Greater abdominal adiposity is associated with lower muscle quality, but not with muscle strength or performance in men and women: The Framingham Study**
Robert McLean*[1], Xiaochun Zhang[2], Shivani Sahni[1], Thomas Travison[1], Marian Hannan[1], Douglas Kiel[1]. [1]Hebrew SeniorLife Institute for Aging Research and Harvard Medical School, United States, [2]Hebrew SeinorLife Institute for Aging Resarch, United States
Disclosures: Robert McLean, None

SA0359 **Vitamin D Deficiency is Related with Altered Functional Performance and Diminished Muscle Mass but not with Falls in Older Ambulatory Women from Buenos Aires**
Beatriz Oliveri*[1], Sabrina Lucas[2], Maria Gabriela Torres[2], Claudia Martinez[2], Felipe Silva Pavon[2], Reynaldo Gomez[2], Adriana Graciela Diaz[2]. [1]Laboratorio Osteoporosis y Enfermedades Metabolicas Oseas (INIGEM, UBA-CONICET), Argentina, [2]Division Endocrinologia, Hospital de Clinicas-UBA, Argentina
Disclosures: Beatriz Oliveri, None

SA0360 **Efficacy of volumetric change of lumbar paraspinal & psoas muscle in spinal balance**
Jaewon Lee*[1], Ye-Soo Park[1]. [1]Guri Hospital Hanyang University, Korea, Republic of
Disclosures: Jaewon Lee, None

SA0361 **Severe hypoglycemia is associated with increased frequency of falls in individuals with type 1 diabetes**

Vrial Shah*[1], Mengid Wu[2], Ruban Dhaliwal[3], Mona Al Mukaddam[4]. [1]Barbara Davis Center for Diabetes, United States, [2]Jaeb Center for Health Research, United States, [3]SUNY Upstate Medical University, United States, [4]University of Pennsylvania, Perelman School of Medciine, United States

Disclosures: Vrial Shah, None

SA0362 **Is adiposity related to neuromuscular performance and musculoskeletal strength in community-dwelling older adults?**

Harshvardhan Singh*[1], Zhaojing Chen[2], Daeyeol Kim[3], Ryan Pohlig[4], Michael Bemben[2], Debra Bemben[2]. [1]Department of Physical Therapy and Rehabilitation Science, University of Maryland School of Medicine, United States, [2]Department of Health and Exercise Science, University of Oklahoma, United States, [3]Department of Physical Education, Chonnam National University, Korea, Republic of, [4]Department of Kinesiology and Applied Physiology, University of Delaware, United States

Disclosures: Harshvardhan Singh, None

SA0363 **Frailty and Fracture Risk in Older Women**

Monica Tembo*[1], Kara Holloway[1], Lana Williams[1], Sophia Sui[1], Sharon Brennan-Olsen[1], Mark Kotowicz[1], Sarah Hosking[1], Julie Pasco[1]. [1]Deakin University, Australia

Disclosures: Monica Tembo, None

SA0364 **Effect of Physical Activity on Frailty: A Secondary Analysis of the LIFE Randomized Controlled Trial**

Andrea Trombetti*[1], Mélany Hars[1], Fang-Chi Hsu[2], Kieran Reid[3], Timothy Church[4], Thomas Gill[5], Abby King[6], Christine Liu[7], Todd Manini[8], Mary McDermott[9], Anne Newman[10], W. Jack Rejeski[11], Jack Guralnik[12], Marco Pahor[8], Roger Fielding[3]. [1]Division of Bone Diseases, Department of Internal Medicine Specialties, Geneva University Hospitals and Faculty of Medicine, Switzerland, [2]Department of Biostatistical Sciences, Wake Forest School of Medicine, United States, [3]Nutrition, Exercise Physiology and Sarcopenia Laboratory, Jean Mayer USDA Human Nutrition Research Center on Aging, Tufts University, United States, [4]Department of Preventative Medicine, Pennington Biomedical Research Center, United States, [5]Department of Internal Medicine, Yale School of Medicine, United States, [6]Department of Health Research and Policy and Department of Medicine, Stanford University, School of Medicine, United States, [7]Department of Medicine, Boston University School of Medicine, United States, [8]Department of Aging and Geriatric Research, University of Florida, United States, [9]Department of Medicine and Preventive Medicine, Northwestern University, Feinberg School of Medicine, United States, [10]Department of Epidemiology, Graduate School of Public Health, University of Pittsburgh, United States, [11]Department of Internal Medicine, Wake Forest University and School of Medicine, United States, [12]Department of Epidemiology and Public Health, University of Maryland School of Medicine, United States

Disclosures: Andrea Trombetti, None

LATE-BREAKING POSTERS I

12:30 pm - 2:30 pm **Colorado Convention Center**

ASBMR Discovery Hall - Exhibit Hall A & B1

LB-SA0365 **A LC-MS/MS method for the diagnostic measurement of cAMP in plasma and urine**

Isabelle Piec*[1], John Dutton[1], Sulaiman Al-Riyami[1], Christopher Washbourne[1], Inez Schoenmakers[1], Hillel Galitzer[2], Gregory Burshtein[2], Phillip Schwartz[2], Jonathan Tang[1], William Fraser[1]. [1]University of East Anglia, United Kingdom, [2]Entera Bio Ltd., Israel

Disclosures: Isabelle Piec, None

LB-SA0366 **Sleep Apnea and Bone Health in Mid-life Women**

W. P. P. Thu *[1], H. Y. Tng[1], S. Logan [1], Izzuddin M Aris [1], J. A. Cauley [2], E. L. Yong[1]. [1]Department of Obstetrics and Gynaecology, National University of Singapore, Singapore, [2]University of Pittsburgh, Graduate School of Public Health, Department of Epidemiology, United States

Disclosures: W. P. P. Thu , None

LB-SA0367 **Characterization of the bone healing process in rats with spinal cord injury.**

Mariana Butezloff*[1], Kelly Astolpho[1], Vitor Correlo[2], Rui Reis[2], Jose Volpon[1], Ariane Zamarioli[1]. [1]University of Sao Paulo, Brazil, [2]B's Research Group, Biomaterials, Biodegradables and Biomimetics, University of Minho, Portugal

Disclosures: Mariana Butezloff, None

LB-SA0368 **Treatment-Related Changes in Bone Turnover and Fracture Risk Reduction in Clinical Trials of Anti-Resorptive Drugs: The FNIH Bone Quality Study**

Richard Eastell*[1], Dennis Black[2], Mary Bouxsein[3], Li-Yung Lui[4], Jane Cauley[5], Sundeep Khosla[6], Charles McCulloch[2], Douglas Bauer[2]. [1]University of Sheffield, United Kingdom, [2]University of California, San Francisco, United States, [3]Harvard Medical School, United States, [4]California Pacific Medical Center, United States, [5]University of Pittsburgh, United States, [6]Mayo Clinic College of Medicine, United States

Disclosures: Richard Eastell, Consultant

LB-SA0369 **Adaptive Vitamin D Metabolism at the Equator Can Predispose to Insufficiency in Children of First Generation African Immigrants in the US**

Elwaseila Hamdoun*[1], Brandon Nathan [1], Thereza Piloya-Were[2], Zahra Mahamed [1], Sarah Cusick[1], Antoinette Moran [1], Anna Petryk [3], Muna Sunni[1]. [1]University of Minnesota, United States, [2]University of Makerere, Uganda, [3]University of Minnesota and Alexion Pharmaceuticals, Inc., United States

Disclosures: Elwaseila Hamdoun, None

LB-SA0370 **Presence of Cyr61 in Native Bone Marrow-derived Extracellular Matrix Is Critical for Retention of Mesenchymal Stem Cell Properties**

Milos Marinkovic*[1], Aaron Gonzalez[1], David Dean[1], Xiao-Dong Chen[1]. [1]UT Health San Antonio, School of Dentistry, United States

Disclosures: Milos Marinkovic, None

LB-SA0371 **Disproportionally decreased volume and histopathologic changes in foetal growth plate following gestational hypoglycaemia in the rat: *a corticosterone mediated effect?***

Vivi Jensen*[1], Fiona McGuigan[2], Kristina Åkesson[2]. [1]Novo Nordisk A/S, Lund University, Denmark, [2]Lund University, Sweden

Disclosures: Vivi Jensen, None

LB-SA0372 **Longitudinal genome-wide association analyses and heritability estimates of pediatric bone mineral density**

Diana Cousminer*[1], Alessandra Chesi[1], Jonathan Mitchell[1], Heidi Kalkwarf[2], Joan Lappe[3], Vicente Gilsanz[4], Sharon Oberfield[5], John Shepherd[6], Andrea Kelly[1], Shana McCormack[1], Benjamin Voight[7], Babette Zemel[1], Struan Grant[1]. [1]Children's Hospital of Philadelphia, United States, [2]Children's Hospital Medical Center, United States, [3]Creighton University, United States, [4]Children's Hospital Los Angeles, United States, [5]Columbia University, United States, [6]University of California San Francisco, United States, [7]University of Pennsylvania, United States

Disclosures: Diana Cousminer, None

LB-SA0373 **Voxel-based morphometry of peripheral BMD in elderly men with recent excessive bone loss: the Osteoporotic Fractures in Men (MrOS) Study**

Julio Carballido-Gamio*[1], Jane A Cauley[2], Dennis M Black[3], Sharmila Majumdar[3], Nancy E Lane[4], Elizabeth Barrett-Connor[5], Eric S Orwoll[6], Andrew J Burghardt[3]. [1]University of Colorado, Denver, United States, [2]University of Pittsburgh, United States, [3]University of California, San Francisco, United States, [4]University of California, Davis, United States, [5]University of California, San Diego, United States, [6]Oregon Health & Science University, United States

Disclosures: Julio Carballido-Gamio, None

LB-SA0374 **Intraflagellar transport protein is required for stem cell maintenance through regulating and coupling of FGF and Hh signaling**

Xue Yuan*[1], Xu Cao[2], Shuying Yang[3]. [1]University of Stanford, United States, [2]Johns Hopkins School of Medicine, United States, [3]University of Pennsylvania, United States

Disclosures: Xue Yuan, None

LB-SA0375 **Anabolic Mechanism of Picolinic Acid action in Human Mesenchymal Stem Cells**

Lakshman Singh*[1], Ahmed Al Saedi[1], Ebrahim Bani Hassan[1], Gustavo Duque[1]. [1]University of Melbourne & Australian Institute for Musculoskeletal Science, Australia

Disclosures: Lakshman Singh, None

LB-SA0376 **Adult hip shape is influenced by variation in genes involved in endochondral bone formation: findings from a genome-wide association study followed by meta-analysis**

Denis Baird*[1], Jennifer Gregory[2], Rebecca Barr[2], Fiona Saunders[2], Claudiu Giuraniuc[2], Lavinia Paternoster[3], Daniel Evans[4], Benjamin Faber[1], Benjamin Mullin[5], Frederick Kinyua Kamanu[6], Debbie Lawlor[3], Scott Wilson[5], Tim Spector[5], Eric Orwoll[7], Steven Cummings[4], David Karasik[6], Douglas Kiel[6], Richard Aspden[2], Jonathan Tobias[1]. [1]Musculoskeletal Research Unit, School of Clinical Sciences, University of Bristol, United Kingdom, [2]Arthritis and Musculoskeletal Medicine, Institute of Medical Sciences, University of Aberdeen, United Kingdom, [3]MRC Integrative Epidemiology Unit, University of Bristol, United Kingdom, [4]CPMC Research Institute, United States, [5]Department of Twin Research and Genetic Epidemiology, King's College London, London, United Kingdom, [6]Institute for Aging Research, Harvard Medical School Affiliate, United States, [7]Oregon Health and Science University, United States

Disclosures: Denis Baird, None

LB-SA0377 **Deficiency of Osteoblast Lineage-intrinsic *TSC1* leads to severe Endoplasmic Reticulum (ER) Stress in Osteoblasts and Compromised Osteogenesis**

Qi Han*[1], Xu Yang[2], Qianming Chen[3], Elia Beniash[2], Hong-Jiao Ouyang[4]. [1]Department of Endodontics, College of Dentistry, Texas A&M University; State Key Laboratory of Oral Diseases, National Clinical Research Center for Oral Diseases, West China Hospital of Stomatology, Sichuan University, United States, [2]The Center for Craniofacial Regeneration, Department of Oral Biology, School of Dental Medicine, University of Pittsburgh, United States, [3]State Key Laboratory of Oral Diseases, National Clinical Research Center for Oral Diseases, West China Hospital of Stomatology, Sichuan University, China, [4]Department of Endodontics, College of Dentistry, Texas A&M University; The Charles and Jane Pak Center for Mineral Metabolism and Clinical Research, Department of Internal Medicine, the University of Texas Southwestern Medical Center, United States

Disclosures: Qi Han, None

LB-SA0378 **Identification of a gene signature associated with elevated bone formation rate in aging mice**

Krista Jackson*[1], Aaron Hudnall[1], Jonathan Lowery[1]. [1]Marian University College of Osteopathic Medicine, United States

Disclosures: Krista Jackson, None

LB-SA0379 **Bone Mass is Increased in Female Mice Lacking Mitofusin2 (Mfn2) in Osteoclast Precursors under Basal and Pathologic Conditions**

Anna Ballard*[1], Rong Zeng[1], Deborah Novack[1]. [1]Washington University in St. Louis, United States

Disclosures: Anna Ballard, None

LB-SA0380 **Synthetic Human Beta-Defensin-3-C15 Peptide Inhibits Bone Resorption via Disrupting Podosome Belt Formation in Osteoclasts**

Ok-Jin Park*[1], Jiseon Kim[1], Jue Yeon Lee[2], Yoon-Jeong Park[1], Kee-Yeon Kum[1], Cheol-Heui Yun[3], Seung Hyun Han[1]. [1]School of Dentistry, Seoul National University, Korea, Republic of, [2]Nano Intelligent Biomedical Engineering Corporation, Korea, Republic of, [3]Research Institute for Agriculture and Life Sciences, Seoul National University, Korea, Republic of

Disclosures: Ok-Jin Park, None

LB-SA0381 **Sclerostin Antibody Attenuates Morphological Alteration of Osteocytes in a Combined Ovariectomized and Concurrent Functional Disuse Rat Model**

Dongye Zhang*[1], Xiaofei Li[1], Jiangmeng Han[1], Nancy Rojas[1], Yue-li Sun[1], Minyi Hu[1], Xiaodong Li[2], Huazhu Ke[3], Yi-Xian Qin[1]. [1]Stony Brook University, United States, [2]Amgen, Inc, United States, [3]UCB, Inc, United Kingdom

Disclosures: Dongye Zhang, None

LB-SA0382 **Incidental Screening for Osteoporosis in the Presence of Contrast Agents Using No Dose Computed Tomography**

W. Timm*[1], J. K. Brown[1], C.-C. Glüer[2], R. Andresen[3]. [1]Mindways Software, Inc., United States, [2]Christian-Albrechts-Universität zu Kiel, Germany, [3]Westkuestenklinikum Heide, Germany

Disclosures: W. Timm, Mindways Software, Inc., Other Financial or Material Support

LB-SA0383 **Shape and Texture Modeling of Hip Bone Density for Fracture Discrimination**

John A Shepherd*[1], Amir Pasha Mahmoudzadeh[1], Bo Fan[1], Luke Chaplin[2], Timothy Cootes[2], Jane A Cauley[3], Peggy Cawthon[4], Steve Cummings[5], Felix Liu[1], Claudia Lindner[2], Rachel Murphy[6], Marjolein Visser[7], Ann Schwartz[1]. [1]University of California, San Francisco, United States, [2]University of Manchester, United Kingdom, [3]University of Pittsburgh, United States, [4]California Pacifiic Medical Center, United States, [5]UCSF School of Medicine, United Kingdom, [6]National Institute on Aging Laboratory of Epidemiology and Population Sciences Bethesda MD USA, United States, [7]VU University Amsterdam Department of Health Sciences Amsterdam The Netherlands VU University Medical Center Department of Epidemiology and Biostatistics Amsterdam The Netherlands, Netherlands

Disclosures: John A Shepherd, None

LB-SA0384 **Bone Density During Lactation and After Weaning in African-American and Caucasian Women.**

Marilyn Augustine*[1], Nayana Nagaraj[2], Deborah Majchel[2], Poonam Sood[2], Robert Boudreau[2], Jane Cauley[2], Andrew Stewart[3], Mara Horwitz[2]. [1]University of Rochester, United States, [2]University of Pittsburgh, United States, [3]Mount Sinai School of Medicine, United States

Disclosures: Marilyn Augustine, None

LB-SA0385 **Effect of Vitamin D Replacement on Maternal and Neonatal Outcomes - Preg-D Trial Protocol**

Marlene Chakhtoura*[1], Ghada El Hajj Fuleihan[1], Cyrus Cooper[2], Nicholas Harvey[2], Anwar Nassar[1], Maya Rahmeh[1], Sara Ajjour [1], Mariam Assad[1], Myriam Chlela[1], Joe Eid[1]. [1]American University of Beirut, Lebanon, [2]Southampton University, United Kingdom

Disclosures: Marlene Chakhtoura, None

LB-SA0386 **Cyclin-dependent Kinase 5 Inhibits Osteoblast Differentiation to Regulate Bone Integrity**
Mubashir Ahmad*[1], Sabine Vettorazzi[1], David Carro Vázquez[1], Dilay Lai[1], Torsten Kroll[2], Maja Vuijc-Spasic[1], Aspasia Ploubidou[2], Johanna Pachmayr[3], Jan Tuckermann[1]. [1]Institute for Comparative Molecular Endocrinology (CME), Ulm University, Germany, [2]Leibniz Institute for Age Research – Fritz Lipmann Institute (FLI), Germany, [3]Paracelsus Medizinische Privatiniverstät, Institute of Pharmacy, Austria
Disclosures: Mubashir Ahmad, None

LB-SA0387 **Examining the Longitudinal Changes in Trabecular vBMD in Individuals with a Chronic SCI**
Rasha El-Kotob*[1], Catharine Craven[2], Lehana Thabane[3], Alexandra Papaioannou[3], Jonathan Adachi[3], Lora Giangregorio[1]. [1]University of Waterloo, Canada, [2]Toronto Rehabilitation Institute, University Health Network, Canada, [3]McMaster University, Canada
Disclosures: Rasha El-Kotob, None

LB-SA0388 **Oral bisphosphonate use and risk of acute Kidney Injury, gastrointestinal events and hypocalcaemia in patients with moderate-advanced chronic kidney disease: a population-based cohort study**
M Sanni Ali*[1], Fergus John Caskey[2], Antonella Delmestri[1], Daniel Dedman[3], Nigel Arden[4], Yoav Ben-Shlomo[5], Bo Abrahamsen[6], Andrew Judge[1], C Cooper[7], M K Javaid[8], Daniel Prieto-Alhambra[1]. [1]Centre for Statistics in Medicine and Nuffield Department of Orthopaedics, Rheumatology, and Musculoskeletal Sciences (NDORMS), University of Oxford, Oxford, UK, United Kingdom, [2]School of Social and Community Medicine, University of Bristol, Bristol, UK and UK Renal Registry, Bristol, UK., United Kingdom, [3]Clinical Practice Research Datalink, MHRA, United Kingdom, [4]Nuffield Department of Orthopaedics, Rheumatology, and Musculoskeletal Sciences (NDORMS), University of Oxford, Oxford, UK, United Kingdom, [5]School of Social and Community Medicine, University of Bristol, Bristol, UK UK Renal Registry, Bristol, UK., United Kingdom, [6]University of Southern Denmark, Odense, Denmark and Holbæk Hospital, Dept of Medicine, Holbæk, Denmark, Denmark, [7]Centre for Statistics in Medicine and Nuffield Department of Orthopaedics, Rheumatology, and Musculoskeletal Sciences (NDORMS), University of Oxford, Oxford, and MRC Lifecourse Epidemiology Unit, Southampton, UK, United Kingdom, [8]Centre for Statistics in Medicine and Nuffield Department of Orthopaedics, Rheumatology, and Musculoskeletal Sciences (NDORMS), University of Oxford, United Kingdom
Disclosures: M Sanni Ali, None

LB-SA0389 **Bone Mineral Density Changes in Adherent Denosumab Treated Patients Over a 24 Months Period in Real Clinical Settings.**
José Francisco Torres Naranjo*[1], Pedro Alberto García Hernández[2], Claudia Flores Moreno [2], Pilar De La Peña Rodriguez[3], Hugo Gutierrez Hermosillo[4], Roberto González Mendoza[5], Alejandro Gaytán González[5], Noe Albino González Gallegos[6], Juan Lopez Y Taylor[5]. [1]Centro de Investigación Ósea y de la Composición Corporal, CIO, Mexico, [2]Servicio de Endocrinología, Hospital Universitario, UANL, Mexico, [3]De La Peña, Servicios Médicos de la Peña, Mexico, [4]Asociación Mexicana De Metabolismo Óseo Y Mineral, AC, Mexico, [5]Instituto de Ciencias Aplicadas a la Actividad Física y al Deporte, Universidad de Guadalajara, Mexico, [6]Departamento De Bienestar Y Desarrollo Sustentable, Centro Universitario del Norte, Universidad de Guadalajara, Mexico
Disclosures: José Francisco Torres Naranjo, None

LB-SA0390 **Increased preosteoclast platelet-derived growth factor type BB secretion abrogates negative effect of prednisolone on skeletal angiogenesis**
Janet Crane*[1], Shan Lyu[1], Xu Cao[1]. [1]Johns Hopkins University, United States
Disclosures: Janet Crane, None

LB-SA0391 **Oral administration of an egg yolk-derived peptide promotes fracture healing in a mouse model**
Yoshiaki Kitaura*[1], Utano Nakamura[2], Maya Sakashita[2], Motonori Yamaguchi[2], Mujo Kim[2], Ung-il Chung[3], Shinsuke Ohba[3]. [1]Department of Bioengineering, The University of Tokyo, Japan, [2]Pharma Foods International Co., Ltd., Japan, [3]Center for Disease Biology and Integrative Medicine, The University of Tokyo, Japan
Disclosures: Yoshiaki Kitaura, None

LB-SA0392 **Low Alkaline Phosphatase Levels: Could it be Hypophosphatasia?**
C. Tornero*[1], P. Aguado[1], S. García[1], J. A Tenorio[2], P. Lapunzina[2], K. Heath[2], A. Buño[3], J.M Iturzaeta[3], I. Monjo[1], C. Plasencia[1], A. Balsa[1], Centro de Investigación en Red de Enfermedades Raras (CIBERER)[4]. [1]Rheumatology. La Paz University Hospital., Spain, [2]Institute of Medical and Molecular Genetics (INGEMM). La Paz University Hospital., Spain, [3]Laboratory medicine. La Paz University Hospital., Spain, [4]H. Carlos III., Spain
Disclosures: C. Tornero, Alexion Pharmaceuticals, Other Financial or Material Support

LB-SA0393 **Administration of a novel SYK inhibitor Entospletinib ameliorates fully established inflammation and bone destruction in adult cherubism mice**
Tetsuya Yoshimoto*[1], Toshio Kondo[1], Mizuho Kittaka[1], Yasuyoshi Ueki[1]. [1]University of Missouri-Kansas City, United States
Disclosures: Tetsuya Yoshimoto, None

SYMPOSIUM: TESTOSTERONE TREATMENT IN OLDER MEN

2:45 pm - 4:00 pm **Colorado Convention Center**
Four Seasons Ballroom II-III

Co-Chairs
Yumie Rhee, M.D., Ph.D.
Department of Internal Medicine, College of Medicine, Yonsei University, Korea
Disclosures: Yumie Rhee, None

Kerrie Sanders, Ph.D.
Australian Catholic University
Disclosures: Kerrie Sanders, None

2:45 pm **Skeletal Effects of Testosterone Treatment**
Peter Snyder, M.D.
University of Pennsylvania
Disclosures: Peter Snyder, None

3:10 pm **Effects of Testosterone on Physical Function, Body Composition and Vitality**
Shalender Bhasin, M.D.
Brigham and Women's Hospital, USA
Disclosures: Shalender Bhasin, None

3:35 pm **Testosterone Treatment in Older Men - Who Should Be Targeted and Safety Considerations**
Fred Wu, M.D.
University of Manchester, United Kingdom
Disclosures: Fred Wu, None

ASBMR/ECTS SYMPOSIUM: SLEEP, ENERGY METABOLISM AND MUSCULOSKELETAL SYSTEMS

2:45 pm - 4:00 pm **Colorado Convention Center**
Mile High Ballroom

Co-Chairs
Bente Langdahl, M.D., DMSc
Aarhus University Hospital, Denmark
Disclosures: Bente Langdahl, None

Jillian Cornish, PhD
University of Auckland
Disclosures: Jillian Cornish, None

2:45 pm **Circadian Rhythms and Energy Metabolism**
Paolo Sassone-Corsi, Ph.D.
University of California Irvine, USA
Disclosures: Paolo Sassone-Corsi, None

3:10 pm **Biological Basis for an Association between Sleep and Osteoporosis**
Christine Swanson
University of Colorado, USA
Disclosures: Christine Swanson, None

3:35 pm **Measures of Sleep and Falls, Frailty and Fractures in Older Adults**
Kristine Ensrud, M.D., MPH
University of Minnesota and Minneapolis VA Health Care System, USA
Disclosures: Kristine Ensrud, None

NETWORKING BREAK

4:00 pm - 4:30 pm **Colorado Convention Center**
Mile High Ballroom Foyer and Four Seasons Ballroom Foyer

CONCURRENT ORALS: BONE TUMORS AND METASTASIS I

4:30 pm - 6:00 pm **Colorado Convention Center**
Four Seasons Ballroom I

Co-Chairs
Patricia Juarez Camacho, PhD
Center for Scientific Research and Higher Education
Disclosures: Patricia Juarez Camacho, None

Brendan Lee, M.D., Ph.D.
Baylor College of Medicine, USA
Disclosures: Brendan Lee, None

4:30 pm **Efferocytosis of Apoptotic Prostate Cancer Cells Induces Inflammation and Accelerates the**
1047 **Growth of Surviving Cancer Cells in Bone**
Hernan Roca*[1], Jacqueline Jones [2], Marta Purica[1], Savannah Weidner[1], Amy Koh[1], Robert Kuo[1], John Wilkinson[1], Yugang Wang[1], Stephanie Daignault-Newton[1], Kenneth Pienta[3], Todd Morgan[1], Evan Keller[1], Jacques Nör[1], Lonnie Shea[1], Laurie McCauley[1]. [1]University of Michigan, United States, [2]Troy University, United States, [3]Johns Hopkins University School of Medicine, United States
Disclosures: Hernan Roca, None

4:45 pm **Loss of TGFBR2 in osteoblasts increases PTH1R and promotes prostate cancer bone metastasis**
1048 Xiangqi Meng*[1], Alexandra Vander Ark[1], Zachary Madaj[1], Galen Hostetter[1], Xiaohong Li[1]. [1]Van Andel Institute, United States
Disclosures: Xiangqi Meng, None

5:00 pm **N-cadherin in Extra-Skeletal Osterix (Osx) Positive Cells Modulates Tumor Growth Independently**
1049 **of Cell-Cell Adhesion**
Francesca Fontana*[1], Biancamaria Ricci[2], Jingyu Xiang[3], Xinming Su[3], Giulia Leanza[1], Roberta Faccio[2], Katherine Weilbaecher[3], Roberto Civitelli[1]. [1]Division of Bone and Mineral Diseases, Washington University, United States, [2]Department of Orthopaedic Surgery, Washington University, United States, [3]Division of Molecular Oncology, Washington University, United States
Disclosures: Francesca Fontana, None

5:15 pm **Re-Expression of Estrogen Receptor Alpha in Osteosarcomas Leads to Osteoblast Differentiation**
1050 Susan Krum*[1], Gustavo Miranda-Carboni[1], Maria Angeles Lillo Osuna[1]. [1]University of Tennessee Health Science Center, United States
Disclosures: Susan Krum, None

5:30 pm **ASBMR 2017 Annual Meeting Young Investigator Award**
1051 **Atp6v1c1 Enhances Breast Cancer Growth by Activating the mTORC1 Pathway and Bone Metastases by Increasing V-Atpase Activity**
Matthew McConnell*[1], Shengmei Feng[2], Lianfu Deng[2], Guochun Zhu[2], Dejun Shen[1], Selvarangan Ponnazhagan[1], Wei Chen[1], Yi-Ping Li[1]. [1]University of Alabama at Birmingham, United States, [2]Shanghai Institute of Traumatology and Orthopaedics, China
Disclosures: Matthew McConnell, None

5:45 pm **Active human immune system induces more severe osteoblastic bone reaction in a humanized**
1052 **mouse model of breast cancer bone metastasis**
Tiina E Kähkönen*[1], Mari I Suominen[1], Jussi M Halleen[1], Azusa Tanaka[2], Michael Seiler[2], Jenni Bernoulli[1]. [1]Pharmatest Services Ltd, Finland, [2]Taconic Biosciences, United States
Disclosures: Tiina E Kähkönen, None

CONCURRENT ORALS: EPIDEMIOLOGY: FRACTURES, FALLS, AND SPECIAL POPULATIONS

4:30 pm - 6:00 pm **Colorado Convention Center**
Four Seasons Ballroom IV

Co-Chairs
Cathleen Colon-Emeric, M.D.
Duke University Medical Center, USA
Disclosures: Cathleen Colon-Emeric, None

Nicola Napoli, M.D.
University Campus Bio-Medico di Roma, Italy
Disclosures: Nicola Napoli, None

4:30 pm **ASBMR 2017 Annual Meeting Young Investigator Award**
1053 **History of fractures for prediction of a future fracture in individuals from the general population**
Claudia Beaudoin*[1], Sonia Jean[1], Lynne Moore[2], Philippe Gamache[1], Louis Bessette[3], Louis-Georges Ste-Marie[4], Jacques P. Brown[3]. [1]Institut national de santé publique du Québec, Canada, [2]Université Laval, Canada, [3]CHU de Québec Research Center, Canada, [4]Université de Montréal, Canada
Disclosures: Claudia Beaudoin, None

4:45 pm **Jump Muscle Power in Octogenarian Men is Related to Prospective Recurrent Falls but not Fall**
1054 **Injuries Over One Year: Osteoporotic Fractures in Men (MrOS) Study.**
Elsa Strotmeyer*[1], Paolo Caserotti[2], Stephanie Harrison[3], Mary Winger[1], Robert Boudreau[1], Peggy Cawthon[3], Kristine Ensrud[4], Eric Orwoll[5], Jane Cauley[1]. [1]University of Pittsburgh, United States, [2]University of Southern Denmark, Denmark, [3]California Pacific Medical Center Research Institute, United States, [4]University of Minnesota, United States, [5]Oregon Health and Science University, United States
Disclosures: Elsa Strotmeyer, None

5:00 pm **Fracture Risk Among 122, 205 Cancer Patients: A Population-Based Cohort Study from**
1055 **Manitoba, Canada**
Harminder Singh*[1], Saeed Al-Azazi[2], Lin Yan[2], Lisa Lix[2], Piotr Czaykowski[1], Beatrice Edwards[3], William Leslie[2]. [1]University of Manitoba, Cancercare Manitoba, Canada, [2]University of Manitoba, Canada, [3]MD Anderson Cancer Center, United States
Disclosures: Harminder Singh, None

5:15 pm **ASBMR 2017 Annual Meeting Young Investigator Award**

1056 **High imminent vertebral fracture risk in smokers and COPD patients with a prevalent or incident vertebral fracture**

Mayke J. van Dort*, Piet P.P.M. Geusens, Johanna H.M. Driessen, Elisabeth A.P.M. Romme[4], Frank W.J.M. Smeenk[4], Emiel F.M. Wouters, Joop P.W. van den Bergh. [1]Department of Internal Medicine, NUTRIM School of Nutrition and Translational Research in Metabolism, Maastricht University Medical Center+ (MUMC+), Netherlands, [2]Department of Internal Medicine, Rheumatology, Maastricht University Medical Center+ (MUMC+), Netherlands, [3]CAPHRI Care and Public Health Research Institute, NUTRIM School for Nutrition and Translational Research in Metabolism, Department of Clinical Pharmacy and Toxicology, Maastricht University Medical Center+ (MUMC+), Netherlands, [4]Department of Respiratory Medicine, Catharina Hospital, Netherlands, [5]Department of Respiratory Medicine, Maastricht University Medical Centre + (MUMC+), Netherlands, [6]Department of Internal Medicine, VieCuri Medical Centre, Venlo and Department of Internal Medicine, NUTRIM School of Nutrition and Translational Research in Metabolism, Maastricht University Medical Center+ (MUMC+), Netherlands

Disclosures: Mayke J. van Dort, None

5:30 pm **Transition to re-fracture and mortality in the elderly: An individualized risk assessment tool for**

1057 **fracture and its outcomes from two large population-based prospective cohort studies**

Thach Tran*[1], Dana Bliuc[1], Hanh Pham[1], Tineke van Geel[2], Jonathan D Adachi[3], Claudie Berger[4], Joop van den Bergh[5], John A Eisman[6], Piet Geusens[7], David Goltzman[4], David A Hanley[8], Robert G Josse[9], Stephanie M Kaiser[10], Christopher S Kovacs[11], Lisa Langsetmo[12], Jerilynn C Prior[13], Tuan V Nguyen[14], Jacqueline R Center[15]. [1]Garvan Institute of Medical Research, Australia, [2]Maastrict University, Research school of CAPHRI, Netherlands, [3]McMaster University, Canada, [4]McGill University, Canada, [5]Maastricht University Medical Center, Research School Nutrim; VieCuri Medical Centre of Noord-Limburg, Netherlands, [6]Garvan Institute of Medical Research; Clinical School, St Vincent's Hospital; Faculty of Medicine, UNSW Sydney; School of Medicine Sydney, University of Notre Dame, Australia, [7]Maastrict University Medical Center, Research School CAPHRI; University Hasselt, Biomedical Research Institute, Netherlands, [8]University of Calgary, Canada, [9]University of Toronto, Canada, [10]Dalhousie University, Canada, [11]Memorial University, Canada, [12]School of Public Health, University of Minnesota, United States, [13]Department of Medicine and Endocrinology, University of British Columbia, Canada, [14]Garvan Institute of Medical Research; Faculty of Medicine, UNSW Sydney, Canada, [15]Garvan Institute of Medical Research; Clinical School, St Vincent's Hospital; Faculty of Medicine, UNSW Sydney, Canada

Disclosures: Thach Tran, None

5:45 pm **Determination of Risk Threshold for Osteoporosis Therapy: A Decision Curve Analysis**

1058 **Approach**

Thao P. Ho-Le*[1], Jackie R. Center[2], John A. Eisman[3], Hung T. Nguyen[4], Tuan V. Nguyen[5]. [1]Centre of Health Technologies, FEIT, University of Technology Sydney, Australia, [2]Bone Biology Division, Garvan Institute of Medical Research; St Vincent Clinical School, UNSW, Australia, Australia, [3]Bone Biology Division, Garvan Institute of Medical Research, NSW;St Vincent Clinical School, UNSW, Australia;School of Medicine, Sydney University of Notre Dame, Australia, Australia, [4]Centre of Health Technologies, Faculty of Engineering and Information Technology, University of Technology, Sydn, Australia, [5]University of Technology, Sydney;Bone Biology Division, Garvan Institute of Medical Research, NSW;St Vincent Clinical School, UNSW;School of Public Health and Community Medicine, UNSW; School of Medicine, Sydney University of Notre Dame, Australia

Disclosures: Thao P. Ho-Le, None

CONCURRENT ORALS: MESENCHYMAL STEM CELLS AND OSTEOPROGENITORS

4:30 pm - 6:00 pm **Colorado Convention Center**
Mile High Ballroom 4A-B

Co-Chairs
Roman Thaler, Ph.D.
Mayo Clinic, USA
Disclosures: Roman Thaler, None

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

4:30 pm **Selective requirement of the histone methyltransferase Ezh2 in distinct mesenchymal lineages**
1059 **during skeletal development**
Amel Dudakovic*[1], Emily Camilleri[1], Deepanwita Pal[2], Sonia Rozario[3], Christopher Paradise[1], Roman Thaler[1], Meghan McGee-Lawrence[4], Elizabeth Bradley[1], Gary Stein[5], Martin Montecino[6], Jennifer Westendorf[1], Ronen Schweitzer[2], Emi Shimizu[3], Andre van Wijnen[1]. [1]Mayo Clinic, United States, [2]Shriners Hospital for Children, United States, [3]Rutgers School Dental Medicine, United States, [4]Augusta University, United States, [5]University of Vermont Medical School, United States, [6]Universidad Andrés Bello, Chile
Disclosures: Amel Dudakovic, None

4:45 pm **ASBMR 2017 Annual Meeting Young Investigator Award**
1060 **Ubiquitin-specific protease 34 regulates osteogenic differentiation of mesenchymal stem cells**
Yuchen Guo*[1], Mengyuan Wang[2], Shiwen Zhang[3], ChenChen Zhou[3], Yunshu Wu[3], Liang Xie[4], Ling Ye[4], Qianming chen[5], Quan Yuan[4]. [1]author, China, [2]teammate, China, [3]workmate, China, [4]mentor, China, [5]teacher, China
Disclosures: Yuchen Guo, None

5:00 pm **Identification of novel periosteal skeletal stem cells**
1061 Shawon Debnath*[1], Alisha Yallowitz[1], Jason Mc Cormick[1], Tuo Zhang[1], Yeon - Suk Yang[2], Yifang Liu[1], Sarfaraz Lalani[1], Srushti Kittane[3], Hwanhee Oh[1], Jae Hyuck Shim[4], Matthew Blake Greenblatt[1], Ren Xu[1]. [1]Weill Cornell Medical College, Cornell University, United States, [2]University of Massachusetts Medical School, United States, [3]New York University, United States, [4]University of Massachusetts Medical College, United States
Disclosures: Shawon Debnath, None

5:15 pm **Identification of osteoprogenitor cells in the mouse periosteum**
1062 Francesca V Sbrana*[1], Danka Grcevic[2], Jessica Funnell[3], Ivo Kalajzic[1], Brya Matthews[1]. [1]UConn Health, United States, [2]University of Zagreb, Croatia, [3]Binghamton University, United States
Disclosures: Francesca V Sbrana, None

5:30 pm **Gli1 Is A Common Lineage Marker For Osteogenic Mesenchymal Progenitors**
1063 Yu Shi*[1], Guangxu He[2], Wen-Chih Lee[1], Jennifer McKenzie[1], Matthew Silva[1], Fanxin Long[1]. [1]Department of Orthopedic Surgery, Washington University School of Medicine, United States, [2]Department of Orthopedic Surgery, The Second Xiangya Hospital, Central South University, China
Disclosures: Yu Shi, None

5:45 pm **Hox genes regulate adult osteoprogenitor cell fate decisions**
1064 Vivian Bradaschia-Correa*[1], Anne Marie Josephson[1], Shane Neibart[1], Devan Mehta[1], Philipp Leucht[1]. [1]NYU School of Medicine, United States
Disclosures: Vivian Bradaschia-Correa, None

CONCURRENT ORALS: OSTEOPOROSIS TREATMENT II

4:30 pm - 6:00 pm **Colorado Convention Center**
Four Seasons Ballroom II-III

Co-Chairs
Benjamin Leder, M.D.
Massachusetts General Hospital and Harvard Medical School, USA
Disclosures: Benjamin Leder, None

Mark Kotowicz, Ph.D.
University Hospital Geelong, Australia
Disclosures: Mark Kotowicz, None

4:30 pm 1065 **Long-term administration of rhPTH(1-84) results in marked and sustained improvements in skeletal Indices by bone histomorphometry in hypoparathyroidism**
Mishaela Rubin*[1], Natalie Cusano[1], Zhou Hua[1], Ruksnaha Majeed[1], Beatriz Omeragic[1], David Dempster[1], John Bilezikian[1]. [1]Columbia University, United States
Disclosures: Mishaela Rubin, Shire Pharma, Consultant

4:45 pm 1066 **Teriparatide Compared with Risedronate and the Risk of Fractures in Subgroups of Postmenopausal Women with Severe Osteoporosis: The VERO Trial**
Piet Geusens*[1], Fernando Marin[2], David L Kendler[3], Luis Russo[4], Cristiano AF Zerbini[5], Susan Greenspan[6], Salvatore Minisola[7], Alicia Bagur[8], Peter Lakatos[9], Enrique Casado[10], Astrid Fahrleitner-Pammer[11], Jan Stepan[12], Eric Lespessailles[13], Rüdiger Moericke[14], Jean Jacques Body[15], Pedro López-Romero [2]. [1]Maastricht University Medical Center, Netherlands, [2]Lilly Research Center Europe, Spain, [3]University of British Columbia, Canada, [4]Centro de Analises e Pesquisas Clínicas LTDA, Brazil, [5]Centro Paulista de Investigaçao Clínica, Brazil, [6]Osteoporosis Center, University of Pittsburgh, United States, [7]Policlinico Umberto I, Italy, [8]Centro de Osteopatías Comlit, Argentina, [9]Semmelweis University Medical School, Hungary, [10]Hospital Parc Taulí, Spain, [11]Division of Endocrinology, Medical University of Graz, Austria, [12]Institute of Rheumatology, Faculty of Medicine 1, Charles University, Czech Republic, [13]Regional Hospital of Orleans, France, [14]Institut Präventive Medizin & Klinische Forschung, Germany, [15]CHU Brugmann, ULB, Belgium
Disclosures: Piet Geusens, Pfizer, Abbott, Eli Lilly and Company, Amgen, MSD, Roche, UCB, BMS, Novartis, Grant/Research Support

5:00 pm 1067 **A randomized, double-blind, placebo-controlled trial of denosumab in postmenopausal women undergoing cementless total hip replacement**
Hannu Aro*[1], Sanaz Nazari-Farsani[2], Mia Vuopio[3], Kimmo Mattila[3]. [1]Turku University Hospital and University of Turku, Finland, [2]University of Turku, Finland, [3]Turku University Hospital, Finland
Disclosures: Hannu Aro, Amgen Inc., Grant/Research Support

5:15 pm 1068 **ASBMR 2017 Annual Meeting Young Investigator Award**
Negligible Long-Term Effects on Bone Density after Four years of Treatment with Two Intensive Combination Strategies, including initially High dose Prednisolone, in Early Rheumatoid Arthritis patients: The COBRA-light Trial.
Merel JJ Lucassen*[1], Marieke M ter Wee[1], Nicole PC Konijn[2], Debby den Uyl[2], Maarten Boers[2], Willem F Lems[2]. [1]VU University medical center, department of Epidemiology and Biostatistics, Netherlands, [2]Amsterdam Rheumatology and immunology center, location VU University medical center, Netherlands
Disclosures: Merel JJ Lucassen, None

5:30 pm **The Effect of Bisphosphonates on Mortality Risk Reduction is Partly Mediated Through a**
1069 **Reduction in the Rate of Bone Loss**

Dana Bliuc*[1], Thach Tran[1], Tineke van Geel[2], Jonathan Adachi[3], Claudie Berger[4], Joop van den Bergh[5], John A. Eisman[6], Piet Geusens[2], David Goltzman[7], David A. Hanley[8], Robert G Josse[9], Stephanie M Kaiser[10], Christopher S Kovacs[11], Lisa Langsetmo[12], Jerilynn C Prior[13], Tuan V. Nguyen[1], Jacqueline R Center[14]. [1]Osteoporosis and Bone Biology Program, Garvan Institute of Medical Research, Australia, [2]Maastricht University Medical Center, Research School CAPHRI, Care and Public Health Research Institute, Netherlands, [3]Department of Medicine, McMaster University, Canada, [4]CaMos National Coordinating Centre, McGill University, Canada, [5]Maastricht University Medical Center, Research School Nutrim, Department of Internal Medicine, Subdivision of Rheumatology, Netherlands, [6]Osteoporosis and Bone Biology Department, Clinical Translation and Advanced Education, Garvan Institute, Clinical School, St Vincent's Hospital, Faculty of Medicine UNSW Australia, School of Medicine, University of Notre Dame, Australia, [7]Department of Medicine, McGill University, Canada, [8]Department of Medicine, University of Calgary, Canada, [9]Department of Medicine, University of Toronto, Canada, [10]Department of Medicine, Dalhousie University, Canada, [11]Faculty of Medicine, Memorial University, Canada, [12]School of Public Health, University of Minnesota, United States, [13]Department of Medicine and Endocrinology, University of British Columbia, Canada, [14]Osteoporosis and Bone Biology Program, Garvan Institute of Medical Research, Clinical School St Vincent's Hospital, Faculty of Medicine, UNSW Australia, Australia

Disclosures: Dana Bliuc, None

5:45 pm **Safety and Efficacy of Denosumab Among Subjects in the FREEDOM Extension Study With**
1070 **Mild-to-Moderate Chronic Kidney Disease (CKD)**

Aaron Broadwell*[1], Peter R Ebeling[2], Edward Franek[3], Stefan Goemaere[4], Rachel B Wagman[5], Xiang Yin[5], Susan Yue[5], Paul D Miller[6]. [1]Rheumatology and Osteoporosis Specialists, United States, [2]Monash University, Australia, [3]Mossakowski Medical Research Centre, Polish Academy of Sciences, Poland, [4]Ghent University Hospital, Belgium, [5]Amgen Inc., United States, [6]Colorado Center for Bone Research, United States

Disclosures: Aaron Broadwell, Janssen, Grant/Research Support

BASIC EVENING – THE BONE MARROW NICHE AND HEMATOPOIESIS

6:30 pm - 8:30 pm **Colorado Convention Center**
Room 205/207

Space is limited and available on a first-come, first-served basis.
Attendees must be registered for the ASBMR 2017 Annual Meeting.

Co-Chairs

Laura Calvi, M.D.
University of Rochester School of Medicine, USA
Disclosures: Laura Calvi, None

Moustapha Kassem, M.D., Ph.D.
Odense University Hospital, Denmark
Disclosures: Moustapha Kassem, None

7:00 pm **Autophagy and the Bone Marrow Niche**

Emmanuelle Passegue, Ph.D.
University of California, San Francisco, USA
Disclosures: Emmanuelle Passegue, None

7:30 pm **Neuronal Control of the Marrow Niche in Hematopoiesis**

Paul Frenette, M.D.
Ruth L. and David S. Gottesman Institute for Stem Cell and Regenerative Medicine, USA
Disclosures: Paul Frenette, None

8:00 pm **Niche and Leukemia**
Stavroula Kousteni, Ph.D.
Columbia University Medical Center, USA
Disclosures: Stavroula Kousteni, None

CLINICAL EVENING – TREATING THE TREATMENT GAP

Supported by an educational grant from Lilly USA, LLC and sponsorship support from UCB

6:30 pm - 8:30 pm **Colorado Convention Center**
Mile High Ballroom

Space is limited and available on a first-come, first-served basis.
Attendees must be registered for the ASBMR 2017 Annual Meeting.

Co-Chairs
Mattias Lorentzon, M.D., Ph.D.
Geriatric Medicine, Center for Bone Research at the Sahlgrenska Academy, Sweden
Disclosures: Mattias Lorentzon, None

Anne Schafer, M.D.
University of California, San Francisco and the San Francisco VA Medical Center, USA
Disclosures: Anne Schafer, None

7:00 pm **An International Look at Changing Rates of Osteoporosis Testing, Treatment and Fractures: Is There Cause and Effect?**
Bo Abrahamsen, M.D., Ph.D.
University of Southern Denmark, Denmark
Disclosures: Bo Abrahamsen, None

7:20 pm **Commentary: Using Population Data to Assess Temporal Trends**
Nicole Wright, PhD
University of Alabama at Birmingham, USA
Disclosures: Nicole Wright, None

7:40 pm **Fall Prevention**
Steven Robinovitch, Ph.D.
Simon Fraser University, Canada
Disclosures: Steven Robinovitch, None

8:00 pm **Will the Therapeutic Horizon Fix the Treatment Gap?**
Douglas Bauer, M.D.
University of California, San Francisco, USA
Disclosures: Douglas Bauer, None

ASBMR NETWORKING EVENT

8:30 pm - 11:30 pm **Hyatt Regency Denver**
Centennial Ballroom

Join us for an evening of food, drinks and dancing at the ASBMR Networking Event! Connect with colleagues, both old and new, and help us celebrate the 40th anniversary of the American Society for Bone and Mineral Research! Admission is included with Annual Meeting registration.

Sunday, September 10, 2017

Day-At-A-Glance

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

ASBMR REGISTRATION OPEN

7:00 am - 5:00 pm **Colorado Convention Center**
Registration Hall - Lobby A Foyer

PLENARY SYMPOSIUM – ASBMR 40TH ANNIVERSARY SYMPOSIUM AND PRESENTATION OF THE FULLER ALBRIGHT AND STEPHEN M. KRANE AWARDS

8:00 am - 9:30 am **Colorado Convention Center**
Mile High Ballroom

Co-Chairs
Steven Teitelbaum, MD
Washington University in St. Louis School of Medicine, USA
Disclosures: Steven Teitelbaum, None

Jane Aubin, Ph.D.
University of Toronto Faculty of Medicine
Disclosures: Jane Aubin, None

8:15 am **Historical Overview**
Paula Stern, PhD
Northwestern University Feinberg School of Medicine Department of Molecular Phar
Disclosures: Paula Stern, None

8:30 am **The History of Clinical Research in Bone**
Steven Cummings, M.D.
San Francisco Coordinating Center
Disclosures: Steven Cummings, None

9:00 am **Basic/Translational Overview**
T. John Martin, M.D., DSc
St. Vincent's Institute of Medical Research
Disclosures: T. John Martin, None

POSTERS OPEN

9:30 am - 4:30 pm **Colorado Convention Center**
ASBMR Discovery Hall - Exhibit Hall A & B1

NETWORKING BREAK

9:30 am - 9:45 am **Colorado Convention Center**
Mile High Ballroom Foyer and Four Seasons Ballroom Foyer

PLENARY ORALS: JOHN H. CARSTENS MEMORIAL SESSION: OSTEOPOROSIS TREATMENT III

9:45 am - 11:00 am **Colorado Convention Center**

Mile High Ballroom

Co-Chairs
Christian Roux, M.D.
Hopital Cochin, France
Disclosures: Christian Roux, None

Meryl Leboff, MD
Brigham & Women's Hospital Professor of Medicine, Harvard Medical School, USA
Disclosures: Meryl Leboff, None

9:45 am 1071 **Continued Fracture Risk Reduction After 12 Months of Romosozumab Followed by Denosumab Through 36 Months in the Phase 3 FRAME (FRActure study in postmenopausal woMen with ostEoporosis) Extension**
E Michael Lewiecki*[1], Rajani V Dinavahi[2], Marise Lazaretti-Castro[3], Peter R Ebeling[4], Jonathan D Adachi[5], Akimitsu Miyauchi[6], Evelien Gielen[7], Cassandra E Milmont[2], Cesar Libanati[8], Andreas Grauer[2]. [1]New Mexico Clinical Research & Osteoporosis Center, United States, [2]Amgen Inc., United States, [3]Federal University of São Paulo, Brazil, [4]Monash University, Australia, [5]McMaster University, Canada, [6]Miyauchi Medical Center, Japan, [7]University Hospitals Leuven, Belgium, [8]UCB Pharma, Belgium
Disclosures: E Michael Lewiecki, Amgen, Lilly, Merck, Grant/Research Support

10:00 am 1072 **Effects of Romosozumab in Postmenopausal Women With Osteoporosis After 2 and 12 Months: Bone Histomorphometry Substudy**
Pascale Chavassieux*[1], Roland Chapurlat[1], Nathalie Portero-Muzy[1], Pedro Garcia[2], Jacques P. Brown[3], Stéphane Horlait[4], Cesar Libanati[5], Rogely Boyce[6], Andrea Wang[6], Andreas Grauer[6]. [1]INSERM UMR 1033, Université de Lyon, France, [2]Hospital Universitario de Monterrey, Mexico, [3]CHU de Quebec Research Centre and Laval University, Canada, [4]Amgen, France, [5]UCB BioPharma, Belgium, [6]Amgen Inc., United States
Disclosures: Pascale Chavassieux, None

10:15 am 1073 **Ten-year Continued Nonvertebral Fracture Reduction in Postmenopausal Osteoporosis With Denosumab Treatment**
S Ferrari*[1], P Butler[2], DL Kendler[3], PD Miller[4], C Roux[5], AT Wang[2], RB Wagman[2], EM Lewiecki[6]. [1]Geneva University Hospital, Switzerland, [2]Amgen Inc., United States, [3]University of British Columbia, Canada, [4]Colorado Center for Bone Research, United States, [5]Paris Descartes University, France, [6]New Mexico Clinical Research & Osteoporosis Center, United States
Disclosures: S Ferrari, Agnovos, Amgen, Radius, UCB, Consultant

10:30 am 1074 **Sustained Fracture Risk Reduction with Sequential Abaloparatide/Alendronate: Results of ACTIVExtend**
Henry G Bone*[1], Felicia Cosman[2], Paul D Miller[3], Gregory C Williams[4], Gary Hattersley[4], Ming-yi Hu[4], Lorraine A Fitzpatrick[4], Socrates Papapoulos[5]. [1]Michigan Bone and Mineral Clinic, United States, [2]Helen Hayes Hospital and Columbia University, United States, [3]Colorado Center for Bone Research, United States, [4]Radius Health, Inc., United States, [5]Leiden University Medical Center, Netherlands
Disclosures: Henry G Bone, Amgen, Consultant

10:45 am **ASBMR 2017 Annual Meeting Young Investigator Award**

1075 **Comparison of BMD Changes and Bone Turnover Levels 3 Years After Bisphosphonate Discontinuation: FLEX and HORIZON Studies**

Tiffany Kim*[1], Douglas Bauer[2], Anne Schafer[1], Felicia Cosman[3], Dennis Black[2], Richard Eastell[4]. [1]University of California, San Francisco, and the San Francisco VA Health Care System, United States, [2]University of California, San Francisco, United States, [3]Helen Hayes Hospital, West Haverstraw, and Columbia University, New York, United States, [4]University of Sheffield, United Kingdom

Disclosures: Tiffany Kim, None

PLENARY ORALS: TRANSLATIONAL PLENARY ORALS II

9:45 am - 11:00 am **Colorado Convention Center**

Four Seasons Ballroom II-III

Chair

Mei Wan, M.D., Ph.D.
Johns Hopkins University School of Medicine

Disclosures: Mei Wan, None

9:45 am **ASBMR 2017 Annual Meeting Young Investigator Award**

1076 **The Crucial p53-Dependent Oncogenic Role of JAB1 in Osteosarcoma Pathogenesis**

William Samsa*[1], Lindsay Bashur[1], Murali Mamidi[1], Alexander Miron[1], Robin Elliott[1], David Danielpour[1], Guang Zhou[1]. [1]Case Western Reserve University, United States

Disclosures: William Samsa, None

10:00 am **Mice with adipocyte-specific deficiency in protein phosphatase 5 (PP5) have high bone mass due**

1077 **to bone anabolic activity of marrow adipocytes**

Lance Stechschulte*[1], Andrew Hendrix[1], Edwin Sanchez[1], Beata Lecka-Czernik[1]. [1]University of Toledo, United States

Disclosures: Lance Stechschulte, None

10:15 am **ASBMR 2017 President's Award**

1078 **Cancellous Bone Volume Fraction and Mineral Content Contribute Differently to Mechanical Behavior in Type 2 Diabetic and Non-diabetic Men**

Heather Hunt*[1], Ashley Torres[1], Pablo Palomino[1], Rehan Saiyed[2], Karen King[3], Joseph Lane[2], Christopher Hernandez[1], Eve Donnelly[1]. [1]Cornell University, United States, [2]Hospital for Special Surgery, United States, [3]University of Colorado Anschutz Medical Campus, United States

Disclosures: Heather Hunt, None

10:30 am **ASBMR 2017 Annual Meeting Young Investigator Award**

1079 **Disrupting Central Estrogen Receptor α Signaling in the Arcuate Nucleus Produces a Dramatic Increase in Bone Mass and Strength**

Candice Herber*[1], William Krause[1], Corey Cain[1], Liping Wang[1], Edward Hsiao[1], Robert Nissenson[1], Aaron Fields[1], Stephanie Correa[2], Holly Ingraham[1]. [1]University of California, San Francisco, United States, [2]University of California, Los Angeles, United States

Disclosures: Candice Herber, None

10:45 am **RAPID-THROUGHPUT SKELETAL PHENOMICS IN ZEBRAFISH**

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Matthew Hur*[1], Charlotte Gistelinck[2], Philippe Huber[1], Jane Lee[1], Marjorie Thompson[1], Adrian Monstad-Rios[1], Claire Watson[1], Sarah McMenamin[3], Andy Willaert[4], David Parichy[5], Paul Coucke[6], Ronald Kwon[1]. [1]University of Washington, United States, [2]Ghent University, Belgium, [3]Boston College, United States, [4]Ghent University, United States, [5]University of Virginia, United States, [6]University of Ghent, Belgium

Disclosures: Matthew Hur, None

MEET-THE-PROFESSOR SESSIONS

11:00 am - 12:00 pm **Colorado Convention Center**
Room 102-113

Meet the Professor: Anti-sclerostin and Multiple Myeloma
Room 102

Peter Croucher, Ph.D.
Garvan Institute of Medical Research, Australia
Disclosures: Peter Croucher, None

Meet the Professor: Glucocorticoids and Bone
Room 103

Mark Cooper, MD, PhD
University of Sydney, Australia
Disclosures: Mark Cooper, None

Meet the Professor: Muscle Power vs. Muscle Strength: Impact for Falls and Mobility
Room 104

Elsa Strotmeyer, Ph.D., MPH
University of Pittsburgh, USA
Disclosures: Elsa Strotmeyer, None

Meet the Professor: New Insights in Bone Vasculature
Room 105

Anjali Kusumbe, Ph.D.
Nuffeld Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences, United Kingdom
Disclosures: Anjali Kusumbe, None

Meet the Professor: Non-Coding RNAs
Room 106

Matthias Hackl
TAmiRNA GmbH, Austria
Disclosures: Matthias Hackl, None

Meet the Professor: ROS Signaling in Bone Cells
Room 107

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

Meet the Professor: Ensuring Scientific Rigor in Animal Experiments
Room 108

Robert Jilka, PhD
University of Arkansas for Medical Sciences, USA
Disclosures: Robert Jilka, None

Meet the Professor: Therapeutic Approach of Osteogenesis Imperfecta in the Adult
Room 109

Bente Langdahl, M.D., DMSc
Aarhus University Hospital, Denmark
Disclosures: Bente Langdahl, None

Meet the Professor: Automated Histomorphometry
Room 110/112

David Rowe, M.D.
University of Connecticut Health Center, David Rowe
Disclosures: David Rowe, None

Meet the Professor: Screening Strategies for Young Postmenopausal Women (50-64)
Room 111/113

Carolyn Crandall, M.D., M.S.
University of California, Los Angeles, USA
Disclosures: Carolyn Crandall, None

HANDS-ON WORKSHOP: RNA-SEQ COMPUTATIONAL ANALYSIS TRAINING WORKSHOP

11:00 am - 12:30 pm **Colorado Convention Center**
Room 402

Hands-on Workshops are ticketed events and require advance registration.

HANDS-ON WORKSHOP: SKELETAL MUSCLE BIOLOGY AND FUNCTION: AN INTRODUCTION TO ANALYTICAL APPROACHES

11:00 am - 12:30 pm **Colorado Convention Center**
Room 401

Hands-on Workshops are ticketed events and require advance registration.

ASBMR-IOF JOINT SESSION: REDUCING THE TREATMENT GAP

11:00 am - 12:00 pm **Colorado Convention Center**
Four Seasons Ballroom I

Co-Chairs
Jane Cauley, Ph.D.
University of Pittsburgh Graduate School of Public Health, USA
Disclosures: Jane Cauley, None

John A. Kanis, M.D.
University of Sheffield, UK
Disclosures: John A. Kanis, None

11:00 am **A Multi-Stakeholder Strategic Roadmap to Prevent Future Fractures in People Who Have Already Fractured**
Sundeep Khosla, M.D.
Mayo Clinic, USA
Disclosures: Sundeep Khosla, None

Douglas Kiel, MD, MPH
Institute for Aging ResearchHebrew SeniorLife
Disclosures: Douglas Kiel, None

11:30 am **A Global Perspective on Current and Future Strategies for Prevention of Fragility Fractures**
Nicholas Harvey, MBBChir
MRC Lifecourse Epidemiology Unit, University of Southampton
Disclosures: Nicholas Harvey, None

Paul Mitchell, MS
University of Notre Dame Australia, New Zealand
Disclosures: Paul Mitchell, None

CAREER DEVELOPMENT SESSION: NAVIGATING CAREER PATHWAYS: HOW TO DEVELOP, ADJUST AND SUSTAIN A CAREER IN BONE AND MINERAL HEALTH FOR THE LONG-TERM

11:00 am - 12:00 pm **Colorado Convention Center**

Mile High Ballroom 4A-B

Everyone knows how to get started with their scientific or clinical career – but how do you develop, adjust and sustain it for the long term? In this interactive workshop session you will have the opportunity to learn from the experiences of a variety of professionals from academia, clinicians, government agencies and industry to learn how they have navigated and developed their careers in the bone and mineral field. Participants will discuss with peers, as well as roundtable table topic leaders, and begin to develop career goals utilizing prompts to guide the roundtable discussions.

Co-Chairs

Nicola Napoli, Ph.D.
University of Campus Bio-Medico di Roma, Itaty
ASBMR Membership Engagement and Education Committee Chair
Disclosures: Nicola Napoli, None

Roberta Faccio, Ph.D.
Washington University in St. Louis School of Medicine, USA
Women in Bone and Mineral Research Committee Chair
Disclosures: Roberta Faccio, None

NETWORKING BREAK

12:00 pm - 12:30 pm **Colorado Convention Center**

Mile High Ballroom Foyer and Four Seasons Ballroom Foyer

POSTER SESSION II & POSTER TOURS

12:30 pm - 2:30 pm **Colorado Convention Center**

ASBMR Discovery Hall - Exhibit Hall A & B1

SU0001 **Primary hyperparathyroidism due to atypical adenoma: clinical, biochemical and histological features of an Italian cohort**

Filomena Cetani*[1], Federica Saponaro[2], Marina Di Giulio[2], Elena Pardi[2], Simona Borsari[2], Claudio Marcocci[2]. [1]University-Hospital of Pisa, Italy, [2]Departmet of Clinical and Experimental Medicine, University of Pisa, Italy

Disclosures: Filomena Cetani, None

SU0002 ***Calbindin-D 9K* mediates vascular calcification from high dose Vitamin D injection via blocking BMP signaling pathway**

Xiangguo Che*[1], Na-Rae Park[1], Yu-Min Hong[1], Min-Su Han[1], Youn-Kwan Jung[1], Yu-Rae Choi[1], Xian Jin[1], Goo Taeg Oh[2], Shigeaki Kato[3], Je-Yong Choi[1]. [1]Department of Biochemistry and Cell Biology, Korea Mouse Phenotype Consortisum, BK21 PLUS, School of Medicine Kyungpook National University, Korea, Republic of, [2]Ewha Womans University, Korea, Republic of, [3]Department of Pharmacy, Iwaki Meisei University, Japan

Disclosures: Xiangguo Che, None

SU0003 **The Global, Prospective, Observational PARADIGHM™ Registry for Patients With Chronic Hypoparathyroidism Was Expanded to Capture Recombinant Human Parathyroid Hormone, rhPTH(1-84), Use Under Routine Clinical Care**

Bart L. Clarke*[1], Maria Luisa Brandi[2], John Germak[3], Stefanie Hahner[4], Pascal Houillier[5], Olle Kampe[6], Christian Kasperk[7], Aliya Khan[8], Michael A. Levine[9], Michael Mannstadt[10], Rebecca Piccolo[11], Lars Rejnmark[12], Dolores M. Shoback[13], Tamara J. Vokes[14], Neil Gittoes[15]. [1]Mayo Clinic Division of Endocrinology, Diabetes, Metabolism, and Nutrition, United States, [2]University Hospital of Careggi, Italy, [3]Shire International GmbH, Switzerland, [4]University of Würzburg, Germany, [5]Georges Pompidou Hospital and Paris Descartes University, France, [6]Karolinska Institutet, Sweden, [7]Medical University, Germany, [8]McMaster University, Canada, [9]Children's Hospital of Philadelphia, United States, [10]Massachusetts General Hospital and Harvard Medical School, United States, [11]Shire Human Genetic Therapies, Inc., United States, [12]Aarhus University Hospital, Denmark, [13]SF Department of Veterans Affairs Medical Center, University of California, United States, [14]University of Chicago Medicine, United States, [15]University of Birmingham, United Kingdom

Disclosures: Bart L. Clarke, Shire, Consultant

SU0004 **Influence of sedentary behavior and voluntary physical activity in bone mineral density in patients with class III obesity**

Florêncio Diniz-Sousa*[1], Giorjines Boppre[1], Leandro Machado[2], João Vilas-Boas[2], Vitor Devezas[3], John Preto[3], Hugo Sousa[3], José Oliveira[1], Hélder Fonseca[1]. [1]CIAFEL, Faculty of Sport, University of Porto, Portugal, [2]CIFI2D, Faculty of Sport, University of Porto, Portugal, [3]Department of Surgery, Centro Hospitalar de São João, Portugal

Disclosures: Florêncio Diniz-Sousa, None

SU0005 **Utility of the Somatostatin Receptor Scintigraphy and Systemic Venous FGF23 Sampling for the Identification of the Tumor Induced Osteomalacia causing FGF23 producing tumor, and New FGF23 Immunostaining System with High Sensitivity for the Differential Diagnosis.**

Nobuaki Ito*[1], Minae Koga[1], Yuka Kinoshita[1], Masaki Katsura[2], Miwako Takahashi[2], Hiroshi Kobayashi[3], Tetsuo Ushiku[4]. [1]Department of Endocrinology & Nephrology, University of Tokyo Hospital, Japan, [2]Department of Radiology, University of Tokyo Hospital , Japan, [3]Department of Orthopaedic Surgery Faculty of Medicine, University of Tokyo Hospital., Japan, [4]Department of Pathology, Graduate School of Medicine, The University of Tokyo, Japan

Disclosures: Nobuaki Ito, None

SU0006 **An overview of the etiology, clinical manifestations, management strategies and complications of hypoparathyroidism from the Canadian National Hypoparathyroidism Registry (CNHR)**

Aliya Khan*[1], Mohammed Almutairi[1], Rafik El-Werfalli[1], Adam Waldbillig[1], Namrah Siraj[1], Tayyab Khan[1], Reema Shah[2], Zubin Punthakee[1], Adam Millar[3], Manoela Braga[1], JEM Young [1]. [1]McMaster University, Canada, [2]McMaster Univeristy, Canada, [3]University of Toronto, Canada

Disclosures: Aliya Khan, None

SU0007 **FRAX-based Intervention Threshold for Therapeutic Decision in Patients with End-stage Renal Disease on Maintenance Dialysis**

Jerzy Przedlacki*[1], Monika Wieliczko[1], Jolanta Buczy□ska-Chyl[2], Piotr Ko□mi□ski[3], Paweł □ebrowski[1], Ewa Wojtaszek[1], Joanna Matuszkiewicz-Rowi□ska[1], Study Group[4]. [1]Chair and Department of Nephrology, Dialysis and Internal Medicine, Medical University of Warsaw, Poland, [2]Dialysis Unit, Regional Specialist Hospital, Poland, [3]Fresenius Dialysis Center, Poland, [4]26 Dialysis Centers, Poland

Disclosures: Jerzy Przedlacki, None

SU0008 **Primary Hyperparathyroidism related to a Parathyroid Adenoma in a Patient with Familial Hypocalciuric Hypercalcemia**

Bridget sinnott*[1], Victoria Loseva[1], David Terris[1], Seth Kay[1], Helena Spartz[1], Robert Brennan[2], Anthony Mulloy[1]. [1]Medical College of Georgia, United States, [2]Laurel Endocrine, United States

Disclosures: Bridget sinnott, None

SU0009 **Occult Stones in Primary Hyperparathyroidism are Associated with Urinary Calcium Excretion, 1, 25-Dihydroxyvitamin D Levels and Male sex**

Donovan Tay*[1], Minghao Liu[1], Melissa Sum[1], Leonardo Costa Bandeira[1], Mariana Bucovsky[1], Ivelisse Colon[1], James Lee[2], Shonni Silverberg[3], Marcella Walker[3]. [1]Columbia University Medical Center, Dept of Medicine Endocrinology, United States, [2]College of Physicians and Surgeons, Columbia Univeristy, United States, [3] Columbia University Medical Center, Dept of Medicine Endocrinology, United States

Disclosures: Donovan Tay, None

SU0010 **Hypophosphatemic Osteomalacia Induced by Long-Term Low-Dose Adefovir Dipivoxil: Clinical Characteristics of 105 Cases**

Zhe Wei*[1], Zhen lin Zhang[1]. [1]Metabolic Bone Disease and Genetic Research Unit, Department of Osteoporosis and Bone Diseases, Shanghai Jiao Tong University Affiliated Sixth People's Hospital, Shanghai, China, China

Disclosures: Zhe Wei, None

SU0011 **Quantifying Microdamage in Fatigue Loaded Cortical Bone Tissue**

Dan McDonald*[1], Brad Hugenroth[1], Brett Rosauer[1], Robert Recker[1], Mohammed Akhter[1]. [1]Creighton University, United States

Disclosures: Dan McDonald, None

SU0012 **Relating Cortical Bone Mechanics to Intracortical Pore Morphology, Distribution and Remodeling History within the Fibula Diaphysis**

Lydia Bakalova*[1], Christina Andreasen[2], Jesper Thomsen[3], Annemarie Bruel[4], Ellen Hauge[4], Birgitte Kiil[4], Jean-Marie Delaisse[4], Thomas Andersen[2], Mariana Kersh[1]. [1]University of Illinois at Urbana-Champaign, United States, [2]University of Southern Denmark, Denmark, [3]Aarhus University, Denmark, [4]Aarhus University , Denmark

Disclosures: Lydia Bakalova, None

SU0013 **Prolonged high repetition high force loading induces localized osteocyte apoptosis, increased CCN2 and sclerostin secretion, and increased RANKL-induced osteoclastogenesis and activity in rat radial bones**

Mary F Barbe*[1], Vicky Massicotte[1], Alexandra M Monroy[2], Steven N Popoff[1]. [1]Temple University Lewis Katz School of Medicine, United States, [2]University of Pennsylvania, United States

Disclosures: Mary F Barbe, None

SU0014 **Whole body vibration therapy triggers load-driven bone formation in adolescents with idiopathic scoliosis**

Patrik Christen*[1], Gianna Marano[1], Yuk-Wai Wayne Lee[2], Tsz-Ping Lam[2], Ralph Müller[1]. [1]ETH Zurich, Switzerland, [2]The Chinese University of Hong Kong, China

Disclosures: Patrik Christen, None

SU0015 **The Decrease in Fracture Resistance with Aging in BALB/c Mice Involves Alterations to the Bone Matrix**

Amy Creecy*[1], Sasidhar Uppuganti[2], Mathilde Granke[3], Madeline Girard[4], Siegfried Schlunk[4], Paul Voziyan[5], Jeffry Nyman[6]. [1]Vanderbilt University, VA Tennessee Valley Healthcare System, United States, [2]Vanderbilt University Medical Center, VA Tennessee Healthcare System, United States, [3]Vanderbilt University Medical Center, VA Tennessee Valley Healthcare System, United States, [4]Vanderbilt University, United States, [5]Vanderbilt University Medical Center, United States, [6]Vanderbilt University, VA Tennessee Valley Healthcare System, Vanderbilt University Medical Center, United States

Disclosures: Amy Creecy, None

SU0016 **Influence of Microcracks and Compositional Heterogeneity on Fracture Resistance of Cortical Bone**

Ahmet Demirtas*[1], Ani Ural[1]. [1]Villanova University, United States

Disclosures: Ahmet Demirtas, None

SU0017 **Characterization of a sandwich ELISA for the quantification of mouse periostin**

Elisabeth Gadermaier*[1], Manfred Tesarz[1], Jacqueline Wallwitz[1], Gabriela Berg[1], Gottfried Himmler[1]. [1]The Antibody Lab GmbH, Austria

Disclosures: Elisabeth Gadermaier, None

SU0018 **Consideration of Tissue-Level Anisotropy and Heterogeneity Does Not Increase the Prediction Power of Apparent-Level Mechanical Properties**

Y. Eric Yu*[1], Yizhong Hu[1], Xingjian Zhang[1], X. Edward Guo[1]. [1]Bone Bioengineering Laboratory, Department of Biomedical Engineering, Columbia University, United States

Disclosures: Y. Eric Yu, None

SU0019 **Bone Quality Assessment of Fresh Bone Using FTIR Imaging**

Teppei Ito*[1], Masahiko Takahata[2], Tomohiro Shimizu[2], Kyosuke Kanazawa[1], Hiromi Kimura-Suda[1]. [1]Chitose Institute of Science and Technology, Japan, [2]Hokkaido University, Japan

Disclosures: Teppei Ito, None

SU0020 **Strain Magnitude Influences Structural Changes in the Radius of Healthy Adult Women**

Megan Mancuso*[1], Joshua Johnson[2], Sabahat Ahmed[1], Karen Troy[1]. [1]Worcester Polytechnic Institute, United States, [2]Worcester Polytechnic Institute , United States

Disclosures: Megan Mancuso, None

SU0021 **The role of osteopontin in the mechanics of the bone across length-scales**

Sabah Nobakhti*[1], Baptiste Depalle[2], Alexandra Porter[2], Sandra Shefelbine[1]. [1]Northeastern University, United States, [2]Imperial College London, United States

Disclosures: Sabah Nobakhti, None

SU0022 **Evaluation of a new bovine biomaterial to conduct bone healing**

Gretel Pellegrini*[1], Macarena Gonzalez-Chaves [2], Francisco Duran[3], Ricardo Orzuza[4], Luciano Parodi[5], Susana Zeni[1]. [1]Instituto de Inmunología Genética y Metabolismo, Universidad de Buenos Aires-CONICET (INIGEM), Universidad de Buenos Aires, Facultad de Odontología, Cátedra de Bioquímica General y Bucal, Argentina, [2]Universidad de Buenos Aires, Facultad de Odontología, Cátedra de Bioquímica General y Bucal, Argentina, [3]Instituto de Inmunología Genética y Metabolismo, Universidad de Buenos Aires-CONICET (INIGEM), Argentina, [4]Universidad de Buenos Aires, Facultad de Odontología, Cátedra de Bioquímica General y Bucal, Argentina, Argentina, [5]Comisión Nacional de Energía Atómica, División Bioterio. Centro Atómico Ezeiza, Argentina

Disclosures: Gretel Pellegrini, None

SU0023 **Sequential antiresorptive and anabolic treatment maintains cortical bone quality in an ovariectomized rat model**

Erik Taylor*[1], Xiaomei Yao[2], Yong Wang[2], Don Kimmel[3], Mark Johnson[2], Eve Donnelly[1], Nancy Lane[4]. [1]Cornell University, United States, [2]University of Missouri-Kansas City, United States, [3]University of Florida, United States, [4]University of California Davis, United States

Disclosures: Erik Taylor, None

SU0024 **Effect of Mineralized Collagen Fibril Orientation on Cortical Bone Fracture Resistance**

Yaohui Wang*[1], Ani Ural[1]. [1]Villanova University, United States

Disclosures: Yaohui Wang, None

SU0025 **Impact of Skeletal Maturity Status on Height Trajectory During Childhood and Adolescence**

Melanie E. Boeyer*[1], Emily V. Leary[1], Richard J. Sherwood[1], Dana L. Duren[1]. [1]University of Missouri, United States

Disclosures: Melanie E. Boeyer, None

SU0026 **A School-Based Exercise Intervention Program from Tanner stage 1 until 5 Improves Composite Risk Score for Fracture in Both Genders**

Felix Cronholm*[1], Magnus Dencker[2], Björn Rosengren[1], Magnus Karlsson[1]. [1]Clinical and Molecular Osteoporosis Research Unit, Department of Orthopedics and Clinical Sciences, Lund University, Skåne University Hospital, Sweden, [2]Department of Physiology and Clinical Sciences, Lund University, Skåne University Hospital, Sweden

Disclosures: Felix Cronholm, None

SU0027 **Predictors of Stress Fractures in Adolescents Engaging in Weight-Bearing Exercise: Use of Peripheral Quantitative Computed Tomography versus Dual-Energy X-Ray Absorptiometry**

Rachel L Duckham*[1], Shara R Bialo[2], Jason Machan[3], Peter Kriz[4], Catherine M Gordon[5]. [1]Institute for Physical Activity and Nutrition, Deakin University and Australian Institute for Musculoskeletal Sciences, St. Albans, Australia, [2]Division of Pediatric Endocrinology, Rhode Island Hospital/Hasbro Children's Hospital, Warren Alpert Medical School of Brown University, Providence, RI, United States, [3]Division of Biostatistics, Rhode Island Hospital, Warren Alpert Medical School of Brown University, Providence, RI, United States, [4]Division of Sports Medicine, Rhode Island Hospital, Warren Alpert Medical School of Brown University, Providence, RI, United States, [5]Division of Adolescent and Transition Medicine, Cincinnati Children's Hospital, Cincinnati, OH, United States

Disclosures: Rachel L Duckham, None

SU0028 **ASBMR 2017 Annual Meeting Young Investigator Award**
Toll-Like Receptor 4 Activation Inhibits Osteoblastic Differentiation of Bone Marrow Stromal Cells and Decreases Bone Formation Following Ischemic Osteonecrosis

Gen Kuroyanagi*[1], Naga Suresh Adapala[1], Harry K.W. Kim[1]. [1]Texas Scottish Rite Hospital for Children, United States

Disclosures: Gen Kuroyanagi, None

SU0029 **In search of hypophosphatasia at two pediatric bone clinics in two Czech hospitals**

Stepan Kutilek*[1]. [1]Dept. of Pediatrics, Klatovy Hospital, Czech Republic, Czech Republic

Disclosures: Stepan Kutilek, None

SU0030 **Nutritional ricket - the Norwegian experience**

Haakon E. Meyer*[1], Kristina Skram[2], Ingvill Almås Berge[2], Ahmed Madar[3], Hilde Johanne Bjørndalen[2]. [1]University of Oslo and Norwegian Institute of Public Health, Norway, [2]Department of Pediatrics, Oslo University Hospital, Norway, [3]Section for Preventive Medicine and Epidemiology, Department of Community Medicine, University of Oslo, Norway

Disclosures: Haakon E. Meyer, None

SU0031 **Established Adult Height Loci Operate in the Pediatric Setting to Influence Bone Mineral Density**

Jonathan Mitchell*[1], Alessandra Chesi[1], Shana McCormack[1], Diana Cousminer[1], Heidi Kalkwarf[2], Joan Lappe[3], Vicente Gilsanz[4], Sharon Oberfield[5], John Shepherd[6], Andrea Kelly[1], Babette Zemel[1], Struan Grant[1]. [1]Children's Hospital of Philadelphia, United States, [2]Cincinnati Children's, United States, [3]Creighton University, United States, [4]Children's Hospital Los Angeles, United States, [5]Columbia University, United States, [6]UCSF School of Medicine, United States

Disclosures: Jonathan Mitchell, None

SU0032 **Growth and Skeletal Effects in Children and Adolescents After Kidney Transplantation: A 3-Year Prospective Study**

Diana Swolin-Eide*[1], Sverker Hansson[1], Per Magnusson[2]. [1]Department of Pediatrics, Institute for Clinical Sciences, The Queen Silvia Children's Hospital, The Sahlgrenska Academy at Göteborg University, Göteborg, Sweden, [2]Department of Clinical Chemistry, Linköping University, Linköping, Sweden

Disclosures: Diana Swolin-Eide, None

SU0033 **Effects of Crohn's Disease Fecal Microbial Transplant on Bone Mass of Germ-Free Mice Are Independent of Gastrointestinal Inflammation**

Francisco Sylvester*[1], Anu Maharjan[1], Emily Bulik-Sullivan[1], Hong Yuan[1], Maureen Bower[1], Ian Carroll[1]. [1]University of North Carolina at Chapel Hill, United States

Disclosures: Francisco Sylvester, None

SU0034 **Bone deficits and discordance between lean mass and bone measures in ambulatory children with cerebral palsy**

Daniel Whitney*[1], Freeman Miller[2], Melissa Ziegler[1], Christopher Modlesky[1], Chuan Zhang[1]. [1]University of Delaware, United States, [2]AI duPont Hospital for Children, United States

Disclosures: Daniel Whitney, None

SU0035 **CCL3 is Essential for Leukemia Progression but Dispensable for Homeostatic Hematopoiesis**

Rhonda Staversky*[1], Mary Georger[1], Marian Ackun-Farmmer[1], Michael Becker[1], Danielle Benoit[1], Laura Calvi[1], Benjamin Frisch[1]. [1]University of Rochester, United States

Disclosures: Rhonda Staversky, None

SU0036 **Disease stabilization in a lower-risk myelodysplastic syndrome (MDS) patient with activated beta-catenin upon All Trans-Retinoic Acid (ATRA) treatment**

Marta Galán-Díez*[1], Abdullah Mahmood Ali[1], Miray Nilufer Cimsit[1], Can Ege Yalçın[1], Stavroula Kousteni[1], Azra Raza[1]. [1]Columbia University, United States

Disclosures: Marta Galán-Diez, None

SU0037 **Expression of CD38 and the Ectoenzymes of the Adenosinergic Pathways in Myeloma Bone Microenvironment: A Rational Basis for an Anti-CD38 Antibody Based Therapy for Myeloma-induced Osteoclastogenesis.**

Denise Toscani*[1], Federica Costa[1], Antonella Chillemi[2], Valeria Quarona[2], Marina Bolzoni[1], Valentina Marchica[1], Rosanna Vescovini[3], Cristina Mancini[4], Eugenia Martella[4], Fabrizio Accardi[1], Alberto L Horenstein[2], Mario Pedrazzoni[5], Franco Aversa[6], Fabio Malavasi[2], Nicola Giuliani[1]. [1]Myeloma Unit, Dept. of Medicine and Surgery, University of Parma, Italy, [2]Laboratory of Immunogenetics, Dept. of Medical Sciences and CeRMS, University of Turin, Italy, [3]Dept. of Medicine and Surgery, University of Parma, Italy, [4]Pathology, "Azienda Ospedaliero-Universitaria di Parma, Italy, [5]Internal Medicine, University of Parma, Italy, [6]Hematology and BMT Center, "Azienda Ospedaliero-Universitaria di Parma, Italy

Disclosures: Denise Toscani, None

SU0038 **3D Tissue-Engineered Bone Constructs Direct Osteogenic Differentiation of human Mesenchymal Stem Cells**

Alyssa Merkel*[1], Joseph Vanderburgh[2], Shanik Fernando[3], Scott Guelcher[2], Julie Sterling[1]. [1]Center for Bone Biology, Vanderbilt University Medical Center, Nashville, TN. Department of Veterans Affairs, Tennessee Valley Healthcare System, Nashville, TN, United States, [2]Center for Bone Biology, Vanderbilt University Medical Center, Nashville, TN. Department of Chemical and Biomolecular Engineering, Vanderbilt University, Nashville, TN, United States, [3]Department of Chemical and Biomolecular Engineering, Vanderbilt University, Nashville, TN, United States

Disclosures: Alyssa Merkel, None

SU0039 **Genetic Instability of the *2.3Col1a1-Cre* Transgenic Line reveals a threshold for leukemogenesis in a model of osteoblast-induced acute myeloid leukemia**

Ioanna Mosialou*[1], Alvaro Cuesta-Dominiguez[1], Julie Teruya-Feldstein[2], Ellin Berman[3], Stavroula Kousteni[1]. [1]Columbia University, United States, [2]Mount Sinai, United States, [3]Memorial Sloan Kettering Cancer Center, United States

Disclosures: Ioanna Mosialou, None

SU0040 **Distribution of Nerve Fibers in Human Bone and their Association to Bone Remodeling Events and Vascular Structures**

Manasi Sayilekshmy*[1], Rikke Rie Hansen[1], Jean-Marie Delaisse[2], Lars Rolighed[3], Anne-Marie Heegaard[1], Thomas Levin Andersen[2]. [1]Department of Drug Design and Pharmacology, University of Copenhagen, Copenhagen, Denmark, Denmark, [2]Department of Clinical Cell Biology, Vejle Hospital – Lillebaelt Hospital, Institute of Regional Health Research, University of Southern Denmark, Vejle, Denmark, Denmark, [3]Department of Otorhinolaryngology, Aarhus University Hospital, Aarhus, Denmark, Denmark

Disclosures: Manasi Sayilekshmy, None

SU0041 **T Cell-Derived IL-17A and IL-17F Drive Bone Formation from Human Periosteal Stem Cells: Implications for Enthesophyte Formation**

Mittal Shah*[1], Ash Maroof[1], Rawiya Al-Hosni[2], Panagiotis Gikas[3], Neil Gozzard[1], Stevan Shaw[1], Scott Roberts[1]. [1]UCB Pharma, United Kingdom, [2]Institute of Orthopaedics and Musculoskeletal Science, United Kingdom, [3]The Royal Orthopaedic Hospital, United Kingdom

Disclosures: Mittal Shah, UCB Pharma, Grant/Research Support

SU0042 **Role of Sirtuin 3 in Bone Homeostasis during Aging**

Liping Wang*[1], Linh Ho[1], Theresa Roth[1], Robert Nissenson[1]. [1]San Francisco VA Medical Center, United States

Disclosures: Liping Wang, None

SU0043 **Soluble factors of prostate cancer cells induce bone pre-metastasic niche changes in mice with induced prostate tumors**

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SU0044 **A novel tubulin inhibitor induces apoptosis of human osteosarcoma cells**

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Disclosures: Yufan Chen, None

SU0045 ***H3F3A* mutation is responsible for the rare Giant Cell Tumor of the Clivus.**

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SU0046 **Transcriptional plasticity of tRNA fragments and microRNAs can be remodulated in chondrosarcoma**
Darrell Green*[1], William Fraser[1]. [1]University of East Anglia, United Kingdom
Disclosures: Darrell Green, None

SU0047 **PTHrP negatively regulates tumor cell dormancy in a PTHR1-independent manner**
Rachelle W Johnson*[1], Yao Sun[2], Patricia WM Ho[2], Natalie Sims[2], T John Martin[2]. [1]Vanderbilt University Medical Center, United States, [2]St. Vincent's Institute of Medical Research, Australia
Disclosures: Rachelle W Johnson, None

SU0048 **A potential JAB1-SOX9 link in chondrosarcoma pathogenesis**
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Disclosures: Murali Mamidi, None

SU0049 **Roles of prostaglandin E2 in prostate cancer induced angiogenesis and bone metastasis**
Shosei Yoshinouchi*[1], Kenta Watanabe[1], Tsukasa Tominari[1], Michiko Hirata[1], Chiho Matsumoto[1], Takayuki Maruyama[2], Masaki Inada[1], Chisato Miyaura[1]. [1]Tokyo University of Agriculture and Technology, Japan, [2]Ono Pharmaceutical Co., Ltd., Japan
Disclosures: Shosei Yoshinouchi, None

SU0050 **Osteoblastic β2 Adrenergic Receptor Contributes to the Immunosuppressive Activity of Myeloid-Derived Suppressor Cells in the Metastatic Bone Microenvironment**
Hyo Min Jeong*[1], Eun Jung Lee[1], Hye-Eun Kim[1], Bo Yeon Seo[1], Hyun-Ho Kim[1], Yun-Jae Kim[1], Hyun-Ju Lee[1], Seok-Hyung Lee[1], Young Mi Whang[2], Serk In Park[1]. [1]Department of Biochemistry and Molecular Biology, Korea University College of Medicine, Korea, Republic of, [2]Chungang University, Korea, Republic of
Disclosures: Hyo Min Jeong, None

SU0051 **Differentiation capacity of osteosarcoma cells transformed by distinct oncogenic drivers**
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Disclosures: Kirby Rickel, None

SU0052 **Secreted Factors from the Dura Mater Promote Proliferation and Invasion of Prostate Cancer Cells via CXCR2 Activation**
Nicholas Szerlip*[1], Alexandra Calinescu[1], Catherine Van Poznak[2], Russell Taichman[3], Greg Clines[1]. [1]University of Michigan School of Medicine, United States, [2]University of Michigan, United States, [3]University of Michigan School of Dentistry, United States
Disclosures: Nicholas Szerlip, None

SU0053 **Effects of the Anti-Estrogen Endoxifen on the Musculoskeletal System and Implications for the Tumor Microenvironment**
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SU0054 **miRNA-150, a novel regulator of post-traumatic osteoarthritis**
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SU0055 **Lactosylceramide enhances chondrocytic differentiation**
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SU0056 **The role of TAK1 in postnatal articular cartilage homeostasis and OA pathogenesis**
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SU0057 **Involvement and therapeutic potential of Nell-1 in inflammatory arthritis**
Chenshuang Li*[1], Zhong Zheng[1], Pin Ha[2], Jie Jiang[3], Wenlu Jiang[4], Seungjun Lee[5], Richard Song[6], Bernard Boback[1], Alireza Hourfar[1], Eric Chen[1], Cymbeline Culiat[7], Xinli Zhang[8], Kang Ting[8], Chia Soo[3]. [1]Division of Growth and Development, Section of Orthodontics, School of Dentistry, University of California, Los Angeles, United States, [2]Department of Cleft Lip and Palate Surgery, West China Stomatology Hospital, Sichuan University, China, [3]Department of Orthopaedic Surgery and the Orthopaedic Hospital Research Center, University of California, Los Angeles, United States, [4]State Key Laboratory of Oral Diseases, Department of Orthodontics, West China Hospital of Stomatology, Sichuan University, China, [5]Department of Chemistry and Biochemistry, University of California, Los Angeles, United States, [6]School of Dentistry, University of California, Los Angeles, United States, [7]Oak Ridge National Laboratory, United States, [8]Division of Growth and Development, Section of Orthodontics, School of Dentistry, University of California, United States
Disclosures: Chenshuang Li, NIH-NIAMS, Grant/Research Support

SU0058 **Femurs versus Phalanges: differences in bone length are achieved by modulating the progression of growth plate senescence**
Julian Lui*[1], Youn Hee Jee[1], Presely Garrison[1], Shanna Yue[1], Michal Ad[1], Quang Nguyen[1], Bijal Kikani[1], Yoshiyuki Wakabayashi[2], Jeffrey Baron[1]. [1]Section on Growth and Development, NICHD, United States, [2]DNA Sequencing and Genomics Core, NHLBI, United States
Disclosures: Julian Lui, None

SU0059 **A novel 3D measurement of mouse joint subchondral bone plate reveals a positive correlation between its thickness and loading status due to altered Sclerostin amount at late osteoarthritis stage**
Xiaoyuan Ma*[1], Haoruo Jia[1], Wei Tong[1], Zhaochun Yang[2], Robert Tower[1], Kairui Zhang[1], Wei-Ju Tseng[1], X. Sherry Liu[1], James H-C. Wang[2], Lin Han[3], Motomi Enomoto-Iwamoto[1], Ling Qin[1]. [1]University of Pennsylvania, United States, [2]University of Pittsburgh, United States, [3]Drexel University, United States
Disclosures: Xiaoyuan Ma, None

SU0060 **Activated FGFR3 Prevents Subchondral Bone Sclerosis During the Development of Osteoarthritis in Transgenic Mice with Achondroplasia**
Toshiaki Okura*[1], Masaki Matsushita[1], Kenichi Mishima[1], Taisuke Seki[1], Naoki Ishiguro[1], Hiroshi Kitoh[1]. [1]Department of Orthopaedic Surgery, Nagoya University Graduate School of Medicine, Japan
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SU0061 **Phlpp Inhibitors Alter the Chondrocyte Epigenome and Promote Cartilage Regeneration**
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Disclosures: Earnest Taylor, None

SU0062 **IGFBP-2 Mediated Effects of PTH on Bone and Cellular Respiration**
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Disclosures: Victoria DeMambro, None

SU0063 **Changes in Visceral Fat and Android Fat over the Menopause Transition: Results from the Study of Women's Health Across the Nation (SWAN)**

Gail Greendale*[1], Mei-Hua Huang[1], Carrie Karvonen-Gutierrez[2], Joel Finkelstein[3], Jane Cauley[4], Kristine Ruppert[5], Arun Karlamangla[1]. [1]Division of Geriatrics, Geffen School of Medicine at UCLA, United States, [2]School of Public Health, University of Michigan, United States, [3]Massachusetts General Hospital, United States, [4]Graduate School of Public Health, University of Pittsburgh, United States, [5] Epidemiology Data Center, University of Pittsburgh, United States

Disclosures: Gail Greendale, None

SU0064 **Identification of Novel Pleiotropic Variants Associated With Osteoporosis and Obesity Using Pleiotropy-informed Conditional False Discovery Rate**

Yuan Hu*[1], Xiang-Ding Chen[1], Zhen Liu[1], Shi-Shi Min[1], Qin Zeng[1], Hui Shen[2], Li-Jun Tan[1], Hong-Wen Deng[2]. [1]Hunan Normal University, China, [2]Tulane University, United States

Disclosures: Yuan Hu, None

SU0065 **Uncarboxylated osteocalcin attenuates the migration of vascular smooth muscle cells**

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Disclosures: Kyoung Min Kim, None

SU0066 **Misty mice are resistant to high fat diet-induced bone loss and have improved insulin sensitivity**

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Disclosures: Phuong Le, None

SU0067 **Metabolomics of Osteoporosis in Southern Chinese**

Grace Koon Yee Lee*[1], Ching-Lung Cheung[1]. [1]Department of Pharmacology and Pharmacy, the University of Hong Kong, Hong Kong

Disclosures: Grace Koon Yee Lee, None

SU0068 **Body Composition and Glucose Metabolism in an Osteocalcin Knockout Rat Model with Diet Induced Obesity**

Aidi Niu*[1], Laura Lambert[1], Lihua Zhou[1], Maria Johnson[1], Timothy Nagy[1], Robert Kesterson[1], Jayleen Grams[1]. [1]University of Alabama at Birmingham, United States

Disclosures: Aidi Niu, None

SU0069 **Relationship of BMP and Phosphate to Chondrocyte and Adipocyte Differentiation and Energy Consumption**

Takashi Noguchi*[1], Amira Hussein[1], Louis Gerstenfeld[1]. [1]Boston University School of Medicine, United States

Disclosures: Takashi Noguchi, None

SU0070 **Mitochondria Play Different Roles in Age-Related vs Estrogen-Related Bone Loss**

Laura Shum*[1], Brianna Shares[1], Roman Eliseev[1]. [1]University of Rochester, United States

Disclosures: Laura Shum, None

SU0071 **An Improved Energy Profile Predicts Favorable Bone Remodeling Dynamics in Amenorrheic Athletes**

Emily Southmayd*[1], Nancy Williams[1], Mary Jane De Souza[1]. [1]The Pennsylvania State University, United States

Disclosures: Emily Southmayd, None

SU0072 **Exercise Effect on Marrow Adipose Tissue, Metabolic and Skeletal Health in Lipodystrophic SEIPIN Deficient Mice**

Cody McGrath*[1], Zengying Wu[2], Jeyantt Srinivas Sankaran[1], Buer Sen[1], Zhihui Xie[1], Martin Styner[3], Xiaopeng Zong[4], Weiqin Chen[5], Janet Rubin[1], Rosalind A. Coleman[6], Maya Styner[1]. [1]Department of Medicine, Division of Endocrinology, University of North Carolina, United States, [2]Department of Nutrition, School of Public Health, University of North Carolina, United States, [3]Departments of Computer Science and Psychiatry, University of North Carolina, United States, [4]Biomedical Research Imaging Center, University of North Carolina , United States, [5]Department of Physiology, Medical College of Georgia at Augusta University, United States, [6]Department of Nutrition, School of Public Health, University of North Carolina , United States

Disclosures: Cody McGrath, None

SU0073 **Zoledronic acid ameliorates thyroxine-induced loss of bone mass and strength but reverses improved glucose tolerance in male mice with exogenous hyperthyroidism**

Elena Tsourdi*[1], Franziska Lademann[1], Ulrike Baschant[1], Holger Henneicke[1], Martina Rauner[1], Lorenz Hofbauer[1]. [1]Department of Medicine III and Center for Healthy Aging, Technische Universität Dresden Medical Center, Dresden, Germany, Germany

Disclosures: Elena Tsourdi, None

SU0074 **Irisin and its functional domain for stimulating the downstream signaling**

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Disclosures: Dongdong Zhang, None

SU0075 **Genetic Variation of Inbred Mouse Strains Uncovers Differences in Femur Strength Distinctly Influenced by Bone Matrix Composition.**

Michael-John Beltejar*[1], Jun Zhang[2], Dana A. Godfrey[1], Renata Rydzik[3], Olivia Hart[3], Douglas J. Adams[3], Cheryl L. Ackert-Bicknell[1]. [1]Center for Musculoskeletal Research, University of Rochester Medical Center, United States, [2]Department of Orthopedics, Zhejiang Provincial People's Hospital, China, [3]Department of Orthopaedic Surgery, University of Connecticut Health, United States

Disclosures: Michael-John Beltejar, None

SU0076 **Cyclin D1-Driven Parathyroid Neoplasia is CDK4/6 Dependent in Transgenic Mice**

Jessica Costa-Guda*[1], Kristin Corrado[2], Justin Bellizzi[2], Robert Romano[2], Elizabeth Saria[2], Kirsten Saucier[2], John Vu[2], Madison Rose[2], Samantha Cummins[2], Samip Shah[2], Cynthia Alander[2], Sanjay Mallya[3], Andrew Arnold[2]. [1]University of Connecticut School of Dental Medicine, United States, [2]University of Connecticut School of Medicine, United States, [3]UCLA School of Dentistry, United States

Disclosures: Jessica Costa-Guda, None

SU0077 **Genotyping assays to distinguish bone-selective cre-driver mouse lines**

greig couasnay*[12], christopher Frey[12], florent Elefteriou[12]. [1]Baylor college of medicine, United States, [2]Baylor college of Medicine, United States

Disclosures: greig couasnay, None

SU0078 **Decreased bone strength induced by persistent activation of calcium-sensing receptor.**

Itsuro Endo*[1], Bingzi Dong[2], Yukiyo Ohnishi[3], Takeshi Kondo[3], Masahiro Hiasa[3], Jumpei Teramachi[3], Shinichi Aizawa[4], Toshio Matsumoto[5], Masahiro Abe[3], Fukomoto Seiji[5]. [1]Department of Chronomedicine, Institute of Biomedical Sciences, Tokushima University Graduate School, Japan, [2]Department of Endocrinology, Affiliated Hospital of Qingdao University, China, [3]Department of Hematology, Endocrinology and Metabolism, Tokushima University, Japan, [4]Genetic Engineering Team, RIKEN Center for Life Science Technologies, Japan, [5]Fujii Memorial Institute of Medical Sciences, Tokushima University, Japan

Disclosures: Itsuro Endo, None

SU0079 **Bone compartment specific effects of long duration hypothalamic leptin gene therapy on osteopetrosis in leptin-deficient *oblob* mice**

Kenneth Philbrick*[1], Laurence Lindenmaier[1], Amy Colagiovanni[1], Dawn Olson[1], Satya Kalra[2], Adam Branscum[1], Urszula Iwaniec[1], Russell Turner[1]. [1]Oregon State University, United States, [2]University of Florida, United States

Disclosures: Kenneth Philbrick, None

SU0080 **Combination Therapy with Anti-TGF-Beta Antibody and a Mutation in *Lrp5* Improves Trabecular Bone Properties In Mice with Osteogenesis Imperfecta**

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Disclosures: Shannon Kaupp, None

SU0081 **Clinical Spectrum and Unifying Pathomechanisms in Ectopic Connective Tissue Mineralization Disorders**

Qiaoli Li*[1], Jouni Uitto[1]. [1]Department of Dermatology and Cutaneous Biology, Thomas Jefferson University, United States

Disclosures: Qiaoli Li, None

SU0082 **Targeted Deletion of *Claudin (Cldn)-12* Gene Inhibits Chondrocyte Differentiation and Increases Articular Cartilage Thickness**

Richard Lindsey*[1], Weirong Xing[1], Patrick Aghajanian[1], Catrina Godwin[1], Sheila Pourteymoor[1], Subburaman Mohan[1]. [1]VA Loma Linda Healthcare System, United States

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SU0083 **Assessment of genetics underlying the trabecular plate-rod ratio using whole exome sequencing**

Melissa Sum*[1], Xiaolin Zhu[1], Minghao Liu[1], Edward Guo[2], David Goldstein[1], Marcella Walker[1]. [1]Columbia University Medical Center, United States, [2]Columbia University, United States

Disclosures: Melissa Sum, None

SU0084 **An Orthologous Transcription Factor Network Modulated by PU.1 Bound Enhancers in Osteoclasts Predicts Bone Density**

Heather Carey*[1], Blake Hildreth[1], Jennifer Geisler[2], Sankha Ghosh[2], Ramiro Toribio[2], Michael Ostrowski[2], Sudarshana Sharma[1]. [1]Ohio State University, United States, [2]OSU, United States

Disclosures: Heather Carey, None

SU0085 **Identification of rare variants in young adults with idiopathic osteoporosis**

Corinne Collet*[1], Agnes Ostertag[2], Manon Ricquebourg[1], Marine Delecourt[3], Giulia Tueur[3], Thomas Funck-Brentano[1], Phillipe Orcel[1], Jean-Louis Laplanche[3], Martine Cohen-Solal[1]. [1]Inserm U1132 and hopital Lariboisiere, France, [2]Inserm U1132, hopital Lariboisiere, France, [3]Department of Biochemistry, hopital Lariboisiere, France

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SU0086 **Genome-wide association study of extreme high bone mass identifies *NPR3* as a novel BMD-associated gene and highlights the contribution of common genetic variation to extreme BMD phenotypes**

Celia Gregson*[1], Felicity Newell[2], Paul Leo[2], Lavinia Paternoster[1], Mhairi Marshall[2], Graeme Clark[2], John Morris[3], Bing Ge[3], Xiao Bao[2], Duncan Bassett[4], Graham Williams[4], Scott Youlten[5], Peter Croucher[5], George Davey Smith[1], David Evans[6], John Kemp[6], Matthew Brown[2], Jon Tobias[1], Emma Duncan[2]. [1]University of Bristol, United Kingdom, [2]Queensland University of Technology, Australia, [3]McGill University, Canada, [4]Imperial College London, United Kingdom, [5]The Garvan Institute of Medical Research, Australia, [6]University of Queensland, Australia

Disclosures: Celia Gregson, None

SU0087 **The response to antenatal cholecalciferol supplementation is associated with common vitamin D related genetic variants: findings from the MAVIDOS trial**

Rebecca Moon*[1], Nicholas Harvey[2], Cyrus Cooper[1], Stefania D'Angelo[1], Elizabeth Curtis[1], Sarah Crozier[1], Sheila Barton[3], Sian Robinson[1], Keith Godfrey[1], Nikki Graham[4], John Holloway[4], Nicholas Bishop[5], Stephen Kennedy[6], Aris Papageorghiou[6], Inez Schoenmakers[7], Robert Fraser[8], Saurabh Gandhi[8], Ann Prentice[9], Hazel Inskip[1], M Kassim Javaid[10]. [1]MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, [2]MRC Lifecourse Epidemiology Unit, United Kingdom, [3]MRC Lifecourse Epidemiolgy Unit, University of Southampton, United Kingdom, [4]Human Health and Development, Faculty of Medicine, University of Southampton, United Kingdom, [5]Academic Unit of Child Health, University of Sheffield, United Kingdom, [6]Nuffield Department of Obstetrics and Gynaecology, John Radcliffe Hospital, United Kingdom, [7]MRC Human Nutrition Resaerch, United Kingdom, [8]Sheffield Hospitals NHS Trust, United Kingdom, [9]MRC Human Nutrition Research, United Kingdom, [10]NIHR Musculoskeletal Biomedical Research Unit, University of Oxford, United Kingdom

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SU0088 **Genotype-phenotype Correlation Analysis in 419 Subjects with Germline *CDC73* Gene Mutations**

Jianhua Zhang*[1], Bin Guan[1], James Welch[1], William F. Simonds[1], Yulong Li[1]. [1]NIH, United States

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SU0089 **Identification of new candidate markers crucial for fracture healing in mice**

Deeksha Malhan*[1], Katharina Schmidt Bleek[2], Georg N. Duda[3], Christian Heiss[1], Thaqif El Khassawna[1]. [1]Experimental Trauma Surgery, Faculty of Medicine, Justus Liebig University of Giessen, Germany, [2]Julius Wolff Institute and Center for Musculoskeletal Surgery, Charité - Universitätsmedizin , Germany, [3]Julius Wolff Institute and Center for Musculoskeletal Surgery, Charité - Universitätsmedizin Berlin, Germany, Germany

Disclosures: Deeksha Malhan, None

SU0090 **Osteocalcin signaling in peripheral organs inhibits the parasympathetic tone**

Julian Berger*[1], Emilio Arteaga-Solis[1], Clio Meghir[1], Gerard Karsenty[1]. [1]Columbia University, United States

Disclosures: Julian Berger, None

SU0091 **Pivotal role of PiT1/Slc20a1 and PiT2/Slc20a2 in phosphate-dependent MAPK/ERK1/2 signaling and FGF23 secretion in bone**

Nina Bon*[1], Annabelle Bourgine[1], Greig Couasnay[1], Sophie Sourice[1], Jérôme Guicheux[2], Sarah Beck-Cormier[1], Laurent Beck[1]. [1]INSERM UMRS 1229 – Regenerative Medicine and Skeleton (RMeS), team Skeletal physiopathology and joint regenerative medicine (STEP), University of Nantes, School of Dental Surgery, France, [2]INSERM UMRS 1229 – Regenerative Medicine and Skeleton (RMeS), team Skeletal physiopathology and joint regenerative medicine (STEP), University of Nantes, School of Dental Surgery, CHU Nantes, Pôle Hospitalo-Universitaire 4 OTONN, France

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SU0092 **Synergistic Actions of VDR and CaSR in Mediating PTH Secretion and Mineral and Skeletal Homeostasis in Mice**

Amanda Herberger*[1], Zhiqiang Cheng[1], Alfred Li[1], Jenna Hwong[1], Chia-Ling Tu[1], Daniel Bikle[1], Dolores Shoback[1], Wenhan Chang[1]. [1]University of California, San Francisco, United States

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SU0093 **Chromatin Landscape and GCM2 Targets in the Parathyroids**

Youngsook Jung*[1], Wenping Zhao[2], Ian Li[3], Amira Barkal[4], Richard Sherwood[5], Cassianne Cohen[6], Bryan Kestenbaum[6], Sareh Parangi[7], Brad E. Bernstein[8], Charles B. Epstein[9], Peter Park[10], Michael Mannstadt[3]. [1]Department of Biomedical Informatics, Harvard Medical School, United States, [2]Endocrine Unit, Massachusetts General Hospital, United States, [3]Endocrine Unit, Massachusetts General Hospital and Harvard Medical School, United States, [4]Brigham and Women's Hospital, Department of Medicine, Division of Genetics., United States, [5]Division of Genetics, Department of Medicine, Brigham and Women's Hospital and Harvard Medical School, United States, [6]Kidney Research Institute, Division of Nephrology, University of Washington, United States, [7]General and Endocrine Surgery, Massachusetts General Hospital and Harvard Medical School, United States, [8]Department of Pathology and Center for Cancer Research, Massachusetts General Hospital and Harvard Medical School, United States, [9]Epigenomics Program, Broad Institute, United States, [10]Department of Biomedical Informatics, Harvard University, United States

Disclosures: Youngsook Jung, None

SU0094 **The Calcium Binding Protein S100A8 is a Likely Gene Target of the Direct Anti-Resorptive Effects of ERα Signaling on Cancellous Bone**

Ha-Neui Kim*[1], Srividhya Iyer[1], Li Han[1], Haibo Zhao[2], Charles O'Brien[1], Robert Jilka[1], Maria Almeida[1], Stavros Manolagas[1], Philippe Tessier[3]. [1]University of Arkansas for Medical Sciences, United States, [2]University of Arkansas for Medical Science, United States, [3]Centre de Recherche en Infectiologie, Canada

Disclosures: Ha-Neui Kim, None

SU0095 **Circulating microRNA-203a is a novel biomarker for bone loss and response to anabolic therapy with PTH**

Roland Kocijan*[1], Elisabeth Geiger[2], Susanna Skalicky[2], Moritz Weigl[2], Gabriele Leinfellner[3], James Ferguson[3], Patrick Heimel[3], Heinz Redl[3], Johannes Grillari[4], Matthias Hackl[2]. [1]St. Vincent Hospital – Medical Department II, The VINFORCE Study Group, Academic Teaching Hospital of Medical University of Vienna, Austria, Austria, [2]TAmiRNA GmbH, Austria, [3]Ludwig Boltzmann Institute for Experimental and Clinical Traumatology, Austria, [4]Department of Biotechnology, BOKU - University of Natural Resources and Life Sciences, Vienna, Austria

Disclosures: Roland Kocijan, None

SU0096 **Mice lacking the DNA segment between -511 and -1423 bp, relative to the transcription start-site, of the endogenous murine Tnfsf11 (RANKL) gene display normal RANKL mRNA levels and bone mass**

Ryan Macleod*[1], Mark Meyer[2], Jinhu Xiong[1], Keisha Cawley[1], Yu Liu[1], Priscilla Baltz[1], Melda Onal[2], Nancy Benkusky[2], Wes Pike[2], Charles OBrien[1]. [1]University of Arkansas for Medical Sciences, United States, [2]University of Wisconsin-Madison, United States

Disclosures: Ryan Macleod, None

SU0097 **Galectin-3 null mice are protected against cortical bone loss following gonadectomy**

Kevin Maupin*[1], Daniel Dick[2], Bart Williams[2]. [1]Indiana University School of Medicine, United States, [2]Van Andel Research Institute, United States

Disclosures: Kevin Maupin, None

SU0098 **Genetic Background Influences Cardiac Phenotype in Murine Chronic Kidney Disease**

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Disclosures: Samantha Neuburg, None

SU0099 **Functional Characterization of Small Molecule Antagonists/Inverse Agonists (JB-4250 and JB-4365) for the Parathyroid Hormone Receptor-1**
Hiroshi Noda*[1], Thomas J Gardella[2]. [1]Endocrine Unit, Massachusetts General Hospital, United States, [2]Endocrine Unit, Massachusetts General Hospital and Harvard Medical School, United States
Disclosures: Hiroshi Noda, Chugai Pharmaceutical Co., Ltd., Other Financial or Material Support

SU0100 **PTHrP(1-36) and Abaloparatide: Differential Regulators of Osteoblast Genes Compared with PTH(1-34)**
Florante Ricarte*[1], Carole Le Henaff[1], Alon Aminov[1], Ching-Yun Hsu[1], Nicola Partridge[1]. [1]New York University, United States
Disclosures: Florante Ricarte, None

SU0101 **Half-life of 25(OH) Vitamin D_3 is Not Influenced by Vitamin D Supplementation Dose**
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Disclosures: Inez Schoenmakers, None

SU0102 **Inducible Androgen Receptor Inactivation Reveals an Essential Role of the Androgen Receptor for both Trabecular and Cortical Bone in Adult Male Mice**
Jianyao Wu*[1], Petra Henning[1], Klara Sjögren[1], Sofia Movérare-Skrtic[1], Claes Ohlsson[1]. [1]Centre for Bone and Arthritis Research, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden, Sweden
Disclosures: Jianyao Wu, None

SU0103 **The age-related changes of plasma 1, 25-dihydroxyvitamin D levels and dietary phosphate responsiveness is associated with renal α-Klotho gene expression, but not plasma PTH levels**
Hironori Yamamoto*[1], Ryouhei Yoshikawa[2], Otoki Nakahashi[2], Tomohiro Kagawa[2], Mari Tajiri[2], Shiori Fukuda[2], Masashi Masuda[2], Masayuki Iwano[3], Eiji Takeda[2], Yutaka Taketani[2]. [1]University of Jin-ai, Japan, [2]University of Tokushima, Japan, [3]University of Fukui, Japan
Disclosures: Hironori Yamamoto, None

SU0104 **Skeletal Unloading Induces Resistance to the Growth Hormone (GH) Anabolic Effect on Trabecular Bone in Mice**
Nikita Bajwa*[1], Chandrasekhar Kesavan[1], Heather Watt[1], Subburaman Mohan[1]. [1]Musculoskeletal Disease Center, VA Loma Linda Healthcare System, United States
Disclosures: Nikita Bajwa, None

SU0105 **Hindlimb Unloading (HU) Inhibits Regeneration of the Mouse Digit Tip**
Connor Dolan*[1], Lindsay Dawson[1], Felisha Imholt[1], Tae Jung Yang[1], Rihana Bohkari[1], Ken Muneoka[1]. [1]Texas A&M University, United States
Disclosures: Connor Dolan, None

SU0106 **Particular adaptation of the human fibula to long-term exercise.**
Laura Nocciolino*[1], Gustavo Cointry[1], Alex Ireland[2], Sergio Lüscher[1], Jose Ferretti[1], Joern Rittweger[3], Ricardo Capozza[1]. [1]Center of P-Ca Metabolism Studies (CEMFoC), National University of Rosario, Rosario, Argentina, Argentina, [2]School of Healthcare Science, Manchester Metropolitan University, Manchester, UK, United Kingdom, [3]Division of Space Physiology, Institute of Aerospace Medicine, German Aerospace Center, Cologne, Germany., Germany
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SU0107 **Bioactivation of poly(ester-urethane) scaffolds with platelet rich plasma to enhance cell recruitment in bone tissue engineering**

Géraldine Rohman*[1], Sophie Frasca[2]. [1]2Team ITP - CSPBAT UMR 7244 CNRS – University Paris 13, France, [2]Institut de Recherche Biomédicale des Armées (IRBA), Département Soutien Médico-Chirurgical des Forces (SMCF), Unité de Biothérapie Ostéo-Articulaire (BOA), France

Disclosures: Géraldine Rohman, None

SU0108 **Biglycan Deficiency Impairs Bone Toughness through Reduced Bound Water in Bone Matrix**

Rui Hua*[1], Jie Bai[1], Qingwen Ni[2], Jean X. Jiang[3], Xiaodu Wang[1]. [1]University of Texas at San Antonio, United States, [2]Texas A&M International University, United States, [3]UT Health Science Center at San Antonio, United States

Disclosures: Rui Hua, None

SU0109 **Spatio-temporal Regulation of Sclerostin Expression and Dynamics in Alveolar Bone During Orthodontic Tooth Movement**

Naoya Odagaki*[1], Yoshihito Ishihara[1], Ziyi Wang[1], Masahiro Nakamura[1], Ei Ei Hsu Hlaing[1], Hiroshi Kamioka[1]. [1]Okayama University, Japan

Disclosures: Naoya Odagaki, None

SU0110 **Diverging Periosteal and Endosteal Modeling/Remodeling Under PTH and Mechanical Loading**

Samuel Robinson*[1], Yizhong Hu[1], X. Edward Guo[1]. [1]Columbia University, United States

Disclosures: Samuel Robinson, None

SU0111 **Whole body vibration intervention: a randomized, prospective, controlled study in children with obesity**

Bojan Tubic*[1], Rickard Zejlon[2], Göran Wennergren[1], Barbara Obermayer-Pietsch[3], Staffan Mårild[1], Jovanna Dahlgren[1], Per Magnusson[4], Diana Swolin-Eide[1]. [1]Department of Pediatrics, Institute of Clinical Sciences, Sahlgrenska Academy, Gothenburg University, The Queen Silvia Children's Hospital, Gothenburg, Sweden, Sweden, [2]Department of Internal Medicine, Sahlgrenska University Hospital, Gothenburg, Sweden, Sweden, [3]Division of Endocrinology and Metabolism, Department of Internal Medicine, Medical University of Graz, A-8036, Graz, Austria, Austria, [4]Department of Clinical Chemistry, Linköping University, Linköping, Sweden, Sweden

Disclosures: Bojan Tubic, None

SU0112 **Site-specific "rescue" of the age-impaired response to mechanical loading in tibiae of old mice**

Gabriel G Galea*[1], Peter J Delisser[1], Lee Meakin[1], Lance E Lanyon[1], Joanna S Price[2], Sara H Windahl[3]. [1]School of Veterinary Sciences, University of Bristol, United Kingdom, [2]Royal Agricultural University Cirencester, United Kingdom, [3]Centre for Bone and Arthritis Research, University of Gothenburg, Sweden

Disclosures: Gabriel G Galea, None

SU0113 **Substrate Stiffness Regulates Arterial-Venous Differentiation of Mouse Bone Marrow-Derived Endothelial Progenitor Cells via the Ras/Mek Pathway**

Changyue Xue*[1]. [1]Sichuan University, China

Disclosures: Changyue Xue, None

SU0114 **Undercarboxylated osteocalcin enhances basal and insulin-stimulated glucose uptake in mouse skeletal muscles ex vivo**

xuzhu lin*[1], emma mclennan[1], lewan parker[1], glenn mcConell[1], xinmei zhang[1], alan hayes[1], tara brennan-speranza[2], itamar levinger[1]. [1]Institute of Sport, Exercise and Active Living (ISEAL), Victoria University, Australia, [2]Department of Physiology and Bosch Institute for Medical Research, University of Sydney, Australia

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SU0115 **Low Intensity Vibrations increase strength, reduce fat, and improve glucose tolerance in mice with complete estrogen deprivation**
Gabriel M. Pagnotti*[1], Laura E. Wright[1], Jenna A. Regan[1], William R. Thompson[1], Khalid S. Mohammad[1], Clinton T. Rubin[2], Theresa A. Guise[1]. [1]IUPUI, United States, [2]Stony Brook University, United States
Disclosures: Gabriel M. Pagnotti, None

SU0116 **Muscle-Specific Vitamin D Receptor (VDR) Ablation Results in Reduced Grip Power and Altered Gene Expression Pattern in Mice**
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SU0117 **Muscle Paralysis Differentially Alters Expression of miR-206 and miR-133b**
Leah Worton*[1], Edith Gardiner[1], Ronald Kwon[1], Brandon Ausk[1], Steven Bain[1], Ted Gross[1]. [1]University of Washington, United States
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SU0118 **Advanced Glycation End Products-Mediated β-enolase Is Involved in the Diabetes-Impaired Muscle Function**
Rong-Sen Yang*[1], Chen-Yuan Chiu[2], Ding-Cheng Chan[3], Shing-Hwa Liu[2]. [1]Department of Orthopaedics, College of Medicine, National Taiwan University, Taipei, Taiwan, Taiwan, Province of China, [2]Institute of Toxicology, College of Medicine, National Taiwan University, Taiwan, Province of China, [3]Superintendent's Office, National Taiwan University Hospital, Chu-Tung Branch, Taiwan, Province of China
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SU0119 **Pin1 regulates skeletal muscle fusion through structural modification of Smad3 in linker region**
Rabia Islam*[1], Heein Yoon[2], Hye-rim Shin[2], Han-sol Bae[2], Bong-soo Kim[2], Won-joon Yoon[2], Kyung-Mi Woo[2], Jeong-Hwa Baek[2], Yun-Sill Lee[2], Hyun-Mo Ryoo[2]. [1]Seoul National University, Bangladesh, [2]Seoul National University, Korea, Republic of
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SU0120 **Mouse digit regeneration: a new model to study age-related regenerative decline**
Regina Brunauer*[1], Ken Muneoka[1]. [1]Texas A&M University, United States
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SU0121 **Relative Age-related Decline in Trunk Muscle Density is Greater in Women than Men whereas Muscle Mass Declines Similarly in Both Sexes: the Framingham Study**
Fjola Johannesdottir*[1], Brett Allaire[2], Dennis Anderson[1], Elizabeth J. Samelson[3], Douglas Kiel[4], Mary Bouxsein[1]. [1]Harvard Medical School and Center for Advanced Orthopaedic Studies, Beth Israel Deaconess Medical Center, MA, USA, United States, [2]Center for Advanced Orthopaedic Studies, Beth Israel Deaconess Medical Center, MA, USA, United States, [3]Institute for Aging Research, Hebrew Senior Life and Harvard Medical School, United States, [4]Institute for Aging Research, Hebrew Senior Life, Department of Medicine Beth Israel Deaconess Medical Center and Harvard Medical School, MA, USA, United States
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SU0122 **Changes in muscle strength and physical performance from midlife and bone health in early old-age: a 7-year follow up study of the MRC National Survey of Health and Development**
Kate Ward*[1], Stella Muthuri[2], Adam Moore[2], Judith Adams[3], Cyrus Cooper[1], Di Kuh[2], Rachel Cooper[2]. [1]MRC Lifecourse Epidemiology, University of Southampton, United Kingdom, [2]MRC Unit for Lifelong Health and Ageing at UCL, United Kingdom, [3]Central Manchester University Hospitals Foundation NHS Trust, United Kingdom
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SU0123 **Ontogenetic Patterning of Human Subchondral Bone Microarchitecture in the Proximal Tibia**
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SU0124 **The Role of Discoidin Domain Receptor 2 in Craniofacial Morphogenesis**
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Disclosures: Fatma Mohamed, None

SU0125 **Postnatal ablation of Smad4 enhances endochondral ossification in epiphyseal growth plate**
Sho Tsukamoto*[1], Noriko Sekine[1], Mai Kuratani[1], Keigo Kumagai[1], Shinya Tanaka[2], Eijiro Jimi[3], Hiromi Oda[2], Takenobu Katagiri[1]. [1]Division of Pathophysiology, Research Center for Genomic Medicine, Saitama Medical University, Japan, [2]Department of Orthopedic Surgery, Saitama Medical University, Japan, [3]Division of Molecular Signaling and Biochemistry, Department of Health Improvement, Kyushu Dental University, Japan
Disclosures: Sho Tsukamoto, None

SU0126 **Bone Renovation of the Mouse Neonatal Fibula into the Adult Skeleton**
Masaki Yoda*[1], Yukiko Kuroda[1], Koichi Matsuo[1]. [1]Keio university school of medicine, Japan
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SU0127 **Effects of human amniotic fluid stem cells and their conditioned medium on bone defect healing**
Mariangela Basile*[1], Paola Vizzarri[2], Francesco Marchegiani[3], Alexander C Lichtler[1], Ivo Kalajzic[1], Roberta Di Pietro[4]. [1]Uconn Health, United States, [2]Department of Medicine and Aging Sciences, Italy, [3]Department of Medicine and Ageing Sciences, Italy, [4]Dept of Medicine and Aging Sciences, Italy
Disclosures: Mariangela Basile, None

SU0128 **Prx-1 Embryonic Specification Is Retained in a Postnatal Regenerative Stem Cell Population that Gives Rise to Skeletal, Fat, and Vascular Tissues**
Beth Bragdon*[1], Andrew Bennie[1], Jenny Lei[2], Elise Morgan[2], Louis Gerstenfeld[1]. [1]Boston University School of Medicine, United States, [2]Boston University College of Engineering, United States
Disclosures: Beth Bragdon, None

SU0129 **Transcriptional Heterogeneity During Lineage Specification Defines Human Musculoskeletogenesis**
Gabriel Ferguson*[1], Benjamin Van Handel[1], Denis Evseenko[1]. [1]University of Southern California, United States
Disclosures: Gabriel Ferguson, None

SU0130 **Actin Filament Associated Protein 1 (AFAP1) is required for osteogenic differentiation of mesenchymal stem cells**
Evan Frigoletto*[1], Holly Corkill[1], Albena Gesheva[2], Jess Cunnick[1], John Arnott[1], Youngjin Cho[1]. [1]Geisinger Commonwealth School of Medicine, United States, [2]University of Scranton, United States
Disclosures: Evan Frigoletto, None

SU0131 **Comparison of Genomic Enhancer and Enhancer RNAs Utilized by aSMA Positive Bone Marrow Stromal Cells and aSMA Positive Periodontal Stem/Progenitor Cells During Differentiation**
stephen e harris*[1], Audrey Rakian[1], Rebecca Neitzke[1], Michael Rediske[1], Marie a Harris[1], Ivo Kalajzic[2], Jian q Feng[3], Lynda f Bonewald[4], Brian f Foster[5], Jelica Gluhak-Heinrich[1], Yong Cui[1]. [1]UTHSCSA, United States, [2]UCHC, United States, [3]TAMHSC, United States, [4]IU, United States, [5]OSU, United States
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SU0132 **The role of Hedgehog signaling in large-scale bone repair**
Stephanie Kuwahara*[1], Francesca Mariani[1], Gage Crump[1], Sandeep Paul[1], Nikita Tripuraneni[1], Jason Hsieh[1], Monica Liu[1], Ashlie Munoz[1], Neel Hedge[1], Lynette Lester[1]. [1]USC, United States
Disclosures: Stephanie Kuwahara, None

SU0133 **Conservation of perivascular progenitor cell antigens and methods of isolation across mammalian species**
Carolyn Meyers*[1], Winters Hardy[2], Paul Hindle[3], Greg Asatrian[2], Catherine Ding[2], Mihaela Crisan[3], Noah Yan[1], Sonja Lobo[2], Pei Liang[2], Xinli Zhang[2], Kang Ting[2], Chia Soo[2], Bruno Peault[2], Aaron James[1]. [1]Johns Hopkins University, United States, [2]UCLA, United States, [3]University of Edinburgh, United Kingdom
Disclosures: Carolyn Meyers, None

SU0134 **Validation of osteogenic properties of Cytochalasin D by high-resolution RNA-sequencing in human mesenchymal stem cells**
Rebekah Samsonraj*[1], Amel Dudakovic[1], Christopher Paradise[1], Buer Sen[2], Allan Dietz[1], Janet Rubin[2], Andre van Wijnen[1]. [1]Mayo Clinic, United States, [2]University of North Carolina, United States
Disclosures: Rebekah Samsonraj, None

SU0135 **Biglycan Regulates the Proliferation and Differentiation of Periosteum-Derived Cells**
Reut Shainer*[1], Megan Noonan[1], Vardit Kram[1], Tina Kilts[1], Marian Young[1]. [1]NIH, United States
Disclosures: Reut Shainer, None

SU0136 **Oleanolic Acid Enhances Mesenchymal Stromal Cell Osteogenic Potential by Inhibition of Notch Signaling**
Guangxi Wang*[1], Bing Shu[2], Sheila Rogers[1], Dollie Smith[1], Massimo Morandi[1], Shane Barton[1], Yufeng Dong[1]. [1]LSU Health Sciences Center, United States, [2]Shanghai University of Traditional Chinese Medicine, China
Disclosures: Guangxi Wang, None

SU0137 **Influences of Chronic Kidney Disease and Obesity on Vitamin D Metabolism and Action in Human MSCs**
Shuanhu Zhou*[1], Fangang Meng[1], Jing Li[1], Meryl LeBoff[1], Julie Glowacki[1]. [1]Brigham and Women's Hospital, Harvard Medical School, United States
Disclosures: Shuanhu Zhou, None

SU0138 **Investigation of the relationship between susceptibility loci for hip osteoarthritis and DXA-derived hip shape in a population based cohort of middle-aged women**
Denis Baird*[1], Lavinia Paternoster[2], Jennifer Gregory[3], Benjamin Faber[1], Richard Aspden[3], Jonathan Tobias[1]. [1]Musculoskeletal Research Unit, School of Clinical Sciences, University of Bristol, United Kingdom, [2]MRC Integrative Epidemiology Unit, University of Bristol, United Kingdom, [3]Arthritis and Musculoskeletal Medicine, Institute of Medical Sciences, University of Aberdeen, United Kingdom
Disclosures: Denis Baird, None

SU0139 **Differences in bone and cartilage between women with ACL tears and uninjured age matched controls.**
Jennifer Bhatla*[1], Andres Kroker[1], Sarah Manske[1], Carolyn Emery[2], Steven Boyd[1]. [1]McCaig Institute for Bone and Joint Health, Department of Radiology, Cumming School of Medicine, University of Calgary, Calgary, Canada, Canada, [2]Sport Injury Prevention Research Centre, Faculty of Kinesiology, University of Calgary, Calgary, Canada, Canada
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SU0140 **Semiautomatic analysis of bone erosion volume by HR-pQCT in patients with rheumatoid arthritis**

Ko Chiba*[1], Narihiro Okazaki[2], Kazuteru Shiraishi[2], Naoki Iwamoto[2], Atsushi Kawakami[2], Makoto Osaki[2]. [1]Nagasaki University , Japan, [2]Nagasaki University, Japan

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SU0141 **Hyperelastic Bone Composite: A Novel 3D-printed Biomaterial Ink used for Spinal Fusion**

Andrew Schneider*[1], Adam Jakus[2], Gurmit Singh[1], Karina Katchko[1], Danielle Chun[1], Joseph Weiner[1], Ralph Cook[1], Michael Schallmo[1], Chawon Yun[1], Soyeon Jeong[1], Michael Newton[3], Tristan Maerz[3], Kevin Baker[3], Ramille Shah[2], Wellington Hsu[1], Erin Hsu[1]. [1]Northwestern University Department of Orthopaedic Surgery, United States, [2]Northwestern University Department of Materials Science and Engineering, United States, [3]Orthopaedic Research Laboratory, Beaumont Health, United States

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SU0142 **Association of Total 25-Hydroxyvitamin D Levels With Disease Activity In A Large Patient Cohort With Rheumatoid Arthritis**

Sofie Malmstroem*[1], Lars Rejnmark[2], Jonathan Graf[3], John B. Imboden[3], Kara Lynch[4], Dolores M. Shoback[5]. [1]Endocrine Research Unit, San Francisco Department of Veterans Affairs Medical Center, University of California, San Francisco and Department of Endocrinology and Internal Medicine, Aarhus University Hospital, Denmark, United States, [2]Department of Endocrinology and Internal Medicine, Aarhus University Hospital, Denmark, [3]Division of Rheumatology and Department of Medicine, Zuckerberg San Francisco General Hospital, University of California, San Francisco, United States, [4]Department of Laboratory Medicine, Zuckerberg San Francisco General Hospital, University of California, San Francisco, United States, [5]Endocrine Research Unit, San Francisco Department of Veterans Affairs Medical Center, University of California, San Francisco, United States

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SU0143 **Inhibition of CaMKK2 attenuates subchondral bone remodeling in post-traumatic osteoarthritis model**

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SU0144 **The study of Bone Cells in osteoarthritis and other Factors that may contribute to a Progressive form of osteoarthritis**

Christine Schutz*[1], gerald atkins[2]. [1]University of Adelaide, Australia, [2]adelaide university, Australia

Disclosures: Christine Schutz, None

SU0145 **Subchondral bone microstructure analysis by HR-pQCT: a new imaging marker for knee osteoarthritis**

Kazuteru Shiraishi*[1], Ko Chiba[2], Narihiro Okazaki[2], Makoto Osaki[2]. [1]Nagasaki University, Japan, [2]Nagasaki Univ., Japan

Disclosures: Kazuteru Shiraishi, None

SU0146 **Osteoporosis in those with Knee Osteoarthritis: Differences in Subchondral Bone Quality, Cartilage Thickness and Associations with Symptoms in the Osteoarthritis Initiative**

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SU0147 **Regulatory Networks Involving Rorβ and miR-219a-5p during Osteoblast Differentiation and in Age-related Bone Loss**

Ruben Aquino-Martinez*[1], Joshua Farr[1], Brittany Negley[1], Andre van Wijnen[1], Sundeep Khosla[1], David Monroe[1]. [1]Mayo Clinic College of Medicine, United States

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SU0148 **Isoproterenol induces RANKL expression by activating NFAT and ATF4 in mouse osteoblastic cells**

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SU0149 **Phlpp1 Regulates Osteoblast Differentiation and Maturation Through mTORC1**

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Disclosures: Dana Begun, None

SU0150 **Estrogen receptor-alpha participates in osteoblast mineralization through upregulating ATP synthesis by specifically inducing expressions of genomic mitochondrial complex genes and mitochondrial cytochrome c oxidase I and II genes**

Pei-I Lin*[1], Mei-Hsiu Liao[1], Ruei-Ming Chen[1]. [1]Taipei Medical University, Taiwan, Province of China

Disclosures: Pei-I Lin, None

SU0151 **Differential Expressions of Osteoblast genes *in-vitro* under the influence of Recombinant Human Parathyroid Hormone (rhPTH) and Zoledronic acid (ZOL)**

Vandana Dhiman*[1], Sanjay Bhadada[2], Sudhaker D. Rao[3], D.K. Dhawan[1]. [1]Panjab University, India, [2]PGIMER, India, [3]Henry Ford Hospital, United States

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SU0152 **Brg1 Associated Factor 45a chromatin remodeling is key for bone formation**

Tanner Godfrey*[1], Benjamin Wildman[1], Mohammad Rehan[1], Mohammad Hassan[1], Chis Lengner[2], Harunur Rashid[1], Amjad Javed[1]. [1]University of Alabama at Birmingham, United States, [2]University of Pennsylvania, United States

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SU0153 **An Epigenetic Switch Confers Pleiotrpoic Risk for Bone Mineral Density and Hyperglycaemia**

Yi-Hsiang Hsu*[1], Nicholas A Sinnott-Armstrong[2], Isabel S. Sousa[2], Elizabeth R Ruedy[3], Richard Sallari[2], Xing Chen[4], Simon E Nitter Dankel[5], Gunnar Mellgren[5], Anyonya Guntur[3], David Karasik[6], Hans Hauner[7], Clifford Rosen[3], Douglas Kiel[4], Melina Claussnitzer[8]. [1]Harvard Medical School and Broad Institute of MIT and Harvard, United States, [2]Broad Institute of MIT and Harvard, United States, [3]Center for Molecular Medicine, Maine Medical Center Research Institute, United States, [4]Institute for Aging Research, Hebrew SeniorLife and Harvard Medical School, United States, [5]University of Bergen, Norway, Norway, [6]Faculty of Medicine of the Galilee, Bar-Ilan University, Israel, Israel, [7]Else Kröner-Fresenius-Center for Nutritional Medicine, Technical University Munich, Germany, [8]Beth Israel Deaconess Medical Center, Harvard Medical School, United States

Disclosures: Yi-Hsiang Hsu, None

SU0154 **A Graphene Oxide modified Shape Memory Polymer with Enhanced Physicochemical Properties and Osteoinductivity.**

Qian Huang*[1], Yunfeng Lin[1]. [1]Sichuan University, China

Disclosures: Qian Huang, None

SU0155 **Promotion of osteoblast differentiation and bone regeneration by a novel indene compound KR-34A through regulation of Bmp7 and Runx2**

Ju Ang Kim*[1], Young-Ae Choi[2], Hye Jung Ihn[1], Myung Ae Bae[3], Hui-suk Yun[4], Nack-Jeong Kim[3], Hong-In Shin[2], Eui Kyun Park[2]. [1]1Department of Oral Pathology and Regenerative Medicine, School of Dentistry, Kyungpook National University, Korea, Republic of, [2]Department of Oral Pathology and Regenerative Medicine, School of Dentistry, Kyungpook National University, Korea, Republic of, [3]Korea Bio-Organic Science Division, Korea Research Institute of Chemical Technology, Korea, Republic of, [4]Powder & Ceramics Division, Korea Institute of Materials Science (KIMS), Korea, Republic of

Disclosures: Ju Ang Kim, None

SU0156 **A CK2/USP7/RUNX2 pathway mediates physiologic bone formation and heterotopic ossification**

Jung-Min Kim*[1], Xianpeng Ge[1], Ren Xu[2], Yeon-Suk Yang[1], Na Li[2], Odile Filhol-Cochet, Brigitte Boldyreff[4], Minkyung Song[2], Matthew B. Greenblatt[2], Jae-Hyuck Shim[1]. [1]Department of Medicine, University of Massachusetts Medical School, United States, [2]Weill Cornell Medical College, United States, [3]Institute de Recherches en Technologies et Sciences pour le Vivant/Biologie du Cancer et de l'Infection, Commissariat aÌ? l'EÌ nergie Atomique et aux EÌ nerigies Alternatives Grenoble, France, [4]KinaseDetect ApS, Denmark

Disclosures: Jung-Min Kim, None

SU0157 **Red Rooibos Tea Increases Mineral Deposition by Osteoblasts in a Concentration-Dependent Manner**

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Disclosures: Michael McAlpine, None

SU0158 **Melatonin Increases Osteoblast Differentiation in Human Mesenchymal Stem Cells Derived from Bone Marrow and Adipose Tissue: implications for a role of MT2 melatonin receptors, MEK1/2, MEK5 and PPARγ.**

Sifat Maria*[1], Fahima Munmun[1], Rebekah Samsonraj[2], Amel Dudakovic[2], Andre vanWijnen[2], Bruce Bunnell[3], Matthew Burow[4], Paula Witt-Enderby[1]. [1]Duquesne University Graduate School of Pharmaceutical Sciences, United States, [2]Mayo Clinic Department of Orthopedic Surgery, United States, [3]Tulane University School of Medicine Department of Pharmacology, United States, [4]Tulane University School of Medicine Cancer Research Center, United States

Disclosures: Sifat Maria, None

SU0159 **Single-Cell RNA Sequencing Provides Molecular Dissection of Osteoblasts and their Adipogenic Potential**

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SU0160 **The effect of ROCK inhibitor on bone remodeling**

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Disclosures: Juri Nakata, None

SU0161 **YAP Promotes Osteogenesis and Suppresses Adipogenic Differentiation**

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Disclosures: Jinxiu Pan, None

SU0162 **Interaction of bromodomain-containing proteins BRD2 and BRD4 with osteoblast transcription factor RUNX2 during osteoblast-lineage commitment**

Christopher Paradise*[1], Amel Dudakovic[2], Roman Thaler[2], Thomas O'Toole[3], Pengfei Zan[2], Andre van Wijnen[2]. [1]Mayo Clinic , United States, [2]Mayo Clinic, United States, [3]Mayo Clinic, United Kingdom

Disclosures: Christopher Paradise, None

SU0163 **Role of HERPUD1 and ERAD activation during differentiation and mineralization of osteoblast *in vitro***

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Disclosures: Luan Americo-Da-Silva, None

SU0164 **Non-Mineralized and Mineralized Collagan Scaffolds induce Differential Osteogenic Signaling pathways in human mesenchymal Stem Cells**

Qi Zhou*[1], Xiaoyan Ren[25], David Bischoff[3], Daniel Weisgerber[4], Dean Yamaguchi[3], Timothy Miller[25], Brendan Harley[4], Justine Lee[25]. [1]UCLA and VA Great Los Angeles and Shandong University of China, United States, [2]UCLA and VA Great Los Angeles, United States, [3]VA Great Los Angeles, United States, [4]University of Illinois at Urbana-Champaign, United States, [5]UCLA and VA great Los Angeles, United States

Disclosures: Qi Zhou, None

SU0165 **Soybean Peroxidase Possesses Osteogenic Activity to Accelerate Bone Regeneration *In Vivo***

Alexandra Shoubridge*[1], Vasilios Panagopoulos[1], Peter Anderson[2], John Field[3], Siamak Saifzadeh[3], Roland Steck[3], Mark DeNichilo[4], Irene Zinonos[1], Shelley Hay[5], Andreas Evdokiou[1]. [1]University of Adelaide, Australia, [2]Women's and Children's Hospital & University of Adelaide, Australia, [3]Queensland University of Technology, Australia, [4]University of South Australia, Australia, [5]Basil Hetzel Institute for Translational Health Research, Australia

Disclosures: Alexandra Shoubridge, None

SU0166 **Impact of Wnt-induced changes in skeletal mass and of an anabolic PTH regime on circulating levels of periostin**

Christine Simpson*[1], Meiling Zhu[1], Grace Lee[1], Dinah Foer[2], Joseph Belsky[3], Rebecca Sullivan[1], Elizabeth Streeten[4], Karl Insogna[1]. [1]Yale University School of Medicine, United States, [2]Brigham and Women's Hospital, United States, [3]Danbury Hospital, United States, [4]University of Maryland School of Medicine, United States

Disclosures: Christine Simpson, None

SU0167 **Osteoblasts regulate type H endothelium via Schnurri-3-regulated production of proangiogenic factors**

Ren Xu*[1], Alisha Yallowitz[1], Shawon Debnath[1], Dong Yeon Shin[1], Jung-Min Kim[1], Na Li[1], Sarfaraz Lalani[1], Han Dong[2], Chao Zhao[3], Zhuhao Wu[4], Michael G. Poulos[5], Jason M. Butler[5], Amanda Wach[6], Jae-Hyuck Shim[7], Laurie H. Glimcher[2], Matthew B. Greenblatt[8]. [1]Department of Pathology and Laboratory, Weill Cornell Medical College, Cornell University, United States, [2]Department of Cancer Immunology and Virology, Dana-Farber Cancer Institute and Harvard University Medical School, United States, [3]Institute for Computational Biomedicine, Weill Cornell Medical College, Cornell University , United States, [4]Laboratory of Brain Development and Repair, The Rockefeller University, New York, NY, USA, United States, [5]Department of Genetic Medicine, Ansary Stem Cell Institute, Weill Cornell Medical College, Cornell University, United States, [6]Department of Biomechanics, Hospital for Special Surgery, United States, [7]Department of Medicine/Division of Rheumatology, University of Massachusetts Medical School, United States, [8]Department of Pathology and Laboratory Medicine, Weill Cornell Medical College, Cornell University , United States

Disclosures: Ren Xu, None

SU0168 **The Regulation of IL-17RD in IL-17A Mediated Bone Remodeling**

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Disclosures: XUEHUI YANG, None

SU0169 **Glucocorticoids Suppress Notch Target Genes but not Notch Signaling in Osteoblasts**

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Disclosures: Stefano Zanotti, None

SU0170 **In vivo Bone Formation by Osteoblasts Generated from Human Induced Pluripotent Stem Cells under Fully Defined and Xeno-Free Conditions**

Denise C. Zujur*[1], Kosuke Kanke[2], Hironori Hojo[1], Shoko Onodera[3], Toshifumi Azuma[3], Ung-il Chung[4], Shinsuke Ohba[4]. [1]Department of Bioengineering, The University of Tokyo, Japan, [2]Department of Oral and Maxillofacial Surgery, The University of Tokyo Hospital, Japan, [3]Department of Biochemistry, Tokyo Dental College, Japan, [4]Department of Bioengineering, The University of Tokyo / Center for Disease Biology and Integrative Medicine, The University of Tokyo, Japan

Disclosures: Denise C. Zujur, None

SU0171 **Orthopedic Particles Induce Inflammatory Osteolysis Through Transcriptional Inhibition of Regulatory T Cells**

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Disclosures: Tim (Hung-Po) Chen, None

SU0172 **Novel Role For EZH2 Methyltransferase in Myeloma-Induced Abnormal Osteoclastogenesis**

Juraj Adamik*[1], Rebecca Silbermann [2], Konstantinos Lontos[1], Peng Zhang [1], Quanhong Sun[1], Judy L Anderson[2], Jolene J Windle [3], G David Roodman [4], Deborah L Galson [5]. [1]Department of Medicine, Hematology-Oncology Division, University of Pittsburgh Cancer Institute, United States, [2]Department of Medicine, Hematology-Oncology Division, Indiana University, Indianapolis, United States, [3]Department of Human and Molecular Genetics, Virginia Commonwealth University, United States, [4]Department of Medicine, Hematology-Oncology Division, Indiana University; Veterans Administration Medical Center, United States, [5]Department of Medicine, Hematology-Oncology Division, University of Pittsburgh Cancer Institute, McGowan Institute for Regenerative Medicine, United States

Disclosures: Juraj Adamik, None

SU0173 **Intracellular Localization of *Staphylococcus aureus* in Osteoclasts**
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Disclosures: Emily Goering, None

SU0174 **Gpnmb/Osteoactivin Plays a Novel Role in Autophagy-Mediated Osteoclast Differentiation and Function**
Fatima Jaber*[1], Asaad Al-Adlaan[1], Nazar Hussein [1], Fayez Safadi[2]. [1]School of Biomedical Sciences, Kent State University, United States, [2]Northeast Ohio Medical University (NEOMED), United States
Disclosures: Fatima Jaber, None

SU0175 **Double Deletion of Ctsk and Mmp9 Exhibit a Severe Osteopetrosis Due to Impaired Osteoclast Differentiation and Activity from the Loss of Synergistic Functions of Ctsk and Mmp9**
Joel Jules*[1], Hong Huang[1], Wei Chen[1], Guochun Zhu[1], Diep Nguyen[1], Yi-Ping Li[1]. [1]University of Alabama at Birmingham, United States
Disclosures: Joel Jules, None

SU0176 **Bisphosphonate inhibits bone resorption by blocking autophagy in osteoclasts**
Sol Kim*[1], Vadim A. Goldshteyn[1], Atsushi Arai[2], No-Hee Park[1], Reuben Kim[1]. [1]UCLA School of Dentistry, United States, [2]Matsumoto Dental University, Japan
Disclosures: Sol Kim, None

SU0177 **Gulp1 deficiency impairs osteoclast function and results in high trabecular bone mass in mice**
Soon-Young Kim*[1], Gunil Park[1], Eun-Hye Lee[2], Seong-Hwan Kim[1], Suk-Hee Lee[1], Yeon-Ju Lee[2], Seung-Yoon Park[3], Jung-Eun Kim[4]. [1]Kyungpook National University School of Medicine, BK21 Plus, Korea, Republic of, [2]Kyungpook National University School of Medicine, CMRI, Korea, Republic of, [3]School of Medicine, Dongguk University, Korea, Republic of, [4]Kyungpook National University School of Medicine, CMRI, BK21 Plus, Korea, Republic of
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SU0178 **Suppression of Osteoclastogenesis by Melatonin: A Melatonin Receptor-Independent Action**
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Disclosures: Hyung Joon Kim, None

SU0179 **LRF/OCZF Regulates Survival of Osteoclasts via Sam68, a Splicing Regulator of Bcl-x**
Xianghe Xu*[1], Makoto Shiraki[1], Asana Kamohara[1], Takeo Shobuike[1], Toshio Kukita[2], Akiko Kukita[1]. [1]Department of Pathology and Microbiology, Faculty of Medicine, Saga University, Japan, [2]Department of Molecular Cell Biology & Oral Anatomy, Faculty of Dentistry, Kyushu University, Japan
Disclosures: Xianghe Xu, None

SU0180 **Osteoclasts Formed under Stimulation by IL-1β Possess Extremely High Ability to Secrete Protons and to Resorb Dentin with Abnormal Adhesiveness, Imaged by pH-Sensitive Fluorescence Probes**
Takuma Shiratori*[1], Akiko Kukita[2], Yukari Kyumoto-Nakamura[1], Norihisa Uehara[1], Jingqi Zhang[1], Kinuko Koda[3], Mako Kamiya[3], Tamer Badawy[1], Xianghe Xu[4], Takayoshi Yamaza[1], Yasuteru Urano[3], Kiyoshi Koyano[5], Toshio kukita[1]. [1]Molecular Cell Biology & Oral Anatomy, Faculty of Dental Science, Kyushu University, Japan, [2]Microbiology, Faculty of Medicine, Saga University, Japan, [3]Chemical Biology & Molecular Imaging, Grad.Sch.Medicine; Chemistry & Biology, Grad.Sch.Pharm.Sci., The University of Tokyo, Japan, [4]Microbiology, Faculty of Medicine, Saga University ; Molecular Cell Biology & Oral Anatomy, Faculty of Dental Science, Kyushu University, Japan, [5]Implant Rehabilitation Dentistry, Faculty of Dental Science, Kyushu University, Japan
Disclosures: Takuma Shiratori, None

SU0181 **α7nAchR is required to regulate osteoclasts and bone mass via TNFα-dependent regulation of OPG and RANKL**

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SU0182 **THOC5 is a positive regulator of human osteoclastogenesis**

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Disclosures: Se Hwan Mun, None

SU0183 **Role of the lysosomal channel, Two Pore Channel 2, in osteoclast differentiation and bone remodeling under normal and low-magnesium conditions**

Takuya Notomi*[1], Miyuki Kuno[2], Akiko Hiyama[1], Yoichi Ezura[3], Kiyoshi Ohura[1], Masaki Noda[3]. [1]Osaka dental university, Japan, [2]Osaka City University, Japan, [3]Tokyo Medical and Dental University, Japan

Disclosures: Takuya Notomi, None

SU0184 **MyD88-Dependent Signaling Impacts Skeletal Cell Biology and Antibacterial Defenses during *Staphylococcus aureus* Osteomyelitis**

Nicole Putnam*[1], Andrew Hendrix[2], Jacob Curry[2], Jim Cassat[3]. [1]Department of Pathology, Microbiology, and Immunology, Vanderbilt University Medical Center, United States, [2]Department of Pediatrics, Division of Pediatric Infectious Diseases, Vanderbilt University Medical Center, United States, [3]Department of Pathology, Microbiology, and Immunology, Vanderbilt University Medical Center; Department of Pediatrics, Division of Pediatric Infectious Diseases, Vanderbilt University Medical Center, United States

Disclosures: Nicole Putnam, None

SU0185 **Withdrawn**

SU0186 **Lack of NLRP3 inflammasome increases osteoclast activity in vitro but does not affect inflammatory bone resorption in vivo**

Fernanda R G Rocha*[1], João A C Souza[2], Marcell C Medeiros[3], Shannon Wallet[1], Carlos Rossa Junior[3]. [1]University of Florida, United States, [2]Federal University of Goias (UFG), School of Dentistry, Brazil, [3]Sao Paulo State University (UNESP), School of Dentistry at Araraquara, Brazil

Disclosures: Fernanda R G Rocha, None

SU0187 **TBC1D25 is involved in autophagy in human osteoclasts**

Michèle Roy*[1], Martine Bisson[1], Sophie Roux[1]. [1]Rheumatology, Sherbrooke University, Canada

Disclosures: Michèle Roy, None

SU0188 **CD55 regulates survival and bone resorbing activity of osteoclasts by modulating Rac activity**

Bongjin Shin*[1], Heeyeon Won[1], Sun-Kyeong Lee[1]. [1]University of Connecticut Health Center, United States

Disclosures: Bongjin Shin, None

SU0189 **YC-1 alleviates bone loss in ovariectomized rats by inhibiting bone resorption and inducing extrinsic apoptosis in osteoclasts**

Jia-Fwu Shyu*[1], Jin-Wen Wang[2], Tzu-Hui Chu[1], Tien-Hua Chen[3], Lo-Wei Chen[1], Jung-Ting Wu[1]. [1]Department of Biology and Anatomy, National Defense Medical Center, Taiwan, Province of China, [2]Department of Orthopedics, Chiali Hospital, Chi Mei Medical Center, Taiwan, Province of China, [3]Institute of Anatomy and Cell Biology, School of Medicine, National Yang Ming University, Taiwan, Province of China

Disclosures: Jia-Fwu Shyu, None

SU0190 **NUMBL Negatively Regulates NF-κB Signaling via Interaction with TAK1/TRAF6/NEMO During Osteoclastogenesis**

Gaurav Swarnkar*[1], Tim Hung-Po Chen[1], Manoj Arra[1], Gabriel Gabriel Mbalaviele[2], Yousef Abu-Amer[3]. [1]Department of Orthopedic Surgery, Washington University School of Medicine, United States, [2]Bone and Mineral Division, Department of Medicine, Washington University School of Medicine, United States, [3]Department of Orthopaedic Surgery and Cell Biology & Physiology, United States

Disclosures: Gaurav Swarnkar, None

SU0191 **Basic research on anti-Siglec-15 antibody and characterization of humanized anti-Siglec-15 antibody (DS-1501a)**

Eisuke Tsuda*[1], Yoshiharu Hiruma[1], Chie Fukuda[1], Akiko Okada[1], Yumiko Fukushima[2], Wada Naoya[2], Kazuishi Kubota[2], Hiroyuki Hattori[1], Megumi Miyamoto[1], Reimi Kawaida[1], Chigusa Yoshimura[1], Yoshitaka Isumi[1], Toshiaki Ohtsuka[1], Toshinori Agatsuma[1], Tohru Takahashi[1], Seiichirou Kumakura[1]. [1]R&D Division, Daiichi Sankyo Co., Ltd., Japan, [2]Daiichi Sankyo RD Novare Co., Ltd., Japan

Disclosures: Eisuke Tsuda, None

SU0192 **Pmepa1 is Specifically Induced by Bone Components in Osteoclasts and Regulates Bone Resorption**

Xianghe Xu*[1], Makoto Shiraki[1], Asana Kamohara[1], Kenichi Nishioka[2], Fumikazu Matsuhisa[3], Shuji Kitajima[3], Toshio Kukita[4], Akiko Kukita[1]. [1]Department of Pathology and Microbiology, Faculty of Medicine, Saga University, Japan, [2]Department of Biomolecular Sciences, Faculty of Medicine, Saga University, Japan, [3]Division of Biological Resources and Development, Analytical Research Center for Experimental Sciences, Saga University, Japan, [4]Department of Molecular Cell Biology & Oral Anatomy, Faculty of Dentistry, Kyushu University, Japan

Disclosures: Xianghe Xu, None

SU0193 **Increasing intracellular iron by Ferroportin deletion in murine myeloid precursors stimulates mitochondria metabolism and osteoclastogenesis and decreases trabecular bone mass**

Lei Wang*[1], Toshifumi Fujiwara[2], Bin Fang[3], Nukhet Aykin-burns[4], Zhichang Zhang[5], Xiaolin Li[5], Stavros C Manolagas[6], Michael L Jennings[7], Jian Zhou[1], Haibo Zhao[6]. [1]Department of Orthopedics, First Affiliated Hospital, Anhui Medical University, China, [2]Department of Orthopedic Surgery, Kyushu University, Japan, [3]Department of Dermatology, University of Arkansas for Medical Sciences, United States, [4]Division of Radiation Health, Department of Pharmaceutical Sciences, University of Arkansas for Medical Sciences, United States, [5]Department of Orthopedics, Shanghai Jiao Tong University Affiliated Sixth People's Hospital, China, [6]Division of Endocrinology and Metabolism, Department of Internal Medicine, University of Arkansas for Medical Sciences, United States, [7]Department of Physiology and Biophysics, University of Arkansas for Medical Sciences, United States

Disclosures: Lei Wang, None

SU0194 **MLO-Y4 cells Modulate Human Peripheral Blood Mononuclear Cells Migration**

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Disclosures: daniel Aedo Martin, None

SU0195 **Increased bone FGF23 production in CKD is associated with altered osteocyte development and bone mineralization**

Corey Dussold*[1], Samantha Neuburg[1], Ying Liu[2], Jian Q. Feng[2], Xueyan Wang[1], Valentin David[1], Myles Wolf[3], Aline Martin[1]. [1]Division of Nephrology and Hypertension, Center for Translational Metabolism and Health, Northwestern University, Chicago, IL, USA, United States, [2]Department of Biomedical Sciences, Baylor College of Dentistry, TXA&M University, Dallas, TX, USA, United States, [3]Division of Nephrology and Hypertension, Duke University, Durham, NC, USA, United States

Disclosures: Corey Dussold, None

SU0196 **Sclerostin-Neutralizing Antibody Treatment Increases Serpinf1(PEDF) Expression In Mice Tibiae Independent of Mechanical Loading**

Tobias Thiele*[1], Catherine Julien[25], Anne Seliger[1], Annette Birkhold[3], Michael Thelen[1], François Lefebvre[4], Martin Pellicelli[25], René St-Arnaud[25], Michael Ominsky[6], Georg Duda[1], Uwe Kornak[7], Sara Checa[1], Bettina M. Willie[25]. [1]Julius Wolff Institute, Universitätsmedizin Charité, Germany, [2]Shriners Hospital for Children, Canada, [3]University of Stuttgart, Germany, [4]Canadian Centre for Computational Genomics, Canada, [5]Shriners hospital for Children, Canada, [6]Amgen, United States, [7]Institute for Medical Genetics and Human Genetics, Charité- Universitätsmedizin, Germany

Disclosures: Tobias Thiele, None

SU0197 **Development and Characterization of Stably Transfected TOPFlash MLO-Y4 Cell Lines**

Nuria Lara*[1], Mark L. Johnson[1]. [1]University of Missouri-Kansas City, United States

Disclosures: Nuria Lara, None

SU0198 **PTEN deletion from osteocytes does not rescue the skeletal fragility phenotype induced by β-catenin deletion**

Kyung-Eun Lim*[1], Phillip C. Witcher[1], Alexander Robling[1]. [1]Indiana University School of Medicine, United States

Disclosures: Kyung-Eun Lim, None

SU0199 **Elevated osteocyte TNF-α, IL-6, and sclerostin in a rodent model of spinal cord injury correlates with altered bone turnover**

Corinne E. Metzger*[1], Sammy Gong[2], Miriam Aceves[2], Michelle A. Hook[2], Susan A. Bloomfield[1]. [1]Texas A&M University, United States, [2]Texas A&M University Health Science Center, United States

Disclosures: Corinne E. Metzger, None

SU0200 **PPARγ and PPARα regulate osteocyte activity by controlling expression of Sclerostin and DKK1 proteins**

Lance Stechschulte*[1], Mathew Mazur[1], Dustin Marinelli[1], Zachary Rotter[1], Amit Chougule[1], Beata Lecka-Czernik[1]. [1]University of Toledo, United States

Disclosures: Lance Stechschulte, None

SU0201 **Mechanical Forces Regulate Osteocytes Gene Expression through Gsα -independent Signaling Pathways**

Ningyuan Sun*[1], Yuhei Uda[2], Chao Shi[3], Keertik Fulzele[4], Ehab Azab[5], Paola Divieti Pajevic[6]. [1]PhD Candidate, United States, [2]Research Fellow, United States, [3]PhD Candidate, China, [4]Reasearch Assistant Professor, United States, [5]DSc Student, United States, [6]Associate Professor, United States

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SU0202 **Deletion of RANKL from Osteoblasts and Osteocytes in Osteogenesis Imperfecta Mice (oim) Increases Bone Mass but Does Not Rescue Bone Fragility or High Bone Turnover**

Sarah Zimmerman*[1], Melissa Heard-Lipsmeyer[1], Milena Dimori[1], Charles O'Brien[1], Roy Morello[1]. [1]University of Arkansas for Medical Sciences, United States

Disclosures: Sarah Zimmerman, None

SU0203 **FRAX is a robust predictor of baseline vertebral fractures in multiple myeloma patients**
Shebli Atrash*[1], Amy Buros[1], Frits van Rhee[1], Larry J. Suva[2], Sharmilan Thanendrarajan[1], Carolina Schinke[1], Faith Davies[1], Gareth Morgan[1], Maurizio Zangari[1]. [1]University of Arkansas for Medical Sciences, United States, [2]Texas A&M University, United States
Disclosures: Shebli Atrash, None

SU0204 **Vitamin D Status of Highly Sun-exposed People: The "Surfer Study" Redux with Standardized 25(OH)D Data**
Neil Binkley*[1], Diane Krueger[1], Gretta Borchardt[1], Gretta Borchardt[1], Marc Drezner[1], Chris Sempos[2]. [1]University of Wisconsin-Madison, United States, [2]Vitamin D Standardization Program, NIH-ODS, United States
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SU0205 **Automated No-Dose Incidental Screening in the Context of Osteoporosis**
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Disclosures: J. Keenan Brown, Mindways Software, Inc., Major Stock Shareholder

SU0206 **Comparison of Metaphyseal and Diaphyseal Microstructure of the Tibia in Elderly Men Measured by HR-pQCT**
Andrew Burgahrdt*[1], Andrew Yu[1], Sharmila Majumdar[1], Dennis Black[1], Eric Orwoll[2]. [1]University of California, San Francisco, United States, [2]Oregon Health & Science University, United States
Disclosures: Andrew Burgahrdt, None

SU0207 **Addressing Bone Quality Loss After Renal Transplantation. A Systematic Assessment of the Evolution of Trabecular Bone Score (TBS) over the first one year following renal transplantation and its correlation with Bone Biochemical Parameters and Steroid Use in Asian Patients**
Manju Chandran*[1], Ying Hao[1], David Ng[1], Pushan Bharadwaj[1]. [1]Singapore General Hospital, Singapore
Disclosures: Manju Chandran, None

SU0208 **Inter-scanner Agreement of Trabecular Bone Score Data in Pre-peak Bone Mass Females, Compared to Intra-scanner Data Variability from Pre/peri/post-menopausal Adults**
Jodi Dowthwaite*[1], Renaud Winzenrieth[2], Kristen Dunsmore[3], Tamara Scerpella[4]. [1]SUNY Upstate Medical University, United States, [2]Med-Imaps, France, [3]Syracuse University, United States, [4]University of Wisconsin- Madison, United States
Disclosures: Jodi Dowthwaite, None

SU0209 **Vertebral Compression Deformities in Patients with Normal Bone Mineral Density**
Jay Ginther*[1], Ann Ginther[1]. [1]Cedar Valley Bone Health Institute of Iowa, United States
Disclosures: Jay Ginther, None

SU0210 **Will Free 25OH Vitamin D Measurement Replace The Current Total 25OH Vitamin D Test In IVD Laboratories?**
Nicolas Heureux*[1]. [1]DIAsource Immunoassays, Belgium
Disclosures: Nicolas Heureux, DIAsource Immunoassays, Other Financial or Material Support

SU0211 **Age-related changes in bone strength and microstructure in Asian: the Vietnam Osteoporosis Study.**
Lan T Ho-Pham*[1], Tuan V. Nguyen[2]. [1]Ton Duc Thang University, Viet Nam, [2]Garvan Institute of Medical Research, Australia
Disclosures: Lan T Ho-Pham, None

SU0212 **A New Device for Ultrasonic Assessment of the 1/3 Radius**

Emily Stein*[1], Gangming Luo[2], Mariana Bucovsky[3], Fernando Rosete[3], Mafo Kamanda-Kosseh[3], Jonathan Kaufman[2], Elizabeth Shane[3], Robert Siffert[4]. [1]Hospital for Special Surgery, United States, [2]CyberLogic, Inc., United States, [3]Columbia University, United States, [4]The Mount Sinai School of Medicine, United States

Disclosures: Emily Stein, None

SU0213 **Longitudinal Changes of Lumbar Bone Mineral Densities in Korean Women**

Young-Sang Kim*[1], Hyejin Chun[2], Kunhee Han[2], Soo-Hyun Lee[2], Bo Youn Won[2], Seung-Gun Park[2]. [1]CHA university, CHA Bundang Medical Center, Korea, Republic of, [2]CHA university, Korea, Republic of

Disclosures: Young-Sang Kim, None

SU0214 **Leg Elevation Does Not Substantially Affect TBS Results**

Diane Krueger*[1], Ellen Siglinsky[1], Doris Tran[2], Luis Del Rio Barquero[3], Neil Binkley[1]. [1]University of Wisconsin, United States, [2]Medimaps SASU, France, [3]CETIR Centre Medic, Spain

Disclosures: Diane Krueger, None

SU0215 **In Which Patient Populations Does Lumbar Spine Trabecular Bone Score (TBS) Have the Largest Effect on Fracture Prediction?**

Patrick Martineau*[1], William Leslie[2], Helena Johannson[3], Anders Oden[3], Eugene McCloskey[3], John Kanis[3], Didier Hans[4]. [1]University of Ottawa, Department of Radiology, Canada, [2]University of Manitoba, Canada, [3]University of Sheffield Medical School, United Kingdom, [4]Lausanne University Hospital, Switzerland

Disclosures: Patrick Martineau, None

SU0216 **Comparison of volumetric density and microstructure between fixed offset and relative offset methods for HR-pQCT: relationships with lengths of forearm and lower leg**

Narihiro Okazaki*[1], Ko Chiba[1], Kazuaki Yokota[1], Kazuteru Shiraishi[1], Makoto Osaki[1]. [1]Department of Orthopaedic Surgery, Nagasaki University Hospital, Japan

Disclosures: Narihiro Okazaki, None

SU0217 **Densitometric lateral spine screening to detect vertebral fractures predicts incident osteoporotic fractures in elderly women in addition to bone density**

Richard L. Prince*[1], Joshua R. Lewis[2], Wai H. Lim[3], Germaine Wong[2], Kevin E. Wilson[4], Ben C. Khoo[5], Kun Zhu[6], Douglas P. Kiel[7], John T. Schousboe[8]. [1]University of Western Australia, School of Medicine and Pharmacology, Australia, [2]Centre for Kidney Research, Children's Hospital at Westmead School of Public Health, Sydney Medical School, Australia, [3]Department of Renal Medicine, Sir Charles Gairdner Hospital, Australia, [4]Skeletal Health, Hologic, Inc., United States, [5]Medical Technology & Physics, Sir Charles Gairdner Hospital, Australia, [6]1University of Western Australia, School of Medicine and Pharmacology, Australia, [7]Institute for Aging Research, Hebrew Senior Life, Department of Medicine, Beth Israel Deaconess Medical Center, Harvard Medical School, United States, [8]Park Nicollet Osteoporosis Center and Health Partners Institute, United States

Disclosures: Richard L. Prince, None

SU0218 **Fracture discrimination using cortical thickness and porosity index obtained with ultrasound**

Jean-Gabriel Minonzio*[1], Nicolas Bochud[1], Quentin Vallet[1], Donatien Ramiandrisoa[1], Adrien Etcheto[2], Karine Briot[2], Sami Kolta[2], Christian Roux[2], Pascal Laugier[1]. [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

Disclosures: Jean-Gabriel Minonzio, Azalée, Consultant

SU0219 **The utility of trabecular bone score in evaluating bone quality in Hispanic population with type 2 diabetes**

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Disclosures: Maryam Buni, None

SU0220 **Assessment of Jawbone Quality as a Predictor of Lumber Fracture Probability**

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Disclosures: Yoshitomo Takaishi, None

SU0221 **Prescreening for Osteoporotic Hip BMD after Fracture with an accurate Pulse-Echo Ultrasound Device.**

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Disclosures: Peter van den Berg, None

SU0222 **Osteophyte-Induced Changes in Vertebral Microstructure in the Elderly Can Only Be Detected by DXA in Lateral but Not in Anterior-Posterior Projections**

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Disclosures: Annika vom Scheidt, None

SU0223 **Comorbidities and medication use in patients with a recent clinical fracture at the Fracture Liaison Service**

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SU0224 **The Reproducibility of Measuring Trabecular Bone Parameters Using High-resolution Magnetic Resonance Imaging**

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Disclosures: Sarah West, None

SU0225 **Prevalence of reduced renal function in the osteoporosis clinic and implications for the osteoporosis treatment gap - a study of 26, 000 DXA referrals in a single-provider geographical area.**

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Disclosures: Bo Abrahamsen, Novartis, Grant/Research Support

SU0226 **Oral bisphosphonate use and all-cause mortality in patients with advanced (stage IIIB+) chronic kidney disease: a population-based cohort study.**

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SU0227 **Fracture Incidence and Characteristics in Young Adults Age 18 to 49 years: A Population-Based Study**

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Disclosures: Joshua Farr, None

SU0228 **Glycemic traits are related to phosphate metabolism: A double-edged sword**

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Disclosures: Ching-Lung Cheung, None

SU0229 **Screening Young Postmenopausal Women for Osteoporosis: Comparison of Hip Fracture Risk Prediction by the Garvan and FRAX Risk Calculators in the Women's Health Initiative Observational Study and Clinical Trials**

Carolyn Crandall*[1], Joseph Larson[2], Andrea LaCroix[3], Jane Cauley[4], Meryl LeBoff[5], Wenjun Li[6], Erin LeBlanc[7], Beatrice Edwards[8], JoAnn Manson[5], Kris Ensrud[9]. [1]University of California, Los Angeles, United States, [2]Fred Hutchinson Cancer Research Center, United States, [3]University of California, San Diego, United States, [4]University of Pittsburgh, United States, [5]Harvard Medical School, United States, [6]University of Massachusetts Medical School, United States, [7]Kaiser Permanente Center for Health Research, United States, [8]The University of Texas MD Anderson Cancer Center, United States, [9]University of Minnesota Medical School, United States

Disclosures: Carolyn Crandall, None

SU0230 **Reasons for Stopping Osteoporosis Medications among Women with Previous Fractures**

Maria Danila*[1], Elizabeth Rahn[1], Amy Mudano[1], Ryan Outman[1], Peng Li[1], David Redden[1], Fred Anderson[2], Susan Greenspan[3], Andrea LaCroix[4], Jeri Nieves[5], Stuart Silverman[6], Ethel Siris[7], Nelson Watts[8], Sigrid Ladores[1], Karen Meneses[1], Jeffrey Curtis[1], Kenneth Saag[1]. [1]University of Alabama at Birmingham, United States, [2]University of Massachusetts Medical School, United States, [3]University of Pittsburgh, United States, [4]University of California, San Diego, United States, [5]Helen Hayes Hospital, United States, [6]Cedars-Sinai Medical Center, United States, [7]Columbia University Medical Center, United States, [8]Mercy Health Osteoporosis and Bone Health Services, United States

Disclosures: Maria Danila, None

SU0231 **Associations of Cognitive Dietary Restraint with Changes in Body Mass Index and Bone Mineral Density: A Population-based Cohort Study of Premenopausal Women and Men Aged 25-49 Years from CaMos**

Jenna C. Gibbs*[1], Lora M. Giangregorio[1], Jerilynn Prior[2], Susan I. Barr[2], Claudie Berger[3], Maryam S. Hamidi[4], Jonathan D. Adachi[5], K. Shawn Davison[6], David Goltzman[7], Robert G. Josse[8], Stephanie M. Kaiser[9], Christopher S. Kovacs[10], William D. Leslie[11], Suzanne N. Morin[7], Alexandra Papaioannou[5], Angela M. Cheung[12]. [1]University of Waterloo, Canada, [2]University of British Columbia, Canada, [3]McGill University Health Centre Research Institute, Canada, [4]Stanford University, United States, [5]McMaster University, Canada, [6]a priori medical science inc., Canada, [7]McGill University, Canada, [8]St. Michael's Hospital, Canada, [9]Dalhousie University, Canada, [10]Memorial University, Canada, [11]University of Manitoba, Canada, [12]University Health Network and University of Toronto, Canada

Disclosures: Jenna C. Gibbs, None

SU0232 **Temporal Trends in Length of Stay after Hip, Femur and Pelvic Fracture in Québec, Canada**

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Disclosures: Sonia Jean, None

SU0233 **Testing an Evidence-based Theoretical Model of Imminent (1-year) Fracture Risk in Elderly Women: Results from the Canadian Multicentre Osteoporosis Study (CaMOS)**

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Disclosures: James S. McGinley, Vector Psychometric Group, LLC., Other Financial or Material Support

SU0234 **Risk of Hip Fracture After Recent Fracture – Comparison of Sentinel Fracture Sites (Reykjavik Study)**

Helena Johansson*[1], Kristín Siggeirsdóttir[2], Nicholas C Harvey[3], Anders Odén[4], Vilmundur Gudnason[5], Eugene McCloskey[6], Gunnar Sigurdsson[2], John A Kanis[7]. [1]Institute for Health and Aging, Australian Catholic University, Melbourne, Australia, Sweden, [2]Icelandic Heart Association, Kopavogur, Iceland, Iceland, [3]MRC Lifecourse Epidemiology Unit, University of Southampton, Southampton, UK, NIHR Southampton Biomedical Research Centre, University of Southampton and University, United Kingdom, [4]Centre for Metabolic Bone Diseases, University of Sheffield, Sheffield, UK, Sweden, [5]Icelandic Heart Association, Kopavogur, Iceland, University of Iceland, Reykjavik, Iceland, Iceland, [6]Centre for Metabolic Bone Diseases, University of Sheffield, Sheffield, UK, Centre for Integrated research in Musculoskeletal Ageing, Mellanby Centre for Bone Research, University of Sheffield, Sheffield UK, United Kingdom, [7]Institute for Health and Aging, Australian Catholic University, Melbourne, Australia, Centre for Metabolic Bone Diseases, University of Sheffield, Sheffield, UK, United Kingdom

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SU0235 **Association between osteoporosis and increased BMI in men and women: KNHANES 2008-2011**

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Disclosures: Ji Hyun LEE, None

SU0236 **A cross-sectional study of osteoporosis in urban and rural areas of Shanghai.**

Jinlong Li*[1], Chenguang Li[2], Jing Wang[2], Bing Shu[2], Yan Zhang[2], Lin Chen[3], Qiang Wang[3], Hao Zhang[3], Nannan Sha[3], Yin Zhu[3], Zhenxing Luo[3], Yongjun Wang[4]. [1]self, China, [2]workmate, China, [3]Student, China, [4]Professor, China

Disclosures: Jinlong Li, None

SU0237 **Acetabular Fractures in Patients Aged Over 60 Years**

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Disclosures: Amanda Lorbergs, None

SU0238 **In-Hospital Mortality following Hip, Femur and Pelvic fractures in Québec, Canada**

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Disclosures: Suzanne Morin, Amgen, Grant/Research Support

SU0239 **Prospective Study of Proton Pump Inhibitor and H_2-Receptor Antagonist Use and Risk of Vertebral Fracture in Women**

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Disclosures: Julie M Paik, None

SU0240 **Impact of hip fracture on health-related quality of life and activities of daily living: the SPARE-HIP prospective cohort study.**

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Disclosures: Daniel Prieto-Alhambra, Amgen, Grant/Research Support

SU0241 **Serum osteoprotegerin concentration was positively associated with 25-OH Vitamin D and fibroblast growth factor 23 in the middle-aged and elderly people with different bone mass**

Bing Shu*[1], Jing Wang[1], Chenguang Li[1], Yan Zhang[1], Jinlong Li[1], Xiaofeng Qi[1], Liang Qiao[1], Yongjian Zhao[1], Lin Chen[1], Qiang Wang[1], Hao Zhang[1], Yongjun Wang[2]. [1]Longhua Hospital, Shanghai University of Traditional Chinese Medicine, China, [2]Longhua Hospital, Shanghai University of Traditional Chinese Medicine; School of Rehabilitation Science, Shanghai University of Traditional Chinese Medicine, China

Disclosures: Bing Shu, None

SU0242 **Estimation of the Recommended Daily Allowance (RDA) for Vitamin D Intake Using Serum 25 Hydroxyvitamin D 20ng/ml As the End Point in two Randomized Trials**

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SU0243 **Extensive Undertreatment of Osteoporosis in Older Swedish Women**

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Disclosures: Daniel Sundh, None

SU0244 **An association of a single missense nucleotide polymorphism in the ALDH2 gene with hip fracture**

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SU0245 **Circulating steroid concentrations exhibit age-dependent associations with spinal muscle density: the Framingham Study**

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Disclosures: Timothy Tsai, None

SU0246 **Cross-Sectional Association of BMAT Unsaturation Index (UI) with QCT Measures of Bone Density and Strength**

Gina Woods*[1], Kaipin Xu[2], Sigurdur Siggurdsson[3], Susan Ewing[2], Deborah Kado[1], Thomas Lang[2], Thomas Link[2], Gudny Eiriksdottir[3], Trisha Hue[2], Eric Vittinghoff[2], Tamara Harris[4], Clifford Rosen[5], Vilmundur Gudnason[6], Ann Schwartz[2], Xiaojuan Li[2]. [1]University of California, San Diego, United States, [2]University of California, San Francisco, United States, [3]Icelandic Heart Association, Iceland, [4]National Institute on Aging, NIH, United States, [5]Maine Medical Center Research Institute, United States, [6]University of Iceland, Iceland

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SU0247 **Patient 'Self-Consultation' as a Novel Strategy to Combat the Osteoporosis Treatment Mismatch: Experience from a Single-Centre Pilot**

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Disclosures: Emma Billington, None

SU0248 **Novel Use of Telecarers in the Co-ordination of Secondary Osteoporosis Prevention in Hip Fracture Patients in a Regional Hospital Setting in Singapore**

Linsey Gani*[1], Wen Hao Tan[1], Nicollette Pereira[1], Thomas King[1], Joan Khoo[1]. [1]Changi General Hospital, Singapore

Disclosures: Linsey Gani, None

SU0249 **Cost-Utility Analysis of Fracture-Risk Assessment Using MicroRNAs Compared to Standard Tools and No-Monitoring in the Austrian Female Population**

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Disclosures: Evelyn Walter, None

SU0250 **Bone Mineral Density in the Osteopenic or Normal Range is a Disincentive to Treatment of Women at High Fracture Risk: Throwing Out the Baby, the Bathwater and Bathtub**

William Leslie*[1], Ego Seeman[2], Suzanne Morin[3], Lisa Lix[1], Sumit Majumdar[4]. [1]University of Manitoba, Canada, [2]University of Melbourne, Australia, [3]McGill University, Canada, [4]Uuniversity of Alberta, Canada

Disclosures: William Leslie, None

SU0251 **Implementation of Fracture Liaison Service: a Mixed Methods Research Project**

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Disclosures: Mireille Luc, None

SU0252 **Serum 25-hydroxyvitamin D Levels in Hospitalized Adults With Community-Acquired Pneumonia**

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Disclosures: María Lorena Brance, None

SU0253 **Short-Term Increased Physical Activity during Early Life Protects High Fat Diet-Induced Bone Resorption in Adult Mice**

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SU0254 **Validity of Self-Reported Fractures in the VITamin D and OmegA-3 TriaL (VITAL)**

Sharon Chou*[1], Catherine Donlon[2], Nancy Cook[3], Douglas Bauer[4], Peggy Cawthon[4], Dennis Black[4], JoAnn Manson[3], Julie Buring[3], Meryl LeBoff[5]. [1]Brigham and Women's Hospital, Endocrinology, Diabetes and Hypertension Division, Instructor in Medicine, Harvard Medical School, United States, [2]Brigham and Women's Hospital, Endocrinology, Diabetes and Hypertension Division, United States, [3]Brigham and Women's Hospital, Division of Preventive Medicine, Professor of Medicine, Harvard Medical School, United States, [4]University of California, San Francisco, United States, [5]Brigham and Women's Hospital, Endocrinology, Diabetes and Hypertension Division, Professor of Medicine, Harvard Medical School, United States

Disclosures: Sharon Chou, None

SU0255 **Build better bones with exercise: feasibility of a multicenter randomized controlled trial of 12 months of home exercise in women with a vertebral fracture.**

Lora Giangregorio*[1], Lehana Thabane[2], Jonathan Adachi[2], Maureen Ashe[3], Robert Bleakney[4], Angela Cheung[5], Jenna Gibbs[1], Caitlin McArthur[1], Keith Hill[6], Jeffrey Templeton[1], David Kendler[3], Nicole Mittmann[4], Sadhana Prasad[2], Aliya Khan[2], Sandra Kim[7], Samuel Scherer[8], John Wark[8], Alexandra Papaioannou[2]. [1]University of Waterloo, Canada, [2]McMaster University, Canada, [3]University of British Columbia, Canada, [4]University of Toronto, Canada, [5]University Health Network, Canada, [6]Curtin University, Australia, [7]Women's College Hospital, Canada, [8]University of Melbourne, Australia

Disclosures: Lora Giangregorio, None

SU0256 **Baseline Characteristics of the VITamin D and OmegA-3 TriaL (VITAL): Effects on Bone Structure and Architecture**

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SU0257 **The Relationship of the Physical Performance and Osteoporosis Prevention with Vitamin D in Older African Americans (PODA)**

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Disclosures: John Aloia, None

SU0258 **Risk Factors for Osteoporosis and Muscle Loss in Hemodialysis Patients**

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SU0259 **A Mechanism By Which Menopause Leads To Chronic Low-Grade Inflammation and Bone Loss**

Anna Cline-Smith*[1], Elena Shashkova[1], Ariel Axelbaum[1], Rajeev Aurora[1]. [1]Saint Louis University School of Medicine, United States

Disclosures: Anna Cline-Smith, None

SU0260 **Characterization of the Remodeling Events Contributing to Trabecularization of Cortical Bone: A Study on Human Fibula Diaphysis**

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Disclosures: Andreasen Christina M, None

SU0261 **STRA6 as a possible candidate gene for pathogenesis of osteoporosis from RNA-seq analysis of human mesenchymal stem cells**

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SU0262 **Supplementation with Calcium and Vitamin D prevents bone loss after Bariatric Surgery**

Katrien Corbeels*[1], Lieve Verlinden[1], Mieke Verstuyf[1], Matthias Lannoo[1], Ann Mertens[2], Christophe Matthys[1], Ann Meulemans[1], Geert Carmeliet[1], Bart Van der Schueren[1]. [1]Laboratory Clinical and Experimental Endocrinology, KU Leuven, Belgium, [2]Department of Endocrinology, UZ Leuven, Belgium

Disclosures: Katrien Corbeels, None

SU0263 **Low bone mass and strength in juvenile rats with acquired epilepsy**

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Disclosures: Hannah M. Davis, None

SU0264 **Long non-coding RNAs and DNA methylation as regulators of mesenchymal stem cells (MSCs) of osteoporotic patients**

Alvaro del Real*[1], Jose A Riancho[1], Leandro Castellano[2], Maria Isabel Perez Nuñez[3], Carolina Sañudo[1], Carmen Garcia Ibarbia[4], Esther Laguna[3], Manuel Sumillera[3], Mario F Fraga[5], Agustin F Fernandez[5]. [1]Department of internal medicine, Hospital Universitario Marqués de Valdecilla-IDIVAL, University of Cantabria, Spain, [2]Department of Surgery and Cancer, Imperial College London, Imperial Centre for Translational and Experimental Medicine (ICTEM), Hammersmith Hospital, United Kingdom, [3]Department of Traumatology/Hospital Universitario Marqués de Valdecilla, University of Cantabria, Spain, [4]Department of internal medicine, Hospital Universitario Marqués de Valdecilla-IDIVAL, Universidad de Cantabria, Spain, [5]Nanomaterials and Nanotechnology Research Center (CINN-CSIC), Universidad de Oviedo-Principado de Asturias, Spain

Disclosures: Alvaro del Real, None

SU0265 **Pyridinoline collagen cross-link content at actively forming trabecular surfaces is associated with fragility fracture incidence independent of BMD and the clinical diagnosis.**

Sonja Gamsjaeger*[1], Erik Eriksen[2], Francis Glorieux[3], Frank Rauch[4], David Dempster[5], Hua Zhou[6], Elizabeth Shane[7], Adi Cohen[8], John Bilezikian[8], Mishaela Rubin[9], Carolina Moreira[10], Imre Pavo[11], Jan Stepan[12], Wolfgang Brozek[13], Peter Fratzl[14], Klaus Klaushofer[13], Eleftherios Paschalis[13]. [1]Ludwig Boltzmann Institute of Osteology at the Hanusch Hospital of WGKK and AUVA Trauma Centre Meidling, 1st Medical Department, Hanusch Hospital, Vienna Austria , Austria, [2]Dept. of Endocrinology, Morbid Obesity and Preventive Medicine Oslo University Hospital Pb 4596 Nydalen N-0424 Oslo, Norway, [3]Shriners Hospital for Children-Canada, Canada, [4]Shriners Hospital for Children, Montreal, Canada, [5]College of Physicians and Surgeons Columbia university, New York, United States, [6]Regional Bone Center, Helen Hayes Hospital , United States, [7]Columbia University Medical Center, United States, [8]Division of Endocrinology, Columbia University Medical Center, United States, [9] Department of Medicine, Metabolic Bone Diseases Unit, College of Physicians & Surgeons Columbia University, United States, [10]Endocrinology Division, Federal University of Parana, Brazil, [11]Eli Lilly, Austria, [12] Institute of Rheumatology, Faculty of Medicine, Charles University, Prague, Czech Republic, Czech Republic, [13]Ludwig Boltzmann Institute of Osteology at the Hanusch Hospital of WGKK and AUVA Trauma Centre Meidling, 1st Medical Department, Hanusch Hospital, Austria, [14]Max Planck Institute of Colloids and Interfaces, Department of Biomaterials, Research Campus Golm, Germany

Disclosures: Sonja Gamsjaeger, None

SU0266 **A Randomized, Double-Blind, Placebo-Controlled, Multicenter 26-Week Study on the Effects of Dexlansoprazole and Esomeprazole on Bone Homeostasis in Healthy Postmenopausal Women**

Karen Hansen*[1], Jeri Nieves[2], Sai Nudurupati[3], David Metz[4], Maria Claudia Perez[5]. [1]University of Wisconsin, United States, [2]Columbia University, United States, [3]AbbVie, Inc, United States, [4]University of Pennsylvania, United States, [5]Takeda Development Center Americas, Inc., United States

Disclosures: Karen Hansen, Takeda, Grant/Research Support

SU0267 **The Bone to Fat-free Mass Ratio–A reflector of the bone to muscle mass relationship**

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Disclosures: Tom Sanchez, None

SU0268 **Randomized controlled double blind trial: role of a putative α-glucosidase inhibitor on bone turnover and GLP-1 after a mixed meal tolerance test.**
Sue Shapses*[1], Alexandra Kreitman[1], Lihong Hao[1], Stephen Schneider[2], Yvette Schlussel[1]. [1]Rutgers University, United States, [2]Robert Wood Johnson Medical Center , United States
Disclosures: Sue Shapses, None

SU0269 **Low-intensity repetitive blast injury results in long-term deleterious effects on bone**
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Disclosures: Joshua Swift, None

SU0270 **Vitamin D level and calcium intake are related to PTH levels but not bone turnover in healthy young men at the age of peak bone mass.**
Charlotte Verroken*[1], Stefan Goemaere[1], Hans-Georg Zmierczak[1], Jean-Marc Kaufman[1], Bruno Lapauw[1]. [1]Unit for Osteoporosis and Metabolic Bone Diseases, Department of Endocrinology, Ghent University Hospital, Ghent, Belgium, Belgium
Disclosures: Charlotte Verroken, None

SU0271 **Renin-angiotensin system inhibition ameliorates bone fragility due to altered material properties in uremic rats with secondary hyperparathyroidism**
Suguru Yamamoto*[1], Takuya Wakamatsu[1], Yoshiko Iwasaki[2], Akemi Ito[3], Ichiei Narita[1], Masafumi Fukagawa[4], Junichiro Kazama[5]. [1]Division of Clinical Nephrology and Rheumatology Niigata University Graduate School of Medical and Dental Sciences, Japan, [2]Department of Health Sciences, Oita University of Nursing and Health Sciences, Japan, [3]Ito Bone Histomorphometry Institute, Japan, [4]Tokai University, Japan, [5]Fukushima Medical University, Japan
Disclosures: Suguru Yamamoto, None

SU0272 **Severity of chronic obstructive pulmonary disease is associated with low muscle mass, osteoporosis and fragility fractures**
Roberta Graumam*[1], Marcelo Pinheiro[1], Vera Szejnfeld[1], Aurora Cabral[1], Luis Eduardo Nery[1], Charlles Castro[1]. [1]Universidade Federal de São Paulo - Escola Paulista de Medicina, Brazil
Disclosures: Roberta Graumam, None

SU0273 **Longer duration of TSH suppression can affect Bone Mineral Density and Trabecular Bone Score in patients with Differentiated Thyroid Cancer**
Maria Luisa De Mingo*[1], Sonsoles Guadalix[1], Maria Begoña Lopez Alvarez[1], Eduardo Ferrero Herrero[1], Guillermo Martinez Diaz-Guerra[1], Federico Hawkins[1]. [1]University Hospital 12 Octubre , Spain
Disclosures: Maria Luisa De Mingo, None

SU0274 **Cumulative Epidural Steroid Dose is Associated with Lower Spine Volumetric Bone Density**
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Disclosures: Yi Liu, None

SU0275 **Analysing the Effect of Multiple Sclerosis on Vitamin D Related Biochemical Markers of Bone Remodelling**
Malachi McKenna*[1], Barbara Murray[1], Niall Tubridy[1], Mark Kilbane[1]. [1]St. Vincent's University Hospital, Ireland
Disclosures: Malachi McKenna, None

SU0276 **Bone Histomorphometry in type 2 Diabetic Premenopausal Women**
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Disclosures: Victoria Borba, None

SU0277 **Long-term Effects of Severe Burn Injury on Bone Turnover and Microarchitecture**

Gabriela Katharina Muschitz*[1], Elisabeth Schwabegger[2], Andreas Baierl[3], Alexandra Fochtmann[1], Roland Kocijan[4], Judith Haschka[4], Wolfgang Gruther[5], Jakob Schanda[6], Heinrich Resch[4], Thomas Rath[1], Peter Pietschmann[7], Christian Muschitz[4]. [1]Division of Plastic and Reconstructive Surgery, Department of Surgery, Medical University Vienna, Austria, [2]Department of Plastic, Reconstructive and Aesthetic Surgery, Medical University of Innsbruck, Austria, [3]Department of Statistics and Operations Research, the University of Vienna, Austria, [4]St. Vincent Hospital - VINFORCE, Austria, [5]HealthPi Medical Center, Wollzeile 1, Austria, [6]AUVA Trauma Center Meidling, Austria, [7]Department of Pathophysiology and Allergy Research, Center for Pathophysiology, Infectiology and Immunology, Medical University of Vienna, Austria

Disclosures: Gabriela Katharina Muschitz, None

SU0278 **Abnormal Microarchitecture and Stiffness in Postmenopausal Women Treated with Chronic Inhaled Glucocorticoids**

Yi Liu*[1], Emily Dimango[2], Mariana Bucovsky[2], Kyle Nishiyama[2], Sanchita Agarwal[2], X. Edward Guo[2], Elizabeth Shane[2], Emily Stein[1]. [1]Hospital for Special Surgery, United States, [2]Columbia University, United States

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SU0279 **The Relationship between Severity of Chronic Obstructive Pulmonary Disease and Bone Metabolism Biomarkers**

Manabu Tsukamoto*[1], Toshiharu Mori[1], Yasuaki Okada[1], Hokuto Fukuda[1], Ke-Yong Wang[2], Kazuhiro Yatera[3], Akinori Sakai[1]. [1]Department of Orthopaedic Surgery, University of Occupational and Environmental Health, Japan, [2]Shared-Use Research Center, University of Occupational and Environmental Health, Japan, [3]Department of Respiratory Medicine, University of Occupational and Environmental Health, Japan

Disclosures: Manabu Tsukamoto, None

SU0280 **Low Bone Mass among Aging HIV-infected patients Compared to HIV-uninfected controls in Thailand**

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Disclosures: Lalita Wattanachanya, None

SU0281 **3D femur assessment using DXA in patients with primary hyperparathyroidism (PHPT) before and one year after parathyroidectomy.**

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Disclosures: Eugenie Koumakis, None

SU0282 **A randomized trial of Vitamin D3 in HIV+ postmenopausal women**

Michael Yin*[12], Arindam RoyChoudhury[12], Mariana Bucovsky[12], David Ferris[3], Susan Olender[12], Anajali Sharma[4], Kyle Nishiyama[12], Cosmina Zeana[3], Barry Zingman[4], Elizabeth Shane[12]. [1]Columbia University Medical Center, United States, [2]Columbia University Medical center, United States, [3]Bronx Lebanon Hospital Center, United States, [4]Albert Einstein College of Medicine, Montefiore Medical Center, United States

Disclosures: Michael Yin, None

SU0283 **Development and Validation of a LC-MS/MS Assay for Quantification of Parathyroid Hormone (PTH 1-34) in human Plasma**

Sulaiman Al Riyami*[1], Jonathan Tang[1], John Dutton[1], Christopher Washbourne[1], Hillel Galitzer[2], William Fraser[1]. [1]Bioanalytical Facility, University of East Anglia, Norwich Research Park, Norwich, United Kingdom, [2]Entera Bio Ltd, Hadassah Ein-Kerem, Jerusalem Bio Park, Jerusalem, Israel

Disclosures: Sulaiman Al Riyami, None

SU0284 **Measurements of Osteoanabolic agents PTH (1-34) and PTHrP (1-36) in therapeutic studies and clinical diagnostics**

Sulaiman Al Riyami*[1], Jonathan Tang[1], Hillel Galitzer[2], William Fraser[3]. [1]Bioanalytical Facility, University of East Anglia, Norwich Research Park, Norwich, United Kingdom, [2]Entera Bio Ltd, Hadassah Ein-Kerem, Jerusalem Bio Park, Jerusalem, Israel, [3]Bioanalytical Facility, University of East Anglia, Norwich, United Kingdom

Disclosures: Sulaiman Al Riyami, None

SU0285 **Effectiveness of Oral Bisphosphonates in Reducing Fracture Risk among Oral Glucocorticoid Users**

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Disclosures: M Amine Amiche, None

SU0286 **Tromsoporosis - Adherence to a Secondary Fracture Prevention Program in Tromsø, Norway**

Camilla Andreasen*[1], Marit Osima[2], Veronica G Rognli[3], Dag E Grundel[4], Jan Elvenes[5], Gunnar Knutsen[1], Khaled Meknas[1], Ragnar M Joakimsen[2], Tove T Borgen[6], Lene B Solberg[7], Frede Frihagen[8], Lars Nordsletten [9], Erik F Eriksen[10], Trude Basso[11], Cecilie Dahl[12], Tone K Omsland[13], Åshild Bjørnerem[14]. [1]University Hospital of North Norway, Tromsø, Norway, Norway, [2]1: University Hospital of North Norway, Tromsø, Norway 2: UiT The Arctic University of Norway, Tromsø, Norway , Norway, [3] UiT The Arctic University of Norway, Tromsø, Norway, Norway, [4]University Hospital of North Norway, Tromsø, Norway , Norway, [5]1: University Hospital of North Norway, Tromsø, Norway 2: UiT The Arctic University of Norway, Tromsø, Norway, Norway, [6]Vestre Viken Hospital Trust, Hospital of Drammen, Drammen, Norway, Norway, [7]l.b.solberg@gmail.com, Norway, [8]1:Oslo University Hospital, Oslo, Norway 2:University of Oslo, Oslo, Norway, Norway, [9]1:Oslo University Hospital, Oslo, Norway 2: University of Oslo, Oslo, Norway, Norway, [10]Oslo University Hospital, Oslo, Norway 2: University of Oslo, Oslo, Norway, Norway, [11]St. Olav University Hospital, Trondheim, Norway, Norway, [12]University of Oslo, Oslo, Norway, Norway, [13]University of Oslo, Oslo, Norway , Norway, [14]University Hospital of North Norway, Tromsø, Norway 2: UiT The Arctic University of Norway, Tromsø, Norway , Norway

Disclosures: Camilla Andreasen, None

SU0287 **Clinical Characteristics of Bisphosphonate Drug Holiday Patients**

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Disclosures: Ammara Aziz, None

SU0288 **Dual Therapy with Teriparatide and Denosumab in Severe Osteoporosis**

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Disclosures: Paul Claffey, None

SU0289 **Quadruple-Labeled Transiliac Crest Biopsies Quantify Bone Formation Response to Teriparatide in Premenopausal Women with Idiopathic Osteoporosis**

Adi Cohen*[1], David Dempster[2], Hua Zhou[3], Robert Recker[4], Joan Lappe[4], Mafo Kamanda-Kosseh[1], Mariana Bucovsky[1], Arindam RoyChoudhury[1], Julie Stubby[4], Emily Stein[1], Thomas Nickolas[1], Elizabeth Shane[1]. [1]Columbia University, United States, [2]Columbia University and Helen Hayes Hospital, United States, [3]Helen Hayes Hospital, United States, [4]Creighton University, United States

Disclosures: Adi Cohen, None

SU0290 **Correlations between Longitudinal Changes in the Bone Turnover Marker P1NP and Bone Formation at the Tissue Level across 3 Envelopes with Teriparatide in the AVA Osteoporosis Study**

David Dempster*[1], Hua Zhou[1], John Krege[2], Jahangir Alam[2], Kathleen Taylor[3], Valerie Ruff[3]. [1]Regional Bone Center, Helen Hayes Hospital, United States, [2]Lilly Research Laboratories, Eli Lilly and Company, United States, [3]Musculoskeletal and Men's Health, Lilly USA, LLC, United States

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SU0291 **Association between Total Hip Bone Mineral Density at Baseline and Vertebral Fracture Incidence in the MOVER Study**

Hiroshi Hagino*[1], Toshitaka Nakamura [2], Masako Ito[3], Masato Tobinai[4], Junko Hashimoto[4], Seitaro Yoshida[4]. [1]School of Health Science & Rehabilitation Division, Tottori University Faculty of Medicine, Japan, [2]Aoba Hospital, Japan, [3]Center for Diversity & Inclusion, Nagasaki University, Japan, [4]Chugai Pharmaceutical Co. Ltd, Japan

Disclosures: Hiroshi Hagino, Ono Pharmaceutical Co. Ltd., Consultant

SU0292 **Upper Gastrointestinal Safety with the Buffered Solution of Alendronate 70mg: Postmarketing Experience**

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Disclosures: Josef Hruska, EffRx Pharmaceuticals, Consultant

SU0293 **Indications for Drug Holiday among Japanese Patients after Long-term Bisphosphonate Treatment**

Yuji Kasukawa*[1], Naohisa Miyakoshi[1], Michio Hongo[1], Koji Nozaka[1], Yoshinori Ishikawa[1], Hiroyuki Tsuchie[1], Daisuke Kudo[1], Yoichi Shimada[1]. [1]Department of Orthopedic Surgery, Akita University Graduate School of Medicine, Japan

Disclosures: Yuji Kasukawa, None

SU0294 **MRI for determining the treatment strategy in patients with apparently isolated greater trochanteric fractures**

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Disclosures: Jai Hyung Park, None

SU0295 **Uncertainty of Current Algorithm for Bisphosphonate-related Osteonecrosis of the Jaw in Population-based Studies**

Jin-Woo Kim*[1], Hye-Yeon Kim[1], Sun-Jong Kim[1], Sang-Hwa Lee[1]. [1]Ewha Womans University, Korea, Republic of

Disclosures: Jin-Woo Kim, None

SU0296 **Additional use of VitaminK2 (menatetelenon) reduces the elevation of ucOC/OC rate which administrated Teriparatides cause.**

Yoichi Kishikawa*[1]. [1]Kishikawa Orthopedics, Japan

Disclosures: Yoichi Kishikawa, None

SU0297 **Bone Health TeleECHO to Address Disparities in Osteoporosis Care and Reduce the Treatment Gap: 18 Month Progress Report**

E. Michael Lewiecki*[1], Natalie Weiss[1], Matthew Bouchonville II[1], David Chafey[1], Sanjeev Arora[1]. [1]University of New Mexico Health Sciences Center, United States

Disclosures: E. Michael Lewiecki, Shire, Consultant

SU0298 **Methodological considerations in evaluating treatment differences in fracture outcomes among female Medicare beneficiaries initiating osteoporosis medications**

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Disclosures: Jiannong Liu, None

SU0299 **A Meta-Analysis of 4 Clinical Trials of Denosumab Compared With Bisphosphonates in Postmenopausal Women Previously Treated With Oral Bisphosphonates**

P Miller*[1], N Pannacciulli[2], J Malouf-Sierra[3], A Singer[4], E Czerwinski[5], HG Bone[6], C Wang[2], RB Wagman[2], JP Brown[7]. [1]Colorado Center for Bone Research, United States, [2]Amgen Inc., United States, [3]Hospital de la Santa Creu i Sant Pau, Spain, [4]Georgetown University Medical Center, United States, [5]Krakow Medical Center, Poland, [6]Michigan Bone and Mineral Clinic, United States, [7]CHU de Québec Research Centre and Laval University, Canada

Disclosures: P Miller, Amgen, Alexion, Eli Lilly, Consultant

SU0300 **Observation of Discharge Destination Following Surgically Treated for Fragility Hip Fracture in Patients over 70-year old - A Single Surgeon Series at Urban Medical Center.**

Kim Tae-Min*[1], Seok-Tae Yun[1], Kwang-Jun Oh[1]. [1]Department of Orthopedic Surgery, KonKuk University Medical Center, Korea, Republic of

Disclosures: Kim Tae-Min, None

SU0301 **DEXA areal BMD Measurement Underestimates the Bone Forming Effects of Teriparatide**

Eleftherios Paschalis*[1], John Krege[2], Sonja Gamsjaeger[1], Erik Eriksen[3], David Burr[4], Damon Disch[2], Jan Stepan[5], Astrid Fahrleitner-Pammer [6], Klaus Klaushofer[1], Imre Pavo[7]. [1]Ludwig Boltzmann Institute of Osteology, Hanusch Hospital of WGKK, AUVA Trauma Centre Meidling, 1st Medical Department, Hanusch Hospital, Austria, [2]Eli Lilly and Company, United States, [3]Dept. of Clinical Endocrinology, Morbid Obesity and Preventive Medicine, Oslo University Hospital Institute of Clinical Medicine, Oslo University, Norway, [4]Dept of Anatomy and Cell Biology, Indiana Univ School of Medicine, United States, [5]Institute of Rheumatology, Faculty of Medicine 1, Charles University, Czech Republic, [6]Department of Internal Medicine, Division of Endocrinology and Metabolism, Medical University of Graz, Austria, [7]Eli Lilly and Company, Austria

Disclosures: Eleftherios Paschalis, None

SU0302 **Mineral and Organic Matrix Content at Bone Forming Surfaces in Postmenopausal Women Treated with Either Teriparatide or Zoledronic Acid for 6 Months.**

Eleftherios P. Paschalis*[1], David W. Dempster[2], Sonja Gamsjaeger[1], Klaus Klaushofer[1], Kathleen A. Taylor[3]. [1]Ludwig Boltzmann Institute of Osteology, Hanusch Hospital, Austria, [2]Regional Bone Center, Helen Hayes Hospital, New York State Department of Health, United States, [3]Lilly USA, United States

Disclosures: Eleftherios P. Paschalis, None

SU0303 **Differing Effects of Oral Conjugated Equine Estrogen and Transdermal Estradiol on Vitamin D Metabolism in Postmenopausal Women: A 4-Year Longitudinal Study**

Anna Maria Santoro*[1], Christine Simpson[1], Elaine Cong[2], Andrea Haas[3], Karl Insogna[1]. [1]Yale University School of Medicine, United States, [2]Englewood Hospital, United States, [3]Brigham and Women's Hospital, United States

Disclosures: Anna Maria Santoro, None

SU0304 **Fracture healing is expedited via preferential upregulation of Wnt/β-catenin using targeted nanoparticle GSK3β inhibitor delivery**

Danielle Benoit*[1], Yuchen Wang[1], Maureen Newman[1], Tzong-Jen Sheu[2], J. Edward Puzas[2]. [1]Biomedical Engineering and Center for Musculoskeletal Research, University of Rochester, United States, [2]Center for Musculoskeletal Research, University of Rochester Medical Center, United States

Disclosures: Danielle Benoit, None

SU0305 **LIGHT/TNFSF14 deficiency affects basal bone remodeling through the regulation of osteoprotegerin expression**

Giacomina Brunetti*[1], Luciana Lippo[2], Sara Bortolotti[1], Giuseppina Storlino[1], Isabella Gigante[1], Graziana Colaianni[1], Adriana Di Benedetto[3], Paolo Pignataro[1], Lindsay Ward-Kavanagh [4], Mariasevera Di Comite [1], Giorgio Mori[2], Koji Tamada [5], Janne E. Reseland[6], Carl F Ware[4], Silvia Colucci[1], Maria Grano[7]. [1]Department of Basic and Medical Sciences, Neurosciences and Sense Organs, section of Human Anatomy and Histology, University of Bari, Italy, [2]Department of Basic Medical Sciences, Neurosciences and Sense Organs, Section of Human Anatomy and Histology, University of Bari, Italy, [3]Department of Clinical and Experimental Medicine, University of Foggia, Italy, [4]Infectious and Inflammatory Disease Center, Sanford Burnham Prebys Medical Discovery Institute, United States, [5]Department of Oncology, Johns Hopkins University School of Medicine, United States, [6]Department of Biomaterials, Institute for Clinical Dentistry, University of Oslo, Norway, [7]Department of Emergency and Organ Transplantation, Section of Human Anatomy and Histology, Italy

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SU0306 **Ablation of IGF-1R in Osteochondroprogenitors Increases CXCL12 Expression in Bone Lining Cells**

Alessandra Esposito*[1], Lai Wang[1], Tieshi Li[1], Joseph Temple[1], Anna Spagnoli[1]. [1]Rush University Medical Center, United States

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SU0307 **Stanniocalcin 1 inhibits RANKL-induced osteoclastogenesis**

Hanna Gu*[1], Hwa Sung Chae[1], Kyung Mi Woo[1], Hyun-Mo Ryoo[1], Jeong-Hwa Baek[1]. [1]Department of Molecular Genetics, Seoul National University School of Dentistry, Korea, Republic of

Disclosures: Hanna Gu, None

SU0308 **Bone phenotype in mouse models of obesity, insulin resistance and diabetes**

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Disclosures: Xiaohong Bi, None

SU0309 **Inhibiting the WNT Inactivating Lipase NOTUM Stimulates Endocortical Bone Formation Independently of Sex Hormones**

Robert Brommage*[1], Faika Mseeh[1], David Potter[1], Jeff Liu[1], Melanie Shadoan[1], Andrea Thompson[1], Peter Vogel[1], Brian Zambrowicz[1], David Powell[1], Qingyun Liu[1]. [1]Lexicon Pharmaceuticals, United States

Disclosures: Robert Brommage, None

SU0310 **Abaloparatide, a Selective PTH1 Receptor Agonist, Reversed Bone Loss and Improved Trabecular Architecture in Orchiectomized Rats**

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Disclosures: Heidi Chandler, Radius Health, Other Financial or Material Support

SU0311 **Modulation of CD4+ T Cell Osteogenic Cytokine Profile by the Probiotic *Lactobacillus reuteri* and its Secreted Factors**

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Disclosures: Fraser Collins, None

SU0312 **Chronic kidney disease and aging diminish both whole bone and microscale bone quality**

Chelsea Heveran*[1], Adam Rauff[2], Eric Livingston[3], Ted Bateman[3], Moshe Levi[4], Dana Carpenter[3], Karen King[5], Virginia Ferguson[3]. [1]Department of Mechanical Engineering, University of Colorado, United States, [2]Department of Bioengineering, United States, [3]Department of Mechanical Engineering, United States, [4]Department of Medicine, Division of Renal Diseases and Hypertension, University of Colorado School of Medicine, United States, [5]Department of Orthopaedics, University of Colorado School of Medicine, United States

Disclosures: Chelsea Heveran, None

SU0313 **Phosphate Restriction Impairs Osteoblast Function in Growing Mice by attenuating mTOR Signaling**

Frank Ko*[1], Marie Demay[1]. [1]Massachusetts General Hospital, United States

Disclosures: Frank Ko, None

SU0314 **Role of Hematopoietic Cell β-glucuronidase in Bone-Specific Activation of Osteoprotective Turmeric-Derived Dietary Polyphenols**

Andrew G. Kunihiro*[1], Jen B. Frye[2], Julia A. Brickey[1], Paula B. Luis[3], Claus Schneider[3], Janet L. Funk[2]. [1]Department of Nutritional Sciences, University of Arizona, United States, [2]Department of Medicine, University of Arizona, United States, [3]Department of Pharmacology, Vanderbilt University, United States

Disclosures: Andrew G. Kunihiro, None

SU0315 **Identification of mouse cathepsin K structural elements that regulate its collagenase activity and the potency of odanacatib**

Simon Law*[1], Pierre-Marie Andrault[1], Adeleke H Aguda[1], Andrew Yamroz[1], Marcus Lee[1], Gary D Brayer[1], Dieter Bromme[1]. [1]University of British Columbia, Canada

Disclosures: Simon Law, None

SU0316 **Calcitriol Treatment Rescues Osteopenia and Skeletal Fragility Outcomes in Goto-Kakizaki Type 2 Diabetes Rat Model**

Yanlong Liang*[1], Yanzhi Liu[1], Minqun Du[1], Wenxiu Lai[1], Shuhui Li[1], Liao Cui[1]. [1]Guangdong Key laboratory for Research and Development of Natural Drugs, Guangdong Medical University, China

Disclosures: Yanlong Liang, None

SU0317 **PF708, a Therapeutic Equivalent and Biosimilar Candidate to FORTEO (Teriparatide), Demonstrates Nonclinical Efficacy Equivalence to the Reference Product in the Treatment of Established Osteopenia in Adult Ovariectomized Rats**

Jukka Morko*[1], Carrie Schneider[2], Jukka Vääräniemi[1], Jukka P Rissanen[1], Jussi M Halleen[1], Hubert Chen[2]. [1]Pharmatest Services Ltd, Finland, [2]Pfenex Inc, United States

Disclosures: Jukka Morko, None

SU0318 **The influences of discontinuation of anti-resorptive agents on bone turnover in ovariectomized mice: a comparison between risedronate and anti-RANKL antibody**

Toshinobu Omiya*[1], Jun Hirose[2], Takeshi Miyamoto[3], Sakae Tanaka[4]. [1]oomiya9ort@yahoo.co.jp, Japan, [2]j.hirose513@gmail.com, Japan, [3]miyamoto@z5.keio.jp, Japan, [4]tanakas-ort@h.u-tokyo.ac.jp, Japan

Disclosures: Toshinobu Omiya, None

SU0319 **Glucocorticoid Induced Osteoporosis is Prevented by Probiotic *Lactobacillus reuteri* 6475 Supplementation.**
Jonathan Schepper*[1], Fraser Collins [1], Regina Irwin[1], Naiomy Rios[1], Narayanan Parameswaran [1], Laura McCabe[1]. [1]Michigan State University , United States
Disclosures: Jonathan Schepper, None

SU0320 **Prior Focal Radiation Causes Atrophic Nonunion Healing in Mouse Long Bone Fracture**
Luqiang Wang*[1], Abhishek Chandra[2], Robert Tower[1], Jaimo Ahn[1], Yejia Zhang[1], Ling Qin[1]. [1]Department of Orthopaedic Surgery, Perelman School of Medicine, University of Pennsylvania, United States, [2]Department of Physiology and Biomedical Engineering, Division of Geriatric Medicine & Gerontology, Mayo Clinic, United States
Disclosures: Luqiang Wang, None

SU0321 **Gut Microbiome Contributes to Altered Bone Homeostasis in SCT and SCD Mice**
Liping Xiao*[1], Julia Oh[2], Patience Meo Burt[1], Kimberly Pantoja[1], Marja Hurley[1]. [1]UConn Health, United States, [2]Jackson Laboraroty, United States
Disclosures: Liping Xiao, None

SU0322 **Hypoparathyroidism Presenting as Acute Cardiomyopathy**
Rahul Agarwal*[1], Lee R. Goldberg[2], Mona Al Mukaddam[1]. [1]University of Pennsylvania, Division of Endocrinology, Diabetes and Metabolism, United States, [2]University of Pennsylvania, Division of Cardiovascular Medicine, United States
Disclosures: Rahul Agarwal, None

SU0323 **Trabecular Bone of the Appendicular and the Axial Skeleton Demonstrate Opposite Impairments in Adults with X-Linked Hypophosphatemic Rickets**
Thomas Funck-Brentano*[1], Agnès Ostertag[2], Sylvie Fernandez[2], Corinne Collet[3], Martine Cohen-Solal[2]. [1]Department of Rheumatology, Lariboisière Teaching Hospital, Univ Paris Diderot, Université Sorbonne Paris Cité, France, [2]BIOSCAR UMRS 1132, Université Paris Diderot, Sorbonne Paris Cité, INSERM, France, [3]Department of Biochemistry, Lariboisière Teaching Hospital, Univ Paris Diderot, Université Sorbonne Paris Cité, France
Disclosures: Thomas Funck-Brentano, None

SU0324 **Generalized Skeletal Sclerosis in a Two-Year Old Girl: Expanding the Phenotype of α-Mannosidosis**
Gary S. Gottesman*[1], Philippe M. Campeau[2], Margaret Huskey[3], Angela Nenninger[1], Deborah V. Novack[3], William H. McAlister[4], Steven Mumm[3]. [1]Center for Metabolic Bone Disease and Molecular Research, Shriners Hospital for Children, United States, [2]Department of Pediatrics, University of Montreal, Canada, [3]Division of Bone and Mineral Diseases, Washington University School of Medicine, United States, [4]Mallinckrodt Institute of Radiology, Washington University School of Medicine, United States
Disclosures: Gary S. Gottesman, None

SU0325 **Effects of Burosumab (KRN23), a Human Monoclonal Antibody to FGF23, in Patients with Tumor-Induced Osteomalacia (TIO) or Epidermal Nevus Syndrome (ENS)**
Suzanne Jan De Beur*[1], Paul D. Miller[2], Thomas J. Weber[3], Munro Peacock[4], Mary D. Ruppe[5], Karl Insogna[6], Diana Luca[7], Christina Theodore-Oklota[7], Javier San Martin[7], Thomas Carpenter[6]. [1]Johns Hopkins University School of Medicine, United States, [2]Colorado Center for Bone Research, United States, [3]Duke University, United States, [4]Indiana University School of Medicine, United States, [5]Houston Methodist Hospital, United States, [6]Yale University School of Medicine, United States, [7]Ultragenyx Pharmaceutical Inc., United States
Disclosures: Suzanne Jan De Beur, Ultragenyx Pharmaceutical Inc., Consultant

SU0326 **Uptake of Influenza Vaccine in UK Patients with Fibrodysplasia Ossificans Progressiva**
Richard Keen*[1], Nataliya Gak[1], Jacqueline Vinton[1], Benjamin Jacobs[1]. [1]Royal National Orthopaedic Hospital, United Kingdom
Disclosures: Richard Keen, None

SU0327 **Pulmonary Function in Adults with XLH who Display Kyphoscoliosis**
Greg Newman*[1], Ilene Rosenberg[1], Ramon Gonzalez[1], Steven Tommasini[2], Carolyn Macica[1]. [1]Quinnipiac University Frank H. Netter MD School of Medicine, United States, [2]Yale School of Medicine, United States
Disclosures: Greg Newman, None

SU0328 **A novel *COL1A2* C-propeptide cleavage site mutation causing osteogenesis imperfecta with high bone mass**
Tim Rolvien*[1], Uwe Kornak[2], Julian Stürznickel[1], Stefan Mundlos[2], Thorsten Schinke[1], Michael Amling[1], Ralf Oheim[1]. [1]Department of Osteology and Biomechanics, University Medical Center Hamburg-Eppendorf, Germany, [2]Institute of Medical Genetics and Human Genetics, Charité Universitätsmedizin Berlin, Germany
Disclosures: Tim Rolvien, None

SU0329 **Determinants Of Impaired Quality Of Life In Patients With Fibrous Dysplasia**
Marlous Rotman*[1], Bas Majoor[1], Cornelie Andela[1], Jens Bruggeman[1], Michiel van de Sande[1], Ad Kaptein[1], Neveen Hamdy[1], Sander Dijkstra[1], Natasha Appelman-Dijkstra[1]. [1]Leiden University Medical Center, Netherlands
Disclosures: Marlous Rotman, None

SU0330 **Long-term Outcome of Patients Affected by Jansen's Disease and *In Vitro* Impact of An Inverse Agonist on Different Activating Pthr1 Mutations**
Hiroshi Saito*[1], Hiroshi Noda[1], Thomas J Gardella[2], Harald Jüppner[2]. [1]Massachusetts General Hospital, Harvard University, United States, [2]Massachusetts General Hospital and Harvard Medical School, United States
Disclosures: Hiroshi Saito, None

SU0331 **Improvement of physical function and bone marrow oedema in an adult patient with pediatric-onset hypophosphatasia after 16 weeks of asfotase alfa therapy**
Tobias Schmidt*[1], Michael Amling[1], Florian Barvencik[1]. [1]Department of Osteology and Biomechanics, University Medical Center Hamburg Eppendorf, Germany
Disclosures: Tobias Schmidt, None

SU0332 **Effect of Zoledronic acid treatment in cases of non-infectious osteomyelitis of the jaw**
Peter Schwarz*[1]. [1]Department of Endocrinologi, Rigshospitalet and Copenhagen University, Denmark
Disclosures: Peter Schwarz, None

SU0333 **Hypercalcemia of malignancy in a patient with hypoparathyroidism: a complicated but treatable condition.**
Marielly Sierra*[1], lillian Haddock[2], Margarita Ramirez[2], Milliette Alvarado[2], Loida Gonzalez[2]. [1]University of Puerto Rico, Endocrinology Department, Puerto Rico, [2]University of Puerto Rico. Recinto de ciencias medicas. Endocrinology section, Puerto Rico
Disclosures: Marielly Sierra, None

SU0334 **Effect of Asfostase Alfa Treatment on Health States and Ambulatory Function Among Patients With Hypophosphatasia**
Andrew Lloyd*[1], Ioannis C Tomazos[2], Katy Gallop[1], Scott Moseley[2], Bonnie MK Donato[2], Gilbert L'Italien[2]. [1]AcasterLloyd Consulting Ltd., United Kingdom, [2]Alexion Pharmaceuticals, Inc., United States
Disclosures: Andrew Lloyd, Alexion Pharmaceuticals, Inc., Grant/Research Support

SU0335 **Atypical femoral fracture in autosomal dominant type II osteopetrosis**
Kyu Hyun Yang*[1], Young Chang Park[1], Xuan Lin Zheng[1], Hyun Soo Moon[1]. [1]Yonsei University, Korea, Republic of
Disclosures: Kyu Hyun Yang, None

SU0336 **Automated segmentation and analysis of heterotopic ossification using *in vivo* micro-computed tomography (μCT)**

Ali Behrooz*[1], Peter Waterman[1], Julie Czupryna[1], Thomas Backus[2], Nikita Kondratiev[2], Jennifer Lachey[2]. [1]PerkinElmer, United States, [2]Keros Therapeutics, United States

Disclosures: Ali Behrooz, PerkinElmer, Inc., Grant/Research Support

SU0337 **Pharmacokinetics and Cardiovascular Assessment of TransCon CNP, a Sustained-Release C-type natriuretic Peptide Prodrug, for the Treatment of Achondroplasia**

Caroline Rasmussen*[1], Ulrich Hersel[2], Tom Woods[3], Thomas Wegge[2], Frank Faltinger[2], Albert Brennauer[3], Per Mygind[1], Kennett Sprogoe[1], Vibeke Miller Breinholt[1]. [1]Ascendis Pharma A/S, Denmark, [2]Ascendis Pharma GmbH, Denmark, [3]Ascendis Pharma GmbH, Germany

Disclosures: Caroline Rasmussen, None

SU0338 **Longitudinal micro-CT study assessing the development of enthesopathies and osteoarthritis in the murine model of X-Linked Hypophosphatemia**

Karine Briot*[1], Benjamin Salmon [2], Carole-Anne Faraji-Bellée[3], Olivier Fogel [4], Aurélie Benoit [5], Thorsten Schinke[6], Agnès Linglart[7], Corinne Miceli-Richard[8], Christian Roux[9], Catherine Chaussain [10], Claire Bardet[11]. [1]AP-HP Service Rhumatologie B Hôpital Cochin, Paris, Reference Center for Rare Diseases of Calcium and Phosphorus Metabolism, France. and Medical School Paris Descartes University, France., France, [2]EA 4462, Laboratory Orofacial Pathologies, Imaging and Biotherapies, School of Dentistry Paris Descartes University Sorbonne Paris Cité, France.AP-HP Department of Odontology, Bretonneau Hospital, Paris, France, France, [3]EA 4462, Laboratory Orofacial Pathologies, Imaging and Biotherapies, School of Dentistry Paris Descartes University Sorbonne Paris Cité, France, France, [4]AP-HP Service Rhumatologie B Hôpital Cochin, Paris, and Medical School Paris Descartes University, France, France, [5]EA 2496, URB2I, School of Dentistry University Paris Descartes Sorbonne Paris Cité, France, France, [6]Department of Osteology and Biomechanics, University Medical Center Hamburg Eppendorf, Hamburg, Germany., Germany, [7]Reference Center for Rare Diseases of Calcium and Phosphorus Metabolism, FranceAP-HP Department of Pediatric Endocrinology, Kremlin Bicêtre Hospital, School of Medicine University Paris Sud, France. ., France, [8]AP-HP Service Rhumatologie B Hôpital Cochin, Paris, and Medical School Paris Descartes University, FrancePasteur Institute, Immunoregulation Unit, Paris, France. , France, [9]AP-HP Service Rhumatologie B Hôpital Cochin, Paris, and Medical School Paris Descartes University, France.Reference Center for Rare Diseases of Calcium and Phosphorus Metabolism, France. , France, [10]EA 4462, Laboratory Orofacial Pathologies, Imaging and Biotherapies, School of Dentistry Paris Descartes University Sorbonne Paris Cité, France.Reference Center for Rare Diseases of Calcium and Phosphorus Metabolism, France. , France, [11]EA 4462, Laboratory Orofacial Pathologies, Imaging and Biotherapies, School of Dentistry Paris Descartes University Sorbonne Paris Cité, France., France

Disclosures: Karine Briot, None

SU0339 **The Experience of XLH in Adulthood: Biopsychosocial Assessment, Needs, and Concerns.**

Maya Doyle*[1], Carolyn Macica[2]. [1]Quinnipiac University, United States, [2]Quinnipiac University, Netter School of Medicine, United States

Disclosures: Maya Doyle, None

SU0340 **A Chaperone Complex Modulates Lysyl Hydroxylation of Type I Procollagen**

Ivan Duran*[1], Deborah Krakow[1]. [1]UCLA, United States

Disclosures: Ivan Duran, None

SU0341 **Bone targeted bisphosphonate-antibiotic conjugates for the treatment of osteomyelitis biofilms**

Parish Sedghizadeh *[1], Frank Ebetino[2], Shuting Sun[2], Keivan Sadrerafi[2], Adam Junka[3], Susan Mahabady[1], Jeffrey Neighbors[4], Graham Russell[5], Charles E. McKenna[6]. [1]Ostrow School of Dentistry, University of Southern California, United States, [2]BioVinc, United States, [3]Wroclaw Medical University, Poland, [4]Penn State University, United States, [5]University of Oxford, United Kingdom, [6]Dept. of Chemistry, University of Southern California, United States

Disclosures: Parish Sedghizadeh , BioVinc, Major Stock Shareholder

SU0342 **The Expansion of Heterotopic Bone in Fibrodysplasia Ossificans Progressiva is Activin A-Dependent**

Sarah Hatsell*[1], Jaymin Upadhyay[1], LiQin Xie[1], Lily Huang[1], Nanditha Das[1], Rachel Stewart[2], Morgan Lyon[2], Keryn Palmer[2], Saathyaki Rajamani[1], Chris Graul[2], Merryl Lobo[2], Tyler Wellman[2], Edward Soares[2], Matt Silva[2], Jacob Hesterman[2], Kalyan Nannuru[1], Vincent Idone[1], Andrew Murphy[1], Aris Economides[1]. [1]Regeneron Pharmaceuticals, Inc., United States, [2]INVICRO, United States

Disclosures: Sarah Hatsell, Regeneron Pharmaceuticals, Inc., Other Financial or Material Support

SU0343 **Efficacy of Regulatory T Cell Transplantation in a Mouse Model of Osteogenesis Imperfecta**

Inhong Kang*[1], Shilpak Chatterjee[1], Uday Baliga[1], Shikhar Mehrotra[1], Meenal Mehrotra[1]. [1]Medical University of South Carolina, United States

Disclosures: Inhong Kang, None

SU0344 **Functional Analysis of a Candidate of Causal Gene for Ossification of the Posterior Longitudinal Ligament of the Spine, *CDC5L***

Shingo Maeda*[1], Masahiro Nakajima[2], Ichiro Kawamura[3], Yuhei Yahiro[1], Hiroyuki Tominaga[3], Yasuhiro Ishidou[1], Eiji Taketomi[4], Shiro Ikegawa[2], Setsuro Komiya[3]. [1]Department of Medical Joint Materials, Graduate School of Medical and Dental Sciences, Kagoshima University, Japan, [2]Laboratory for Bone and Joint Diseases, Center for Integrative Medical Sciences, RIKEN, Japan, [3]Department of Orthopaedic Surgery, Graduate School of Medical and Dental Sciences, Kagoshima University, Japan, [4]Japanese Red Cross Kagoshima Hospital, Japan

Disclosures: Shingo Maeda, None

SU0345 **PLCγ2 differentially modulates pro-inflammatory macrophages through DAG and Calcium pathways in arthritic complications**

Sahil Mahajan*[1], Corinne Decker[2], Elizabeth Mellins[3], Roberta Faccio[2]. [1]Department of Orthopedics, Washington University, School of Medicine, United States, [2]Department of Orthopaedics, Washington University, School of Medicine, United States, [3]Department of Pediatrics, Programme in Immunology, Stanford University, United States

Disclosures: Sahil Mahajan, None

SU0346 **Pin1 as a therapeutic target in craniosynostosis**

Hye-rim SHIN*[1], Han-sol BAE[1], Bong-su KIM[2], Rabia Islam[1], Young-dan CHO[1], Won-joon YOON[1], Kyung-mi WOO[2], Jeong-Hwa Baek[1], Hyun-mo RYOO[1]. [1]Seoul National University, Korea, Republic of, [2]Seoul Nationl University, Korea, Republic of

Disclosures: Hye-rim SHIN, None

SU0347 **Characterization of Osteofibrous Dysplasia-Causing MET Mutation in Osteoblast and Osteoclast Signaling**

Ralph Zirngibl*[1], Andrew Wang[1], Raymond Poon[2], Benjamin Alman[3], Peter Kannu[2], Irina Voronov[1]. [1]Faculty of Dentistry, University of Toronto, Canada, [2]The Hospital for Sick Children, Canada, [3]Duke University, United States

Disclosures: Ralph Zirngibl, None

SU0348 **Pathogenesis of the Inherited Skeletal Overgrowth Disorder Caused by Activating Mutations in Natriuretic Peptide Receptor B**

Keiko Yamamoto*[1], Masanobu Kawai[1], Miwa Yamazaki[1], Kanako Tachikawa[1], Takuo Kubota[2], Keiichi Ozono[2], Toshimi Michigami[1]. [1]Department of Bone and Mineral Research, Research Institute, Osaka Women's and Children's Hospital, Osaka Prefectural Hospital Organization, Japan, [2]Department of Pediatrics, Osaka University Graduate School of Medicine, Japan

Disclosures: Keiko Yamamoto, None

SU0349 **Association Between Vitamin D and Frailty in Community-Dwelling Older Women**

David Buchebner*[1], Fiona McGuigan[2], Patrik Bartosch[2], Kristina Akesson[2]. [1]Hallands Hospital, Department of Internal Medicine, Sweden, [2]Lund University, Department of Clinical Science Malmö, Clinical and Molecular Osteoporosis Research Unit, Sweden

Disclosures: David Buchebner, None

SU0350 **High Prevalence of Sarcopenia Among Binge Drinking Elderly Women: *A Nationwide Population-Based Study***

Jun-Il Yoo*[1], Dong Won Byun[2], Yong-Chan Ha[1], Young-Kyun Lee[3], Hana Choi[4], Moon-Jib Yoo[4], Kyung-Hoi Koo[3]. [1]Chung-Ang University College of Medicine, Korea, Republic of, [2]SoonChunHyang University Hospital, Korea, Republic of, [3]Seoul National University Bundang Hospital, Korea, Republic of, [4]Dankook University College of Medicine, Korea, Republic of

Disclosures: Jun-Il Yoo, None

SU0351 **Does PROMIS29 correlate with Frailty in hip fracture patients?**

Omer Or*[1], Joseph M. Lane[2], Omar Halawa[1], Eric Marty[1], Rehan Sayied[1], Yi Liu[1], Jackie Szymonifka[1], Kirsten Grueter[1], Ridhi Sachdev[1], Lisa A. Mandl[2]. [1]Hospital for Special Surgery, United States, [2]Hospital for Special Surgery, Weill Cornell Medicine, United States

Disclosures: Omer Or, None

SU0352 **Withdrawn**

SU0353 **A Multifaceted Intervention Improves Functional Fitness in Pre-frail/frail Seniors: Results from the TAPESTRY-TRIAGE Study**

Courtney Kennedy*[1], George Ioannidis[1], Larkin Lamarche[1], Doug Oliver[1], Lisa Dolovich[1], Sarah Radcliffe[1], Aidan Giangregorio[1], Alexandra Papaioannou[1]. [1]McMaster University, Canada

Disclosures: Courtney Kennedy, None

SU0354 **Spinal Alignment, Muscular Strength, and Quality of Life in Postmenopausal Osteoporosis: A Cross-sectional Comparative Study with Healthy Volunteers**

Naohisa Miyakoshi*[1], Daisuke Kudo[1], Michio Hongo[1], Yuji Kasukawa[1], Yoshinori Ishikawa[1], Yoichi Shimada[1]. [1]Department of Orthopedic Surgery, Akita University Graduate School of Medicine, Japan

Disclosures: Naohisa Miyakoshi, None

SU0355 **Determinants of bone mineral density and insulin resistance: Area, strength or composition of muscle?**

Hye-Sun Park*[1], JungSoo Lim[2], Yumie Rhee[3], Han Seok Choi[4], Sung-Kil Lim[1]. [1]Division of Endocrinology and Metabolism, Department of Internal Medicine, Yonsei University College of Medicine, Korea, Republic of, [2]Division of Endocrinology and Metabolism, Department of Internal Medicine, Yonsei University Wonju College of Medicine, Korea, Republic of, [3]Department of Internal Medicine, Endocrine Research Institute, Severance Hospital, Yonsei University College of Medicine, Korea, Republic of, [4]Division of Endocrinology and Metabolism, Department of Internal Medicine, Dongguk University Ilsan Hospital, Korea, Republic of

Disclosures: Hye-Sun Park, None

SU0356 **Vitamin D and Falls in Older African American Women - the PODA trial.**
Rakhil Rubinova*[1], Mageda Mikhail[1], Melissa Fazzari[1], Ruban Dhaliwal[2], Subhashini Katumuluwa[1], John Aloia[1]. [1]NYU Winthrop Hospital , United States, [2]SUNY Upstate Medical University, United States
Disclosures: Rakhil Rubinova, None

LATE-BREAKING POSTERS II

12:30 pm - 2:30 pm **Colorado Convention Center**

ASBMR Discovery Hall - Exhibit Hall A & B1

LB-SU0357 **Analysis of *GCM2* Sequence Variants in Sporadic Parathyroid Adenomas**
Aaliyah Riccardi*[1], Taylor Brown[2], Reju Korah[2], Timothy Murtha[2], Justin Bellizzi[1], Kourosh Parham[3], Tobias Carling[2], Jessica Costa [1], Andrew Arnold[1]. [1]Center for Molecular Medicine, University of Connecticut School of Medicine, United States, [2]Yale Endocrine Neoplasia Laboratory, Yale School of Medicine, United States, [3]University of Connecticut School of Medicine, United States
Disclosures: Aaliyah Riccardi, None

LB-SU0358 **Precision assessment of cortical thickness and volumetric bone mineral density derived from hip DXA scans using 3D DXA.**
Ludovic Humbert*[1], Alejandro Hinojosa[1], Edu Cortés[1], Josep Potau Gines[2], Luis Del Rio[3], Renaud Winzenrieth[1]. [1]Galgo Medical SL, Spain, [2]Laboratorio de Anatomia, Hospital Clinic, Spain, [3]Cetir Grupo Medic, Spain
Disclosures: Ludovic Humbert, Galgo Medical, Major Stock Shareholder

LB-SU0359 **Bone phenotype of human immune system engrafted mice**
Tiina E Kähkönen*[1], Mari I Suominen[1], Jussi M Halleen[1], Azusa Tanaka[2], Michael Seiler[2], Jenni Bernoulli[1], Jukka Morko[3]. [1]Pharmatest Services Ltd, Finland, [2]Taconic Biosciences, United States, [3]Pharmatest Services Ltd, United States
Disclosures: Tiina E Kähkönen, None

LB-SU0360 **In US Females, Adult Proportions of Head to Whole Body Bone Mass Ratio Stabilize Early, Allowing Evaluation of Whole Body BMC from Age 12 years, or Menarche, Onward**
Jodi N. Dowthwaite*[1], Stephanie A. Kliethermes[2], Tamara A. Scerpella[2]. [1]SUNY Upstate Medical University, United States, [2]University of Wisconsin- Madison, United States
Disclosures: Jodi N. Dowthwaite, None

LB-SU0361 **Female mice are protected from the osteolytic effect of IAP antagonists, independent of estrogen**
Allahdad Zarei*[1], Jesse Gibbs[1], Chang Yang[1], Jennifer Davis[1], Anna Ballard[1], Linda Cox[1], Deborah V. Novack[1]. [1]Washington University School of Medicine, United States
Disclosures: Allahdad Zarei, None

LB-SU0362 **Measurement of lower extremity muscle by HR-pQCT: comparison between distal and diaphyseal sites, pQCT, lean mass by DXA, and physical performance**
Andrew Burghardt*[1], Nicolas Vilayphiou[2], Elsa S Strotmeyer[3], Paolo Caserotti[4], Deborah Kado[5], Iva Miljkovic[3], Peggy M Cawthon[1], Dennis M Black[1], Sharmila Majumdar[1], Jane A Cauley[3], Eric S Orwoll[6]. [1]University of California, San Francisco, United States, [2]Scanco Medical AG, Switzerland, [3]University of Pittsburgh, United States, [4]University of Southern Denmark, Denmark, [5]University of California, San Diego, United States, [6]Oregon Health & Science University, United States
Disclosures: Andrew Burghardt, None

LB-SU0363 **Loss of sex steroids attenuates traumatic heterotopic ossification**
Semahat Serra Ucer*[1], Charles Hwang[1], Anita Vaishampayan[1], Michael T. Chung[1], John Li[1], Chase Pagani[1], Joe Habbouche[1], Shuli Li[1], Benjamin Levi[1]. [1]University of Michigan, United States
Disclosures: Semahat Serra Ucer, None

LB-SU0364 **Wnt Signaling Inhibitor Characteristics According to Bone Status and Physical Activity Levels in Young and Middle-aged Premenopausal Women**

Pragya Sharma Ghimire*[1], Samuel Buchanan[1], Debra Bemben[1], Michael Bemben[1], Allen Knehans[2], Jason Campbell[1]. [1]The University of Oklahoma, United States, [2]The University of Oklahoma Health Sciences Center, United States

Disclosures: Pragya Sharma Ghimire, None

LB-SU0365 **Outbred CFW Mice Exhibit a Bimodal Bone Mass Distribution**

Meghan Moran*[1], Rick Sumner[1], Abraham Palmer[2], Maleeha Mashiatulla[1]. [1]Rush University Medical Center, United States, [2]UC San Diego, United States

Disclosures: Meghan Moran, None

LB-SU0366 **BMP2 Regulates Entheseal Bone Formation in Antigen-Induced Arthritis**

Yukiko Maeda*[1], Catherine Manning[1], Ellen Gravallese[1]. [1]University of Massachusetts Medical School, United States

Disclosures: Yukiko Maeda, Abbvie, Grant/Research Support

LB-SU0367 **Imbalanced bone osteogenesis and adipogenesis in mice deficient of the chemokine Cxcl12 in the bone mesenchymal stem/progenitor cells**

Yi-shiuan Tzeng*[1], Ni-chun Chung[2], Yu-ren Chen[1], Yuan-ye Kuo[1], Dar-ming Lai[2]. [1]Graduate Institute of Oncology, National Taiwan University, Taiwan, Province of China, [2]Department of Surgery, National Taiwan University Hospital, Taiwan, Province of China

Disclosures: Yi-shiuan Tzeng, None

LB-SU0368 **Effect of Yerba Mate (*Ilex paraguariensis*) on Osteoblastic Cells**

Lucas R Brun*[1], Laureana Villareal[1], María J Rico[2], Viviana R Rozados [2], O.Graciela Scharovsky[2], Verónica E Di Loreto[1]. [1]Laboratorio de Biología Ósea. Facultad de Ciencias Médicas UNR, Argentina, [2]Instituto de Genética Experimental, Argentina

Disclosures: Lucas R Brun, None

LB-SU0369 **In vivo and In vitro Absence of 5-LO Gene Is Related to Higher Osteogenic Profile**

Flavia Amadeu de Oliveira*[1], Cintia Kazuko Tokuhara[1], José Carlos Guareschi Filho[1], Adriana Arruda Matos[1], João Paulo Domezi[1], Tania Mary Cestari[1], Vimal Veeriah[2], Camila Peres-Buzalaf[3], Rodrigo Cardoso de Oliveira[1]. [1]University of Sao Paulo, Brazil, [2]The Kennedy Institute of Rheumatology- University of Oxford, United Kingdom, [3]University of Sagrado Coração, Brazil

Disclosures: Flavia Amadeu de Oliveira, None

LB-SU0370 **Transcriptome profiling of stem cell-derived osteoblasts identifies genes associated with osteoblast differentiation**

Hui Zhu*[1], Takaharu Kimura[1], Joy Wu[1]. [1]Stanford University School of Medicine, United States

Disclosures: Hui Zhu, None

LB-SU0371 **Myricitrin Inhibits Osteoclastogenesis by attenuating the NF-?B and MAPKs signaling pathway and Prevents Bone Loss in vivo**

lingbo kong*[1], xiaobin yang[1], baorong he[1], dingjun hao[1]. [1]xi'an jiaotong university, China

Disclosures: lingbo kong, None

LB-SU0372 **Bone CLARITY reveals that anti-sclerostin antibody penetrates the lacunar canalicular system in mice under physiological loading conditions**

Alon Greenbaum*[1], Ken Chan[2], Rogely Boyce[3], Hossein Salimi-Moosavi[4], Helen J. McBride[3], Viviana Gradinaru[1]. [1]Division of Biology and Biological Engineering, California Institute of Technology, Pasadena, CA 91125, USA, United States, [2]Division of Biology and Biological Engineering, California Institute of Technology, Pasadena, CA 91125, USA., United States, [3]Comparative Biology and Safety Sciences, Amgen, Thousand Oaks, CA 91320, USA, United States, [4]Pharmacokinetics and Drug Metabolism, Amgen, Thousand Oaks, CA 91320, USA, United States

Disclosures: Alon Greenbaum, AMGEN, Grant/Research Support

LB-SU0373 **Primary Osteoporosis Screening in U.S. Male Veterans is Effective in High Risk Subgroups, but not Overall**

Cathleen Colon-Emeric*[1], Carl Pieper[1], Kenneth Lyles[1], Courtney VanHoutven[1], Joanne LaFleur[2], Robert Adler[3]. [1]Duke University, United States, [2]University of Utah, United States, [3]Richmond VAMC, United States

Disclosures: Cathleen Colon-Emeric, None

LB-SU0374 **Changes in volumetric BMD and cortical thickness measured by 3D-DXA in the lumbar spine after 24 months of Denosumab treatment**

Mirella Lopez Picazo*[1], Ludovic Humbert[2], Miguel Angel Gonzalez Ballester[3], Luis Del Rio[4], Renaud Winzenrieth[1], Silvana Di Gregorio[5]. [1]Galgo Medical, Spain, [2]Galgo Medical SL, Spain, [3]SIMBioSys, Universitat Pompeu Fabra, Spain, [4]CETIR Grup Mèdic, Spain, [5]CETIR Grup Medic, Spain

Disclosures: Mirella Lopez Picazo, None

LB-SU0375 **Prevalence of morphologic femoral variants in a large single centre cohort; Implications for clinical application and therapeutic management.**

Laurence Rubin*[1], Robert Josse[1], Erin Norris[1], Shabbir Mewa[1], Karl Bruckmueller[2], Angela Cheung[3]. [1]St. Michael's Hospital and the University of Toronto, Canada, [2]St. Michael's Hospital, Canada, [3]UHN and the University of Toronto, Canada

Disclosures: Laurence Rubin, None

LB-SU0376 **Parity and Lactation Are Not Associated with BMD Loss or Incident Major Fragility Fractures Over 15 Years of Follow-Up: Canadian Multicentre Osteoporosis Study (CaM*os*)**

Sandra Cooke-Hubley*[1], Gao Zhiwei[1], Gerald Mugford[1], Stephanie M. Kaiser[2], David Goltzman[3], WIlliam D. Leslie[4], K. Shawn Davison[5], Jerilynn C. Prior[6], Christopher S. Kovacs[1]. [1]Memorial University of Newfoundland, Canada, [2]Dalhousie University, Canada, [3]McGill University, Canada, [4]University of Manitoba, Canada, [5]A Priori Medical Sciences, Canada, [6]University of British Columbia, Canada

Disclosures: Sandra Cooke-Hubley, None

LB-SU0377 **Patients' Perceptions of Case-Managed Osteoporosis Care as Acceptable, Accessible and Appropriate: Qualitative Data from a Randomized Trial**

Lisa Wozniak*[1], Lauren Beaupre[1], Brian Rowe[1], Finlay McAlister[1], Debbie Bellerose[1], Jeffrey Johnson[1], Sumit Majumdar[1]. [1]University of Alberta, Canada

Disclosures: Lisa Wozniak, None

LB-SU0378 **Intra-individual changes in total versus free 25-hydroxyvitamin D associated with changes in 24,25-dihydroxyvitamin D and parathyroid hormone during 16 weeks of high-dose, daily supplementation with cholecalciferol or calcifediol**

Albert Shieh*[1], Christina Ma[1], Rene Chun[1], Brandon Rafison[1], Carter Gottlieb[1], Martin Hewison[2], John Adams[1]. [1]UCLA, United States, [2]University of Birmingham, United Kingdom

Disclosures: Albert Shieh, None

LB-SU0379 **Bone Structure and Turnover Status in Women with and without Atypical Femur Fracture Following Long-term Bisphosphonate Therapy**

Ruban Dhaliwal*[1], Shijing Qiu[2], Elizabeth Warner[2], Donald Cibula[3], Sudhaker D. Rao[2]. [1]Division of Endocrinology, Diabetes and Metabolism, State University of New York Upstate Medical University, United States, [2]Bone and Mineral Research Laboratory, Henry Ford Hospital, United States, [3]Department of Public Health, State University of New York Upstate Medical University, United States

Disclosures: Ruban Dhaliwal, None

LB-SU0380 **Serum Periostin is Positively Correlated with Leptin in Normal Weight and Obese Adults**

Amy Evans*[1], Fatma Gossiel[1], Margaret Paggiosi[1], Richard Eastell[1], Jennifer Walsh[1]. [1]Academic Unit of Bone Metabolism, University of Sheffield, United Kingdom

Disclosures: Amy Evans, None

LB-SU0381 **After Two Years Of Bone Loss, Cathepsin K Inhibition Increases Lumbar Vertebral Strength Independent Of Changes In Trabecular Bone Morphology**

Isabel Colon-Bernal*[1], Le Duong[2], Kenneth Kozloff[1], James Henderson[3], Mark Banaszak Holl[1]. [1]University of Michigan, United States, [2]Merck & Co. (retired), United States, [3]Center for Statistics, Computing and Analytics Research, United States

Disclosures: Isabel Colon-Bernal, None

LB-SU0382 **Rebound-associated bone loss after discontinuation of denosumab in 101 postmenopausal women: preliminary results of an observational study (Disco DMAb)**

Albrecht W Popp*[1], Helene Buffat[1], Bita Yousefi[1], Christoph Senn[1], Sandra Grifone[1], Kurt Lippuner[1]. [1]Department of Osteoporosis, Inselspital, Bern University Hospital, University of Bern, Switzerland

Disclosures: Albrecht W Popp, None

LB-SU0383 **Effect of Alendronic acid on fracture healing - A Randomised Clinical Trial**

Stuart Ralston*[1], Andrew Duckworth[1], Christopher Tuck[1], Aryally Rodriguez[1], Gordon Murray[1], Margaret McQueen[1]. [1]University of Edinburgh, United Kingdom

Disclosures: Stuart Ralston, Novartis, Other Financial or Material Support

LB-SU0384 **Blackberry and raspberry attenuate angiotensin-II induced osteoclastogenesis**

Rafaela Feresin*[1], Ha-neui Kim[2], Maria Almeida[2], Shengyu Mu[2], Christy Simecka[2]. [1]Georgia State Univeristy, United States, [2]University of Arkansas for Medical Sciences, United States

Disclosures: Rafaela Feresin, None

LB-SU0385 **Pharmacologically Targeting Aging Slows Age-Related Bone Loss**

Simon Melov*[14], Daniel Evans[2], Ha-Neui Kim[3], Monique O'leary[14], Li Han[3], Ryan Murphy[14], Kristin Koenig[14], Michael Presley[14], Emmeline Academia[14], Brittany Garrett[14], Matt Laye[14], Daniel Edgar[14], Chris Zambatoro[14], Tracey Barhydt[14], Colleen Dewey[14], Jarrot Mayfield[14], Joy Wilson[14], Silvestre Alavez[14], Brian Kennedy[14], Julie Andersen[14], Pankaj Kapahi[14], Maria Schuller Almeida[3], Gordon Lithgow[14]. [1]Buck Institute for Research on Aging, United States, [2]CPMC, United States, [3]University of Arkansas for Medical Sciences, United States, [4]Buck Institute for Research on aging, United States

Disclosures: Simon Melov, None

LB-SU0386 **Improvements in Motor Function and Cognitive Development With Up to 6 Years of Treatment With Asfotase Alfa in Infants and Children Aged =5 Years With Hypophosphatasia**

Christine Hofmann*[1], Johannes Liese[1], Paul Harmatz[2], Jerry Vockley[3], Wolfgang Högler[4], Shanggen Zhou[5], Andrew Denker[6], Anna Petryk[6], Cheryl Rockman-Greenberg[7]. [1]University Children's Hospital, University of Würzburg, Germany, [2]UCSF Benioff Children's Hospital Oakland, United States, [3]University of Pittsburgh School of Medicine and Graduate School of Public Health, United States, [4]Birmingham Children's Hospital and Institute of Metabolism and Systems Research, University of Birmingham, United Kingdom, [5]Chiltern International Inc., United States, [6]Alexion Pharmaceuticals, Inc., United States, [7]Children's Hospital Research Institute of Manitoba and University of Manitoba, Canada

Disclosures: Christine Hofmann, Alexion Pharmaceuticals, Inc., Grant/Research Support

LB-SU0387 **Severe 1,25-dihydroxyvitamin D–mediated hypercalcemia, polyarticular synovial thickening, and resolving generalized osteosclerosis associated with a heterozygous *NOD2* mutation in a 3-year-old girl: a new disorder**

Michael P. Whyte*[1], Emilina Lim[2], Gary S. Gottesman[1], Lien Trinh[2], William H. McAlister[3], Deborah V. Novack[4], Vinieth N. Bijanki[5], Angela Nenninger[1], Steven Mumm[4], David Buchbinder[2]. [1]Shriners Hospital for Children, St. Louis, United States, [2]Children's Hospital of Orange County, United States, [3]St. Louis Children's Hospital, United States, [4]Washington University School of Medicine, United States, [5]Shriners Hospital for Children, United States

Disclosures: Michael P. Whyte, None

CONCURRENT ORALS: FRAX: RISK ASSESSMENT AND PRACTICAL APPLICATIONS

2:30 pm - 4:00 pm **Colorado Convention Center**

Mile High Ballroom

Co-Chairs

Dennis Black, Ph.D.
UC San Francisco, USA
Disclosures: Dennis Black, None

Suzanne Morin, M.D.
McGill University, Canada
Disclosures: Suzanne Morin, None

2:30 pm **1081** **Fracture Risk Indices from DXA-Based Finite Element Analysis Stratify Incident Fracture Risk Independently from FRAX: The Manitoba BMD Registry**

William Leslie*[1], Shuman Yang[1], Andrew Goertzen[1], Lisa Lix[1], Yunhua Luo[1]. [1]University of Manitoba, Canada

Disclosures: William Leslie, None

2:45 pm **1082** **FRAX for Fracture Prediction Shorter and Longer Than Ten Years: The Manitoba BMD Registry**

William Leslie*[1], Sumit Majumdar[2], Suzanne Morin[3], Lisa Lix[4], Helena Johannson[5], Anders Oden[5], Eugene McCloskey[5], John Kanis[5]. [1]University of Manitoba, Canada, [2]University of Alberta, Canada, [3]McGill University, Canada, [4]Lisa.Lix@umanitoba.ca, Canada, [5]University of Sheffield Medical School, United Kingdom

Disclosures: William Leslie, None

3:00 pm **1083** **The ROSE study:*R*isk-stratified *O*steoporosis *S*trategy *E*valuationEffectiveness of a two-step population based osteoporosis screening programme using FRAX® : A randomised prospective population-based study.**

katrine Hass Rubin*[1], Teresa Holmberg[24], Mette Juel Rothmann[24], Kim Brixen[3], Mikkel Hoejberg[24], Jeppe Gram[24], Michael Bech[24], Claus Glüer[5], Reinhard Barkmann[5], Anne Pernille Hermann[24]. [1]OPEN - Odense Patient Data Explorative Network, Denmark, [2]University of Southern Denmark, Denmark, [3]Odense University Hospital, Denmark, [4]University of southern Denmark, Denmark, [5]University of Kiel, Germany

Disclosures: katrine Hass Rubin, None

3:15 pm **1084** **Radius Microarchitecture Measured By HRpQCT Predicts Incident Fragility Fracture In The Subset Of Women With Moderately Decreased BMD – The QUALYOR Cohort**

Mathilde Proriol*[1], Blandine Merle[2], Emmanuelle Vignot[1], Jean-Baptiste Pialat[3], Anne-Marie Schott[4], Pawel Szulc[4], Eric Lespessailles[5], Roland Chapurlat[4]. [1]Hôpital Edouard Herriot, France, [2]INSERM, France, [3]Centre Hospitalier Lyon Sud, France, [4]INSERM U1033, France, [5]CHR d'Orléans, France

Disclosures: Mathilde Proriol, None

3:30 pm 1085 **Measures of physical performance or function, but not appendicular lean mass, predict new fractures independently of FRAX probability: Findings from MrOS**

Nicholas Harvey*[1], Anders Odén[2], Eric Orwoll[3], Jodi Lapidus[4], Timothy Kwok[5], Magnus Karlsson[6], Björn Rosengren[6], sten Ljunggren[7], Cyrus Cooper[1], Peggy Cawthon[8], John Kanis[9], Claes Ohlsson[2], Dan Mellström[2], Helena Johansson[10], Eugene McCloskey[9]. [1]MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, [2]Centre for Bone and Arthritis Research (CBAR), Sahlgrenska Academy, University of Gothenburg, Sweden, [3]Oregon Health & Science University, United States, [4]Department of Public Health and Preventive Medicine, Division of Biostatistics, Oregon Health and Science University, United States, [5]Department of Medicine & Therapeutics and School of Public Health, The Chinese University of Hong Kong, Hong Kong, [6]Clinical and Molecular Osteoporosis Research Unit, Department of Clinical Sciences Malmo, Lund University and Department of Orthopedics, Skane University Hospital, Sweden, [7]Department of Medical Sciences, University of Uppsala, Sweden, [8]Department of Epidemiology and Biostatistics, University of California, United States, [9]Centre for Metabolic Bone Diseases, University of Sheffield, United Kingdom, [10]Institute for Health and Aging, Catholic University of Australia, Australia

Disclosures: Nicholas Harvey, None

3:45 pm 1086 **Women Identified at High Risk of Hip Fracture based on FRAX are Responsive to Appropriate Osteoporosis Management: Results from the SCOOP Study of Population Screening**

Eugene McCloskey*[1], Nicholas Harvey[2], Helena Johansson[1], Lee Shepstone[3], Elizabeth Lenaghan[3], Cyrus Cooper[4], John Kanis[1], and the SCOOP Study Investigators[5]. [1]Centre for Metabolic Bone Diseases, University of Sheffield, United Kingdom, [2]MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, [3]University of East Anglia, United Kingdom, [4]MRC Lifecourse Epidemiology Unit, United Kingdom, [5]The SCOOP Study, United Kingdom

Disclosures: Eugene McCloskey, None

CONCURRENT ORALS: OSTEOBLASTS

2:30 pm - 4:00 pm **Colorado Convention Center**

Four Seasons Ballroom II-III

Co-Chairs

Francesca Gori, Ph.D.
Harvard School of Dental Medicine, USA
Disclosures: Francesca Gori, None

Gustavo Duque, M.D., Ph.D.
University of Melbourne
Disclosures: Gustavo Duque, None

2:30 pm 1087 **Osteoblasts are a major source of circulating Dickkopt-1 which is responsible for bone loss due to glucocorticoids in female mice**

Juliane Colditz*[1], Sylvia Thiele[2], Ulrike Baschant[2], Christof Niehrs[3], Lynda Bonewald[4], Lorenz Hofbauer[2], Martina Rauner[2]. [1]TU Dresden , Germany, [2]TU Dresden, Germany, [3]Uni Heidelberg, Germany, [4]Indiana University School of Medicine, United States

Disclosures: Juliane Colditz, None

2:45 pm 1088 **BMPs and Activins regulate bone mass through the competition of shared type 2 receptors**

Shek Man Chim*[1], Laura Gamer[1], Vicki Rosen[1]. [1]Department of Developmental Biology, Harvard School of Dental Medicine, United States

Disclosures: Shek Man Chim, None

3:00 pm **Increased Ca2+ signaling through altered CaV1.2 L-type Ca2+ channel activity promotes bone**
1089 **formation and prevents estrogen deficiency-induced bone loss**
Chike Cao*[1], Yinshi Ren[2], Anthony J. Mirando[2], Adam Barnett[1], Douglas Rouse[3], Se Hwan Mun[4], Kyung-Hyun Park-Min[4], Amy L. McNulty[2], Farshid Guilak[5], Courtney M. Karner[2], Matthew J. Hilton[2], Geoffrey S. Pitt[6]. [1]Ion channel Research Unit, Duke University Medical Center, United States, [2]Department of Orthopaedic Surgery, Duke University Medical Center, United States, [3]Department of Lab Animal Resources & Rodent Surgical and Genetic Services, Duke University Medical Center, United States, [4]Arthritis and Tissue Degeneration Program, Hospital for Special Surgery, United States, [5]Department of Orthopaedic Surgery, Washington University Medical Center, United States, [6]Cardiovascular Research Institute, Weill Cornell Medicine, United States
Disclosures: Chike Cao, None

3:15 pm **ASBMR 2017 Annual Meeting Young Investigator Award**
1090 **Osteoclast-secreted Cthrc1 Regulates Bone Remodeling through Waif1, a Receptor on Stromal/ Osteoblastic Cells**
Yukihiro Kohara*[1], Kazuhiko Matsuoka[2], Masako Ito[3], Kyoji Ikeda[1], Sunao Takeshita[1]. [1]National Center for Geriatrics and Gerontology, Japan, [2]Development and Disease Group, Cancer Cell Biology Programme, Spanish National Cancer Research Centre, Spain, [3]Medical Work-Life-Balance Center, Nagasaki University Hospital, Japan
Disclosures: Yukihiro Kohara, None

3:30 pm **Deletion of Menin Early in the Osteoblast Lineage Leads to Increased Bone Resorption, and**
1091 **Reduced Bone Mass and Strength in Adult Mice**
Jad Abi-Rafeh*[1], Ildi Troka[1], Lucie Canaff[1], Marie-Claude Faugere[2], Thomas L. Clemens[3], Geoffrey N. Hendy[1]. [1]McGill University, Canada, [2]University of Kentucky, United States, [3]Johns Hopkins University, United States
Disclosures: Jad Abi-Rafeh, None

3:45 pm **ASBMR 2017 Annual Meeting Young Investigator Award**
1092 **Gata4 directly controls osteoblast differentiation via *Runx2***
Aysha Khalid*[1], Alexandria Slayden[1], Chanel Perry[1], Gustavo Miranda-Carboni[1], Susan Krum[1]. [1]University of Tennessee Health Science Center, United States
Disclosures: Aysha Khalid, None

CONCURRENT ORALS: RARE BONE DISEASES (TRANSLATIONAL)

2:30 pm - 4:00 pm **Colorado Convention Center**
Four Seasons Ballroom I

Co-Chairs
Eva S. Liu, M.D.
Brigham and Women's Hospital, USA
Disclosures: Eva S. Liu, None

Wim Van Hul, PhD
University of Antwerp
Disclosures: Wim Van Hul, None

2:30 pm **Twice Daily Injection of Inverse Agonist for Constitutively Active Parathyroid Hormone**
1093 **Receptor Ameliorates the Bone Phenotype in Col1-Jansen's Mice**
Hiroshi Noda*[1], Hiroshi Saito[1], Monica Reyes[1], Braden A Corbin[1], Jun Guo[1], Michael Armanini[1], Daniel Brooks[2], Janaina S Martins[1], Mary L Bouxsein[2], Marie B Demay[3], Harald Jueppner[3], Thomas J Gardella[3]. [1]Endocrine Unit, Massachusetts General Hospital, United States, [2]Endocrine Unit, Massachusetts General Hospital and Beth Israel Deaconess Medical Center, United States, [3]Endocrine Unit, Massachusetts General Hospital and Harvard Medical School, United States
Disclosures: Hiroshi Noda, Chugai Pharmaceutical Co., Ltd., Other Financial or Material Support

2:45 pm **Development of blocking monoclonal antibodies against ALK2, which is a type I receptor for**
1094 **BMPs**
Takenobu Katagiri*[1], Shinnosuke Tsuji[2], Sho Tsukamoto[1], Satoshi Ohte[1], Kengo Kumagai[1], Kenji Osawa[1], Kiyosumi Takaishi[2], Kensuke Nakamura[3], Yoshiro Kawaguchi[4], Jun Hasegawa[4]. [1]Division of Pathophysiology, Research Center for Genomic Medicine, Saitama Medical University, Japan, [2]Rare Disease & LCM Laboratories, R&D Division, Daiichi-Sankyo Co., Ltd., Japan, [3]Modality Research Laboratories, Biologics Division, Daiichi-Sankyo Co., Ltd.., Japan, [4]Modality Research Laboratories, Biologics Division, Daiichi-Sankyo Co., Ltd., Japan
Disclosures: Takenobu Katagiri, Daiichi-Sankyo Co., Ltd., Grant/Research Support

3:00 pm **Efficacy of Palovarotene Oral Treatment on Prevention of Osteochondroma Formation in the**
1095 **Fsp1-Ext1CKO Mouse Model of Multiple Osteochondromas**
Toshihiro Inubushi*[1], Isabelle Lemire[2], Michael Harvey[2], Yu Yamaguchi[1]. [1]Sanford Burnham Prebys Medical Discovery Institute, United States, [2]Clementia Pharmaceuticals Inc., Canada
Disclosures: Toshihiro Inubushi, Clementia Pharmaceuticals Inc., Grant/Research Support

3:15 pm **ASBMR 2017 Annual Meeting Young Investigator Award**
1096 **The Musculoskeletal Effects of Soluble Activin Receptor Type IIB (sActRIIB-mFc) in the *G610C* Osteogenesis Imperfecta Mouse Model**
Youngjae Jeong*[1], Salah Daghlas[1], Marybeth Brown[2], Ferris Pfeiffer[3], Yixia Xie[4], Mark Dallas[5], R. Scott Pearsall[6], Sarah Dallas[4], Charlotte Phillips[1]. [1]Department of Biochemistry, University of Missouri, United States, [2]Department of Biomedical Sciences and Physical Therapy Program, University of Missouri, United States, [3]Department of Bioengineering, University of Missouri, United States, [4]Department of Oral and Craniofacial Biology, University of Missouri, United States, [5]Department of Oral and Caniofacial Biology, University of Missouri, United States, [6]Acceleron Pharma, Inc., United States
Disclosures: Youngjae Jeong, None

3:30 pm **ASBMR 2017 Annual Meeting Young Investigator Award**
1097 **Increasing Muscle Mass by GDF Ligand Trap Treatment Improves Bone Geometry in a Mouse Model of Severe Osteogenesis Imperfecta**
Josephine T. Tauer*[1], Frank Rauch[1]. [1]Shriners Hospital for Children - Montreal, Canada
Disclosures: Josephine T. Tauer, None

3:45 pm **Inverse Agonist Infusion Mitigates Bone Remodeling Abnormalities in the Col1-PTHR-H223R**
1098 **mouse model of Jansen's Metaphyseal Chondrodysplasia**
Jun Guo*[1], Hiroshi Noda[1], Monica Reyes[1], Michael Armanini[1], Janaina Martins[1], Dan Brooks[1], Mary Bouxsein[1], Marie Demay[1], Harald Jueppner[1], Thomas, J Gardella[1]. [1]Massachusetts General Hospital, United States
Disclosures: Jun Guo, Chugai Pharmaceutical Co. Ltd., Grant/Research Support

CONCURRENT ORALS: SYSTEMIC REGULATION

2:30 pm - 4:00 pm **Colorado Convention Center**
Four Seasons Ballroom IV

Co-Chairs
David G. Monroe, Ph.D.
Mayo Clinic College of Medicine, USA
Disclosures: David G. Monroe, Ph.D., None

Annegreet Veldhuis-Vlug
Academic Medical Center Amsterdam, Netherlands
Disclosures: Annegreet Veldhuis-Vlug, None

2:30 pm **Daily PTH (1-34) Administration Preserves Bone Structure and Enhances Bone Turnover after**
1099 **Severe Immobilization-induced Bone Loss**
Lauren Harlow*[1], Karim Sahbani[1], Jeffry Nyman[2], Christopher Cardozo[1], William Bauman[1], Hesham Tawfeek[1]. [1]James J. Peters VA Medical Center, United States, [2]Vanderbilt University School of Medicine, United States
Disclosures: Lauren Harlow, None

2:45 pm **ASBMR 2017 Annual Meeting Young Investigator Award**
1100 **The $GABA_{B1}R$ Is A Critical Promoter of PTH Secretion in Ca2+-deficient and Hyperparathyroidism States**
Amanda Herberger*[1], Jenna Hwong[1], Hanson Ho[1], Alfred Li[1], Zhiqiang Cheng[1], Frederic Jean-Alphonse[2], Chia-Ling Tu[1], Jean-Pierre Vilardaga[2], Wenhan Chang[1]. [1]University of California, San Francisco, United States, [2]University of Pittsburgh School of Medicine, United States
Disclosures: Amanda Herberger, None

3:00 pm **Osteocalcin Has Anti-Geronic Functions in the Brain**
1101 Lori Khrimian*[1], Arnaud Obri[1], Gerard Karsenty[1]. [1]Columbia University Medical Center, United States
Disclosures: Lori Khrimian, None

3:15 pm **The Effects of Systemic Hedgehog Pathway Activation on Aged Fracture Healing**
1102 Jennifer McKenzie*[1], Clayton Maschhoff[1], Xiaochen Liu[1], Nicole Migotsky[1], Matthew Silva[1], Michael Gardner[2]. [1]Washington University in St. Louis, United States, [2]Stanford University, United States
Disclosures: Jennifer McKenzie, None

3:30 pm **Loss of deoxyribonuclease 1 impairs renal phosphate reabsorption and increases serum fibroblast**
1103 **growth factor 23 in mice**
Daniela Egli-Spichtig*[1], Martin Zhang[1], Carsten A Wagner[2], Farzana Perwad[1]. [1]University of California San Francisco, United States, [2]University of Zurich, Switzerland
Disclosures: Daniela Egli-Spichtig, None

3:45 pm **1, 25-dihydroxyvitamin D treatment impairs renal FGF23 signaling in the Hyp mouse model of**
1104 **XLH.**
Janaina Da Silva Martins*[1], Eva S. Liu[1], Marie B. Demay[1]. [1]Endocrine Unit Massachusetts General Hospital, Harvard Medical School, United States
Disclosures: Janaina Da Silva Martins, None

NETWORKING BREAK

4:00 pm - 4:30 pm **Colorado Convention Center**
Mile High Ballroom Foyer and Four Seasons Ballroom Foyer

CONCURRENT ORALS: OSTEOCLASTS

4:30 pm - 5:45 pm **Colorado Convention Center**
Four Seasons Ballroom IV

Co-Chairs
Kim Mansky, PhD
University of Minnesota, USA
Disclosures: Kim Mansky, None

Alberta M. Zallone, Ph.D.
University of Bari Medical School
Disclosures: Alberta M. Zallone, None

4:30 pm **ASXL1 epigenetically suppresses osteoclast formation by methylating NFATc1**
1105 Nidhi Rohatgi*[1], Wei Zou[1], Tim Chen[1], Tim Chen[1], Yousef Abu-Amer[1], Steven Teitelbaum[1]. [1]Washington University in St. Louis, United States
Disclosures: Nidhi Rohatgi, None

4:45 pm **RIP140 in Osteoclast Precursors Regulates Bone Homeostasis, Growth and Osteoclast Activity**
1106 Bomi Lee*[1], Urszula T Iwaniec[2], Russell T Turner[2], Yi-Wei Lin[1], Bart L Clarke[3], Li-Na Wei[1], Anne Gingery[4]. [1]Department of Pharmacology, University of Minnesota Medical School, United States, [2]Skeletal Biology Laboratory, College of Public Health and Human Sciences, Oregon State University, United States, [3]Division of Endocrinology, Diabetes, Metabolism, and Nutrition, United States, [4]Department of Orthopedics Mayo Clinic, United States
Disclosures: Bomi Lee, None

5:00 pm **ASBMR 2017 Annual Meeting Young Investigator Award**
1107 **PGC1β Stimulates Osteoclast Function But not Formation via Mitochondrial Biogenesis and Activation**
Yan Zhang*[1], Nidhi Rohatgi[2], Deborah V. Novack[3], Joel Schilling[4], Steven L. Teitelbaum[3], Wei Zou[2]. [1]Department of Pathology and Immunology, Washington University School of Medicine, St. Louis, MO 63110, USA; Center for Translational Medicine, the First Affiliated Hospital of Xi'an Jiaotong University, Xi'an, Shaanxi 710061, People's Republic of China, United States, [2]Department of Pathology and Immunology, Washington University School of Medicine, St. Louis, MO 63110, USA, United States, [3]Department of Pathology and Immunology; Division of Bone and Mineral Diseases, Department of Medicine, Washington University School of Medicine, St. Louis, MO 63110, USA, United States, [4]Cardiovascular Division, Department of Medicine, Washington University School of Medicine, St. Louis, MO 63110, USA, United States
Disclosures: Yan Zhang, None

5:15 pm **Igf1 Derived from Osteoclasts Regulates Bone Formation via Signaling through EphrinB2/EphB4**
1108 Yasuhisa Ohata*[1], Gabriel M Pagnotti[2], Jolene J. Windle[3], G. David Roodman[4], Noriyoshi Kurihara[1]. [1]Indiana University, Medicine/Hematology-Oncology, United States, [2]Indiana University, Medicine/Endocrinology, United States, [3]Human and Molecular Genetics, Virginia Commonwealth University, United States, [4]Indiana University, Medicine/Hematology-Oncology; Roudebush VA Medical Center, United States
Disclosures: Yasuhisa Ohata, None

5:30 pm **Intravital imaging of osteoclasts in vivo reveals cellular recycling as a novel cell fate mechanism**
1109 Michelle McDonald*[1], Pei Ying Ng[2], Danyal Butt[1], Karrnan Pathmanandavel[1], Mate Biro[3], Rachael Terry[1], Weng Hua Khoo[1], Sindhu Mohanty[1], Marija Simic[1], Ryan Chai[1], Julian Quinn[1], Jessica Pettitt[1], David Abi-Hanna[3], Rohit Jain[4], Wolfgang Weninger[4], Paul Baldock[1], Michael Rogers[1], Robert Brink[1], Nathan Pavlos[2], Peter Croucher[1], Tri Phan[1]. [1]The Garvan Institute, Australia, [2]University of Western Australia, Australia, [3]University of New South Wales, Australia, [4]Centenary Institute, Australia
Disclosures: Michelle McDonald, None

CONCURRENT ORALS: OSTEOPOROSIS TREATMENT IV

4:30 pm - 5:45 pm **Colorado Convention Center**
Mile High Ballroom

Chair
Jonathan Adachi, M.D.
St. Joseph's Hospital/McMaster University, Canada
Disclosures: Jonathan Adachi, None

4:30 pm **FRAME Study: The Foundation Effect of Rebuilding Bone With One Year of Romosozumab**
1110 **Leads to Continued Lower Fracture Risk After Transition to Denosumab**
Felicia Cosman*[1], Daria B Crittenden[2], Serge Ferrari[3], Aliya Khan[4], Nancy Lane[5], Kurt Lippuner[6], Toshio Matsumoto[7], Cassandra E Milmont[2], Cesar Libanati[8], Andreas Grauer[2]. [1]Helen Hayes Hospital, West Haverstraw, and Columbia University, United States, [2]Amgen Inc., United States, [3]Geneva University Hospital, Switzerland, [4]Oakville Medical Centre, Canada, [5]UC Davis Medical Center, United States, [6]Osteoporosis Poliklinik, Inselspital, Bern University Hospital and University of Bern, Switzerland, [7]University of Tokushima, Japan, [8]UCB Pharma, Belgium
Disclosures: Felicia Cosman, Amgen, Eli Lilly, Merck, Radius, Other Financial or Material Support

4:45 pm **Denosumab Reduced Bone Remodeling, Eroded Surface, and Erosion Depth in Cortical Bone of**
1111 **Iliac Crest Biopsies From Postmenopausal Women in the FREEDOM Trial**
Roland Chapurlat*[1], Nathalie Portero-Muzy[1], Jean-Paul Roux[1], Stephane Horlait[2], David Dempster[3], Andrea Wang[2], Rachel Wagman[2], Pascale Chavassieux[1]. [1]INSERM UMR 1033, Université de Lyon, France, [2]Amgen Inc., United States, [3]Columbia University, United States
Disclosures: Roland Chapurlat, Amgen, Janssen, Radius, Sandoz, UCB, Consultant

5:00 pm **Prospective, randomized, double-blind, placebo-controlled trial to evaluate efficacy and safety of**
1112 **zoledronic acid for the treatment of bone marrow lesions - ZoMARS**
Lothar Seefried*[1], Jasmin Baumann[1], Franca Genest[1], Anke Heidemeier[1], Rainer Meffert[2], Franz Jakob[3]. [1]Clinical Trial Unit, Orthopedic Institute, University Wuerzburg, Germany, [2]Department of Trauma, Plastic, Reconstructive, and Hand Surgery, University Hospital Wuerzburg, Germany, [3]Orthopedic Center of Musculoskeletal Research, University of Wuerzburg, Germany
Disclosures: Lothar Seefried, Novartis, Grant/Research Support

5:15 pm **ASBMR 2017 Annual Meeting Young Investigator Award**
1113 **PTH(1-34) for Surgical Hypoparathyroidism: A 2 year Prospective, multicentric, Open-Label Investigation of Efficacy and Quality of Life**
Andrea Palermo*[1], Assunta Santonati[2], Gaia Tabacco[1], Daria Maggi[1], Claudio Pedone[3], Daniela Bosco[2], Spada Antonio[2], Bruno Raggiunti[4], Doris Tina[4], Silvia Manfrini[5], Fabio Vescini[6]. [1]1Department of Endocrinology and Diabetes, University Campus Bio-Medico, Italy, [2]Department of Endocrinology, San Giovanni Addolorata Hospital, Italy, [3]Unit of Geriatrics, University Campus Bio-Medico, Italy, [4]Department of Endocrinology, Hospital San Liberatore Atri, Italy, [5]Department of Endocrinology and Diabetes, University Campus Bio-Medico, Italy, [6]Department of Endocrinology and Diabetes, Santa Maria della Misericordia Hospital, Italy
Disclosures: Andrea Palermo, None

5:30 pm 1114 **Effectiveness of a Private, Orthopedic Practice-Based Osteoporosis Management Program for Prevention of Recurrent Fractures**

Kathleen A. Taylor *[1], Andre B. Araujo [1], Li Wang [2], Natalie N. Boystov[3], Ginger S. Haynes [1], Shivani Pandya [2], Debra L. Sietsema[4], Douglas Faries[1], Onur Baser[5], Clifford B. Jones [4]. [1]Eli Lilly and Company , United States, [2]STATinMED Research , United States, [3]Eli Lilly and Company, United States, [4]The CORE Institute , United States, [5]Columbia University, Center for Innovation and Outcomes Research, Department of Surgery, United States

Disclosures: Kathleen A. Taylor , Eli Lilly and Company , Grant/Research Support

CONCURRENT ORALS: PEDIATRIC BONE DISORDERS

4:30 pm - 5:45 pm **Colorado Convention Center**

Four Seasons Ballroom II-III

Chair

Giacomina Brunetti, Ph.D.
University of Bari, Italy

Disclosures: Giacomina Brunetti, None

4:30 pm 1115 **The Fracture Panorama in Children and Adolescents - A Register-based Study of 3.5 Million Person-years in Sweden 1999-2010**

Daniel Jerrhag*[1], Magnus Karlsson[1], Martin Englund[2], Bjorn Rosengren[1]. [1]Clinical and Molecular Osteoporosis Research Unit, Department of Orthopedics and Clinical Sciences, Lund University, Skane University Hospital Malmoe, Sweden, Sweden, [2]Clinical Epidemiology Unit, Orthopedics, Department of Clinical Sciences Lund, Lund University, Lund, Sweden and Clinical Epidemiology Research and Training Unit, Boston University School of Medicine, Boston, MA, USA , Sweden

Disclosures: Daniel Jerrhag, None

4:45 pm 1116 **ASBMR 2017 Annual Meeting Young Investigator Award**
Femoral Stress Index Is Prominently Associated With Risk Of Fracture In Children Of School Age

Olja Grgic*[1], Carolina Medina-Gomez[2], Katerina Trajanoska[3], Thomas J Beck[4], Carola M Zillikens[5], Vincent W V Jaddoe[6], Eppo B Wolvius[7], Fernando Rivadeneira[8]. [1]EMC, Generation R, EMC, Internal Medicine, EMC, Maxillofacial Surgery, Rotterdam/NL, Netherlands, [2]EMC, The Generation R Study Group, EMC, Internal Medicine, EMC, Department of Epidemiology, Netherlands, [3]EMC, Internal Medicine, EMC, Department of Epidemiology, Netherlands, [4]Department of Radiology, The Johns Hopkins University School of Medicine, Baltimore, USA, United States, [5]EMC, Internal Medicine, Netherlands, [6]EMC, The Generation R Study Group, Netherlands, [7]EMC, The Generation R Study Group, 3EMC, Oral & maxillofacial surgery, special dental care and orthodontics, Netherlands, [8]EMC, The Generation R Study Group, EMC, Internal Medicine , Netherlands

Disclosures: Olja Grgic, None

5:00 pm 1117 **Fractures Prospectively Recorded in Healthy Children and Adolescents Are Predictive of Radial Peak Bone Mass and Strength Fragility in Females but not in Males**

Thierry Chevalley*[1], Jean-Philippe Bonjour[1], Marie-Claude Audet[1], Fanny Merminod[1], Bert van Rietbergen[2], Rene Rizzoli[1], Serge Ferrari[1]. [1]Division of Bone Diseases, Geneva University Hospitals and Faculty of Medicine, Switzerland, [2]Department of Biomedical Engineering, Eindhoven University of Technology, Netherlands

Disclosures: Thierry Chevalley, None

5:15 pm **A genome-wide association meta-analysis implicates adrenal steroidogenesis in the process of**
1118 **skeletal maturation**
Alessandra Chesi*[1], Olja Grgić[2], Carolina Medina-Gomez[2], Shana E. McCormack[1], Diana L. Cousminer[1], Jonathan A. Mitchell[1], Heidi J. Kalkwarf[3], Joan M. Lappe[4], Vicente Gilsanz[5], Sharon E. Oberfield[6], John A. Shepherd[7], Andrea Kelly[1], Soroosh Mahboubi[1], Katerina Trajanoska[2], Vincent Jaddoe[2], Andre G. Uitterlinden[2], Eppo B. Wolvius[2], Babette S. Zemel[1], Struan F.A. Grant[1], Fernando Rivadeneira[2]. [1]The Children's Hospital of Philadelphia, United States, [2]Erasmus MC, Netherlands, [3]Cincinnati Children's Hospital Medical Center, United States, [4]Creighton University School of Medicine, United States, [5]University of Southern California Los Angeles , United States, [6]Columbia University Medical Center, United States, [7]University of California San Francisco, United States
Disclosures: Alessandra Chesi, None

5:30 pm **Transdermal 17-β Estradiol has a Beneficial Effect on Bone Parameters Assessed using**
1119 **HRpQCT Compared to Oral Ethinyl Estradiol-Progesterone Combination Pills in Oligo-amenorrheic Athletes: a Randomized Controlled Trial**
Kathryn Ackerman*[1], Meghan Slattery[1], Vibha Singhal[1], Charumathi Baskaran[1], Karen Campoverde Reyes[1], Alexander Toth[1], Hang Lee[1], Mary Bouxsein[1], Anne Klibanski[1], Madhusmita Misra[1]. [1]Massachusetts General Hospital, United States
Disclosures: Kathryn Ackerman, None

CONCURRENT ORALS: PRECLINICAL MODELS: NUTRITION AND PHARMACOLOGY

4:30 pm - 5:45 pm **Colorado Convention Center**
Four Seasons Ballroom I

Co-Chairs
Gretel Pellegrini, DDS, PhD
Universidad de Buenos Aires- CONICET, Argentina
Disclosures: Gretel Pellegrini, None

Shuanhu Zhou, Ph.D.
Brigham and Women's Hospital
Disclosures: Shuanhu Zhou, None

4:30 pm **ASBMR 2017 Annual Meeting Young Investigator Award in honor of Robert Heaney**
1120 **Probiotics Induce Bone Anabolism Via A Regulatory T Cells-Wnt10b Mediated Pathway**
Abdul Malik Tyagi*[1], Mingcan Yu[1], Trevor Derby[1], Jau-Yi Li[1], Jonathan Adams[1], Rheinallt M. Jones[1], Roberto Pacifici[1]. [1]Emory University, United States
Disclosures: Abdul Malik Tyagi, None

4:45 pm **Prebiotic Alteration of the Gut Microbiome Rescues Impaired Fracture Healing in Obesity**
1121
Christopher Farnsworth*[1], Ashlee MacDonald[2], Eric Schott[1], Jun Zhang[3], Alex Grier[4], Cheryl Ackert_Bicknell[5], Steven Gill[6], Hani Awad[7], Michael Zuscik[7], John Ketz[8], Robert Mooney[9]. [1]Department of Pathology and Center for Musculoskeletal Research, University of Rochester Medical Center, United States, [2]Department of Orthopedic Surgery, University of Rochester Medical Center, United States, [3]Center for Musculoskeletal Research, University of Rochester Medical Center, United States, [4]Department of Microbiology and Immunology, University of Rochester Medical Center, United States, [5]Department of Orthopaedic Surgery and Center for Musculoskeletal Research, United States, [6]Department of Microbiology and Immunology, United States, [7]Department of Orthopedic Surgery and Center for Musculoskeletal Research, United States, [8]Department of Orthopedic Surgery, United States, [9]Department of Pathology and Center for Musculoskeletal Research, United States
Disclosures: Christopher Farnsworth, None

5:00 pm **ASBMR 2017 Annual Meeting Young Investigator Award**

1122 **GDF11 impairs bone remodeling and regeneration**

Weiqing Liu*[1], Liyan Zhou[1], Chenchen Zhou[1], Shiwen Zhang[1], Xing Liang[1], Ling Ye[1], Qianming Chen[1], Beate Lanske[2], Quan Yuan[1]. [1]State Key Laboratory of Oral diseases, West China School of Stomatology, Sichuan University, China, [2]Division of Bone and Mineral Research, Harvard School of Dental Medicine, United States

Disclosures: Weiqing Liu, None

5:15 pm **ASBMR 2017 Annual Meeting Young Investigator Award**

1123 **1, 25-Dihydroxy Vitamin D Prevents Tumorigenesis by Inhibiting Oxidative Stress and Inducing Tumor Cellular Senescence**

Renlei Yang*[1], Lulu Chen[1], Wanxin Qiao[1], Xiaoqin Yuan[1], Shui Wang[1], David Goltzman[2], Dengshun Miao[1]. [1]Nanjing Medical University, China, [2]McGill University, Canada

Disclosures: Renlei Yang, None

5:30 pm **A comparison of the efficacy and side effects of an active site and ectosteric inhibitor of Cathepsin**

1124 **K in mouse**

Preety Panwar*[1], Kamini Srivastava[1], Dieter Bromme[1]. [1]University of British Columbia, Canada

Disclosures: Preety Panwar, None

ASBMR ANNUAL TOWN HALL MEETING AND RECEPTION

6:00 pm - 7:00 pm **Colorado Convention Center**

Mile High Ballroom 4A-B

You are invited to attend the ASBMR Town Hall Meeting and Reception at which 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 ASBMR leadership, ask questions during an "open-mic" time and enjoy a wine and cheese reception.

DIVERSITY IN BONE AND MINERAL RESEARCH NETWORKING RECEPTION

Sponsored by the ASBMR Diversity Subcommittee and Membership Engagement and Education Committee

7:00 pm - 8:30 pm **Hyatt Regency Denver**

Capitol Ballroom 1

This reception provides attendees the opportunity to meet other attendees and ASBMR leadership, including the ASBMR Diversity in Bone and Mineral Research Subcommittee in an interactive environment. Come to network and learn how the Diversity in Bone and Mineral Research Subcommittee is working to promote inclusiveness and participation of the Society's diverse members, particularly focusing on individuals from underrepresented racial and ethnic groups and individuals with disabilities.

CLINICAL EVENING – MANAGEMENT AND TREATMENT OF RARE BONE DISEASES

This activity is supported by an educational grant from Horizon Pharma USA, and an educational funding donation provided by Ultragenyx Pharmaceutical.

7:00 pm - 9:00 pm **Colorado Convention Center**
Room 205/207

Space is limited and available on a first-come, first-served basis. Attendees must be registered for the ASBMR 2017 Annual Meeting.

7:00 pm **Dinner**

7:30 pm **30 Years of Treatment of Osteogenesis Imperfecta: Where We Are and Where We Are Going**
Francis Glorieux, M.D., Ph.D.
Shriners Hospital for Children and McGill University
Disclosures: Francis Glorieux, None

8:00 pm **Morbidity due to Osteoporosis in Duchenne Muscular Dystrophy: The Path Forward**
Leanne Ward, M.D.
Children's Hospital of Eastern Ontario
Disclosures: Leanne Ward, None

8:30 pm **Autosomal Dominant Osteopetrosis Type 2: Is there Hope for Treatment?**
Michael Econs, M.D.
Indiana University School of Medicine
Disclosures: Michael Econs, None

ADULT BONE AND MINERAL WORKING GROUP

Supported by an educational grant from Merck & Co., Inc.

7:15 pm - 10:00 pm **Colorado Convention Center**
Room 210/212

7:15 pm **Opening Remarks and Dinner**
Introduction of Co-Chairs
Michael Mannstadt, MD, Massachusetts General Hospital, USA
Ann Kearns, MD, PhD, Mayo Clinic, USA
Suzanne Marie Jan De Beur, MD, John Hopkins Medicine, USA

7:30 pm **Historical Vignette: Uncovering a Parathyroid Tumor Gene**
Andrew Arnold, MD
Center for Molecular Oncology, University of Connecticut Health Center, USA

8:00 pm **LPR 5 Variant Associated with Childhood Fractures and Adult Osteoporosis**
Jay R. Shapiro, MD
Uniformed Services University of the Health Sciences, Bethesda, MD, USA

8:15 pm **Hereditary Multicentric Carpal-Tarsal Osteolysis Syndrome: Clinical and Genetic Considerations**
Jad G. Sfeir, MD
Division of Endocrinology, Diabetes, Metabolism and Nutrition, Mayo Clinic, Rochester, MN, USA

8:30 pm **Commercial Laboratory Reproducibility of Serum CTX in Clinical Practice**
Sahar M. Hindi, MD
Division of Endocrinology and Metabolism, Department of Medicine, University of California, San Francisco, USA

8:45 pm **Long-term outcome of patients affected by Jansen's disease and in vitro impact of an inverse agonist on different activating PTHR1 mutations**
Hiroshi Saito, MD, PhD
Endocrine Unit, Massachusetts General Hospital and Harvard Medical School, USA

9:00 pm **Denosumab-Associated Hypercalcemia and Fluctuating Hyperparathyroidism in an Early Postmenopausal Woman**
Malachi J. McKenna, MD, FRCPI, FACP, CCD
St. Michael's Hospital & St. Vincent's University Hospital, Metabolism Laboratory & Director DXA Unit, St. Vincent's University Hospital, School of Medicine, University College Dublin

9:15 pm **A Case of Hypophosphatemic Rickets in Pregnancy**
Janet Y. Lee, MD, MPH
Division of Endocrinology and Metabolism, Department of Medicine and Pediatrics, University of California, USA

9:30 pm **Biallelic Compound Heterozygous Mutations in ENPP1 Associated with Periarticular Calcifications and Autosomal Recessive Hypophasphatemic Rickets 2**
Anupam Kotwal, MBBS
Mayo Clinic College of Medicine, USA

9:45 pm **Presentation of the Boy Frame Award to Dr. Andrew Arnold**

10:00 pm **Adjourn**

BONE TURNOVER MARKERS WORKING GROUP

7:15 pm - 9:15 pm **Colorado Convention Center**
Room 406/407

Description: Debate on the clinical usefulness of bone turnover markers.
This year the Working Group Meeting will address the use of bone turnover markers in monitoring the offset of the effect of drugs for osteoporosis, as well as the usefulness of BTMs in predicting fracture risk reduction of bisphosphonate treatment. A lively debate on BTMs in clinical practice is expected.

7:15 pm Welcome and Introduction
Paul Miller, MD. University of Colorado Health Sciences Center (USA)
Pawel Szulc, MD. University of Lyon, INSERM (France)

7:20 pm How to monitor the offset of the effect of drugs in postmenopausal osteoporosis
Richard Eastell, MD. University of Sheffield (UK)

7:50 pm Relationship between bisphosphonate-related changes in BTMs and fracture risk reduction. Data from the FNIH Bone Quality project
Douglas Bauer, MD. University of California (USA)

8:20 pm Is there a place for bone turnover markers in clinical practice?
Peter Ebeling, MD. Monash University (Australia)

9:00 pm Closing Remarks

WORKING GROUP ON AGING

7:15 pm - 9:15 pm **Colorado Convention Center**
Room 405

Moderated by: Lynda Bonewald, Ph.D. and Sundeep Khosla, M.D.

7:15 pm **Beneficial effects of physiological loading and exercise mimetics on integrative skeletal physiology**
Meghan McGee-Lawrence, Ph.D., Medical College of Georgia (USA)

7:45 pm **Exercise and aging skeletal muscle: The local and systemic benefits**
Karyn Esser, Ph.D., University of Florida (USA)

8:15 pm **Molecular mechanisms involved in muscle-bone crosstalk with aging**
Lynda Bonewald, Ph.D., Indiana University (USA)

8:45 pm Open Discussion

PEDIATRIC BONE AND MINERAL WORKING GROUP

Supported by an educational grant from Ultragenyx Pharmaceuticals

7:15 pm - 9:30 pm **Colorado Convention Center**
Room 301/302

Moderators: Clemens Bergwitz, M.D. and Madhusmita Misra, M.D., M.P.H.
Speakers: Andrew Sirotnak, MD, Erik Imel, MD, Deborah Mitchell, MD.

7:15 pm Dinner

7:25 pm Opening remarks

7:30 pm **An infant or toddler with non-accidental trauma- what should pediatric bone specialists do to assure that the child does not have an underlying metabolic bone disease?**
Andrew Sirotnak, MD, FAAP
University of Colorado

7:55 pm **Updates on Developments in XLH Management**
Erik Imel, MD
Indiana University

8:20 pm **Impact of Type 1 Diabetes on Bone**
Deborah Mitchell, MD
Massachusetts General Hospital and Harvard Medical School

8:45 pm **Abstract 1:** Incidence of Metabolic Bone Disease in Children Receiving Elemental Formula. Creo A et al.

9:00 pm **Abstract 2:** Generation of a mouse model overexpressing *Slc20a1*/*Pit1* in osteocytes to study the role this transporter in bone growth and phosphate homeostasis. Chande S et al.

9:15 pm **Abstract 3:** Do the timing and rate of bone mass acquisition differ between overweight and healthy-weight adolescent females? An 18-month prospective study. Kindler et al.

9:30 pm Closing remarks

Monday, September 11, 2017

DAY-AT-A-GLANCE

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

ASBMR REGISTRATION OPEN

7:30 am - 2:00 pm **Colorado Convention Center**
Registration Hall - Lobby A Foyer

CONCURRENT ORALS: BONE DENSITY AND FRACTURE EPIDEMIOLOGY

8:00 am - 9:30 am **Colorado Convention Center**
Mile High Ballroom

Co-Chairs
Deborah Kado, M.D.
University of California, San Diego, USA
Disclosures: Deborah Kado, None

Robert G. Josse, BSc, MBBS, FRCP
University of Toronto, Canada
Disclosures: Robert G. Josse, None

8:00 am 1125 **Longitudinal 5-year changes in bone density and microarchitecture after Roux-En-Y Gastric Bypass**
Logan Greenblatt*[1], Katherine Lindeman[1], Caroline Rourke[1], Mary Bouxsein[1], Joel Finkelstein[1], Elaine Yu[1]. [1]Massachusetts General Hospital, United States
Disclosures: Logan Greenblatt, None

8:15 am 1126 **Adverse Effects of Weight Loss on Bone Microarchitecture in Obese and Non-Obese Older Adults: The Framingham Study**
Elizabeth Samelson*[1], Douglas Kiel[2], Kerry Broe[3], Hanfei Xu[4], Laiji Yang[3], Robert McLean[2], Shivani Sahni[2], Marian Hannan[2], Mary Bouxsein[5], Ching-Ti Liu[4]. [1]Harvard Med School, Institute for Aging Research, Hebrew SeniorLife, United States, [2]Harvard Med Sch, Inst for Aging Research, Hebrew SeniorLife, United States, [3]Inst for Aging Research, Hebrew SeniorLife, United States, [4]Boston University, United States, [5]Harvard Med Sch, BIDMC, South Sudan
Disclosures: Elizabeth Samelson, None

8:30 am 1127 **Predictors of Incident Fractures in Obese Subjects With Type 2 Diabetes Mellitus**
Anna Nilsson*[1], Kristian Axelsson[2], Dan Lundh[3], Ann-Marie Svensson[4], Björn Eliasson[5], Mattias Lorentzon[6]. [1]Institute of Medicine, Sahlgrenska Academy, Gothenburg University, Sweden, [2]Department of Orthopaedic Surgery, Skaraborg Hospital, Sweden, [3]School of Health and Education, University of Skövde., Sweden, [4]The Swedish National Diabetes Register, Center of Registers in Region Västra Götaland, Sweden, [5]Department of Medicine, University of Gothenburg, Sweden, [6]Geriatric Medicine, Center for Bone and Arthritis Research, Institute of Medicine, Sahlgrenska Academy, Gothenburg University, Sweden
Disclosures: Anna Nilsson, None

8:45 am 1128 **HIV and Vertebral Fractures: a Systematic Review and Metanalysis**
Melissa Premaor*[1], Thales Ilha[1], Rafaela Copes[1], Fabio Comim[1], Juliet Compston[2]. [1]Federal University of Santa Maria, Brazil, [2]University of Cambridge, United Kingdom
Disclosures: Melissa Premaor, None

9:00 am 1129 **ASBMR 2017 Annual Meeting Young Investigator Award**
Trends in Mean Femoral Neck Bone Mineral Density Among Individuals Aged 30 or Older in the United States, 2005-2006 through 2013-2014
Yingke Xu*[1], William Donald Leslie[2], Qing Wu[1]. [1]University of Las Vegas, Nevada, United States, [2]University of Manitoba, Canada
Disclosures: Yingke Xu, None

9:15 am **ASBMR 2017 Annual Meeting Young Investigator Award**

1130 **African Ancestry-Specific Genetic Variants for Bone Mineral Density Determination**

Michelle S. Yau*[1], Yi-Hsiang Hsu[1], Allison Kuipers[2], Ryan Price[3], Aude Nicolas[3], Salman Tajuddin[3], Samuel Handelman[4], Liubov Arbeeva[5], Alessandra Chesi[6], Ching-Ti Liu[7], Fredrick Kinyua[1], Wen-Chi Chou[1], David Karasik[1], Roby Joehanes[1], Serkalem Demissie[7], L. Adrienne Cupples[7], Babette Zemel[6], Struan Grant[6], Joanne M. Jordan[5], Rebecca Jackson[4], Michele Evans[3], Tamara Harris[3], Joseph M. Zmuda[2], Douglas P. Kiel[1]. [1]Hebrew SeniorLife, Harvard Medical School, United States, [2]University of Pittsburgh, United States, [3]National Institute on Aging, United States, [4]The Ohio State University, United States, [5]Thurston Arthritis Research Center, UNC, United States, [6]Children's Hospital of Philadelphia, United States, [7]Boston University School of Public Health, United States

Disclosures: Michelle S. Yau, None

CONCURRENT ORALS: BONE TUMORS AND METASTASIS II

8:00 am - 9:30 am **Colorado Convention Center**

Four Seasons Ballroom II-III

Chair

Robert Gagel, M.D.

University of Texas M.D. Anderson Cancer Center

Disclosures: Robert Gagel, None

8:00 am **Activation of PI3K in the myeloid lineage induces bone loss and confers myeloproliferative**

1131 **neoplastic potential due to the increase in myeloid derived suppressor cells**

Jungeun Yu*[1], Laura Doherty[2], Evan Jellison[1], Ernesto Canalis[1], Archana Sanjay[1]. [1]U Conn Health, United States, [2]U Conn Health , United States

Disclosures: Jungeun Yu, None

8:15 am **A Novel Osteolinage-derived Cancer-Associated Fibroblast Population In Primary Tumors**

1132 **Expresses DKK1 And Enhances Tumor Growth**

Biancamaria Ricci*[1], Francesca Fontana[2], Sahil Mahajan[1], Danielle Ketterer[1], Roberto Civitelli[3], Roberta Faccio[4]. [1]Washington University-School of Medicine, Department of Orthopaedic Surgery, United States, [2]Washington University-School of Medicine, Department of Medicine-Bone and Mineral Division, United States, [3]Washinton University-School of Medicine, Department of Medicine-Bone and Mineral Division , United States, [4]Washinton University-School of Medicine, Department of Orthopaedic Surgery, United States

Disclosures: Biancamaria Ricci, None

8:30 am **Evaluating the Role of Osteoblast-Specific Stabilization of β-catenin in Leukemia Initiation and**

1133 **Progression**

Mitchell McDonald*[1], Cassandra Diegel[1], Galen Hostetter[1], Roderick Bronson[2], Bart Williams[1]. [1]Van Andel Research Institute, United States, [2]Harvard Medical School, United States

Disclosures: Mitchell McDonald, None

8:45 am **Notch2 pathway and breast cancer cellular dormancy. A role for osteoblasts.**

1134

Mattia Capulli*[1], Dayana Hristova[1], Zoe Valbret[1], Ronak Arjan[1], Antonio Maurizi[1], Alfredo Cappariello[1], Nadia Rucci[1], Anna Teti[1]. [1]University of L'Aquila, Italy

Disclosures: Mattia Capulli, None

9:00 am **Metabolic reprogramming in breast cancer bone metastases via PKC-ζ regulated crosstalk of**

1135 **serine biosynthesis and autophagy regulation**

Manish Tandon*[1], Ahmad Othman[1], Jitesh Pratap[1]. [1]Rush University Medical Center, United States

Disclosures: Manish Tandon, None

9:15 am **CD8+ T Cells Increase Osteolytic Bone Metastases from Breast Cancer in Mice**
1136 Danna Arellano-Rodriguez*[1], Andrea Verdugo-Meza[1], Florian Drescher[1], Felipe Olvera-Rodriguez[2], Patricia Juarez[1], Pierrick Fournier[1]. [1]Biomedical Innovation Dept., CICESE, Mexico, [2]Instituto de Biotecnología, UNAM, Mexico
Disclosures: Danna Arellano-Rodriguez, None

CONCURRENT ORALS: OSTEOCYTES

8:00 am - 9:30 am **Colorado Convention Center**
Four Seasons Ballroom I

Co-Chairs
Anne Gingery, Ph.D.
Mayo Clinic, USA
Disclosures: Anne Gingery, None

Jan Tuckermann, Ph.D.
University of Ulm
Disclosures: Jan Tuckermann, None

8:00 am **Anabolic PTH Signaling Activates the Canonical Notch Pathway in Osteocytes to Restrain**
1137 **Bone Resorption and Facilitate Bone Gain**
Jesus Delgado-Calle*[1], Jessica H. Nelson[1], Matthew E. Olson[1], Kevin McAndrews[1], Emily G. Atkinson[1], Xiaolin Tu[1], Teresita Bellido[1]. [1]Anatomy and Cell Biology, Indiana University School of Medicine, United States
Disclosures: Jesus Delgado-Calle, None

8:15 am **ASBMR 2017 Annual Meeting Young Investigator Award**
1138 **The extra-large G protein alpha-subunit (XLαs) mediates FGF23 production by maintaining FGFR1 expression and MAPK signaling in bone**
Qing He*[1], Cumhur Aydin[2], Marc Wein[1], Jordan Spatz[1], Regina Goetz[3], Moosa Mohammadi[3], Antonius Plagge[4], Paola Pajevic Divieti Pajevic[5], Murat Bastepe[1]. [1]Endocrine Unit, Department of Medicine, Massachusetts General Hospital and Harvard Medical School, United States, [2]Department of Endodontics, Gülhane Military Medical Academy, Turkey, [3]Department of Biochemistry & Molecular Pharmacology, New York University School of Medicine, United States, [4]Department of Cellular and Molecular Physiology, Institute of Translational Medicine University of Liverpool, United Kingdom, [5]Department of Molecular & Cell Biology, Boston University School of Dental Medicine, United States
Disclosures: Qing He, None

8:30 am **A Novel Distal Enhancer of the Mouse *Fgf23* Gene Mediates the Inflammation- and CKD-**
1139 **induced Expression of FGF23**
Melda Onal*[1], Alex Carlson[1], Mark Meyer[1], Benkusky Nancy[1], Seong Min Lee[1], Hillary St. John[1], John Wesley Pike[1]. [1]University of Wisconsin - Madison, United States
Disclosures: Melda Onal, None

8:45 am **Collagen Dynamics During the Process of Osteocyte Embedding and Mineralization**
1140 Lora A. McCormick*[1], LeAnn M. Tiede-Lewis[1], Eleanor C. Ray[1], Youngbo Lu[2], Sarah L. Dallas[1]. [1]University of Missouri, Kansas City, United States, [2]Texas A&M University College of Dentistry, United States
Disclosures: Lora A. McCormick, None

9:00 am **ASBMR 2017 Annual Meeting Young Investigator Award**

1141 **Osteocyte intrinsic TGFβ signaling in regulates bone quality through perilacunar remodeling**

Neha S. Dole *[1], Courtney M. Mazur[1], Claire Acevedo[1], Justin P. Lopez[2], David A. Monteiro[2], Tristan W. Fowler[1], Bernd Gludovatz[3], Flynn Walsh[4], Robert O. Ritchie[3], Khalid S. Mohammad[5], Tamara Alliston[1]. [1]Department of Orthopaedic Surgery, University of California San Francisco, United States, [2]Department of Orthopaedic Surgery, University of California San Francisco , United States, [3]Materials Science Division, Lawrence Berkeley National Laboratory, United States, [4]Department of Materials Science and Engineering, University of California Berkeley, United States, [5]Department of Medicine, Indiana University School of Medicine, United States

Disclosures: Neha S. Dole , None

9:15 am **ASBMR 2017 Annual Meeting Young Investigator Award**

1142 **Sclerostin antibody administration increases the Numbers and Differentiation of Osteoblast Precursors *in Vivo***

Sophia Trinh*[1], Deepak Balani[1], Rogely Boyce[2], Henry Kronenberg[1]. [1]Endocrine Unit, Massachusetts General Hospital and Harvard Medical School, Boston, MA, United States, [2]Amgen, Inc, United States

Disclosures: Sophia Trinh, None

CONCURRENT ORALS: REPAIR AND REGENERATION

8:00 am - 9:30 am **Colorado Convention Center**

Four Seasons Ballroom IV

Co-Chairs

Koichi Matsuo, MD, PhD
Keio University School of Medicine, Japan
Disclosures: Koichi Matsuo, None

Megan Weivoda, PhD
Mayo Clinic, USA
Disclosures: Megan Weivoda, None

8:00 am **HMGB1 accelerates regeneration of multiple tissues by transitioning stem cells to G_{Alert}.**

1143

Geoffrey Lee*[1], Ana Isabel Espirito Santo[1], Stefan Zwingenberger[2], Emilie Venereau[3], Lawrence Cai[4], Thomas Vogl[5], Marc Feldmann[1], Marco Bianchi[6], Nicole Horwood[1], James Chan[1], Jagdeep Nanchahal[1]. [1]The Kennedy Institute of Rheumatology, University of Oxford, United Kingdom, [2]Department of Orthopaedics, University Hospital Carl Gustav Carus at Technische Universität Dresden, Germany, [3]Chromatin Dynamics Unit, Division of Genetics and Cell Biology, San Raffaele Scientific Institute, Italy, [4]Faculty of Medicine, UNSW Australia, Australia, [5]Institute of Immunology, University of Münster, Germany, [6]Chromatin Dynamics Unit, Division of Genetics and Cell Biology, San Raffaele University and Scientific Institute, Italy

Disclosures: Geoffrey Lee, None

8:15 am **USP34 is required for BMP2 signaling and bone regeneration**

1144

Mengyuan Wang*[1], Shiwen Zhang[1], Yuchen Guo[1], Weiqing Liu[1], Yuan Wang[1], Liang Xie[1], Junjun Jing[1], Xuedong Zhou[1], Quan Yuan[1]. [1]State Key Laboratory of Oral diseases, West China Hospital of Stomatology, Sichuan University, Chengdu 610041, China., China

Disclosures: Mengyuan Wang, None

8:30 am **The CaSR Is A Critical Mediator of Chondrocyte Trans differentiation into Osteoblastic**

1145 **Lineage and Bone Fracture Repair in Mice.**

Zhiqiang Cheng*[1], Alfred Li[1], Fuqing Song[1], Jiali Wang[1], Xiaodong Liu[1], Amanda Herberger[1], Jenna Hwong[1], Dolores Shoback[1], Chia-Ling Tu[1], Wenhan Chang[1]. [1]UCSF, United States

Disclosures: Zhiqiang Cheng, None

8:45 am **Osteoprogenitor directed overexpression of Notch signaling improves bone fracture healing**
1146 Sanja Novak*[1], Emilie Roeder[1], Brya G Matthews[1], Liping Wang[1], Douglas J Adams[1], Ivo Kalajzic[1]. [1]Uconn Health, United States
Disclosures: Sanja Novak, None

9:00 am **Static Preloading: A Previously Unrecognized Inhibitor of Bone Anabolism**
1147 Sundar Srinivasan*[1], Danica Balsiger[1], Philippe Huber[1], Brandon Ausk[1], Steven Bain[1], Edith Gardiner[1], Ted Gross[1]. [1]University of Washington, United States
Disclosures: Sundar Srinivasan, None

9:15 am ***Mx1*-labeled Tendon Stem/Progenitor Cells in Paratenon Contribute to Tendon Regeneration**
1148 **and Repair *in vivo***
Yannis Hara*[1], Hamilton Wang[1], Brendan Lee[1], Dongsu Park[1]. [1]Department of Molecular Human Genetics, United States
Disclosures: Yannis Hara, None

POSTERS OPEN

9:30 am - 2:00 pm **Colorado Convention Center**
ASBMR Discovery Hall - Exhibit Hall A & B1

DISCOVERY HALL OPEN

9:30 am - 2:30 pm **Colorado Convention Center**
ASBMR Discovery Hall - Exhibit Hall A & B1

NETWORKING BREAK

9:30 am - 9:45 am **Colorado Convention Center**
Mile High Ballroom Foyer and Four Seasons Ballroom Foyer

PLENARY ORALS: BASIC II

9:45 am - 11:00 am **Colorado Convention Center**
Four Seasons Ballroom II-III

Co-Chairs
Geert J.V. Carmeliet, M.D., Ph.D.
KU Leuven, Belgium
Disclosures: Geert J.V. Carmeliet, None

Dana Gaddy, PhD
College of Veterinary Medicine, Texas A&M University, USA
Disclosures: Dana Gaddy, None

9:45 am **Extracellular Vesicle-Mediated Cell-Cell Communication in Bone and Potential Role in**
1149 **Muscle-Bone Crosstalk**
Kun Wang*[1], LeAnn Tiede-Lewis[1], Lora McCormick[1], Nuria Lara[1], Andrew Keightley[1], Nicholas Farina[2], Jian Huang[3], Jane Lian[2], Marco Brotto[3], Lynda Bonewald[4], Sarah Dallas[1]. [1]University of Missouri, Kansas City, United States, [2]University of Vermont, United States, [3]University of Texas at Arlington, United States, [4]Indiana University, United States
Disclosures: Kun Wang, None

10:00 am **Glutaminase is necessary for the maintenance and specification of mesenchymal stem cells.**
1150 Yilin Yu*[1], Leyao Shen[1], Fanxin Long[2], Courtney Karner[3]. [1]Department of Orthopedic Surgery, Duke University, United States, [2]Department of Orthopedic Surgery, Washington University School of Medicine, United States, [3]Departments of Orthopedic Surgery and Cell Biology, Duke University, United States
Disclosures: Yilin Yu, None

10:15 am **The identification of TGFβ-induced osteoclast factors that couple bone resorption to bone formation**
1151 Megan Weivoda*[1], Ming Ruan[1], Christine Hachfeld[1], Glenda Evans[1], Stephanie Youssef[1], Rachel Davey[2], Jeffrey Zajac[2], Brendan Lee[3], Jennifer Westendorf[1], David Monroe[1], Sundeep Khosla[1], Merry Jo Oursler[1]. [1]Mayo Clinic, United States, [2]University of Melbourne, Australia, [3]Baylor, United States
Disclosures: Megan Weivoda, None

10:30 am **ASBMR 2017 Annual Meeting Young Investigator Award**
1152 **Deletion of Androgen Receptor in Neurons Accelerates the Age-Related Loss of Cortical Thickness in Male Mice**
Ferran Jardi*[1], Michael Laurent[2], Rougin Khalil[1], Nari Kim[1], Vanessa Dubois[3], Ludo Deboel[1], Dieter Schollaert[1], Geert Carmeliet[1], Brigitte Becallonne[1], Frank Claessens[1], Dirk Vanderschueren[1]. [1]KU Leuven, Belgium, [2]UZ Leuven, Belgium, [3]inserm, France
Disclosures: Ferran Jardi, None

10:45 am **The Epigenetic Regulator CXXC Finger Protein 1 is Required for Mesenchymal Progenitor Cell Function and Skeletogenesis**
1153 Diana Carlone*[1], Lijie Jiang[1], David Skalnik[2], Ernesto Canalis[3], David Breault[1]. [1]Boston Children's Hospital, United States, [2]IUPUI School of Science, United States, [3]UConn Health, United States
Disclosures: Diana Carlone, None

PLENARY ORALS: CLINICAL HIGHLIGHTS

9:45 am - 11:00 am **Colorado Convention Center**
Mile High Ballroom

Co-Chairs
Nuria Maria Guanabens Gay
Hospital Clinico, USA
Disclosures: Nuria Maria Guanabens Gay, None

Robert Adler, M.D.
McGuire VA Medical Center
Disclosures: Robert Adler, None

9:45 am **Burosumab (KRN23), a Fully Human Anti-FGF23 Monoclonal Antibody for X-linked Hypophosphatemia (XLH): Final 64-Week Results of a Randomized, Open-label Phase 2 Study of 52 Children**
1154 Michael Whyte*[1], Anthony Portale[2], Erik Imel[3], Annemieke Boot[4], Wolfgang Högler[5], Agnès Linglart[6], Raja Padidela[7], William van't Hoff[8], Meng Mao[9], Alison Skrinar[10], Emil Kakkis[10], Javier San Martin[10], Thomas Carpenter[11]. [1]Shriners Hospital for Children, United States, [2]UCSF School of Medicine, United States, [3]Indiana University School of Medicine, United States, [4]University of Groningen, Netherlands, [5]Birmingham Children's Hospital, United Kingdom, [6]Hôpital Bicêtre, France, [7]Royal Manchester Children's Hospital, United Kingdom, [8]Great Ormond Street Hospital, United Kingdom, [9]Ultragenyx Pharmaceutical Inc., United States, [10]Ultragenyx Pharmaceutical Inc, United States, [11]Yale University School of Medicine , United States
Disclosures: Michael Whyte, Ultragenyx Pharmaceutical Inc., Grant/Research Support

10:00 am **ASBMR 2017 Most Outstanding Clinical Abstract Award**

1155 **The Fracture, Osteoporosis, and CT Utilization Study (FOCUS) — Utilizing Pre-existing CT to Assess Risk of Hip Fracture in a Large Real-world Clinical Setting**

Annette Adams*[1], Heidi Fischer[1], David Kopperdahl[2], David Lee[2], Dennis Black[3], Mary Bouxsein[4], Shireen Fatemi[5], Sundeep Khosla[6], Eric Orwoll[7], Ethel Siris[8], Tony Keaveny[2]. [1]Department of Research & Evaluation, Kaiser Permanente Southern California, United States, [2]O.N. Diagnostics, LLC, United States, [3]Department of Epidemiology and Biostatistics, University of California San Francisco, United States, [4]Center for Advanced Orthopedic Studies, Beth Israel Deaconess Medical Center & Harvard Medical School, Endocrine Unit, Massachusetts General Hospital, United States, [5]Endocrinology, Southern California Permanente Medical Group, United States, [6]Mayo Clinic, United States, [7]Oregon Health & Science University, United States, [8]New York-Presbyterian Hospital, United States

Disclosures: Annette Adams, Amgen, Grant/Research Support

10:15 am **The Risk of Fracture among men with Sarcopenia, Obesity, their combination Sarcopenic**

1156 **Obesity, and men with neither condition: the MrOS Study**

Rebekah Harris*[1], Elsa Strotmeyer[1], Robert Boudreau[1], Jennifer Brach[1], C. Kent Kwoh[2], Nancy Lane[3], Eric Orwoll[4], Ann Schwartz[5], Peggy Cawthon[5], Jane Cauley[1]. [1]University of Pittsburgh, United States, [2]University of Arizona, United States, [3]University of California-Davis, United States, [4]Oregon Health & Science University, United States, [5]University of California- San Francisco, United States

Disclosures: Rebekah Harris, None

10:30 am **Physical performance, osteoporosis and vitamin D in elderly African-American women - the**

1157 **PODA trial and bone density loss**

Jeannette Owusu, MD*[1], Mageda Mikhail, MD[1], Melissa Fazzari, PhD[1], Ruban Dhaliwal, MD[1], Subhashini Katumuluwa, MD[2], Albert Shieh, MD[1], Ayesha Ashraf Anwarullah, MD[1], Gianina Usera, M.D.[1], Alexandra Stolberg, MD[1], Louis Ragolia, PhD[1], John Aloia, MD[1]. [1]Winthrop University Hospital, United States, [2]Winthrop University Hopsital, United States

Disclosures: Jeannette Owusu, MD, None

10:45 am **Relationship between femoral strength from QCT-based finite element analysis and femoral**

1158 **BMD before and after treatment: An Analysis from the FNIH Bone Quality Project**

Mary L. Bouxsein*[1], Tony M. Keaveny[2], David C. Lee[2], Sundeep Khosla[3], Anne de Papp[4], Richard Eastell[5], Li-Yung Lui[6], Douglas C. Bauer[7], Dennis M. Black[7]. [1]Harvard Medical School, United States, [2]O.N. Diagnostics, LLC, United States, [3]Mayo Clinic College of Medicine, United States, [4]Merck & Co., Inc., United States, [5]University of Sheffield, United Kingdom, [6]California Pacific Medical Center, United States, [7]University of California, San Francisco, United States

Disclosures: Mary L. Bouxsein, Amgen, Grant/Research Support

NETWORKING BREAK

11:00 am - 11:15 am **Colorado Convention Center**

Mile High Ballroom Foyer and Four Seasons Ballroom Foyer

LATE-BREAKING ABSTRACT PRESENTATIONS: CLINICAL

11:15 am - 12:00 pm **Colorado Convention Center**

Mile High Ballroom

LB-1159 **A Phase 3 Randomized, 24 Week, Double-Blind, Placebo-Controlled Study Evaluating the Efficacy of Burosumab, an Anti-FGF23 Antibody, in Adults with X-Linked Hypophosphatemia (XLH)**

Karl Insogna*[1], Karine Briot[2], Erik Imel[3], Peter Kamenický[4], Mary Ruppe[5], Anthony Portale[6], Thomas Weber[7], Pisit Pitukcheewanont[8], Hae II Cheong[9], Suzanne Jan De Beur[10], Yasuo Imanishi[11], Nobuaki Ito[12], Robin Lachmann[13], Hiroyuki Tanaka[14], Diana Luca[15], Christina Theodore-Oklota[16], Matt Mealiffe[17], Javier San Martin[16], Thomas O. Carpenter[1]. [1]Yale University School of Medicine, United States, [2]CHU Paris Centre - Hôpital Cochin, France, [3]Indiana University Department of Medicine, United States, [4]Université Paris-Sud, Service d'Endocrinologie et des Maladies de la Reproduction, Hôpital de Bicêtre, France, [5]Houston Methodist Hospital, United States, [6]UCSF Medical Center, United States, [7]Duke University Medical Center, United States, [8]Children's Hospital Los Angeles, University of Southern California Keck School of Medicine, United States, [9]Seoul National University Hospital, Korea, Democratic People's Republic of, [10]Johns Hopkins University, United States, [11] Osaka City University Graduate School of Medicine, Japan, [12]The University of Tokyo Hospital, Japan, [13]Univeristy College of London Hospital, United Kingdom, [14]Okayama Saiseikai General Hospital, Japan, [15]Ultragenyx Pharmaceutical Inc., United States, [16]Ultragenyx Pharmaceutical, Inc, United States, [17]Ultragenyx Pharmaceutical, Inc., United States

Disclosures: Karl Insogna, Ultragenyx Pharmaceutical Inc., Grant/Research Support

LB-1160 **Mortality after a recent clinical fracture before and after the introduction of a Fracture Liaison Service**

Caroline E Wyers*, Lisanne Vranken, Johanna H Driessen, Irma JA de Bruim, Piet PM Geusens, Robert Y van der Velde, Heinrich MJ Janzing[4], Sjoerd Kaarsemaker[5], John A Eisman[6], Joop PW van den Bergh. [1]Maastricht UMC+, NUTRIM, Department of Internal Medicine; VieCuri Medical Center, Department of Internal Medicine, Netherlands, [2]Maastricht UMC+, NUTRIM, CAPHRI, Department of Clinical Pharmacy and Toxicology; Utrecht Institute of Pharmaceutical Sciences, Division of Pharmacoepidemiology and Clinical Pharmacology, Netherlands, [3]Maastricht UMC+, CAPHRI, Department of Internal Medicine subdivision of Rheumatology; University of Hasselt, Netherlands, [4]VieCuri Medical Center, Department of Surgery, Netherlands, [5]VieCuri Medical Center, Department of Orthopedic Surgery, Netherlands, [6]Garvan Institute of Medical Research, Clinical Translation and Advanced Education;, Australia, [7]Maastricht UMC+, NUTRIM, Department of Internal Medicine; VieCuri Medical Center, Department of Internal Medicine; University of Hasselt, Netherlands

Disclosures: Caroline E Wyers, None

LB-1161 **Trends in Bisphosphonate Orders and Pharmacy Dispenses, 2008-2016**

Annette Adams*[1], Hui Zhou[1], Lei Qian[1], Dennis Black[2], Kristi Reynolds[1]. [1]Kaiser Permanente Southern California, United States, [2]University of California San Francisco, United States

Disclosures: Annette Adams, None

LB-1162 **A Randomized Alendronate-Controlled Trial of Romosozumab: Results of the Phase 3 ARCH Study (Active-contRolled fraCture study in postmenopausal women with osteoporosis at High risk)**

Kenneth G Saag*[1], Jeffrey Petersen[2], Maria Luisa Brandi[3], Andrew Karaplis[4], Mattias Lorentzon[5], Thierry Thomas[6], Judy Maddox[2], Michelle Fan[2], Paul Meisner[7], Andreas Grauer[2]. [1]University of Alabama, United States, [2]Amgen Inc., United States, [3]University of Florence, Italy, [4]McGill University, Canada, [5]University of Gothenburg and Sahlgrenska University Hospital, Sweden, [6]CHU de Saint-Étienne, France, [7]UCB Pharma, Belgium

Disclosures: Kenneth G Saag, Amgen, Merck, Consultant

LATE-BREAKING ABSTRACT PRESENTATIONS: BASIC AND TRANSLATIONAL

11:15 am - 12:00 pm **Colorado Convention Center**

Four Seasons Ballroom I

LB-1163 **A Novel Mouse Model of Fibrous Dysplasia Reveals Both Cell autonomous and Non Cell-autonomous Function of G□sR201H Mutation**

Sanjoy Khan*[1], Prem Yadav[1], Yingzi Yang[1], Gene Elliot[2]. [1]Harvard School of Dental Medicine, United States, [2]National Human Genome Research Institute, United States

Disclosures: Sanjoy Khan, None

LB-1164 **Advanced Glycation End-Products (AGEs) Associated with Altered Gene Expression in Bone Strength Candidate Genes**

Ellen Quillen*[1], Anne Sheldrake[1], Jeremy Glenn[1], Jaydee Foster[1], Laura Cox[1], Daniel Nicolella[2], Todd Bredbenner[2]. [1]Texas Biomedical Research Institute, United States, [2]Southwest Research Institute, United States

Disclosures: Ellen Quillen, None

LB-1165 **Osteocytes express a unique transcriptome that underpins skeletal homeostasis**

Scott Youlten*[1], Paul Baldock[1], Victoria Leitch[2], Julian Quinn[1], Nenad Bartonicek[3], Ryan Chai[1], John Eisman[1], J.H. Duncan Bassett[2], Graham Williams[2], Peter Croucher[1]. [1]The Division of Bone Biology, Garvan Institute of Medical Research, Australia, [2]Molecular Endocrinology Laboratory, Department of Medicine Imperial College London, United Kingdom, [3]Centre for Clinical Genomics, Garvan Institute of Medical Research, Australia

Disclosures: Scott Youlten, None

LB-1166 **Osteocalcin signaling in the liver favors de novo gluconeogenesis**

Paula Mera*[1], Subrata Chowdhury[1], Gerard Karsenty[1]. [1]Columbia University, United States

Disclosures: Paula Mera, None

Monday

POSTER SESSION III

12:00 pm - 2:00 pm **Colorado Convention Center**

ASBMR Discovery Hall - Exhibit Hall A & B1

MO0388 **Primary Hyperparathyroidism: Insights from Indian PHPT Registry**

Sanjay Bhadada*[1], Ashutosh Arya[1], Satinath Mukhopadhyay[2], Rajesh Khadgawat[3], Suja Sukumar[1], Sailesh Lodha[4], Deependra N Singh[4], Anjali Sathya[1], Priyanka Singh[1], Anil Bhansali[1], Sudhaker D Rao[5]. [1]PGIMER, India, [2]IPGMER, India, [3]AIIMS, India, [4]Fortis Hospital, India, [5]Henry Ford Hospital, United States

Disclosures: Sanjay Bhadada, None

MO0389 **Paget's, Kidney Disease, and Denosumab: A Dangerous Combination**

Lila Chertman*[1], Violet Lagari-Libhaber[2]. [1]University of Miami Department of Endocrinology, Jackson Memorial Hospital, United States, [2]University of Miami Department of Endocrinology, Miami VA Healthcare System, Jackson Memorial Hospital, United States

Disclosures: Lila Chertman, None

MO0390 **Comorbidities Associated with Hypoparathyroidism: An 8-Year Register-Based Study in Italy**

Cristiana Cipriani*[1], Jessica Pepe[1], Rizieri Manai[1], Luciano Nieddu[2], Federica Biamonte[1], Chiara Sonato[1], Piergianni Biondi[1], Luisella Cianferotti[3], Maria Luisa Brandi[3], Salvatore Minisola[1]. [1]Sapienza University of Rome, Italy, [2]UNINT University, Italy, [3]University of Florence, Italy

Disclosures: Cristiana Cipriani, None

MO0391 **Maintenance of Key Biochemical Parameters With Recombinant Human Parathyroid Hormone (1-84) in Patients With Hypoparathyroidism: An Analysis of a Long-Term, Open-Label, Single-Center Study**

Natalie E. Cusano*[1], Mishaela R. Rubin[1], Rebecca Piccolo[2], Alan Krasner[2], John P. Bilezikian[1]. [1]College of Physicians and Surgeons, Columbia University, United States, [2]Shire Human Genetic Therapies, Inc., United States

Disclosures: Natalie E. Cusano, Shire, Speakers' Bureau

MO0392 **A Case of Hypophosphatemic Rickets in Pregnancy**

Janet Lee*[1], Jeffrey Sperling[2], Kirsten Salmeen[2], Dolores Shoback[3], Ingrid Block-Kurbisch[2]. [1]Division of Endocrinology and Metabolism, Department of Medicine and Pediatrics, University of California, San Francisco, United States, [2]Department of Obstetrics, Gynecology, and Reproductive Sciences, Division of Maternal Fetal Medicine, University of California, San Francisco, United States, [3]Endocrine Research Unit, Department of Medicine, San Francisco Department of Veterans Affairs Medical Center, University of California, San Francisco, United States

Disclosures: Janet Lee, None

MO0393 **Clinical presentation and management of primary hyperparathyroidism in Italy**

Federica Saponaro*[1], Filomena Cetani[2], Andrea Repaci[3], Valentina Camozzi[4], Salvatore Minisola[5], Alfredo Scillitani[6], Iacopo Chiodini[7], Francesco Romanelli[8], Bruno Madeo[9], Laura Gianotti[10], Antongiulio Faggiano[11], Luisella Cianferotti[12], Sabrina Corbetta[13], Maria Laura De Feo[14], Andrea Palermo[15], Paolo Pozzilli[15], Claudio Marcocci[16]. [1]Departmet of Clinical and Experimental Medicine, University of Pisa, Italy, [2]University-Hospital of Pisa, Italy, [3]Endocrine Unit, Sant'Orsola Malpighi, Bologna, Italy, [4]Endocrine Unit, University of Padova, Italy, [5]Department of Internal Medicine and Medical Disciplines'Sapienza' University, Rome, Italy, [6]Endocrinology Unit, ''Casa Sollievo della Sofferenza, '' IRCCS, San Giovanni Rotondo, Italy, [7]Unit of Endocrinology and Metabolic DiseasesFondazione IRCCS Cà Granda-Ospedale Maggiore Policlinico, Milan, Italy, [8]Department of Experimental Medicine, Sapienza University of Rome, Italy, [9]Azienda USL of Modena, Unit of Endocrinology, Modena, Italy, [10]Division of Endocrinology, Diabetes and Metabolism, Santa Croce and Carle Hospital, 12100, Cuneo, Italy, [11]Endocrinology, Federico II University of Naples, Italy, [12]Department of Internal Medicine, University of Florence, Italy, [13])Area di Endocrinologia e Malattie Metaboliche, IRCCS Policlinico San Donato Milan, Italy, [14]Endocrinology Unit, Careggi Hospital and University of Florence, Italy, [15]Department of Endocrinology and Diabetes, University Campus Bio-Medico, Rome, Italy, [16]Department of Clinical and Experimental Medicine, University of Pisa, Italy

Disclosures: Federica Saponaro, None

MO0394 **Deterioration of Physical Function and Bone Mineral Density after Discontinuation of Asfotase Alfa Therapy in a Young Woman with Infantile Hypophosphatasia**

Mahshid Mohseni*[1], Katherine L. Madson[2], Gary S. Gottesman[2], Karen E. Mack[2], Amy L. Reeves[2], Michael P. Whyte[1]. [1]Center for Metabolic Bone Disease and Molecular Research, Shriners Hospital for Children, and Division of Bone and Mineral Diseases, Department of Internal Medicine, Washington University School of Medicine, United States, [2]Center for Metabolic Bone Disease and Molecular Research, Shriners Hospital for Children, United States

Disclosures: Mahshid Mohseni, None

MO0395 **Geographic Heterogeneity in Health-Related Quality-of-Life Treatment Response to Recombinant Human Parathyroid Hormone (rhPTH[1-84]) in Patients With Chronic Hypoparathyroidism: Post Hoc Analysis of REPLACE**

Tamara J. Vokes*[1], Michael Mannstadt[2], Michael A. Levine[3], Bart L. Clarke[4], Peter Lakatos[5], Kristina Chen[6], Rebecca Piccolo[6], Alan Krasner[6], Dolores M. Shoback[7], John P. Bilezikian[8]. [1]University of Chicago Medicine, United States, [2]Massachusetts General Hospital and Harvard Medical School, United States, [3]Children's Hospital of Philadelphia, United States, [4]Mayo Clinic Division of Endocrinology, Diabetes, Metabolism, and Nutrition, United States, [5]Semmelweis University Medical School, Hungary, [6]Shire Human Genetic Therapies, Inc., United States, [7]SF Department of Veterans Affairs Medical Center, University of California, United States, [8]College of Physicians and Surgeons, Columbia University, United States

Disclosures: Tamara J. Vokes, Shire, Consultant

MO0396 **Is normal range of serum PTH really normal**

Junping Wen*[1], Yinli Lin[1], Yuanyuan Zheng[1], Wei Lin[1], Jixing Liang[1], Huibin Huang[1], Liantao Li[1], Lixiang Lin[1], Gang Chen[1]. [1]Fujian Provincial Hospital, China

Disclosures: Junping Wen, None

MO0397 **Exploring the Associations between Bone Composition and Clinical Measures of Fragility Fracture Risk: a Pilot Transcutaneous*in vivo* Raman Study**

Hao Ding*[1], Andrea Baker[1], Ping Wang[1], Philip Orlander[1], William Ip[1], James Kellam[1], Catherine Ambrose[1], Nahid Rianon[1], Xiaohong Bi[1]. [1]University of Texas Health Science Center, United States

Disclosures: Hao Ding, None

MO0398 **Impact of Endurance Exercise on Bone Response to Continuous Low Dose-Rate Radiation during Hindlimb Unloading**

Rihana Bokhari*[1], Emily Sturgell[1], Matthew Allen[2], John Ford[1], Susan Bloomfield[1]. [1]Texas A&M University, United States, [2]Indiana University School of Medicine, United States

Disclosures: Rihana Bokhari, None

MO0399 **Microgravity exposure diminishes trabecular microarchitecture and cortical bone morphology in skeletally mature mice**

Jennifer C. Coulombe*[1], Alicia M. Ortega[1], Eric W. Livingston[2], Ted A. Bateman[2], Louis S. Stodieck[1], Samuel M. Cadena[3], Virginia L. Ferguson[1]. [1]University of Colorado, United States, [2]University of North Carolina at Chapel Hill, United States, [3]Novartis Institutes for Biomedical Research, Inc., United States

Disclosures: Jennifer C. Coulombe, None

MO0400 **Bisphosphonate Pre-Treatments Protect Cancellous Bone Density and Strength in Unloaded Adult Rats**

Jon Elizondo*[1], Jeremy Black[1], Jennifer Kosniewski[1], Jessica Brezicha[2], Scott Lenfest[1], Susan Bloomfield[3], Matthew Allen[4], Harry Hogan[5]. [1]Dept. of Mechanical Engineering, Texas A&M University, United States, [2]Dept. of Biomedical Engineering, Texas A&M University, United States, [3]Dept. of Health and Kinesiology, Texas A&M University, United States, [4]Dept. of Anatomy and Cell Biology, Indiana University, United States, [5]Dept. of Mechanical Engineering and Dept. of Biomedical Engineering, Texas A&M University, United States

Disclosures: Jon Elizondo, None

MO0401 **Age–related changes in the anabolic response to exercise**
Niloufar Rostami*[1], Chunbin Zhang[1], Joseph Gardinier[1]. [1]Henry Ford Hospital, United States
Disclosures: Niloufar Rostami, None

MO0402 **Finite Element Models of Linear Microcracks in Trabecular Bone with Simulated Bisphosphonate and Raloxifene Treatment**
Max Hammond*[1], Joseph Wallace[2], Matthew Allen[3], Thomas Siegmund[1]. [1]Purdue University, United States, [2]Indiana University - Purdue University Indianapolis, United States, [3]Indiana University School of Medicine, United States
Disclosures: Max Hammond, None

MO0403 **Fracture toughness and geometry-independent microscale material properties are improved with exercise for male but not female rats in diet-induced obesity.**
Chelsea Heveran*[1], Rebecca Foright[2], Ginger Johnson[2], Virginia Ferguson[3], Paul MacLean[2], Vanessa Sherk[2]. [1]Department of Mechanical Engineering, University of Colorado, United States, [2]Department of Medicine, Division of Endocrinology, Metabolism & Diabetes, University of Colorado Anschutz Medical Campus, United States, [3]Department of Mechanical Engineering University of Colorado, United States
Disclosures: Chelsea Heveran, None

MO0404 **Long Term Effects of Omeprazole on Mouse Bone Quality and Mechanics**
Serra Kaya*[1], Jessica Thomas[1], Tasnim Islam[1], Robert J Majeska[1], Mitchell B Schaffler[1]. [1]City College of New York, United States
Disclosures: Serra Kaya, None

MO0405 **The Relationship between Stiffness and Strength in the Femur is Sex- and Age-Dependent**
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MO0406 **Effect of Spaceflight-relevant Ionizing Radiation on Mechanical Properties of Mouse Vertebra for Repetitive Loading**
Megan Pendleton*[1], Saghi Sadoughi[1], Alfred Li[2], Jennifer Liu[3], Grace O'Connell[1], Joshua Alwood[4], Tony Keaveny[1]. [1]University of California, Berkeley, United States, [2]SF VA Medical Center, University of California San Francisco, United States, [3]Washington University, St. Louis, United States, [4]NASA Ames Research Center, United States
Disclosures: Megan Pendleton, None

MO0407 **A novel Raman parameter correlates with the fracture toughness of human cortical bone**
Mustafa Unal*[1], Selin Timur[2], Sasidhar Uppuganti[1], Ozan Akkus[2], Jeffry S. Nyman[1]. [1]Vanderbilt University Medical Center, United States, [2]Case Western Reserve University, United States
Disclosures: Mustafa Unal, None

MO0408 **Lactation-induced changes in mineral and matrix composition are site-specific**
Christina Vrahnas*[1], Christine Jun[2], Ingrid Poulton[1], Keith Bambery[3], Christopher Kovacs[4], Jack Martin[1], Natalie Sims[1]. [1]St. Vincent's Institute of Medical Research, Australia, [2]University of Melbourne, Australia, [3]Australian Synchrotron, Australia, [4]Memorial University of Newfoundland, St. John's, Australia
Disclosures: Christina Vrahnas, None

MO0409 **Distinct Roles of Periosteum and Endosteum during Long Bone Growth, Loading and Intermittent PTH Responses**

Ke Wang*[1], Yuan Hui[1], Yingshi Ren[2], Reuel Cornelia[3], Harry Kim[3], Xianglong Han[4], Jian Feng[1]. [1]Department of Biomedical Science, Texas A&M Health Science Center, College of Dentistry, Dallas, TX, United States, [2]Department of Biomedical Science, Texas A&M Health Science Center, College of Dentistry, Dallas, TX;, United States, [3]Department of Research, Texas Scottish Rite Hospital for Children, United States, [4]State Key Laboratory of Oral Diseases, West China Hospital of Stomatology, Sichuan University, China, China

Disclosures: Ke Wang, None

MO0410 **Association between vertebral cross-sectional area and vertebral wedging**

Tishya Wren*[1], Skorn Ponrartana[1], Patricia Aggabao[1], Ervin Poorghasamians[1], Vicente Gilsanz[1]. [1]Children's Hospital Los Angeles, Keck School of Medicine, University of Southern California, United States

Disclosures: Tishya Wren, None

MO0411 **Does Childhood and Adolescent Fat Mass Accrual Influence Trajectories of Bone Development in Emerging Adulthood?**

Adam Baxter-Jones*[1], Erin Barbour-Tuck[1], Saija Kontulainen[1], Marta Erlandson[1]. [1]University of Saskatchewan, Canada

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MO0412 **Lumbar Spine Trabecular Bone Score: a Potential Screening Tool for the First Year Post-menarche?**

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MO0413 **Accuracy and Precision of estimated %FAT from Hologic Forearm and Lateral Distal Femur DXA Scans in children**

Bo Fan*[1], Natasha Din[1], Bennett Ng[2], Amir Pasha Mahmoudzadeh[1], Babette Zemel[3], Heidi Kalkwarf[4], Andrea Kelly[3], James Heubi[5], Kimberly Yolton[5], Leila Kazemi[1], John Shepherd[1]. [1]UCSF, United States, [2]University of California Berkeley, United States, [3]CHOP, United States, [4]Cincinnati Children's Hopital, United States, [5]Cincinnati Children's Hospital, United States

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MO0414 **Do the Timing and Rate of Bone Mass Acquisition Differ Between Overweight and Healthy-Weight Adolescent Females? An 18-Month Prospective Study**

Joseph Kindler*[1], Kara Vogel[1], Berdine Martin[1], Linda McCabe[1], Courtney Henry[1], Munro Peacock[2], Stuart Warden[2], George McCabe[1], Connie Weaver[1]. [1]Purdue University, United States, [2]Indiana University, United States

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MO0415 **Elevated IL-1 Expression in Mesenchymal Stem Cells Derived from Spondyloarthitis Patients Is Associated With an Increase in Their Capacity To Form Mineralizing Osteoblasts**

Gerlinde Layh-Schmitt*[1], Breanna Nguyen[1], Robert A. Colbert[1]. [1]Pediatric Translational Research Branch, NIAMS, NIH, United States

Disclosures: Gerlinde Layh-Schmitt, None

MO0416 **Pre-pubertal onset of type 1 diabetes mellitus (T1D) is associated with differences in bone microarchitecture in young adult males**

Roger Long*[1], Ursula Heilmeier[1], Ann Schwartz[1], Aenor Sawyer[1], Saleh Adi[1], Marie Nader[1], Courtney Pasco[1], Melis Yilmaz[1], Thomas Link[1], Galateia Kazakia[1]. [1]University of California, San Francisco, United States

Disclosures: Roger Long, None

MO0417 **Adolescent use of Combined Hormonal Contraceptives and Peak Areal Bone Mineral Density Accrual in Prospective Studies: a meta-analysis**

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MO0418 **Relationship of total or calculated free 25-hydroxyvitamin D to metabolic indices in a cohort of healthy children**

Christine Simpson*[1], Jane Zhang[2], Teresita Pennestri[1], Lei Fu[3], Dirk Vanderschueren[4], Roger Bouillon[4], David Cole[3], Thomas Carpenter[1]. [1]Yale University School of Medicine, United States, [2]V.A. Connecticut Healthcare System, United States, [3]University of Toronto, Canada, [4]Katholieke Universiteit, Belgium

Disclosures: Christine Simpson, None

MO0419 **Walking at 1 Year of Age Relates to Higher Lean Body Mass with Benefits to Bone Mineral Density Evident at 3 Years of Age**

Hope Weiler*[1], Catherine Vanstone[1]. [1]McGill University, Canada

Disclosures: Hope Weiler, None

MO0420 **Limitations Associated with Bone Assessment by Dual-Energy X-ray Absorptiometry at the Distal Femur in Children with Cerebral Palsy**

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MO0421 **Bone Marrow Adipose Tissue and Bone Turnover in Postmenopausal Osteoporotic Women and the Effects of Raloxifene**

Kerensa Beekman*[1], Annegreet Veldhuis-Vlug[2], Martin den Heijer[1], Mario Maas[3], Paul Lips[1], Susan Ott[4], Rob van 't Hof[5], Peter Bisschop[2], Nathalie Bravenboer[6]. [1]VU University Medical Center, Department of Endocrinology, Netherlands, [2]Academic Medical Center/University of Amsterdam, Department of Endocrinology and Metabolism, Netherlands, [3]Academic Medical Center/University of Amsterdam, Department of Radiology , Netherlands, [4]University of Washington, Department of Metabolism, Endocrinology and Nutrition, United States, [5]University of Liverpool, Department of Musculoskeletal Biology, United Kingdom, [6]VU University Medical Center, Department of Clinical Chemistry and Leiden University Medical Center, Center for Bone Quality, Netherlands

Disclosures: Kerensa Beekman, None

MO0422 **Conditioned medium of Amniotic fluid derived mesenchymal stromal cells ameliorated ischemia induced bone loss in murine bone**

Sun Wook Cho*[1], Hyun Jin Sun[1], Sang Eun Lee[2], JoonHo Lee[3], Young Joo Park[1], Chan Soo Shin[1]. [1]Seoul National University Hospital , Korea, Republic of, [2]Asan medical center, Korea, Republic of, [3]YONSEI UNIVERSITY, COLLEGE OF MEDICINE, Korea, Republic of

Disclosures: Sun Wook Cho, None

MO0423 **MicroRNA-141 regulates SDF-1α expression and osteogenic differentiation in mouse and human bone marrow derived stromal cells.**
Sadanand Fulzele*[1], Sudharsan Periyasamy-Thandavan[2], Galina Kondrikova[2], John Burke[3], Rajnikumar Sangani[3], Bharati Mendhe[4], Khaled Hussein[2], Monte Hunter[5], Carlos Isales[6], Mark Hamrick[2], William Hill[7]. [1]Department of Orthopedic Surgery, Medical College of Georgia, Augusta University, United States, [2]Departement of Cell Biology and Anatomy, Medical College of Georgia, Augusta University, United States, [3]Medical College of Georgia, Augusta University, United States, [4]Depaetment of Cell Biology and Anatomy, Medical College of Georgia, Augusta University, United States, [5]Departement of Orthopedic Surgery, Medical College of Georgia, Augusta University, United States, [6]Department of Neuroscience and Regenerative Medicine, Medical College of Georgia, Augusta University, United States, [7]Department of Cell Biology and Anatomy Medical College of Georgia, Augusta University. Charlie Norwood VA Medical Center, United States
Disclosures: Sadanand Fulzele, None

MO0424 **B cell depletion by anti-CD20 antibodies entrains trabecular bone loss in mice**
Albert Kolomansky*[1], Naamit Deshet-Unger[1], Alina Ostrovsky[1], Sahar Hiram-Bab[2], Nathalie Ben-Califa[1], Tamar Liron[2], Howard S Oster[3], Moshe Mittelman[3], Yankel Gabet[2], Drorit Neumann[1]. [1]Department of Cell and Developmental Biology, Sackler Faculty of Medicine, Tel Aviv University, Israel, [2]Department of Anatomy and Anthropology, Sackler Faculty of Medicine, Tel Aviv University, Israel, [3]Department of Medicine A, Tel Aviv Sourasky Medical Center, Sackler Faculty of Medicine, Tel Aviv University, Israel
Disclosures: Albert Kolomansky, None

MO0425 **Bone marrow phenotype in a murine model of cystic fibrosis**
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Disclosures: Genevieve Mailhot, None

MO0426 **The PEG Associated Solvent System (PEGASOS) Method Enables 3-Dimentional Visualization of Hard Tissue**
Shiwen Zhang*[1], Wenjing Luo[2], Dian Jing[1], Yi Men[2], Quan Yuan[3], Zhihe Zhao[3], Hu Zhao[2]. [1]Texas A&M University College of Dentistry, USA; Sichuan University, China, United States, [2]Texas A&M University College of Dentistry, USA, United States, [3]Sichuan University, China, China
Disclosures: Shiwen Zhang, None

MO0427 **Selective Pharmacological Inhibition of Notch Receptor 3 Signaling Induces Myeloma Cell Death and Preserves Osteocyte Viability**
Emily G. Atkinson*[1], Teresita Bellido[1], G. David Roodman[2], Mark R. Kelley[3], Jesus Delgado-Calle[1]. [1]Anatomy and Cell Biology, Indiana University School of Medicine, United States, [2]Department of Medicine, Indiana University School of Medicine, United States, [3]Department of Pediatrics, Herman B Wells Center for Pediatric Research, Indiana University School of Medicine, United States
Disclosures: Emily G. Atkinson, None

MO0428 **Characterizing Dose Dependent Effects of Estrogen in a Murine Model of Human Estrogen Receptor-Positive Breast Cancer Bone Metastasis**
Julia Cheng*[1], Jennifer Frye[2], Susan Whitman[2], Andrew Kunihiro[3], Madison Egan[4], Julia Brickey[3], Janet Funk[2]. [1]Cancer Biology Graduate Interdisciplinary Program, University of Arizona, United States, [2]Department of Medicine, University of Arizona, United States, [3]Department of Nutritional Sciences, University of Arizona, United States, [4]Department of Molecular and Cellular Biology, University of Arizona, United States
Disclosures: Julia Cheng, None

MO0429 **Conditioned Medium of the Osteosarcoma Cell Line Saos-2 Induces BMSCs to Exhibit Characteristics of Carcinoma-Associated Fibroblasts via TGFβ Pathway**
Ze Tang*[1], Qiming Fan[1], Tingting Tang[1]. [1] Shanghai Key Laboratory of Orthopaedic Implants, Department of Orthopaedic Surgery, Shanghai Ninth People's Hospital, Shanghai Jiao Tong University School of Medicine (SJTUSM), China
Disclosures: Ze Tang, None

MO0430 **Functional Comparison between CD44s and CD44v8-10 in Cancer Metastasis to Bone**
Toru Hiraga*[1], Hiroaki Nakamura[1]. [1]Matsumoto Dental University, Japan
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MO0431 **Rare-earth-doped Luminescent Nanoparticles for Breast Cancer Detection and Potential Bone-targeting Contrast Agents**
Akhil Jain*[1], Fournier Pierrick[2], Gustavo A Hirata[1], Patricia Juarez[2]. [1]Center of Nanosciences and Nanotechnology-UNAM, Mexico, [2]Center for Scientific Research and Higher Education, Mexico
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MO0432 **Effects of estrogen removal by ovariectomy on growth of human MCF-7 breast cancer cells in bone**
Tiina E Kähkönen*[1], Mari I Suominen[1], Jukka Morko[1], Jukka Vääräniemi[1], Jussi M Halleen[1], Jenni Bernoulli[1]. [1]Pharmatest Services Ltd, Finland
Disclosures: Tiina E Kähkönen, None

MO0433 **Association Between Mutations in a New Gene (*ZNF687*) and Neoplastic Degeneration of Paget's Disease of Bone in Giant Cell Tumor but not Osteosarcoma**
Materozzi Maria*[1], Daniela Merlotti[2], Simone Bianciardi[3], Domenico Rendina[4], Vito Guarnieri[5], Paolo Graziano[6], Salvatore Minisola[7], Alfredo Scillitani[8], Pasquale Strazzullo[9], Ranuccio Nuti[3], Luigi Gennari[3]. [1]Department of Medicine, Surgery and Neurosciences, University of Siena, Italy; Department of Medical, Biotechnologies, University of Siena, Italy, Italy, [2]Division of Genetics and Cell Biology, San Raffaele Scientific Institute, Milan, Italy; Department of Medicine, Surgery and Neurosciences, University of Siena, Italy, Italy, [3]Department of Medicine, Surgery and Neurosciences, University of Siena, Italy, Italy, [4]Department of Clinical and Experimental Medicine, Federico II University, Naples, Italy , Italy, [5]Unit of Medical Genetics, IRCCS Casa Sollievo della Sofferenza Hospital, San Giovanni Rotondo Italy, Italy, [6]Unit of Pathology, IRCCS Casa Sollievo della Sofferenza Hospital, San Giovanni Rotondo Italy, Italy, [7]Department of Internal Medicine, Sapienza University Rome, Italy , Italy, [8]Unit of Diabetology and Endocrinology, IRCCS Casa Sollievo della Sofferenza Hospital, San Giovanni Rotondo Italy, Italy, [9]Department of Clinical and Experimental Medicine, Federico II University, Naples, Italy , Italy
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MO0434 **Theranostic bone-targeting upconversion-nanoparticles with responsive plumbagin-release inhibit RANKL expression in osteocytes to attenuate early bone metastasis of breast cancer**
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Disclosures: Han Qiao, None

MO0435 **Amlexanox inhibition of TBK1/IKKε Signaling Is a Novel Therapeutic Approach for Multiple Myeloma-Induced Bone Disease**
Quanhong Sun*[1], Peng Zhang[1], Juraj Adamik[1], Valentina Marchica[2], Nicola Giuliani[2], Rebecca Silbermann[3], G. David Roodman[3], Deborah L. Galson[1]. [1]Department of Medicine, Hematology-Oncology Division, University of Pittsburgh Cancer Institute, McGowan Institute for Regenerative Medicine, University of Pittsburgh, PA, USA, United States, [2]Myeloma Unit, Department of Clinical and Experimental Medicine, University of Parma, Italy, Italy, [3]Department of Medicine, Hematology-Oncology Division, Indiana University, Indianapolis, IN, USA, United States
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MO0436 **Micro-environmental Features of the Bone and Bone Marrow Associated with Metastatic Colonization**

Maura Hartzman*[1], Amato Giaccia[2], Colleen Wu[1]. [1]Duke University, United States, [2]Stanford University, United States

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MO0437 **PARylation-mediated Activation of NF-κB by NAMPT in Chondrocytes Causes Catabolic Changes**

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Disclosures: Manoj Arra, None

MO0438 **Anabolic Effects of Novel Small Molecular Weight Fibroblast Growth Factor Receptor (FGFR) 3 Agonists in Articular Chondrocytes**

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MO0439 **IL36α enhances chondrocyte differentiation and maturation while promoting osteoarthritis**

Xin Jin*[1], Tieshi Li[2], Lai Wang[2], Alessandra Esposito[2], Arnavaz Hakimiyan[2], Joseph Temple[2], Susan Chubinskaya[2], Anna Spagnoli[2]. [1]Department of Pediatrics, Rush University Medical Center; Department of Orthopaedics, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, United States, [2]Department of Pediatrics, Rush University Medical Center, United States

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MO0440 **Aggrecan Gene Expression in Chondrocytes is Controlled by Multiple DNA Regulatory Elements**

Ian M. H. Li*[1], Ke Liu[1], Alice Neal[2], Peter D. Clegg[1], Sarah De Val[2], George Bou-Gharios[1]. [1]University of Liverpool, United Kingdom, [2]University of Oxford, United Kingdom

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MO0441 **WNT16 Regulation of Articular Chondrocyte Proliferation and Differentiation**

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MO0442 **Tetrahedral DNA Nanostructure: A Potential Promoter for Cartilage Tissue Regeneration via Regulating Chondrocyte Phenotype and Proliferation**

Xiaoru Shao*[1], Shiyu Lin[1]. [1]West China Hospital of Stomatology, Sichuan University, China

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MO0443 **Cartilage ECM enhances chondrogenic differentiation of skeletal cells: formulation of a fracture callus mimetic for non-union repair**

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MO0444 **Overexpression of human RANKL decreases skeletal muscle function, increases steatosis and engenders insulin resistance**

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MO0445 **PPARα nuclear receptor regulates osteoblast and osteoclast differentiation, and sclerostin protein levels in osteocytes**

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MO0446 **Marrow Adipose Tissue, Trabecular Bone Score and Osteocalcin as Parameters of Bone Quality in Type 2 Diabetes Mellitus**

Iana de Araújo*[1], Carlos Salmon[1], Marcello Nogueira-Barbosa[1], Sergio Luchini[1], Francisco de Paula[1], Francisco de Paula[1]. [1]Ribeirao Preto Medical School, USP, Brazil

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MO0447 **Beyond the Skeletal Effects of PTH: Energy expenditure, body composition, gene expression and bone mass in PTH treated mouse models**

Victoria DeMambro*[1], David Maridas[1], Elizabeth Rendina-Ruedy[1], Beate Lanske[2], Clifford Rosen[1]. [1]Maine Medical Center Research Institute, United States, [2]Harvard School of Dental Medicine, United States

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MO0448 **High fat, high protein diet increases nonshivering thermogenesis and serum leptin but is deleterious to trabecular bone in cold- and warm-housed mice**

Maureen Devlin*[1], Amy Robbins[1], Christopher Tom[1], Miranda Cosman[1], Lillian Shipp[1], Katarina Alajbegovic[1]. [1]University of Michigan, United States

Disclosures: Maureen Devlin, None

MO0449 **Increases in Gut Hormone PYY May Be Associated with Loss of Bone Mass After Gastric Bypass Surgery**

Tiffany Kim*[1], Dolores Shoback[1], Dennis Black[2], Stanley Rogers[2], Lygia Stewart[1], Jonathan Carter[2], Andrew Posselt[2], Nicole King[2], Anne Schafer[1]. [1]University of California, San Francisco, and the San Francisco VA Health Care System, United States, [2]University of California, San Francisco, United States

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MO0450 **Rapid Marrow Adipogenesis Following Burns: Implications for Onset of Reduced Bone Formation**

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Disclosures: Amina El Ayadi, None

MO0451 **Vitamin D Regulates Adipocyte and Muscle Cells Differentiation in vitro and Muscle Fat Content in vivo**

Jiarong Li*[1], Milton Mihalcioiu[1], Lifeng Li[1], Richard Kremer[1]. [1]McGill University, Canada

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MO0452 **Long-Term Exercise Restores Key Lipid Mediators in Muscle**

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MO0453 **Postprandial Regulation of Appetite by Lipocalin 2**

Ioanna Mosialou*[1], Steven Shikhel[1], Elisabeth Sornay-Rendu[2], Justine Bacchetta[3], Blandine Laferrere[4], Mishaela Rubin[5], Cyrille B. Confavreux[6], Stavroula Kousteni[1]. [1]Department of Physiology, Columbia University, USA, United States, [2]INSERM UMR1033-Université de Lyon, 69008-Lyon, France, France, [3]INSERM UMR1033-Université de Lyon, 69008-Lyon, France and Department of Pediatrics, Hospices Civils de Lyon, 69500-Bron, France, France, [4]Department of Medicine Endocrinology, Columbia University, United States, [5]Department of Medicine Endocrinology, Columbia University, USA, United States, [6]INSERM UMR1033-Université de Lyon, 69008-Lyon, France, Department of Pediatrics, Hospices Civils de Lyon, 69500-Bron, France and Department of Rheumatology, Hospices Civils de Lyon, 69003-Lyon FRANCE, United States

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MO0454 **Specific Micro-RNA changes in healthy vitamin D deficient men before and after vitamin D supplementation**

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MO0455 **The effect of AdipoRon on osteogensis and osteoclastogenesis*in vitro*.**

Xingwen Wu*[1], Qisheng Tu[1], Wei Qiu[1], Jake Chen[1], Youcheng Yu[2]. [1]Division of oral biology, Tufts university school of dental medicine, United States, [2]department of dentistry, zhongshan hospital, fudan university, China

Disclosures: Xingwen Wu, None

MO0456 **Generation of a mouse model overexpressing*Slc20a1*/*Pit1* in osteocytes to study the role this transporter in bone growth and phosphate homeostasis**

Sampada Chande*[1], Jonathan Fentene[1], Nelli Mnatsakanyan[2], Meiling Zhu[3], Karl Insogna[3], Clemens Bergwitz[1]. [1]Section of Endocrinology and Metabolism, Yale University School of Medicine, New Haven, CT 06519, USA., United States, [2]Internal Medicine, Yale University, New Haven, CT, USA, United States, [3]Yale Musculoskeletal Center, Yale University School of Medicine, New Haven, USA, United States

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MO0457 **CRISPR/Cas9-Mediated Creation of Novel Mouse Strains Lacking the LRP5 LDLR Class A Repeats**

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MO0458 **Phenomic analysis of zebrafish type I collagen mutants reveals a spectrum of skeletal phenotypes mimicking the clinical variability in human brittle bone disease**

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Disclosures: Charlotte Gistelinck, None

MO0459 Low Frequency Coding Variation in *CYP2R1* has Large Effects on Vitamin D Level and Risk of Multiple Sclerosis.

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MO0460 **Alterations in NFkB Signaling Contribute to the Bone Fragility in Osteogenesis Imperfecta type V**
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Disclosures: Ronit Marom, None

MO0461 **Complete absence of calcitriol in *Cyp27b1* null fetal mice does not disturb mineral metabolism or skeletal development**
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Disclosures: Brittany A. Ryan, None

MO0462 **Reduction of Gαs expression in mice with maternal ablation of exon Nesp (Nespm-) provides evidence for a potent Gαs silencing mechanism**
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Disclosures: OLTA TAFAJ, None

MO0463 **ADAMTS 18 plays an important role in murine endochondral ossification and fracture healing**
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MO0464 **Histomorphometrical Analysis in Murine Hypophosphatasia.**
Seiko Yamamoto-Nemoto*[1], Eri Yokoi[1], Kei Ogawa[24], Chika Endo[3], Nao Ogawa[1], Kunihiko Shimizu[24], Takehiko Shimizu[3]. [1]Nihon Univ. School of Dentistry at Matsudo, Japan, [2]Nihon Univ.school of Dentistry at Matsudo, Japan, [3]Nihon Univ. School of Dentistry at Mastudo, Japan, [4]Nihon Univ.School of Dentistry at Matsudo, Japan
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MO0465 **A Statistical Approach to the Identification of Potential Causal Variants Related to Bone Mineral Density**
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Disclosures: Jonathan Greenbaum, None

MO0466 **A Case-Control Study of the Genetic Determinants of Atypical Femoral Fracture**
Roby Joehanes*[1], Emmanuel Biver[2], Fredrick Kinyua[1], Yi-Hsiang Hsu[3], David Karasik[3], Michelle Yau[3], Serkalem Demissie[4], Ching-Ti Liu[4], Douglas Kiel[3], Serge Ferrari[2]. [1]Hebrew SeniorLife, United States, [2]Geneva University Hospitals, Switzerland, [3]Hebrew SeniorLife / Harvard Medical School, United States, [4]Boston University, United States
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MO0467 **Functional Effects of the p.Asp188Tyr Mutation in the Geranylgeranyl Diphosphate Synthase (*GGPS1*) Gene Associated with Bisphosphonate-related Atypical Femoral Fractures**
Neus Roca-Ayats*[1], James E. Dunford[2], PeiYing Ng[3], Natalia Garcia-Giralt[4], Monica Cozar[1], Jose M Quesada-Gomez[5], Xavier Nogués[4], Daniel Prieto-Alhambra[6], R Graham Russell[2], Daniel Grinberg[1], Adolfo Diez-Perez[4], Roland Baron[3], Susana Balcells[1]. [1]Dep of Genetics, University of Barcelona and CIBERER, Spain, [2]University of Oxford, United Kingdom, [3]Division of Bone and Mineral Research, Dept of Oral Medicine, Harvard School of Dental Medicine, United States, [4]Hospital del Mar Institute of Medical Investigation and CIBERFES, Spain, [5]Instituto Maimónides de Investigación, Cordoba, and CIBERFES, Spain, [6]Universitu of Oxford and GREMPAL CIBERFES, Spain
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MO0468 **Metabolomics of sarcopenia in Hong Kong Chinese**
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MO0469 **Aldosterone regulates FGF23 expression through WNK signaling in bone**
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MO0470 **CKD-MBD in a model of targeted FGF23 deletion**
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MO0471 **Performance of Liaison immunoassays versus LC-MS/MS for measurement of serum 25OHD level and impact on clinical decision making**
Maya Rahme*[1], Laila Al Shaar[1], Ravinder Singh[2], Asma Arabi[3], Rafic Baddoura[3], Georges Halabi[3], Robert Habib[3], Rose Daher[3], Darina Bassil[1], Karim El Ferekh[4], Maha Hoteit[1], Ghada El-Hajj Fuleihan[3]. [1]Mrs, Lebanon, [2]Professor, United States, [3]Professor, Lebanon, [4]Mr, Lebanon
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MO0472 **Quantification of soluble human Neuropilin-1 by sandwich ELISA**
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Disclosures: Manfred Tesarz, None

MO0473 **Measurement of (Free) 25OH Vitamin D in Saliva.**
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Disclosures: Christy Van Veenendaal, None

MO0474 **Free 25 (OH) vitamin D, but not total 25 (OH) vitamin D, is strongly correlated with gestational age and calcium in normal human pregnancy**
Oleg Tsuprykov*[12], Claudia Buse[12], Roman Skoblo[12], Berthold Hocher[3]. [1]IFLb, Germany, [2]IFLB, Germany, [3]University of Potsdam, Germany
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MO0475 **The Primary Trabecular Bone Becomes Lamellar by Continuous Parathyroid Hormone Infusion**
Nobuhito Nango*[1], Shogo Kubota[1], Yusuke Horiguchi[1], Hidekazu Takano[2], 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 University, Japan, [3]Center for Stem Cell and Regenerative Medicine, Tokyo Medical and Dental University, Japan, [4]Laboratory of Cell and Tissue Biology, Keio University School of Medicine, Japan
Disclosures: Nobuhito Nango, None

MO0476 **Steroid Orphan Receptor NR2C2 showed a osteopenia phenotype through regulation of RUNX2 function in osteoblast.**
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MO0477 **Development of Long-Acting Antagonists for the PTH Receptor**
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Disclosures: Hiroshi Noda, Chugai Pharmaceutical Co. Ltd., Grant/Research Support

MO0478 **Transient receptor potential melastatin 6 (TRPM6) as a Channel-kinase Regulator of Mineral Metabolism**
Nora Renthal*[1], David Clapham[1]. [1]Boston Children's Hospital, United States
Disclosures: Nora Renthal, None

MO0479 **Bidirectional Modulation of Adiponectin Signaling via APPL Proteins Interaction in Bone Cells**
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MO0480 **Gene Expression Profiles of Selective Transcriptome Responses in the Intestine Reveal Novel 1, 25$(OH)_2D_3$ Targets and Suggest an Essential Role for the Vitamin D Receptor in Distal as well as Proximal Intestinal Segments**
Vaishali Veldurthy*[1], Puneet Dhawan[1], Nishant Patel[1], Angela Porta[1], Shanshan Li[1], Alketa Stefa[1], Patricia Soteropoulos[1], Saleena Ghanny[1], Sylvia Christakos[1]. [1]Rutgers, New Jersey Medical School, United States
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MO0481 ***Enpp1*** **regulates** ***Klotho*** **expression under phosphate overload conditions**
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MO0482 **Fluoxetine use during pregnancy and lactation stimulates mammary-derived hormonal stimulation of bone turnover**
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MO0483 **Modulation of osteocyte membrane repair activity via Vitamin E alters the response of bone to mechanical loading**
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MO0484 **Calcium Efflux from Diffuse Microdamaged Bone Matrix Enhances Osteoblastic Activity**
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MO0485 **Effect of IG9402 (Osteocyte Apoptosis Inhibitor) on Tooth Movement and Alveolar Bone**
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MO0486 **Synergistic effect of remodeling and loading in aged mice**

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MO0487 **Mechanical loading leads to bone formation in vivo in osteolytic Multiple Myeloma**

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MO0488 **Age and Gender Does Not Influence All Biomechanical Properties of Femur and Ulna of C57Bl/6 Mice**

Hammad Mumtaz*[1], Mark Dallas[1], Mark Begonia[2], JoAnna Scott[1], Mark Johnson[1], Ganesh Thiagarajan[1]. [1]University of Missouri Kansas City, United States, [2]Medical College of Wisconsin, United States

Disclosures: Hammad Mumtaz, None

MO0489 **Osteoblast-Derived Nerve Growth Factor is Required for Skeletal Adaptation to Mechanical Loads**

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MO0490 **Evolutional Separation of Epiphyseal and Articular Cartilage is a Bone Adaptation to Terrestrial Growth**

Meng Xie*[1], Pavel Gol'din[2], Jordi Estsfa[3], Lei Li[4], Irene Linares Arregui[5], Christian Gasser[5], Ekaterina Medvedeva[6], Kotova Svetlana[6], Peter Timashev[6], Igor Adameyko[4], Anders Eriksson[7], Sophie Sanchez[8], Andrei Chagin[4]. [1]Department of Physiology and Pharmacology, Karolinska Institute, Sweden, [2]Stockholm University, Sweden, [3]Department of Organismal Biology, Uppsala Universitet, Sweden, [4]Department of Physiology and Pharmacology, Karolinska Institutet, Sweden, [5]Department of Solid Mechanics, KTH, Sweden, [6]Sechenov Medical University, Russian Federation, [7]Department of Mechanics, KTH, Sweden, [8]Department of Organismal Biology, Uppsala University, Sweden

Disclosures: Meng Xie, None

MO0491 **The Mechanism and an Alternative Method of Accelerated Bone Remodeling in Orthodontics after Maxillary Osteotomy**

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MO0492 **Effects of 2g hypergravity on osteoarthritis-induced bone and muscle changes**

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MO0493 **Delayed Bone Defect Healing In Dystrophin/Utrophin Double Knockout Mice Is Associated with Muscle Force and Decrease in Osteoblasts and Osteoclasts**

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MO0494 **Estrogen Modulates Musculoskeletal Physiology in Female Mice**

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MO0495 **Myostatin Inhibition of Osteoblastic Differentiation by Suppression of Osteocyte-derived Exosomal miR-218 in Vitro: A Novel Mechanism of Muscle-Bone Communication.**

Weiping Qin*[1], Yuanzhen Peng[1], Wei Zhao[1], Paola Divieti Pajevic[2], Lynda F. Bonewald[3], William A Bauman[1]. [1]James J. Peters VA Medical Center, United States, [2]Boston University, United States, [3]Indiana University School of Medicine, United States

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MO0496 **Lack of a direct effect of FGF23 on skeletal muscle contractility, Ca2+ handling and development**

Julian A. Vallejo*[1], Keith G. Avin[2], Neal X. Chen[3], Kun Wang[4], Chad D. Touchberry[5], Marco Brotto[6], Sarah L. Dallas[4], Sharon M. Moe[3], Michael J. Wacker[5]. [1]Department of Biomedical Science, School of Medicine, University of Missouri-Kansas City; Department of Biomedical Sciences, School of Medicine, University of Missouri-Kansas City, United States, [2]Department of Physical Therapy, School of Health & Rehabilitation Sciences, Indiana University;Division of Nephrology, School of Medicine, Indiana University, United States, [3]Division of Nephrology, School of Medicine, Indiana University, United States, [4]Department of Oral & Craniofacial Sciences, School of Dentistry, University of Missouri-Kansas City, United States, [5]Department of Biomedical Science, School of Medicine, University of Missouri-Kansas City, United States, [6]College of Nursing and Health Innovation, University of Texas-Arlington, United States

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MO0497 **Innate IgM Natural Antibodies against oxidized phospholipids decline with age in mice: a putative contributor to the declining bone formation and a novel target for bone anabolic therapy.**

Elena Ambrogini*[1], Michela Palmieri[1], Li Han[1], Stuart B Berryhill[1], Xuchu Que[2], Sotirios Tsimikas[2], Stavros C Manolagas[1], Joseph L Witztum[2], Robert L Jilka[3]. [1]1Center for Osteoporosis and Metabolic Bone Diseases, University of Arkansas for Medical Sciences and the Central Arkansas Veterans Healthcare System, United States, [2]2Department of Medicine, University of California San Diego, United States, [3]1Center for Osteoporosis and Metabolic Bone Diseases, University of Arkansas for Medical Sciences, United States

Disclosures: Elena Ambrogini, None

MO0498 **Kynurenine, an endogenous ligand of the aryl hydrocarbon receptor that accumulates with age, stimulates expression of the senescence-associated microRNA miR-183 in bone marrow-derived mesenchymal stem cells**

Andrea Lambert*[1], Sadanand Fulzele[1], Bharati Mendhe[1], William Hill[1], Carlos Isales[1], Meghan McGee-Lawrence[1], Xingming Shi[1], Mark Hamrick[1]. [1]Medical College of Georgia, United States

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MO0499 **Kynurenine and SDF-1α Derived Bone Marrow Mesenchymal Stem Cells in Age-Related Bone Loss: Potential Role of Aryl Hydrocarbon Receptor**

Khaled Hussein*[1], Xue Jiang[2], Ke-Hong Ding[3], Sadanand Fulzele[4], Wendy Bollag[5], Mohammed Elsalanty[6], Qing Zhong[3], Xing-ming Shi[7], Maribeth Johnson[8], Monte Hunter[9], Mark Hamrick[1], Carlos Isales[10], William Hill[11]. [1]Department of Cell Biology and Anatomy Medical College of Georgia, Augusta University, United States, [2]Department of Cell Biology and Anatomy Medical College of Georgia, Augusta University. Rehabilitation Center, Sheng Jing Hospital, China Medical University., United States, [3]Department of Neuroscience and Regenerative Medicine, Medical College of Georgia, Augusta University, United States, [4] Department of Orthopedic Surgery, Medical College of Georgia, Augusta University, United States, [5]Department of Physiology, Medical College of Georgia, Augusta University, United States, [6]Department of Oral Biology Dental College of Georgia, Augusta University, United States, [7]Department of Neuroscience and Regenerative Medicine, Department of Orthopedic Surgery, Medical College of Georgia, Augusta University, United States, [8]Department of Biostatistics and Epidemiology, Medical College of Georgia, Augusta University, United States, [9]Department of Orthopedic Surgery, Medical College of Georgia, Augusta University, United States, [10]Department of Neuroscience and Regenerative Medicine, Department of Orthopedic Surgery, Medicine and Cellular Biology and Anatomy, Medical College of Georgia, Augusta University, United States, [11]Department of Cell Biology and Anatomy Medical College of Georgia, Augusta University. Charlie Norwood VA Medical Center, United States

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MO0500 **Kynurenine, a Tryptophan Oxidation Product That Accumulates With Age, Interferes With Fracture Healing**

Kehong Ding*[1], Ariana Reyes[1], Jianrui Xu[1], Qing Zhong[1], Wendy Bollag[1], Meghan McGee-Lawrence[1], William Hill[1], Xingming Shi[1], Monte Hunter[1], Sadanand Fulzele[1], Eileen Kennedy[2], Ranya Elsayed[1], Mohammed Elsalanty[1], Maribeth Johnson[1], Mark Hamrick[1], Carlos Isales[1]. [1]Medical College of Georgia, United States, [2]University of Georgia, United States

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MO0501 **Mutation of the glycan binding domain of galectin-3 in mice enhances cortical bone mass in males, but trabecular bone mass in females**

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Disclosures: Kevin Maupin, None

MO0502 **Ephrin Ligand and Receptor Expression during Bone Fracture Repair Indicates Ephrin Regulation of Chondrogenesis and Bone Formation**

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Disclosures: Amandeep Kaur, None

MO0503 **Prenatal Exposure to Acetaminophen Affects Tissue Mineral Density and Microarchitecture of Young Adult Murine Bone**

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Disclosures: Jessica Lavery, None

MO0504 **Molecular changes triggered in local osteoprogenitors at the onset of bone remodeling**

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Disclosures: Pia Rosgaard Jensen, None

MO0505 **IL-4, but not IL-6 and IL-17F, Significantly Inhibits Osteogenic Differentiation of Human Adipose Stem Cells under Hypoxia**

Angela P. Bastidas-Coral*[1], Astrid D. Bakker[1], Jolanda M.A. Hogervorst[1], Cees J. Kleverlaan[2], Tim Forouzanfar[3], Jenneke Klein-Nulend[1]. [1]Department of Oral Cell Biology, Academic Centre for Dentistry Amsterdam (ACTA), University of Amsterdam and Vrije Universiteit Amsterdam, Amsterdam Movement Sciences, Amsterdam, The Netherlands, Netherlands, [2]Department of Dental Materials Science, Academic Centre for Dentistry Amsterdam (ACTA), University of Amsterdam and Vrije Universiteit Amsterdam, Amsterdam, The Netherlands, Netherlands, [3]Department of Oral and Maxillofacial Surgery, VU University Medical Center / Academic Centre for Dentistry Amsterdam (ACTA), Amsterdam Movement Sciences, Amsterdam, The Netherlands, Netherlands

Disclosures: Angela P. Bastidas-Coral, None

MO0506 **Inducible Cre Targeting of Bone and Vascular Cells during Various Modes of Fracture Repair**

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Disclosures: Evan Buettmann, None

MO0507 **Status of the Blood-Nerve Barrier is Critical for Both Neuroma Formation and Heterotopic Ossification**

Eleanor Davis*[1], Austin Dickerson[1], Dustin Neubauer[1], Zbigniew Gugala[2], Elizabeth Salisbury[2], Elizabeth Olmsted-Davis[1], Alan Davis[1]. [1]Baylor College of Medicine, United States, [2]University of Texas Medical Branch, United States

Disclosures: Eleanor Davis, None

MO0508 **Nerve Injury is a Prerequisite for Neurogenic Heterotopic Ossification**

Austin Dickerson*[1], Dustin Neubauer[1], Eleanor Davis[1], Corinne Sonnet[1], Zbigniew Gugala[2], Alan Davis[1], Elizabeth Olmsted-Davis[1]. [1]Baylor College of Medicine, United States, [2]University of Texas Medical Branch, United States

Disclosures: Austin Dickerson, None

MO0509 **miR-550a-5p inhibits osteogenic differentiation of immortalized human mesenchymal stem cells**

Matthias Hackl*[1], Viktoria Wiedemann[1], Susanna Skalicky[1], Elisabeth Geiger[1], Moustapha Kassem[2], Jamie Soul[3], Jean-Marc Schwartz[3], Tina Schleicher[4], Yadhu Kumar[4], Johannes Grillari[5]. [1]TAmiRNA GmbH, 1190 Vienna, Austria, Austria, [2]Department of Endocrinology, University Hospital of Odense and University of Southern Denmark, DK-5000, Denmark, [3]University of Manchester, Manchester, UK, United Kingdom, [4]GATC Biotech, Konstanz, Germany, Germany, [5]Department of Biotechnology, BOKU - University of Natural Resources and Life Sciences, Vienna, Austria

Disclosures: Matthias Hackl, None

MO0510 **H3K9MTase G9a regulates tooth development in mice**

Hisashi Ideno*[1], Taichi Kamiunten[2], Akemi Shimada[1], Tatsuo Terashima[3], Kazuhisa Nakashima[1], Yasuhiro, Tomooka[4], Yoshiki Nakamura[2], Hiroshi Kimura[5], Makoto Tachibana[6], Akira Nifuji[1]. [1]Department of Pharmacology, Tsurumi University School of Dental Medicine, Japan, [2]Department of Orthodontics, Tsurumi University School of Dental Medicine, Japan, [3]Department of Biochemistry and Molecular Biology, Tsurumi University School of Dental Medicine, Japan, [4]Biological Science & Technology, The Tokyo University of Science, Japan, [5]School of Life Science and Technology, Tokyo Institute of Technology, Japan, [6]Institute for Enzyme Research, The University of Tokushima, Japan

Disclosures: Hisashi Ideno, None

MO0511 **Whole transcriptome analysis of MSCs derived from different types of tissue reveals unique profiles**

Satoru Onizuka*[1], Yasuharu Yamazaki[2], Takayuki Sugimoto[2], Yumiko Sone[2], Akira Takeda[2], Sung-Joon Park[3], Kenta Nakai[3], Takanori Iwata[1], Masayuki Yamato[3], Teruo Okano[3]. [1]Institute of Advanced Biomedical Engineering and Science, Tokyo Women's Medical University, Japan, [2]Department of Plastic and Aesthetic Surgery, Kitasato University School of Medicine, Japan, [3]Human Genome Center, The Institute of Medical Science, The University of Tokyo, Japan

Disclosures: Satoru Onizuka, None

MO0512 **WISP-1 associated osteochondral differentiation in heterotopic ossification**

Carolyn Meyers*[1], Semahet Ucer[2], Michael Chung[2], David Cholok[2], John Li[2], Greg Asatrian[3], Catherine Ding[3], Paulina Giacomelli[3], Edward McCarthy[1], Benjamin Levi[2], Aaron James[1]. [1]Johns Hopkins University, United States, [2]University of Michigan, United States, [3]University of California, Los Angeles, United States

Disclosures: Carolyn Meyers, None

MO0513 **Multilayered Nanofiber Mimetic as a Functional Periosteum for Bone Tissue Repair and Reconstruction**

Tao Wang*[1], Marc Nuzzo[1], Yunpeng Yang[1], Xinping Zhang[1]. [1]University of Rochester Medical Center, United States

Disclosures: Tao Wang, None

MO0514 **Fibromodulin Reprogrammed Cells: A Safe Source for Musculoskeletal Regeneration**

Pin Ha*[1], Chenshuang Li[2], Wenlu Jiang[3], Emily Berthiaume[4], Zane Mills[5], Jony Kil Kim[2], Joyce Wang[6], Eric Chen[2], Xinli Zhang[2], Kang Ting[2], Chia Soo[7], Zhong Zheng[2]. [1]Department of Cleft Lip and Palate Surgery, West China Stomatology Hospital, Sichuan University, China, [2]Division of Growth and Development, School of Dentistry, University of California, Los Angeles, United States, [3]State Key Laboratory of Oral Diseases, Department of Orthodontics, West China Hospital of Stomatology, Sichuan University, China, [4]David Geffen School of Medicine, University of California, Los Angeles, United States, [5]Department of Ecology and Evolutionary Biology, University of California, Los Angeles, United States, [6]Department of Emergency Medicine, Highland General Hospital, United States, [7]Department of Orthopaedic Surgery and the Orthopaedic Hospital Research Center, University of California, Los Angeles, United States

Disclosures: Pin Ha, None

MO0515 **Increased migration of cementless acetabular cups in female THR patients with low osteogenic capacity of their bone marrow MSCs**

Jessica Alm*[1], Sami Finnilä[1], Niko Moritz[1], Hannu Aro[1]. [1]Orthopaedic Research Unit, University of Turku, Finland

Disclosures: Jessica Alm, None

MO0516 **Distinct expression of adipokines and cartilage degradation markers in obese patients with knee osteoarthritis**

Friederike Behler-Janbeck*[1], Tobias Schmidt[1], Nicola Oehler[1], Andreas Niemeier[1]. [1]Department of Orthopedics, Institute of Biochemistry and Molecular Cell Biology, University Medical Center Hamburg Eppendorf, Hamburg 20246, Germany., Germany

Disclosures: Friederike Behler-Janbeck, None

MO0517 **Boldine Inhibits Bone Resorption by Suppressing the Osteoclast Differentiation in Collagen-induced Arthritis**

Zhao Hongyan*[1], Xu Huihui, Qiao Senyan [3], Lu Cheng[4], Wang Gui , Liu Meijie[1], Guo Baosheng[5], Tan Yong [6], Xiao Cheng [7]. [1]Experimental research center, China Academy of Chinese Medical Science, China, [2]Institute of Clinical Medicine, China-Japan Friendship Hospitali¼?Beijing University of Chinese Medicine, China, [3]Department of Pathology, the Third People's Hospital of Zhengzhou, China, [4]Institute of Basic Research in Clinical Medicine, China Academy of Chinese Medical Science, China, [5] Institute for Advancing Translational Medicine in Bone &Joint Diseases, School of Chinese Medicine, Hong Kong Baptist University, China, [6]nstitute of Basic Research in Clinical Medicine, China Academy of Chinese Medical Science, China, [7]Institute of Clinical Medicine, China-Japan Friendship Hospital, China

Disclosures: Zhao Hongyan, None

MO0518 **Inhibition of the FoxA family of transcription factors ameliorates Osteoarthritis (OA) progression following destabilization of the medial meniscus**

Kailing Ho*[1], Lin Xu[1], Elena Kozhemyakina[2], yefu Li[1], Andrew Lassar[2], Klaus Kaestner[3], Malcolm Whitman[1], Steven Pregizer[1], Shek Man Chim[1], Laura Gamer[1], Vicki Rosen[1], Andreia Ionescu[1]. [1]HSDM, United States, [2]HMS, United States, [3]Upenn, United States

Disclosures: Kailing Ho, None

MO0519 **HR-pQCT-Based Individual Trabecula Segmentation: Potentials in *in Vivo* Monitoring of Subchondral Microstructural Changes in Human Knee Osteoarthritis**

Yizhong Hu*[1], Y. Eric Yu[1], Xingjian Zhang[1], William Macaulay[2], X. Edward Guo[1]. [1]Bone Bioengineering Laboratory, Department of Biomedical Engineering, Columbia University, United States, [2]Department of Orthopaedic Surgery, New York University Langone Hospital for Joint Disease, United States

Disclosures: Yizhong Hu, None

MO0520 **Establishment of an autoinflammatory disease model in mice**

Takatsugu Oike*[1], Takeshi Miyamoto[1], Hiroya Kanagawa[1], Yasuo Niki[1], Morio Matsumoto[1], Masaya Nakamura[1]. [1]Department of Orthopaedic Surgery, Keio University School of Medicine, Japan

Disclosures: Takatsugu Oike, None

MO0521 **Withdrawn**

MO0522 **Mechanical loading regulates endoplasmic reticulum stress in a mouse model of osteoarthritis**

Xinle Li*[1], Daquan Liu[1], Jie Li[1], Zhaonan Wang[1], Hiroki Yokota[2], Ping Zhang[1]. [1]Department of Anatomy and Histology, School of Basic Medical Sciences, Tianjin Medical University, China, [2]Department of Biomedical Engineering, Indiana University-Purdue University Indianapolis, United States

Disclosures: Xinle Li, None

MO0523 **PiT2 is Essential for Normal Endochondral and Intramembranous Ossification, Tooth Development and the Maintenance of Adult Bone Structure and Strength**

Sarah Beck*[1], John Logan[2], David Tino-Lafont[3], Laure Merametdjian[1], Nina Bon[1], Sophie Sourice[1], Jérôme Guicheux[1], Laurent Beck[1], Graham Williams[2], Chris Lelliott[3], J. H. Duncan Bassett[2]. [1]Inserm U1229-RMeS, Université de Nantes, France, France, [2]Molecular Endocrinology Laboratory, Department of Medicine, Imperial College London, United Kingdom, [3]Wellcome Trust Sanger Institute, Hinxton, UK, United Kingdom

Disclosures: Sarah Beck, None

MO0524 **Female Protein Kinase D1 Osteoprogenitor-specific Conditional Knockout Mice Show Reduced Bone Mineral Density with No Further Decrease upon Ovariectomy**

Wendy Bollag*[1], Ke-Hong Ding[1], Jianrui Xu[1], Vivek Choudhary[1], Qing Zhong[1], Ranya Elsayed[1], Kanglun Yu[1], Mohammed El-Salanty[1], Meghan McGee-Lawrence[1], Carlos Isales[1]. [1]Augusta University, United States

Disclosures: Wendy Bollag, None

MO0525 **PDGFRβ-Expressing Osteoprogenitors and PDGFRβ Signaling Contribute to Fracture Healing by Promoting Callus Formation and Vascularization**

Naomi Dirckx*[1], Robert J. Tower[2], Matthias Van Hul[1], Christa Maes[1]. [1]Laboratory of Skeletal Cell Biology and Physiology (SCEBP), Skeletal Biology and Engineering Research Center (SBE), Department of Development and Regeneration, KU Leuven, Leuven, Belgium, Belgium, [2]Laboratory of Skeletal Cell Biology and Physiology (SCEBP), Skeletal Biology and Engineering Research Center (SBE), Department of Development and Regeneration, KU Leuven, Leuven, Belgium, United States

Disclosures: Naomi Dirckx, None

MO0526 **Investigating*Zbtb40* and its Role in Osteoblast-Mediated Bone Formation**

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MO0527 **Vitamin E-stabilized UHMWPE: evaluation of biological response on human osteoblasts to wear debris**

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Disclosures: Emanuela Galliera, None

MO0528 **Overexpression of MitoNEET in osteoblasts leads to impaired bone mass and energy metabolism in mice**

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MO0529 ***Usp53*, a novel target gene of the PTH-activated αNAC transcriptional coregulator**

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Disclosures: Hadla Hariri, None

MO0530 **The Unfolded Protein Response plays an important role in osteoblastogenesis and its aberrations adversely affect skeletal homeostasis.**

Srividhya Iyer*[1], Kanan Vyas[1], Annick Deloose[1], Michela Palmieri[1], Ha-neui Kim[1], Marilina Piemontese[1], Maria Almeida[1], Charles O'Brien[1], Stavros Manolagas[1], Robert Jilka[1]. [1]Center for Osteoporosis and Metabolic Bone Diseases, Univ. Arkansas for Medical Sciences, and Central Arkansas Veterans Healthcare System, United States

Disclosures: Srividhya Iyer, None

MO0531 **Interrelationship Between c-src and SIT in the Regulation of Osteoblast Differentiation**

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MO0532 **Analysis of the miR-101/Ezh2 axis during osteoblast differentiation by Crispr/Cas9 and scalable over-expression technology**
Farzaneh Khani*[1], Roman Thaler[1], Janet Denbeigh[1], Christopher Paradise[1], Endre Soreide[1], Gary S. Stein[2], Amel Dudakovic[1], Andre J van Wijnen[1]. [1]Departments of Orthopedic Surgery & Biochemistry and Molecular Biology, Mayo Clinic, United States, [2]Departments of Biochemistry & Surgery, University of Vermont Cancer Center, Burlington, VT, United States
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MO0533 **Interleukin-6 Inhibits Osteoblastic Differentiation of Bone Marrow Stromal Cells and Decreases Bone Formation Following Ischemic Osteonecrosis**
Gen Kuroyanagi*[1], Naga Suresh Adapala[1], Ryosuke Yamaguchi[1], Harry K.W. Kim[1]. [1]Texas Scottish Rite Hospital for Children, United States
Disclosures: Gen Kuroyanagi, None

MO0534 **Nuclear Factor I-C Regulates Calvarial Bone Formation via Control of Fgfr1 Expression and Cell Proliferation**
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MO0535 **The Critical Role of Peroxiredoxin-1 for the Estrogen Protects Osteoblast from Oxidative Stress**
Di Liu*[1], Juan Du[1], Minqi Li[1]. [1]Shandong Provincial Key Laboratory of Oral Biomedicine, Shandong University, China
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MO0536 **Comparative Study of the Effect of Different Tea Types on Mineral Deposition in an Osteoblast Cell Model**
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MO0537 **Regulation of Bone Mass by FGF Signaling Pathways**
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MO0538 **Runx2 mediated autophagy promotes osteoblast and chondrocyte differentiation**
Ahmad Othman*[1], Manish Tandon[1], Ryan Ross[1], Lifan Liao[1], Rick Sumner[1], Amjad Javed[2], Di Chen[1], Jitesh Pratap[1]. [1]Rush University Medical Center, United States, [2]University of Alabama at Birmingham, United States
Disclosures: Ahmad Othman, None

MO0539 **Unexpected and controversial role of Lipocalin 2 in bone and energy metabolism**
Nadia Rucci*[1], Mattia Capulli[1], Marco Ponzetti[1], Antonio Maurizi[1], Sara Gemini-Piperni[1], Anna Teti[1]. [1]Department of Biotechnological and Applied Clinical Sciences, Italy
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MO0540 **Systems Genetics Identifies Novel Genes and Gene Networks Influencing Osteoblast Activity**
Olivia L Sabik*[1], Gina M Calabrese[2], Cheryl L Ackert-Bicknell[3], Charles R Farber[4]. [1]Department of Biochemistry and Molecular Genetics and Center for Public Health Genomics, School of Medicine, University of Virginia, United States, [2]Center for Public Health Genomics, School of Medicine, University of Virginia, United States, [3]Center for Musculoskeletal Research, University of Rochester Medical Center, University of Rochester, United States, [4]Department of Public Health Sciences and Center for Public Health Genomics, School of Medicine, University of Virginia, United States
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MO0541 **A footstep to figuring out the difference between alveolar bone and long bone**
Chul Son*[1], Yeoung Hyun Park[1], Joo Cheol Park[1]. [1]Department of Oral Histology-Developmental Biology, School of Dentistry, Seoul National University, Korea, Republic of
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MO0542 **The role of Tet1 and Tet2 and active DNA demethylation for osteoblastic differentiation**
Roman Thaler*[1], Farzaneh Khani[1], Janet Denbeigh[1], Markus Schreiner[1], Amel Dudakovic[1], Xianhu Zhou[1], David Deyle[2], Andre J van Wijnen[1]. [1]Departments of Orthopedic Surgery & Biochemistry and Molecular Biology, Mayo Clinic, United States, [2]Departments of Mediacl Genetics, Mayo Clinic, United States
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MO0543 **MiR-23a Cluster – RUNX2 – EZH2 Axis Controls Bone Formation*In-Vivo***
Benjamin Wildman*[1], Mohammad Hassan[1], Tanner Godfrey[1], Harunur Rashid[1], Chris Lengner[2], Amjad Javed[1]. [1]UAB, United States, [2]UPenn, United States
Disclosures: Benjamin Wildman, None

MO0544 **Inhibition of CaMKK2 accelerates bone fracture healing**
Justin Williams*[1], Anu Valiya Kambrath[1], Roshni Patel[1], Yinghua Chen[1], Alexander Robling[1], Uma Sankar[1], Melissa Kacena[1]. [1]Indiana University School of Medicine, United States
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MO0545 **Cbfβ Governs Osteoblast-Adipocyte Lineage Commitment through Enhancing β-Catenin Signaling and Suppressing Adipogenesis Gene Expression**
Mengrui Wu*[1], Wei Chen[1], Jue Wang[2], Yi-Ping Li[2]. [1]1Department of Pathology, University of Alabama at Birmingham, United States, [2]University of Alabama at Birmingham, United States
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MO0546 **AFF1 and AFF4 differentially regulate the osteogenic differentiation of human MSCs**
Chenchen Zhou*[1], QiuChan Xiong[1]. [1]NO.14, 3rd Section of Ren Min Nan Rd, China
Disclosures: Chenchen Zhou, None

MO0547 **Novel Cytoplasmic Roles of EZH2 Methyltransferase During RANKL Signaling, Cytoskeletal Organization and Resorption of Osteoclasts**
Juraj Adamik*[1], Peng Zhang[1], Quanhong Sun[1], Jolene J Windle[2], Philip E Auron[3], Deborah L Galson[1]. [1]Department of Medicine, Hematology-Oncology Division, University of Pittsburgh Cancer Institute, McGowan Institute for Regenerative Medicine, University of Pittsburgh, United States, [2]Department of Human and Molecular Genetics, Virginia Commonwealth University, United States, [3]Deparment of Biological Sciences Duquesne University, United States
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MO0548 **Osteomacs express higher levels of MCSF, MCSF-R and Galectin3 and show increased osteoclastogenesis compared to bone marrow-derived macrophages**
Alexandra Aguilar-Perez*[1], Angela Bruzzaniti[1], Melissa Kacena[1], Edward Srour[1], Safa Mohamad[1], Joydeep Ghosh[1], Marta Alvarez[1], Paul Jeffrey Childress[1], Korbin Davis[1], Lin Lin Xu[1], Hao Wu[1]. [1]Indiana University, United States
Disclosures: Alexandra Aguilar-Perez, None

MO0549 **Rapid Effects of Low Extracellular Sodium on Osteoclasts: Molecular Mechanisms**
Julia Barsony*[1], Qin Xu[1], Joseph Verbalis[1]. [1]Georgetown University, United States
Disclosures: Julia Barsony, None

MO0550 **Unraveling the molecular determinants of continuous long-term bone resorption by osteoclasts**
Xenia G Borggaard*[1], Dinisha C Pirapaharan[1], Anaïs MJ Moeller[1], Jean-Marie Delaissé[1], Kent Soe[1]. [1]Vejle Hospital/University of Southern Denmark, Denmark
Disclosures: Xenia G Borggaard, None

MO0551 **Slit-ROBO Rho GTPase Activating Protein 2 (SRGAP2) Regulates Osteoclast and Osteoblast Differentiation**
Henry Hrdlicka*[1], Bongjin Shin[1], Anne Delany[1], Sun-Kyeong Lee[1]. [1]UConn Health, United States
Disclosures: Henry Hrdlicka, None

MO0552 **The nuclear receptor AhR controls bone homeostasis by regulatingã??osteoclast differentiation via the RANK/c-Fos signaling axis**
Takashi Izawa*[1], Eiji Tanaka[1], Naozumi Ishimaru[2]. [1]Tokushima University Grad School, dept of Orthod, Japan, [2]Tokushima University Grad School, dept of Oral Pathol, Japan
Disclosures: Takashi Izawa, None

MO0553 **C/EBPα Binds to the Androgen Receptor Cofactor MEP50, a Novel Inhibitor of Osteoclast formation, to Release the Inhibitory Effect by Promoting Early Stages of Osteoclastogenesis**
Joel Jules*[1], Wei Chen[1], Yi-Ping Li[1]. [1]University of Alabama at Birmingham, United States
Disclosures: Joel Jules, None

MO0554 **Mitochondrial proteins SOD2 and Sirt3 play a crucial role in ROS regulation during osteoclast differentiation**
Haemin Kim*[1], Hong-Hee Kim[1], Yong Deok Lee[1], Hyung Joon Kim[2], Zang Hee Lee[1]. [1]Seoul National University School of Dentistry, Korea, Republic of, [2]Pusan National University, Korea, Republic of
Disclosures: Haemin Kim, None

MO0555 **TNF Induction of Deubiquitinases Polarize Inflammatory Macrophages via NF-κB RelB**
Wei Lei*[1], Xiaoxiang Yin[2], Zhijun Zhao[2], Xiaodong Hou[2], Rong Duan[1], Brendan Boyce[1], Zhenqiang Yao[1]. [1]University of Rochester Medical Center, United States, [2]Henan University First Affiliated Hospital, China
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MO0556 **Effects of Retinoids on Physiological and Inflammatory Osteoclastogenesis *in vitro***
Vikte Lionikaite*[1], Anna Westerlund[1], Howard H Conaway[2], Ulf H Lerner[1], Petra Henning[1]. [1]University of Gothenburg, Sweden, [2]University of Arkansas for Medical Sciences, United States
Disclosures: Vikte Lionikaite, None

MO0557 **Bone healing in response to *S. aureus* infection is associated with rapid initiation of neutrophil and osteoclast invasion, and bone resorption prior to aberrant bone healing.**
Cameron Martin *[1], Alyssa Falck[1], Sofia Lopez Gelston[1], Chris Litwin[1], Larry Suva[1], Dana Gaddy[1]. [1]Texas A&M University College of Veterinary Medicine , United States
Disclosures: Cameron Martin , None

MO0558 **Def6 restrains osteoclastogenesis and inflammatory bone resorption.**
Nikolaus Binder*[1], Christine Miller[2], Masaki Yoshida[2], Kazuki Inoue[2], Shinichi Nakano[2], Xiaoyu Hu[2], Lionel B. Ivasgkiv[2], Georg Schett[3], Alessandra Pernis[2], Stevev R. Goldring[2], F. Patrick Ross[2], Baohong Zhao[2]. [1]Hospital for Supecial Surgery, United States, [2]Hospital for Special Surgery, United States, [3]Erlangen university, Germany
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MO0559 **Elucidation of the role of DC-STAMP heterogeneity and calcium signaling in osteoclastogenesis**
Ananta Paine*[1], Maria De La Luz Garcia-Hernandez[1], Nelson Huertas[1], Dongge Li[1], Minsoo Kim[2], Larry E. Wagner[3], David Yule[3], Christopher Ritchlin[4]. [1]Division of Allergy/Immunology and Rheumatology, School of Medicine and Dentistry, University of Rochester Medical School, United States, [2]Microbiology and Immunology, University of Rochester, United States, [3]Department of Pharmacology and Physiology, University of Rochester, United States, [4]Division of Allergy/Immunology and Rheumatology, School of Medicine and Dentistry, United States
Disclosures: Ananta Paine, None

MO0560 **Blockade of Osteoclast-Mediated Bone Resorption with a RANKL Inhibitor Enhances Spinal Fusion in a Rat Model**

Karin Payne*[1], Christopher Erickson[1], Nichole Shaw[1], Peter Yarger[1], Todd Baldini[1], Christopher Kleck[1], Vikas Patel[1], Evalina Burger[1]. [1]University of Colorado Anschutz Medical Campus, United States

Disclosures: Karin Payne, None

MO0561 **Nupr1/p8, a Key Player of Stress Response, Regulates Autophagy and Apoptosis of Osteoclasts**

Makoto Shiraki*[1], Xianghe Xu[2], Asana Kamohara[2], Juan Iovanna[3], Yasushi Kubota[4], Masaaki Mawatari[5], Akiko Kukita[2]. [1]Department of Orthopaedic Surgery, Faculty of Medicine, Saga University, Japan, [2]Department of Pathology and Microbiology, Faculty of Medicine, Saga University, Japan, [3]Centerb de Recherche en Cancerologie de Marselle, INSERM U1068, France, France, [4]Division of Hematology, Respiratory Medicine and Oncology, Department of Internal Medicine, Faculty of Medicine, Saga University, Japan, [5]Department of Orthipaedic Surgery, Faculty of Medicine, Saga University, Japan

Disclosures: Makoto Shiraki, None

MO0562 **Anti-Siglec-15 antibody inhibits bone-resorbing activity of osteoclasts and stimulates osteoblast differentiation**

Nobuyuki Udagawa*[1], Shunsuke Uehara[1], Masanori Koide[2], Atsushi Arai[2], Toshihide Mizoguchi[2], Midori Nakamura[1], Yasuhiro Kobayashi[2], Naoyuki Takahashi[2], Chie Fukuda[3], Eisuke Tsuda[3]. [1]Department of Biochemistry, Institute for Oral Science, Matsumoto Dental University, Japan, [2]Institute for Oral Science, Matsumoto Dental University, Japan, [3]Rare Disease & LCM Laboratories, R&D Division, Daiichi Sankyo Co., Ltd., Japan

Disclosures: Nobuyuki Udagawa, Daiichi Sankyo Co., Ltd., Grant/Research Support

MO0563 **A Role for Cathepsin K in the Periosteal Response to Bone Repair**

Bhavita Walia*[1], Elizabeth Lingenheld[2], Le Duong[3], Archana Sanjay[4], Hicham Drissi[5]. [1]Department of Genetics and Genome Sciences, UConn Health, United States, [2]Department of Orthopaedic Surgery, UConn Health, United States, [3]Bone Biology Group, Merck Research Laboratories, United States, [4]Department of Orthopaedic Surgery, United States, [5]Department of Orthopaedics, Emory University School of Medicine, United States

Disclosures: Bhavita Walia, Merck, Grant/Research Support

MO0564 **Differential effects of Wnt signaling on osteoclast differentiation with aging**

Megan Weivoda*[1], Ming Ruan[1], Christine Hachfeld[1], Glenda Evans[1], Stephanie Youssef[1], Joshua Farr[1], David Monroe[1], Sundeep Khosla[1], Jennifer Westendorf[1], Merry Jo Oursler[1]. [1]Mayo Clinic, United States

Disclosures: Megan Weivoda, None

MO0565 **TMEM178 is a novel negative regulator of store-operated calcium entry in osteoclasts by affecting STIM1 oligomerization.**

Zhengfeng Yang*[1], Roberta Faccio[1]. [1]Department of Orthopaedic Surgery, School of Medicine, Washington University in St. Louis, United States

Disclosures: Zhengfeng Yang, None

MO0566 **Osteocytic Proteins Upregulated by Mechanical Signals Display Increased Functional Specificity**

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Disclosures: Graeme Murray, None

MO0567 **Deletion of CaMKK2 in Osteocytes Elicits Gender-Specific Effects on Bone Mass**

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Disclosures: Mavis Irwin, None

MO0568 **DMP1-conditional YAP/TAZ ablation impairs bone matrix organization and reduces bone accrual differentially in load-bearing compared to non-bearing bones.**
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Disclosures: Chris Kegelman, None

MO0569 **Differential expression of Dickkopf-1 (DKK1) and wingless-type MMTV integration site family, member 3A (Wnt3a) in BALB/c and C57BL/6J axial spondyloarthritis models**
Michael Schirmer*[1], Tobias De Zordo[2], Sandra Kemmerling[3], Christian Kremser[2], Christoph Ammann[4], Volker Kuhn[5]. [1]Medical University Innsbruck, Internal Medicine II, Austria, [2]Medical University Innsbruck, Radiology, Austria, [3]Medical University Hospital Innsbruck, Austria, [4]Medical University Innsbruck, Austria, [5]Medical University Innsbruck, Trauma Surgery, Austria
Disclosures: Michael Schirmer, None

MO0570 **miR-145 overexpression impairs osteocytes structure and function in Adolescent Idiopathic Scoliosis**
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Disclosures: Wayne Yuk-wai Lee, None

MO0571 **A 3D collagen-hydroxyapatite tissue culture model for studying bone formation and osteocyte differentiation.**
Brian Golz*[1], Sherry Harbin[1], Eric Nauman[1], Teresita Bellido[2], Fredrick Pavalko[2], Russell Main[1]. [1]Purdue University, United States, [2]Indiana University School of Medicine, United States
Disclosures: Brian Golz, None

MO0572 **Metabolic Labelling of Osteocyte Pericellular Matrix in vitro and in vivo**
Shaopeng Pei*[1], Jerahme Martinez[1], Shubo Wang[1], Shongshan Fan[1], Catherine Kirn-Safran[1], X.Lucas Lu[1], Liyun Wang[1]. [1]University of Delaware, United States
Disclosures: Shaopeng Pei, None

MO0573 **Accelerated bone aging in human auditory ossicles is accompanied by excessive hypermineralization, osteocyte death and micropetrosis**
Tim Rolvien*[1], Christoph Riedel[1], Petar Milovanovic[1], Anke Jeschke[1], Sebastian Butscheidt[1], Klaus Püschel[2], Michael Amling[1], Björn Busse[1]. [1]Department of Osteology and Biomechanics, University Medical Center Hamburg-Eppendorf, Germany, [2]Department of Legal Medicine, University Medical Center Hamburg-Eppendorf, Germany
Disclosures: Tim Rolvien, None

MO0574 **Histone deacetylases HDAC4 and HDAC5 participate in osteocyte mechanotransduction and are required for loading-induced bone formation**
Tadatoshi Sato*[1], Maureen J. Omeara[1], Nia Campbell[1], Henry M. Kronenberg[1], Ted S. Gross[2], Marc Wein[1]. [1]Massachusetts General Hospital Endocrine unit, Harvard Medical School, United States, [2]University of Washington, Department of Orthopaedics and Sports Medicine, United States
Disclosures: Tadatoshi Sato, None

MO0575 **Second-generation HR-pQCT: Reproducibility of in vivo Bone Microarchitecture and Strength Measurements**

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MO0576 **Volumetric Hip DXA Indicates Rapid Deterioration Of Both Cortical And Trabecular Bone Compartments After Allogeneic Hematologic Stem Cell Transplant**

Mohammed Almohaya*[1], Naveen Sami[25], David Kendler[3], Renaud Winzenrieth[4], Ni Bai[25], Stephen Robertson[25], Raewyn Broady[3]. [1]King Fahad Medical City, Saudi Arabia, [2]Prohealth clinical research, Canada, [3]University of British Columbia, Canada, [4]Galgo Medical, Spain, [5]Prohealth Clinical Research, Canada

Disclosures: Mohammed Almohaya, None

MO0577 **Peripheral bone microstructure and strength improve the prediction of incident clinical low-trauma fractures beyond DXA and FRAX in postmenopausal women**

Emmanuel Biver*[1], Claire Durosier-Izart[1], Thierry Chevalley[1], Bert van Rietbergen[2], René Rizzoli[1], Serge Ferrari[1]. [1]Division of Bone Diseases, Geneva University Hospitals and Faculty of Medicine, Switzerland, [2]Department of Biomedical Engineering, Eindhoven University of Technology, Netherlands

Disclosures: Emmanuel Biver, None

MO0578 **Spatial Assessment of Bone Microarchitecture in Postmenopausal Women With a Recent Colles' Fracture**

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Disclosures: Andrew Burghardt, None

MO0579 **Age-related normative values of trabecular bone score (TBS) for Spanish population. SEIOMM-TBS project.**

Antonio Cano*[1], Javier del Pino[2], Luis Del Rio[3], Silvana Di Gregorio[4], Jesus García-Vadillo[5], Carlos Gomez[6], Jesus Gonzalez-Macias[7], Nuria Guañabens[8], Federico Hawkins[9], Jorge Malouf[10], Eduardo Kanterewicz[11], Esteban Martínez[8], Ana Monegal[12], Maria Jose Montoya[13], Manuel Muñoz[14], Xavier Nogues[15], Joan Miquel Nolla[16], Jose Maria Olmos[17], Ramon Perez-Cano[18], Jose Luis Perez-Castrillon[19], Pilar Peris[12], Manuel Rodriguez[20], Daniel Roig[21], Manuel Sosa[22], Elena Valassi[10]. [1]Hospital Clínico Universitario, Spain, [2]Hospital Unv. De Salamanca, Spain, [3]CETIR Centre Medic, Spain, [4]ERESA Centro Médico Quirurgico el Campanar, Spain, [5]Hospital de la Princesa, Spain, [6]Hospital Central de Asturias, Spain, [7]Hospital Unv. Marques de Valdecilla, Spain, [8]Hospital Clínic, Spain, [9]Hospital Universitario 12 Octubre, Spain, [10]Hospital de Santa Creu i Sant Pau, Spain, [11]Hospital general de Vic, Spain, [12]Hospital Clinic, Spain, [13]Departamento de Medicina. Universidad de Sevilla, Spain, [14]Hospital Universitario San Cecilio, Spain, [15]Hospital del Mar, Spain, [16]Hospital Universitari de Bellvitge, Spain, [17]Hospital Unv.Marques de Valdecilla, Spain, [18]Hospital Unv. Virgen Macarena, Spain, [19]Hospital Universitario Rio Hortega, Spain, [20]Hospital Regional Unv. de Málaga, Spain, [21]Hospital Sant Joan Despi Moises Broggi, Spain, [22]Hospital Unv. Insular, Spain

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MO0580 **Fractal-based Assessment of Bone-antiresorptive Treatment Effects at the Lumbar Spine Using Conventional Radiographs; Results from a Pilot Study in a Sub-cohort of Postmenopausal Women who Participated in the FREEDOM Pivotal Trial and its Extension Phase*.**

Hans Peter Dimai*[1], Richard Ljuhar[2], Davul Ljuhar[3], Benjamin Norman[3], Tobias Haftner[3], Stefan Nehrer[4], Astrid Fahrleitner-Pammer[1]. [1]Medical University of Graz, Department of Internal Medicine, Division of Endocrinology & Diabetology, Austria, [2]Image Biopsy Lab, R & D, Austria, [3]Braincon Technologies, Austria, [4]Danube University Krems, Department for Health Services and Biomedicine, Center for Regenerative Medicine, Austria

Disclosures: Hans Peter Dimai, None

MO0581 **Quantification of the effects of tissues thickness and fat content on the experimental variogram, the basic algorithm of TBS**

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Disclosures: Franck Michelet, Medimaps, Other Financial or Material Support

MO0582 **Commercial Laboratory Reproducibility of Serum CTX in Clinical Practice**

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Disclosures: Sahar M. Hindi, None

MO0583 **Quantification of Age-Related Changes in Whole-Skeleton Bone Metabolism using18F-NaF PET/CT**

Alyssa Johncola*[1], Jonathan Guntin[1], Christian McHugh[1], Austin Alecxih[1], Sun Kim[1], Rishika Sharma[1], Shivali Patel[1], Sheenali Patel[1], Thomas Werner[1], Poul Flemming[1], Abass Alavi[1], Chamith Rajapakse[1]. [1]University of Pennsylvania, United States

Disclosures: Alyssa Johncola, None

MO0584 **Shift in narrow neck centre-of mass influences neck of femur fracture prediction**

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Disclosures: Ben Khoo, None

MO0585 **Plasma MicroRNAs Might Be Related to Trabecular Bone Score in Postmenopausal Women**

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Disclosures: Tilen Kranjc, None

MO0586 **Bone Mineral Density Measurement Intervals for Rheumatoid Arthritis Patients Not Treated for Osteoporosis**

Seung Yun Lee*[1], Min-jae Jo[1], Kyong-Hee Jung[1], Seong-Ryul Kwon[1], Won Park[1]. [1]Division of Rheumatology, Departments of Internal Medicine, Inha University Hospital, Inha University School of Medicine, Korea, Republic of

Disclosures: Seung Yun Lee, None

MO0587 **Assessing Intervention Thresholds for Osteoporotic Fracture Using FRAX® in Patients Following a Hematopoietic Stem Cell Transplantation**

Huifang Lu*[1], William A Murphy Jr[1], Srishti Manocha[1], Data Don-Pedro[1], Gabriela Rondon[2], Cheuk Hong Leung[1], Liu Suyu[1], Richard E Champlin[1], Xerxes Pundole[1]. [1]The University of Texas MD Anderson Cancer Center, United States, [2] The University of Texas MD Anderson Cancer Center, United States

Disclosures: Huifang Lu, None

MO0588 **Multi-Centre Cross-Calibration for First and Second Generation HR-pQCT**

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Disclosures: Sarah L Manske, None

MO0589 **Comparisons of Hip Fractures Rates for a New Fracture Risk Scale in Adults Living in Long-term Care Across Canada**

Ahmed NEGM*[1], Micaela Jantzi[2], George I oannidis[1], Jenn Bucek[2], Jonathan Adachi[1], Lora Giangregorio[2], Laura Pickard[1], John Hirdes[2], Alexandra Papaioannou[1]. [1]McMaster University, Canada, [2]University of Waterloo, Canada

Disclosures: Ahmed NEGM, None

MO0590 **Analysis of the evolution of cortical and trabecular bone compartments in the proximal femur after spinal cord injury by 3D-DXA.**

Laia Gifre*[1], Ludovic Humbert[2], Africa Muxi[3], Luis del Rio[4], Joan Vidal[5], Enric Portell[5], Ana Monegal[1], Nuria Guañabens[1], Pilar Peris[1]. [1]Rheumatology Department, Hospital Clinic of Barcelona, University of Barcelona, Spain, [2]Galgo Medical, Spain, [3]Nuclear Medicine Department. Hospital Clínic of Barcelona, Spain, [4]CETIR, Spain, [5]Guttmann Neurorehabilitation Institute. Universitat Autònoma de Barcelona, Spain

Disclosures: Laia Gifre, None

MO0591 **Relationship between Bone Structural Variables from bone biopsy and Bone Mineral Density (BMD) in Patients on long term Bisphosphonate (BP) Therapy**

Christopher Little*[1], Elizabeth Warner[2], Mahalakshmi Honasoge[2], Loren Safta[3], Shiri Levy[2], Sudhaker Rao[2], Saroj Palnitkar[2], Pooja Kulkarni[2]. [1]Wayne State University School of Medicine, United States, [2]Henry Ford Hospital, United States, [3]High School Student, United States

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MO0592 **Urinary N-telopeptide and rate of decline in femoral neck strength across the menopause transition: Results from the Study of Women's Health Across the Nation (SWAN)**

Albert Shieh*[1], Shinya Ishii[2], Gail Greendale[1], Jane Cauley[3], Arun Karlamangla[1]. [1]UCLA, United States, [2]University of Tokyo, United States, [3]University of Pittsburgh, United States

Disclosures: Albert Shieh, None

MO0593 **Region-Specific Assessment of Bone Mineral Density and Trabecular Bone Score in Lateral Projection Identifies Local Decay in Trabecular Bone Microstructure of the Vertebral Body**

Petar Milovanovic*[1], Annika vom Scheidt[1], Eric Flavio Grisolia Seifert[1], Klaus Püschel[2], Michael Amling[1], Björn Busse[1]. [1]University Medical Center Hamburg-Eppendorf, Department of Osteology and Biomechanics, Germany, [2]University Medical Center Hamburg-Eppendorf, Department of Legal Medicine, Germany

Disclosures: Petar Milovanovic, None

MO0594 **Racial Dimorphism in the Assembly of Bone Microstructure in Chinese resident in Hong Kong and Melbourne**

Xiao-Fang Wang*[1], Ka Yee Cheuk[2], Tsz Ping Lam[2], Ali Ghasem-Zadeh[1], Roger Zebaze[1], X. Edward Guo[3], Jack Chun-Yiu Cheng[4], Ego Seeman[1]. [1]Departments of Endocrinology and Medicine, Austin Health, University of Melbourne, Australia, [2]2Department of Orthopaedics and Traumatology, The Chinese University of Hong Kong, China, [3]Bone Bioengineering Laboratory, Department of Biomedical Engineering, Columbia University, United States, [4]Department of Orthopaedics and Traumatology, The Chinese University of Hong Kong, China

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MO0595 **Systematic Evaluation of Abdominal Aortic Calcification Reveals Unknown Cardiovascular Disease Risk in Patients Visiting a Fracture Liaison Service**

Caroline E Wyers*, Lisanne Vranken, John T Schousboe[2], Robert Y van der Velde, Irma J de Bruin, Heinrich M Janzing[3], Sjoerd Kaarsemaker[4], Piet P Geusens, Joop P van den Bergh. [1]Maastricht UMC+, NUTRIM, Department of Internal Medicine; VieCuri Medical Center, Department of Internal Medicine, Netherlands, [2]Park Nicollet Clinic, St. Louis Park, MN. Division of Health Policy & Management, University of Minnesota, Minneapolis, MN, United States, [3]Department of Surgery and Trauma Surgery, VieCuri Medical Centre, Netherlands, [4]Department of Orthopedic Surgery and Trauma Surgery, VieCuri Medical Centre, Netherlands, [5]Maastricht UMC+, CAPHRI, Department of Internal Medicine subdivision of Rheumatology; University of Hasselt, Netherlands, [6]Maastricht UMC+, NUTRIM, Department of Internal Medicine; VieCuri Medical Center, Department of Internal Medicine; University of Hasselt, Netherlands

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MO0596 **Bone turnover in postmenopausal women with hyponatremia**

Caroline Chiu*[1], Philip Orlander[1], Kelly Wirfel[1], Jeena Varghese[2], Catherine G Ambrose[1], Nahid Rianon[1]. [1]UTHealth McGovern Medical School, United States, [2]University of Texas M.D. Anderson Cancer Center, United States

Disclosures: Caroline Chiu, None

MO0597 **Prevalence of osteoporosis and rate of bone loss in Korean adults**

Kihyun Baek*[1], Je-Ho Han[1], Moo-Il Kang[1]. [1]Division of Endocrinology and Metabolism, Department of Internal Medicine, College of Medicine, The Catholic University of Korea, Korea, Republic of

Disclosures: Kihyun Baek, None

MO0598 **Osteoporosis diagnosed with distal forearm addition is better at identifying osteoporosis, but does not increase the predictive value for incidental clinical fracture in older adults. Preliminary data from the SARCOS study**

Sheila Ingham*[1], Alberto Frisoli[2], Jairo Borges[1], Angela Paes[1], antonio Carvalho[1]. [1]Federal Univeristy of Sao Paulo, Brazil, [2]Federal University of Sao Paulo, Brazil

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MO0599 **Bone Turnover Markers in Men with Dysglycemia**

Kara Holloway*[1], Lelia de Abreu[1], Mark Kotowicz[1], M. Amber Sajjad[1], Julie Pasco[1]. [1]Deakin University, Australia

Disclosures: Kara Holloway, None

MO0600 **Therapeutic uses of muscle-derived stem cells in the treatment of skeletal metastases**

Krishna Sinha*[3], Rozita Bagheri-Yamand[2], Xiaodong Mu[3], Johnny Huard[3]. [1]UT Health Science Center at Houston, United States, [2]MD Anderson Cancer Center, United States, [3] UT Health Science Center at Houston, United States

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MO0601 **Is hyperkyphosis associated with incident falls in older men?**

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Disclosures: Corinne McDaniels-Davidson, None

MO0602 **The Relation Between Radiographic Vertebral Fractures And Trabecular Bone Score In Elderly Women: A Meta- Analysis Of Prospective Studies**

Fjorda Koromani*[1], Ling Oei[1], Biljana Atanasovska[2], Carolina Medina-Gomez[1], Enisa Shevroja[3], Josje Schoufour[1], Berengere Aubry-Rozier[3], Carola Zillikens[1], Andre Uitterlinden[1], Edwin Oei[1], Didier Hans[3], Fernando Rivadeneira[1]. [1]Erasmus MC, Netherlands, [2]Groningen University, Netherlands, [3]University of Lausanne, Switzerland

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MO0603 **Machine Learning Principles Can Improve Hip Fracture Prediction**

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Disclosures: Christian Kruse, None

MO0604 **Sleep disorders are associated with trabecular bone score and osteoporotic fractures, not with bone mineral density**

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MO0605 **The bone-vascular hypothesis: relationship between abdominal aortic calcification, bone mineral density and fractures in elderly women**

Joshua Lewis*[1], Celeste Eggermont[2], John Schousboe[3], Wai Lim[2], Germaine Wong[1], Ben Khoo[4], MingXiang Yu[5], Kun Zhu[2], Kevin Wilson[6], Douglas Kiel[7], Richard Prince[2]. [1]School of Public Health, University of Sydney, Australia, [2]School of Medicine and Pharmacology, University of Western Australia, Australia, [3]Park Nicollet Osteoporosis Center and Institute for Research and Education, United States, [4]Medical Technology and Physics, Sir Charles Gairdner Hospital, Australia, [5]Department of Endocrinology & Metabolism, Shanghai Zhongshan Hospital, Fudan University, China, [6]Skeletal Health, Hologic, Inc, United States, [7]Institute for Aging Research, Hebrew SeniorLife, Beth Israel Deaconess Medical Center, Harvard Medical School, United States

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MO0606 **Is microagiopathy an independent risk factor of vertebral fracture? A prospective study from Chinese population**

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MO0607 **Burden of fractures attributable to low bone mineral density**

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Disclosures: Thao Ho-Le, None

MO0608 **Multi-Modal Intervention for Improving Osteoporosis Treatment Initiation and Adherence**

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MO0609 **Low peak bone mineral density of lumbar spine in Korean women of Korea National Health and Nutrition Examination Survey (2008-2010)**

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Disclosures: Ye Soo Park, None

MO0610 **Bisphosphonates and Age-Related Macular Degeneration: A Propensity-Matched Cohort and Nested Case-Control Analysis**

Cesar Garriga*[1], Andy Judge[2], Samuel Hawley[1], Antonella Delmestri[1], Daniel Prieto-Alhambra[1], Cyrus Cooper[3], Michael Pazianas[1]. [1]NIHR Musculoskeletal Biomedical Research Unit, Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences, Nuffield Orthopaedic Centre, University of Oxford, United Kingdom, [2]NIHR Musculoskeletal Biomedical Research Unit, Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences, Nuffield Orthopaedic Centre, University of Oxford, Oxford and MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, [3]NIHR Musculoskeletal Biomedical Research Unit, Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences, Nuffield Orthopaedic Centre, University of Oxford, and MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom

Disclosures: Cesar Garriga, None

MO0611 **Young adult muscle strength is not associated with middle-age fracture risk in men: a cohort study using Swedish conscription data linked to the National Patient Register**

Daniel Prieto-Alhambra*[1], Aleksandra Turkiewicz[2], Björn Rosengren[3], Martin Englund[2]. [1]Centre for Statistics in Medicine and Nuffield Department of Orthopaedics, Rheumatology, and Musculoskeletal Sciences (NDORMS), University of Oxford, United Kingdom, [2]Clinical Epidemiology Unit, Orthopaedics, Department of Clinical Sciences Lund, Lund University, Sweden, [3]Clinical and Molecular Osteoporosis Research Unit, Departments of Clinical Sciences and Orthopedics Malmö, Skåne University Hospital, Lund University, Sweden

Disclosures: Daniel Prieto-Alhambra, Amgen, Grant/Research Support

MO0612 **Bone Attenuation on Computed Tomography (CT) is Inversely Associated with All-cause Mortality in Elderly Women in the National Lung Screening Trial**

Thomas Register*[1], Robert Boutin[2], Stephen Kritchevsky[1], Haiying Chen[1], Caroline Chiles[1], Barton Wise[2], Cyrus Bateni[2], Ahmed Bayoumi[2], Leon Lenchik[1]. [1]Wake Forest School of Medicine, United States, [2]University of California, Davis, United States

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MO0613 **Low femur neck BMD is associated with CAD in elderly women not on statins**

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MO0614 **Evaluation of Current Screening and Treatment Patterns in Males at the Veteran Affairs Healthcare System**

David Smith*[1], Nicola Berman[2], Craig Tenner[3], Virginia Pike[4], Michael Pillinger[4], Stephen Honig[4]. [1]NYU School of Medicine, United States, [2]NYU Rheumatology, United States, [3]NYU Department of Medicine, United States, [4]NYU Department of Rheumatology, United States

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MO0615 **A Retrospective Study on the Relationship between Spinal Fragility Fracture and Bone Mineral Density**

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MO0616 **Relationship between bilateral muscle strength and lumbar spine bone mineral density in post-menopausal women- a cross sectional study**

Jing Wang*[1], Chenguang Li[1], Yan Zhang[1], Xiaofeng Qi[1], Liang Qiao[1], Jinlong Li[1], Lin Chen[1], Qiang Wang[1], Hao Zhang[1], Yongjian Zhao[1], Yongjun Wang[1], Bing Shu[1]. [1]Longhua Hospital, Shanghai University of Traditional Chinese Medicine, China

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MO0617 **Trends in Self-Reported and Measured Osteoporosis Among US Adults, 2005-2014**
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MO0618 **Impact of Primary Osteoporosis Screening in a National Sample of Older Men**
Cathleen Colon-Emeric*[1], Carl Pieper[1], Courtney VanHoutven[2], Kenneth Lyles[1], Joanne LaFleur[3], Janet Grubber[2], Robert Adler[4]. [1]Duke University, United States, [2]Durham VA Medical Center, United States, [3]Salt Lake City VA, United States, [4]Hunter Holmes McGuire VAMC, United States
Disclosures: Cathleen Colon-Emeric, Biscardia Inc, Major Stock Shareholder

MO0619 **Delirium and Operatively-Managed Fragility Fracture: an Intervention to Educate Providers and Improve Detection and Outcomes**
Jamie Confino*[1], John Roe[2], Sara Merwin[2], Vafa Tabatabaie[2], Stephanie Kim[2], Yungtai Lo[2], Wanda Horn[2]. [1]Albert Einstein College of Medicine, United States, [2]Montefiore Medical Center, United States
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MO0620 **Training the Next Generation of Musculoskeletal Investigators: A Report on the Activity of the USBJI's Young Investigator Initiative**
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Disclosures: Edward Puzas, None

MO0621 **Evaluating Racial Differences in Medical Experiences Among Women with Osteoporosis**
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MO0622 **Dancing on Broadway with Irregular Periods and a Femoral Neck Stress Fracture**
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Disclosures: Dorothy Fink, None

MO0623 **Participation in Varsity Sports is Associated with Tibial Bone Health as Assessed by Peripheral QCT**
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Disclosures: Katelyn Guerriere, None

MO0624 **The effects of endurance exercise and dietary restriction on zoledronic acid caused quiescence of bone turnover in male adult rats**
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Disclosures: Tsang-Hai Huang, None

MO0625 **Changes of Trabecular Bone Score (TBS) in Asian Females: Comparison of 1990's and 2010's**
Young-Seong Kim*[1], Taeyong Lee[2], Jin-Hwan Kim[3], Dong Gyu Hwang[2]. [1]Dongguk University, Korea, Republic of, [2]Ewha womans University, Korea, Republic of, [3]Inje University Ilsan Paik Hospital, Korea, Republic of
Disclosures: Young-Seong Kim, None

MO0626 **A dietary pattern rich in calcium, potassium, and protein is associated with tibia bone mineral content and strength in young adults entering initial military training**
Anna Nakayama *[1], Laura Lutz[1], Adela Hruby[1], J. Philip Karl[1], James McClung[1], Erin Gaffney-Stomberg[1]. [1]USARIEM, United States
Disclosures: Anna Nakayama , None

MO0627 **Relationship between dietary calcium intake and biomarkers of bone and vascular health in healthy postmenopausal women**
Angel Ong*[1], Hope Weiler[1], Shubhabrata Das[1], Michelle Wall[2], Stella Daskalopoulou[2], David Goltzman[2], Suzanne Morin[2]. [1]McGill University, Canada, [2]Research Institute of McGill University Health Centre, Canada
Disclosures: Angel Ong, None

MO0628 **Effect of Maintenance of Serum Ionized Calcium during Treadmill Walking on Parathyroid Hormone and C-Terminal Telopeptides of Type I Collagen in Older Adults**
Sarah Wherry*[1], Christine Swanson[1], Pamela Wolfe[1], Toby Wellington[1], Andrew Overstreet[1], Jane Quick[1], Rebecca Boxer[1], Robert Schwartz[1], Wendy Kohrt[1]. [1]University of Colorado, United States
Disclosures: Sarah Wherry, None

MO0629 **Overexpression of WNT16 does not Rescue the Bone Loss due to Glucocorticoid Treatment in Mice**
Imranul Alam*[1], Dana Oakes[1], Shahed Sbeta[1], Caylin Billingsley[1], Dena Acton[1], Austin Reilly[1], Rita Gerard-O'Riley[1], Michael Econs[1]. [1]Indiana University School of Medicine, United States
Disclosures: Imranul Alam, None

MO0630 **Changes in Macrophage and Inflammatory Response During Fracture Healing in an Ovariectomized Mice Model**
Lin Chen*[1], Chunchun Xue[1], Yongjian Zhao[1], Yan Zhang[1], Yongjun Wang[1], Bing Shu[1]. [1]Spine Research Institute, Shanghai University of T.C.M., Shanghai, China, 200032, China
Disclosures: Lin Chen, None

MO0631 **α-Klotho is Associated with Bone Fractures and Arterial Stiffness in Dialysis Patients**
Louis-Charles Desbiens*[1], Aboubacar Sidibe[1], Roth-Visal Ung[1], Michaël Munger[1], Catherine Fortier[1], Yue-Pei Wang[1], Mohsen Agharazii[1], Karine Marquis[1], Fabrice Mac-Way[1]. [1]CHU de Québec Research Center, L'Hôtel-Dieu-de-Québec Hospital, Endocrinology and Nephrology axis, Faculty and Department of Medicine, Laval University, Canada
Disclosures: Louis-Charles Desbiens, None

MO0632 **Recombinant Soluble Betaglycan as a Potent Bone Remodeling Agent in Osteoporosis and Cancer Induced Bone Disease**
Fernando M Guerra-Olvera*[1], Cinthia N Cuero-Antolin[1], Fernando López-Casillas[2], Pierrick Fournier[1], Patricia Juárez[1]. [1]Center for Scientific Research and Higher Education, Mexico, [2]Cellular Physiology Institute, Mexico
Disclosures: Fernando M Guerra-Olvera, None

MO0633 **High serum Erythropoetin Predicts Incident Fractures in Men.MrOS Sweden.**
Hallgerdur Lind Kristjansdottir*[1], sten Ljunggren[2], Magnus Karlsson[3], Mattias Lorentzon[4], Ulf Lerner[5], Claes Ohlsson[5], Catharina Lewerin[1], Dan Mellström[4]. [1]Section of Hematology and Coagulation, Department of Internal Medicine, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden, Sweden, [2]Department of Medical Sciences, University of Uppsala, Uppsala, Sweden, Sweden, [3]Department of Clinical Sciences and orthopaedics, Lund University, Lund, Sweden, Sweden, [4]Department of Geriatric Medicine, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden, Sweden, [5]Centre for Bone and Arthritis Research(CBAR), Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden, Sweden
Disclosures: Hallgerdur Lind Kristjansdottir, None

MO0634 **Low serum vitamin D and high parathyroid hormone are not associated with cortical porosity in postmenopausal women, but are associated with non-vertebral fracture independent of cortical porosity: the Tromsø Study**
Marit Osima*[1], Tove Tveitan Borgen[1], Marko Lukic[1], Guri Grimnes[2], Ragnar Joakimsen[2], Erik F Eriksen[2], Åshild Bjørnerem[2]. [1]MD, Norway, [2]MD, PhD, Norway
Disclosures: Marit Osima, None

MO0635 **New bone biopsy sectioning approach for histomorphometry and molecular biology**
Sylvain Picard*[1], Roth-Visal Ung[1], Sarah-Kim Bisson[1], Fabrice Mac-Way[1]. [1]Research Center of CHU de Quebec, Hôtel-Dieu de Quebec Hospital, Faculty and Department of Medecine, Université Laval, Canada
Disclosures: Sylvain Picard, None

MO0636 **Withdrawn**

MO0637 **Targeted Massively Parallel Sequencing of 128 Candidate Genes Reveals a Potential Molecular Cause in 75% of Cases with Idiopathic, Severe or Familial Osteoporosis**
Manuela Rocha-Braz*[1], Monica França[2], Adriana Fernandes[1], Regina Martin[2], Antonio Lerario[2], Berenice Mendonca[2], Bruno Ferraz-de-Souza[1]. [1]Endocrinology/LIM-25, Hospital das Clinicas, University of Sao Paulo School of Medicine, Brazil, Brazil, [2]SELA/LIM-42, Hospital das Clinicas, University of Sao Paulo School of Medicine, Brazil, Brazil
Disclosures: Manuela Rocha-Braz, None

MO0638 **The effect of hyperbaric oxygen therapy on bone metabolism**
Zaida Salmón*[1], Juan Carlos Borregan[1], Mayte García Unzueta[1], José Antonio Riancho[1], Carmen Valero[1]. [1]Department of Internal Medicine. University Hospital Marqués de Valdecilla. University of Cantabria. IDIVAL. Santander. Spain, Spain
Disclosures: Zaida Salmón, None

MO0639 **Identification of Enhancer-SNPs Associated with Osteoporosis**
Chuan Qiu*[1], Hui Shen[1], Hongwen Deng[1]. [1]Tulane University, United States
Disclosures: Chuan Qiu, None

MO0640 **Cortical Porosity is not Synonymous with Microstructural Deterioration**
Roger Zebaze*[1], Roland Charpulat[2], Elizabeth Sornay- Rendu[2], ego Seeman[3]. [1]Department of Medicine Austin Health, Australia, [2]Inserm Lyon, France, [3]Department of Medicine, Austin Health, Australia
Disclosures: Roger Zebaze, None

MO0641 **Fractures in Adults with Type 1 Diabetes: Results from the T1D Exchange Clinic Registry**
Ruban Dhaliwal*[1], Claire Boyle[2], Mona Al Mukaddam[3], Ruth Weinstock[1], Michael Rickels[4], Viral Shah[5], Linda DiMeglio[6]. [1]SUNY Upstate Medical University, United States, [2]Jaeb Center for Health Research, United States, [3]University of Pennsylvania School of Medicine, United States, [4]University of Pennsylvania Perelman School of Medicine, United States, [5]Barbara Davis Center for Diabetes, United States, [6]Indiana University School of Medicine, United States
Disclosures: Ruban Dhaliwal, None

MO0642 **Comparative Study between "Minodronate with Eldecalcitol" and "Denosumab" as Treatment after 2-year Daily Teriparatide in Osteoporosis in Patients with Rheumatoid Arthritis – Results in 24 Months**

Yuji Hirano*[1], Kyosuke Hattori[1], Takayasu Ito[2]. [1]Department of Rheumatology, Toyohashi Municipal Hospital, Japan, [2]Ito Orthopaedic Clinic, Japan

Disclosures: Yuji Hirano, None

MO0643 **Lower bone mass and higher bone resorption in pheochromocytoma: Clinical evidence for the effect of the sympathetic nervous system on bone**

Beom-Jun Kim*[1], Mi Kyung Kwak[1], Seong Hee Ahn[2], Hyeonmok Kim[3], Seung Hun Lee[1], Kee-Ho Song[4], Sunghwan Suh[5], Jae Hyeon Kim[6], Jung-Min Koh[1]. [1]Division of Endocrinology and Metabolism, Asan Medical Center, University of Ulsan College of Medicine, Korea, Republic of, [2]Department of Endocrinology, Inha University School of Medicine, Korea, Republic of, [3]Department of Internal Medicine and Institute of Health Sciences, Gyeongsang National University Hospital, Gyeongsang National University School of Medicine, Korea, Republic of, [4]Division of Endocrinology and Metabolism, Konkuk University Medical Center, Konkuk University School of Medicine, Korea, Republic of, [5]Division of Endocrinology and Metabolism, Department of Internal Medicine, Dong-A University Medical Center, Dong-A University College of Medicine, Korea, Republic of, [6]Division of Endocrinology and Metabolism, Department of Medicine, Samsung Medical Center, Sungkyunkwan University School of Medicine, Korea, Republic of

Disclosures: Beom-Jun Kim, None

MO0644 **The increased risk of fractures after treatment of aromatase inhibitors in patients with breast cancer: The National Health Insurance System Data (NHIS 2005-2015)**

Sujin Lee*[1], Yumie Rhee[2], Jung Wha Hong[3], Soojung Hong[3], Kyoung Hye Park[1], Sun Ok Song[1], Ju Young Nam[1], Kyoungmin Kim[1], Eun Young Lee[4], Ho Hur[1], Namki Hong[2]. [1]Department of Internal Medicine, National Health Insurance Service Ilsan Hospital, Korea, Republic of, [2]Yonsei University College of Medicine, Endocrine Research Institute, Yonsei University College of Medicine, Korea, Republic of, [3]Research Institute, National Health Insurance Service Ilsan Hospital, Korea, Republic of, [4]Seoul St. Mary's Hospital, College of Medicine, The Catholic University of Korea, Korea, Republic of

Disclosures: Sujin Lee, None

MO0645 **17 Patients with Monoclonal Gammopathy of Undetermined Significance (MGUS) Presenting with Symptomatic Vertebral Compression Fractures (SVCF)**

Michael Lovy*[1], Jack Hodgkins[1], Nir Ben-Shlomo[2], Brian Hodgkins[1]. [1]Desert Oasis Healthcare, United States, [2]Ben-Gurion Medical School, Israel

Disclosures: Michael Lovy, None

MO0646 **Evolution of Serum Sclerostin Six Months After Liver Transplantation: Different Response Compared With Bone Turnover Markers**

Gonzalo Allo Miguel*[1], Soledad Librizzi[1], Mercedes Aramendi Ramos[2], Carlos Jiménez[3], Federico Hawkins[4], Guillermo Martínez Díaz-Guerra[1]. [1]Endocrinology Service, 12 de Octubre University Hospital, Spain, [2]laboratory Service, 12 de Octubre University Hospital, Spain, [3]Surgery Service, 12 de Octubre University Hospital, Spain, [4]Endocrinology Serivce, 12 de Octubre University Hospital, Spain

Disclosures: Gonzalo Allo Miguel, None

MO0647 **One-year Changes in Bone Mineral Density with High-Dose Prednisone in Patients with Rheumatoid Arthritis**

Linda Rasch*[1], Lilian van Tuyl[1], Martijn Kremer[1], Irene Bultink[1], Maarten Boers[2], Willem Lems[1]. [1]Amsterdam Rheumatology and immunology Center | VU University Medical Center, Netherlands, [2]Epidemiology and Biostatistics, VU University Medical Center, Netherlands

Disclosures: Linda Rasch, None

MO0648 **Combined treatment with Growth Hormone and Anastrozole in a pubertal male with Growth Hormone Deficiency and Low Bone Density Due To Chronic Steroids Use**

Marielly Sierra*[1], Lillian Haddock[2], Milliette Alvarado[3], Margarita Ramirez[4], Loida Gonzalez[5], Francisco Nieves[6], Anette Garces[7]. [1]University of Puerto Rico Recinto de Ciencias Medicas, Endocrinology section, Puerto Rico, [2]University of Puerto Rico, Recinto de Ciencias Medicas. Endocrinology section, Puerto Rico, [3]University of Puerto Rico, Recinto de Ciencias Medicas. Endocrinology department, Puerto Rico, [4]University of PR. Recinto de Ciencias Medicas. Endocrinology department., Puerto Rico, [5]Universidad de Puerto Rico. Recinto de Ciencias Medicas, Endocrinology department, Puerto Rico, [6]University of Puerto Rico, Pediatric Endocrinology department, Puerto Rico, [7]University of Puerto Rico, Puerto Rico

Disclosures: Marielly Sierra, None

MO0649 **A meta-analysis of the risk of ankle and wrist fractures in diabetes**

Tatiane Vilaca*[1], Jennifer Walsh [1], Richard Eastell[2]. [1]Academic Unit of Bone Metabolism Department of Oncology and Metabolism University of Sheffield, United Kingdom, [2]Academic Unit of Bone Metabolism Department of Oncology and Metabolism University of Sheffield , United Kingdom

Disclosures: Tatiane Vilaca, None

MO0650 **Cross-sectional evaluation of bone metabolism in male patients with type 2 diabetes**

Reiko Watanabe*[1], Nobuyuki Tai[1], Junko Hirano[1], Yoshiyuki Ban[1], Daisuke Inoue[1], Ryo Okazaki[1]. [1]Third Department of Medicine, Teikyo University Chiba Medical Center, Japan

Disclosures: Reiko Watanabe, None

MO0651 **Cinacalcet hydrochloride increases sharpey fiber in patients with renal hyperparathyroidism**

Aiji Yajima*[1], Ken Tsuchiya[2], David Burr[1], Kosaku Nitta[3]. [1]Indiana University, School of Medicine, Anatomy and Cell Biology, United States, [2]Tokyo Women's Medical University, Blood Purification, Kidney Center, Japan, [3]Tokyo Women's Medical University, Medicine, Kidney Center, Japan

Disclosures: Aiji Yajima, None

MO0652 **Cardiovascular Safety of zoledronic acid compared with oral bisphosphonates and untreated population controls: an observational cohort study using Danish and Swedish National Health registries.**

Bo Abrahamsen*[1], Katrine H Rubin[2], Sören Möller[2], Anup Choudhury[3], Erik F Eriksen[4], Morten Andersen[5]. [1]University of Southern Denmark and Holbæk Hospital, Denmark, [2]OPEN, University of Southern Denmark, Denmark, [3]Global Drug Development, Novartis, India, [4]Department of Health, University of Oslo, Norway, [5]Karolinska Institute Stockholm and Department of Drug Design and Pharmacology, University of Copenhagen, Sweden

Disclosures: Bo Abrahamsen, UCB, Grant/Research Support

MO0653 **CT-guided cement sacroplasty (CSP) as pain therapy in non-dislocated insufficiency fractures**

Reimer Andresen*[1], Sebastian Radmer[2], Mathias Wollny[3], Julian Ramin Andresen[4], Urs Nissen[5], Hans-Christof Schober[6]. [1]Institute of Diagnostic and Interventional Radiology/ Neuroradiology, Westkuestenklinikum Heide, Academic Teaching Hospital of the Universities of Kiel, Luebeck and Hamburg, Heide, Germany, Germany, [2]Centre for Orthopaedics, Berlin, Germany , Germany, [3]Medimbursement, Tarmstedt, Germany, Germany, [4]Medical School Sigmund Freud University, Vienna, Austria, Austria, [5]Department of Neurosurgery and Spine Surgery, Westkuestenklinikum Heide, Academic Teaching Hospital of the Universities of Kiel, Luebeck and Hamburg, Heide, Germany, Germany, [6]Department of Internal Medicine I, Municipal Hospital Suedstadt Rostock, Academic Teaching Hospital of the University of Rostock, Rostock, Germany, Germany

Disclosures: Reimer Andresen, None

MO0654 **Bisphosphonate Prescriptions May Reduce Fracture Risk in Older Nursing Home (NH) Residents**

Sarah Berry*[1], Andrew Zullo[2], Tingting Zhang[2], Yoojin Lee[2], Geetanjoli Banerjee[2], Lori Daiello[2], Kevin McConeghy[2], David Dosa[2], Vincent Mor[2], Douglas Kiel[1]. [1]Hebrew SeniorLife, Institute for Aging Research, United States, [2]Brown University School of Public Health, United States

Disclosures: Sarah Berry, Amgen, Grant/Research Support

MO0655 **Bone Mineral Density and Bone Turnover Marker Changes with Sequential Abaloparatide/ Alendronate: Results of ACTIVExtend**

John P Bilezikian*[1], Lorraine A Fitzpatrick[2], Gregory C Williams[2], Ming-yi Hu[2], Gary Hattersley[2], Rene Rizzoli[3]. [1]Columbia University Medical Center, United States, [2]Radius Health, Inc., United States, [3]Geneva University Hospitals and Faculty of Medicine, Switzerland

Disclosures: John P Bilezikian, Shire, Consultant

MO0656 **Early Change in Serum PINP During Treatment with Abaloparatide is Correlated with Lumbar Spine BMD: Results from the ACTIVE Trial**

Dennis M Black*[1], Bruce H Mitlak[2], Yamei Wang[2], Ming-yi Hu[2], Lorraine A Fitzpatrick[2], Richard Eastell[3]. [1]University of California San Francisco, United States, [2]Radius Health, Inc., United States, [3]University of Sheffield, United States

Disclosures: Dennis M Black, Merck, Other Financial or Material Support

MO0657 **Early Change in PINP Correlates with Lumbar Spine BMD More Strongly with Abaloparatide than with Teriparatide: Results of the ACTIVE trial**

Richard Eastell*[1], Bruce H Mitlak[2], Yamei Wang[2], Ming-yi Hu[2], Lorraine A Fitzpatrick[2], Dennis M Black[3]. [1]University of Sheffield, United Kingdom, [2]Radius Health, Inc., United States, [3]University of California San Francisco, United States

Disclosures: Richard Eastell, Teijin Pharma, Consultant

MO0658 **QCT Demonstrates Long-Term Proximal Femur Trabecular Density Increases in Osteoporotic Women Following Treatment with a Minimally-Invasive Local Osteo-Enhancement Procedure Involving Injection of a Resorbable, Triphasic Calcium-Based Implant Material**

Klaus Engelke*[1], Dominique Favell[2], Ronald Hill[2], Thomas Fuerst[3], Bryan Huber[4], James Howe[2], Harry Genant[5]. [1]Bioclinica Germany, Germany, [2]AgNovos Healthcare, United States, [3]Bioclinica, United States, [4]Copley Hospital, United States, [5]Bioclinica; University of California, San Francisco, United States

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MO0659 **Offset of Effect of Oral Bisphosphonates on Tartrate-Resistant Acid Phosphatase in Postmenopausal Osteoporosis: the TRIO Study**

Fatma Gossiel*[1], Lucy Flintham[1], Kim Naylor[1], Jennifer Walsh[1], Nicola Peel[2], Eugene McCloskey[1], Richard Eastell[1]. [1]University of Sheffield, United Kingdom, [2]Sheffield Teaching Hospital, United Kingdom

Disclosures: Fatma Gossiel, None

MO0660 **Bone density, microarchitecture and tissue quality after 1 year of treatment with Tenofovir Disoproxil Fumarate**

Robert Güerri-Fernández*[1], Xavier Nogués[2], Alicia Gonzalez-Mena[3], Ana Guelar[2], Leonardo Mellibovsky[4], Natalia García-Giralt[5], Hernando Knobel[2], Adolfo Díez-Pérez[5]. [1]Infectious Diseases. Hospital del Mar., Spain, [2]Infectious Diseases, Spain, [3]Infectious Diseases. Hospital del Mar Research Institute, Spain, [4]Infectious Diseases. Hospital del Mar Research Institute., Spain, [5]IMIM., Spain

Disclosures: Robert Güerri-Fernández, None

MO0661 **Influence of glucocorticoids on effect of denosumab on osteoporosis in patients with Japanese rheumatoid arthritis; 24 months of follow-up ~a Multicenter Registry Study~**

Yasuhide Kanayama*[1], Yuji Hirano[2], Nobunori Takahashi[3], Shuji Asai[3], Naoki Ishiguro[3], Toshihisa Kojima[3]. [1]Toyota Kosei Hospital, Japan, [2]Toyohashi Municipal Hospital, Japan, [3]Nagoya University Graduate school of Medicine, Japan

Disclosures: Yasuhide Kanayama, None

MO0662 **The Change of Injected Cement after Percutaneous Vertebrolasty(PVP) and Percutaneous Balloon Kyphoplasty(KP) on Osteoporotic Vertebral Fractures**

Jin Hwan Kim*[1], Tae Yong Lee[2], Ji Woong Yeom[1]. [1]Department of Orthopedic Surgery, Inje University, Ilsan Paik Hospital, Korea, Republic of, [2]Ewha woman's university, Division of Mechanical and Biomedical engineering, Korea, Republic of

Disclosures: Jin Hwan Kim, None

MO0663 **Effective treatment of severe pregnancy and lactation- associated osteoporosis with denosumab: case report**

Shigeki Nishida*[1]. [1]M.D. Ph.D., Japan

Disclosures: Shigeki Nishida, None

MO0664 **Effects of Romosozumab in Postmenopausal Women With Osteoporosis After 2 and 12 Months Assessed by MicroCT on Iliac Crest Bone Biopsies**

Jean-Paul Roux*[1], Pascale Chavassieux[1], Roland Chapurlat[1], Nathalie Portero-Muzy[1], Pedro Garcia[2], Jacques P Brown[3], Cesar Libanati[4], Rogely Boyce[5], Andrea Wang[5], Andreas Grauer[5]. [1]INSERM UMR 1033, Université de Lyon, France, [2]Hospital Universitario de Monterrey, Mexico, [3]CHU de Quebec Research Centre and Laval University, Canada, [4]UCB BioPharma, Belgium, [5]Amgen Inc., United States

Disclosures: Jean-Paul Roux, None

MO0665 **Effects of vitamin D compounds on intestinal calcium absorption and calcium regulating hormones.**

Makio Tokiwa*[1], Masataka Shiraki[2]. [1]IDD Inc. Clinical Development Dept, Japan, [2]Department of Internal Medicine, Research Institute and Practice for Involutional Diseases, Japan

Disclosures: Makio Tokiwa, None

MO0666 **Clinical efficacy and safety of bazedoxifene(Viviant®) in postmenopausal women with osteoporosis and osteopenia**

Hee-Dong Chae*[1], Ji-Won Song[1], Sung-Hoon Kim[1], Chung-Hoon Kim[1], Byung-Moon Kang[1]. [1]Asan medical center, Korea, Republic of

Disclosures: Hee-Dong Chae, None

MO0667 **Incidence Rates of Acute Events Leading to Hospitalization or Emergency Room Visit Among Postmenopausal Women Receiving Treatment for Osteoporosis**

Leslie Spangler*[1], Florence T Wang[2], Vera Ehrenstein[3], Henrik T Sørensen[3], Susan Yue[4], Xiang Yin[5], J Michael Sprafka[6], Shawna Smith[7], Jeffrey R Curtis[8]. [1]Center for Observational Research, Amgen Inc, United States, [2]Optum Epidemiology, United States, [3]Department of Clinical Epidemiology, Aarhus University, Denmark, [4]Global Development, Amgen Inc., United States, [5]Global Biostatistics, Amgen Inc., United States, [6]Center for Observational Research, Amgen Inc., United States, [7]Global Safety, Amgen Inc., United States, [8]Division of Clinical Immunology and Rheumatology, University of Alabama at Birmingham, United States

Disclosures: Leslie Spangler, None

MO0668 **The Safety and Efficacy of Monthly Intravenous Ibandronate Injections in a Prospective, Post-Marketing Observational Study in Japanese Patients with Osteoporosis**

Yasuhiro Takeuchi*[1], Junko Hashimoto[2], Chiemi Yamagiwa[3], Takashi Tamura[3], Ryousuke Harada[3], Yosuke Nishida[3], Akihide Atsumi[3]. [1]Endocrine Center, Toranomon Hospital, Japan, [2]Project & Lifecycle Management Unit, Chugai Pharmaceutical Co. Ltd, Japan, [3]Drug Safety Division, Chugai Pharmaceutical Co. Ltd, Japan

Disclosures: Yasuhiro Takeuchi, Chugai, Speakers' Bureau

MO0669 **Antiresorptive activity of a cathepsin K inhibitor ONO-5334 and its relationship to BMD increase in a phase II trial for postmenopausal osteoporosis**

Makoto Tanaka*[1], Yoshitaka Hashimoto[1], Chihiro Hasegawa[1], Steve Deacon[2], Richard Eastell[3]. [1]Ono Pharmaceutical Co., Ltd., Japan, [2]Ono Pharma UK Ltd., United Kingdom, [3]University of Sheffield, United Kingdom

Disclosures: Makoto Tanaka, Ono Pharmaceutical Co., Ltd, Grant/Research Support

MO0670 **A dedicated Telephone program and use of a single Bone Turnover Marker for individual Persistence to Oral Bisphosphonates: A single center Fracture Liaison Service (FLS) study.**

Peter Van den Berg*[1], Paul Van Haard[1], Eveline Van der Veer[2], Piet Geusens[3], Joop Van den Bergh[3], Dave Schweitzer[1]. [1]Reinier de Graaf Gasthuis, Netherlands, [2]University Medical Center Groningen, Netherlands, [3]Maastricht University Medical Center, Netherlands

Disclosures: Peter Van den Berg, None

MO0671 **Comparison between daily and weekly Teriparatide treatments for Osteoporosis after 3 years from the start of injection.**

Tsuyoshi Watanabe*[1], Emi Konno[2]. [1]National Center for Geriatrics and Gerontology, Japan, [2]Minami Seikyo Hospital, Japan

Disclosures: Tsuyoshi Watanabe, None

MO0672 **Atypical Femoral Fractures and Bisphosphonates Exposure among Patients Participating in a Fracture Liaison Service- A Case Control Study**

Uri Yoel*[1], Lior Baraf[1], Vitaly Medvedovsky[1], Tamar Eshkoli[1], Dayana Cohen[1], Victor Novack[2], Poliana Shamgar[3], Michal Lamberger[3], Avital Blum[4], Vera Polischuk[5], Dvora Lieberman[6], Viktoria Makarov[7], Ethel Siris[8], Merav Fraenkel[9]. [1]Endocrinology, Soroka University Medical Center, Faculty of Health Sciences, Ben-Gurion University of the Negev, Israel, [2]Clinical Research Center, Soroka University Medical Center, Faculty of Health Sciences, Ben-Gurion University of the Negev, Israel, [3]Clinical Research Center, Soroka University Medical Center, Israel, [4]Clinical Research Center, Faculty of Health Sciences, Ben-Gurion University of the Negev, Israel, [5]Internal medicine, Soroka University Medical Center, Faculty of Health Sciences, Ben-Gurion University of the Negev, Israel, [6]Geriatrics, Soroka University Medical Center, Faculty of Health Sciences, Ben-Gurion University of the Negev, Israel, [7]Clinical Imagine Institution, Soroka University Medical Center, Faculty of Health Sciences, Ben-Gurion University of the Negev, Israel, [8]Division of Endocrinology, Columbia University Medical Center, New York, USA, United States, [9]Endocrinology, Soroka University Medical Center, the Faculty of Health Sciences, Ben-Gurion University of the Negev, Israel

Disclosures: Uri Yoel, None

MO0673 **Damage-Associated Molecular Patterns (DAMPs) Released Following Ischemic Osteonecrosis of the Femoral Head**

Harry Kim*[1], Ryosuke Yamaguchi[1], Naga Suresh Adapala[1], Matthew Phipps[1], Olumide Aruwajoye[1]. [1]Texas Scottish Rite Hospital for Children, United States

Disclosures: Harry Kim, Genentech, Other Financial or Material Support

MO0674 **Adiponectin Enhances Osteogenic Differentiation in Human Adipose-derived Stem Cells by Activating the APPL1-p38 MAPK Signaling Pathway**

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Disclosures: Tong Chen, None

MO0675 **Identification of commercially available antibodies that block ligand binding by BMPR2**
Laura Schoerning*[1], Ruthann Gorrell[1], Jordan Newby[1], Julia Hum[1], Jonathan Lowery[1]. [1]Marian University College of Osteopathic Medicine, United States
Disclosures: Laura Schoerning, None

MO0676 **BMP2 encapsulated within exosomes bypasses its cell surface plasma membrane receptors to signal directly from inside the cell. Does this represent a new signaling paradigm?**
Saigopalakrishna Yerneni*[1], Lee Weiss[1], Theresa Whiteside[2], Phil Campbell[1]. [1]Carnegie Mellon University, United States, [2]University of Pittsburgh, United States
Disclosures: Saigopalakrishna Yerneni, None

MO0677 **Initiating Zoledronic Acid in Rice Rats with Established Periodontitis Shortens Time to First Occurrence of Osteonecrosis of the Jaw-like Lesions**
Jose Aguirre*[1], Jonathan Messer[1], Jessica Jiron[1], Evelyn Castillo[1], Jorge Mendieta[1], Jorge Mendieta[1], Indraneel Bhattacharyya[2], Catherine van Poznak[3], Donald Kimmel[1]. [1]Department of Physiological Sciences, University of Florida, United States, [2]Department of Oral & Maxillofacial Diagnostic Sciences, College of Dentistry, University of Florida, United States, [3]Oncology Division, Department of Medicine, College of Medicine, University of Michigan, United States
Disclosures: Jose Aguirre, None

MO0678 **Strontium treatment has synergistic effects with PTH as evaluated in OVX rats**
Patrick Ammann*[1]. [1]Division of Bone Diseases, Switzerland
Disclosures: Patrick Ammann, servier, Grant/Research Support

MO0679 **Addition of Diabetes Agravates Deleterious Effects of Metabolic Syndrome on Bone**
Cedo Bagi*[1], Edwin Berryman[1], Kristin Edwards[1], David Zakur[1], Chang-Ning Liu[1]. [1]Pfizer, Inc, United States
Disclosures: Cedo Bagi, None

MO0680 **Abaloparatide Increased Bone Mass in a Rabbit Glucocorticoid-Induced Osteopenia Model**
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Disclosures: Heidi Chandler, Radius Health , Other Financial or Material Support

MO0681 **PAI-1 inhibitor treatment attenuate bone loss through stimulating bone formation in a mouse model of postmenopausal osteoporosis**
Guangwen Jin*[1], Jinying Piao[2], Zulipiya Aibibula[2], alkebaier aobulikasimu[2], Daisuke Koga[2], Hiroki Ochi[3], Kunikazu Tsuji[4], Toshio Miyata[5], Atsushi Okawa[2], Yoshinori Asou[2]. [1]Department of Orthopaedics Surgery, Tokyo Medical and Dental University, Japan, [2]Department of Orthopedics Surgery, Tokyo Medical and Dental University, Japan, [3]Department of Physiology and Cell Biology, Tokyo Medical and Dental University, Japan, [4]Department of Cartilage Regeneration, Tokyo Medical and Dental University, Japan, [5]Department of Molecular Medicine and Therapy, United Centers for Advanced Research and Translational Medicine, Tohoku University Graduate School of Medicine, Japan
Disclosures: Guangwen Jin, None

MO0682 **TransCon PTH, a Sustained-Release PTH Prodrug for the Treatment of Hypoparathyroidism: Proof-of-Principle in Cynomolgus Monkeys and TPTx Rats**
Lars Holten-Andersen*[1], Martin Guillot[2], Felix Cleemann[3], Melanie Felx[2], Susanne Pihl[1], Kennett Sprogoe[1], David Karpf[4], Aurore Valera[2], Vibeke Miller Breinholt[1]. [1]Ascendis Pharma A/S, Denmark, [2]Charles River Laboratories, Canada, [3]Ascendis Pharma GmbH, Germany, [4]Ascendis Pharma Inc., United States
Disclosures: Lars Holten-Andersen, None

MO0683 **YKL-05-099 uncouples bone formation and resorption by blocking M-CSF-driven osteoclastogenesis**
Maureen Omeara*[1], Janaina Da Silva Martins[1], Nathanael Gray[2], Henry Kronenberg[1], Marc Wein[1]. [1]MGH Endocrine Unit, United States, [2]Dana Farber Cancer Institute, United States
Disclosures: Maureen Omeara, None

MO0684 **Naproxen, but not Aspirin, Increases Risk and Impairs Repair of Stress Fractures**
Jino Park*[1], Camilo Restrepo[2], Javad Parvizi[2], Ryan Tomlinson[1]. [1]Thomas Jefferson University, United States, [2]Rothman Institute, United States
Disclosures: Jino Park, None

MO0685 **Chondroprotective effects of orally consumed hydrolyzed type 1 collagen in osteoarthritis are associated with shifts in the gut microbiome**
Eric Schott*[1], Sarah Soniwala[2], Christopher Farnsworth[1], Alex Grier[1], Sarah Catheline[1], Qurratul-Ain Dar[2], John Ketz[1], Cheryl Ackert-Bicknell[1], Jennifer Jonason[1], Steven Gill[1], Robert Mooney[1], Janne Prawitt[3], Michael Zuscik[1]. [1]University of Rochester Medical Center, United States, [2]University of Rochester, United States, [3]Rousselot BVBA, Belgium
Disclosures: Eric Schott, None

MO0686 **Maternal phosphate loading during pregnancy does not alter fetal FGF23, PTH, or phosphorus parameters**
K. Berit Sellars*[1], Brittany A. Ryan[1], Beth J. Kirby[1], Christopher S. Kovacs[1]. [1]Memorial University of Newfoundland, Canada
Disclosures: K. Berit Sellars, None

MO0687 **The Chemotherapeutic Trabectedin Negatively Impacts Osteal Macrophages, Bone Formation and Bone Healing**
Benjamin Sinder*[1], Justin Do[1], Amy Koh[1], Megan Michalski[1], Jose Aguirre[2], Hernan Roca[1], Laurie McCauley[1]. [1]University of Michigan, United States, [2]University of Florida, United States
Disclosures: Benjamin Sinder, None

MO0688 **Suitability of Various Non-Invasive Imaging Techniques to Analyze Bone, Muscle and Fat Tissues in Ovariectomized Mice**
Jukka Vääräniemi*[1], Thomas Delale[2], Tiina E Kähkönen[1], Jussi M Halleen[1], Thierry Abribat[2], Jukka Morko[1]. [1]Pharmatest Services Ltd, Finland, [2]Alizé Pharma III SAS, France
Disclosures: Jukka Vääräniemi, None

MO0689 **Prevention of glucocorticoid induced osteonecrosis with either parathyroid hormone or LLP2A-Ale**
Wei Yao*[1], Geetha Mohan[1], Yu-An Lay[1], Alexander Kot[1], MieJin Lim[1], Donald Kimmel[2], Nancy Lane[1]. [1]UC Davis Medical Center, United States, [2]University of Florida, United States
Disclosures: Wei Yao, None

MO0690 **Bodyweight Suppored Treadmill Training and Testosterone Produce Additive Bone Anabolic and Antiresorptive Benefit after Spinal Cord Injury**
Joshua Yarrow*[1], Ean Phillips[1], Hui Jean Kok[2], Christine Conover[1], Taylor Bassett[1], Hannah Prock[1], Andrea Catter[1], Carol Buydos[1], Jessica Jiron[2], J. Ignacio Aguirre[2], Stephen Borst[2], Fan Ye[1]. [1]VA Medical Center, United States, [2]University of Florida, United States
Disclosures: Joshua Yarrow, None

MO0691 **Effect of Lowering Dietary Calcium and Vitamin D on Bone Development in Female CD-1 Mice**
Jenalyn L. Yumol*[1], C. Brent Wakefield[2], Sandra M. Sacco[2], Philip J. Sullivan[2], Elena M. Comelli[3], Wendy E. Ward[4]. [1]Health Sciences, Brock University, Canada, [2]Kinesiology, Brock University, Canada, [3]Nutritional Sciences, University of Toronto; Kinesiology, Brock University, Canada, [4]Health Sciences, Brock University; Kinesiology, Brock University; Nutritional Sciences, University of Toronto, Canada
Disclosures: Jenalyn L. Yumol, None

MO0692 **Serum Inflammatory Biomarkers and Monocyte Responses in Fibrodysplasia Ossificans Progressiva**

Emilie Barruet*[12], Blanca M Morales[12], Tea Chan[12], Katherine Bigay[12], Jennifer Ho[12], Mary Nakamura[3], Edward C Hsiao[12]. [1]University of California, San Francisco, United States, [2]University of California, San francisco, United States, [3]UCSF/SFVAMC, United States

Disclosures: Emilie Barruet, None

MO0693 **Improvement of severe bone pain from fibrous dysplasia of bone with tocilizumab treatment - A case report**

Nadia Mehsen-Cetre*[1], Deborah Gensburger[2], Johanna Benhamou[2], Roland Chapurlat[2]. [1]Bordeaux University Hospital, FHU ACRONIM, France, [2]Lyon University Hospital, Rheumatology department, France

Disclosures: Nadia Mehsen-Cetre, None

MO0694 **Bone Involvement in Gaucher Disease is Related to Late Diagnosis and Treatment**

Diana Gonzalez*[1], Felisa Quiroga[2], Claudio Silva[2], Paula Rozenfeld[3], Beatriz Oliveri[4]. [1]Mautalen, Salud e Investigación, Argentina, [2]Diagnóstico Maipú, Argentina, [3]LISIN Departamento de Ciencias Biológicas Facultad de Ciencias Exactas Universidad Nacional de La Plata, Argentina, [4]Laboratorio deOsteoporosis y Enfermedades Metabólicas Oseas INIGEM UBA Conicet Hospital de Clínicas Jose de San Martín, Argentina

Disclosures: Diana Gonzalez, Shire , Speakers' Bureau

MO0695 **The Effects of Burosumab (KRN23), a Fully Human Anti-FGF23 Monoclonal Antibody, on Phosphate Metabolism and Rickets in 1 to 4-Year-Old Children with X-linked Hypophosphatemia (XLH)**

Erik Imel*[1], Thomas Carpenter[2], Gary S Gottesman[3], Javier San Martin[4], Meng Mao[4], Alison Skrinar[4], Michael P Whyte[3]. [1]Indiana University School of Medicine, United States, [2]Yale University School of Medicine, United States, [3]Shriners Hospitals for Children, United States, [4]Ultragenyx Pharmaceutical Inc., United States

Disclosures: Erik Imel, Ultragenyx Pharmaceutical Inc., Consultant

MO0696 **High-Turnover Bone Disease Due to a Novel 27-Base Pair Tandem Duplication in *TNFRSF11A* Leading to Constitutively Active RANK**

Sean J. Iwamoto*[1], Micol S. Rothman[1], Shenghui Duan[2], Steven Mumm[2], Kelsey Burr[1], Michael P. Whyte[3]. [1]Division of Endocrinology, Metabolism & Diabetes, University of Colorado School of Medicine, United States, [2]Division of Bone and Mineral Diseases, Washington University School of Medicine at Barnes-Jewish Hospital, United States, [3]Center for Metabolic Bone Disease and Molecular Research, Shriners Hospital for Children, United States

Disclosures: Sean J. Iwamoto, None

MO0697 **Earlier onset age of p.R179 than p.R176 mutation of *FGF23* gene in autosomal dominant hypophosphatemic ricketsï¼?Analysis of 6 Chinese pedigrees and review of the literature**

Zhen Zhao*[1], Chang Liu[1], Ou Wang[1], Mei Li[1], Xiaoping Xing[1], Yue Sun[1], Yan Jiang[1], Weibo Xia[1]. [1]Department of Endocrinology, Key Laboratory of Endocrinology, The Ministry of Health, Peking Union Medical College Hospital, Chinese Academy of Medical Sciences, China

Disclosures: Zhen Zhao, None

MO0698 **Gestational Gigantomastia Complicated By PTHrP-mediated Hypercalcemia**

Taher Modarressi*[1], Michael A. Levine[2], Amna N. Khan[1]. [1]Department of Endocrinology, Hospital of the University of Pennsylvania, United States, [2]Division of Endocrinology and Diabetes, Children's Hospital of Philadelphia, United States

Disclosures: Taher Modarressi, None

MO0699 **Assessment Tools of Physical and Functional Disability in Fibrodysplasia Ossificans Progressiva (FOP)**

Frederick S. Kaplan*[1], Edward C. Hsiao[2], Genevieve Baujat[3], Maja Di Rocco[4], Matthew A. Brown[5], Carmen De Cunto[6], Richard Keen[7], Mona Al Mukaddam[8], Donna R. Grogan[9], Robert J. Pignolo[10]. [1]The University of Pennsylvania, Perelman School of Medicine, United States, [2]Institute of Human Genetics and the Division of Endocrinology & Metabolism, University of California, San Francisco, United States, [3]Departement de Genetique, Institut IMAGINE and Hôpital Necker-Enfants Malades, France, [4]Unit of Rare Diseases, Department of Pediatrics, Gaslini Institute, Italy, [5]Queensland University of Technology, Faculty of Health, School - Biomedical Sciences, Australia, [6]Department of Pediatrics/Hospital Italiano de Buenos Aires, Argentina, [7]The Royal National Orthopaedic Hospital (Stanmore), United Kingdom, [8]The University of Pennsylvania, United States, [9]Clementia Pharmaceuticals Inc., United States, [10]Geriatric Medicine & Gerontology, Mayo Clinic College of Medicine, United States

Disclosures: Frederick S. Kaplan, None

MO0700 **Diagnosis and Management of Osteopetrosis: Consensus Guidelines from the Osteopetrosis Working Group**

Calvin Wu*[1], Michael J. Econs[2], Linda A. DiMeglio[2], Karl L. Insogna[3], Michael A. Levine[4], Paul J. Orchard[5], Weston P. Miller[5], Anna Petryk[6], Eric T. Rush[7], Dolores M. Shoback[8], Leanne M. Ward[9], Lynda E. Polgreen[1]. [1]Los Angeles Biomedical Research Institute at Harbor-UCLA Medical Center, United States, [2]Indiana University School of Medicine, United States, [3]Yale School of Medicine, United States, [4]University of Pennsylvania Perelman School of Medicine, United States, [5]University of Minnesota, United States, [6]Alexion Pharmaceuticals, Inc., United States, [7]University of Nebraska Medical Center, United States, [8]University of California, San Francisco, United States, [9]University of Ottawa, Canada

Disclosures: Calvin Wu, None

MO0701 **Passive Coping Strategies Are Associated With Higher Impairment In Quality Of Life In Patients With Fibrous Dysplasia**

Marlous Rotman*[1], Cornelie Andela[1], Bas Majoor[1], Ad Kaptein[1], Sander Dijkstra[1], Neveen Hamdy[1], Neveen Hamdy[1], Natasha Appelman-Dijkstra[1]. [1]Leiden University Medical Center, Netherlands

Disclosures: Marlous Rotman, None

MO0702 **PTH treatment activates intracortical bone remodeling in patients with hypoparathyroidism**

Tanja Sikjaer*[1], Lars Rejnmark[1], Jesper Skovhus Thomsen[2], Annemarie Brüel[2], Ellen Margrethe Hauge[3], Jean-Marie Delaisse[4], Thomas Levin Andersen[4]. [1]Department of Internal Medicine and Endocrinology, Aarhus University Hospital, Denmark, [2]Department of Biomedicine, Aarhus University, Denmark, [3]Department of Rheumathology, Aarhus University hospital, Denmark, [4]Department of Clinical Cell Biology, Vejle Hospital – Lillebaelt Hospital, Institute of Regional Health Research, University of Southern Denmark, Denmark

Disclosures: Tanja Sikjaer, Shire Pharmacuticals, Speakers' Bureau

MO0703 **Frequency and Time of Clinical Symptom Onset Impacting Health-Related Quality-of-Life Dimensions in Patients With Hypophosphatasia**

Shelagh M Szabo*[1], Ioannis C Tomazos[2], Lauren C Stewart[1], Sanjesh C Roop[1], Bonnie MK Donato[2], Anna Petryk[2], Yuri A Zarate[3], Anatoly Tiulpakov[4], Gabriel ngel Martos-Moreno[5]. [1]Broadstreet HEOR, Canada, [2]Alexion Pharmaceuticals, Inc., United States, [3]University of Arkansas for Medical Sciences, United States, [4]Endocrinology Scientific Center, Russian Federation, [5]Hospital Infantil Universitario Niño Jesús, Universidad Autónoma de Madrid, CIBEROBN, ISCIII, Spain

Disclosures: Shelagh M Szabo, Alexion Pharmaceuticals, Inc., Grant/Research Support

MO0704 **Bone Indices in Patients with Non-Surgical Hypoparathyroidism and Pseudohypoparathyroidism**

Line Underbjerg*[1], Tanja Sikjaer[2], Lars Rejnmark[3]. [1]MD/Ph.D.-student, Denmark, [2]MD, Ph.D., Denmark, [3]Clinical professor, consultant, PhD, DMSc, Denmark

Disclosures: Line Underbjerg, NPS pharmaceuticals, Shire, Speakers' Bureau

MO0705 **Hypophosphatasia: Principal Biochemical Features Validate The Clinical Nosology for Affected Children**

Michael P. Whyte*[1], Fan Zhang[2], Stephen P. Coburn[3], Karen L. Ericson[3]. [1]Center for Metabolic Bone Disease and Molecular Research, Shriners Hospital for Children; and Division of Bone and Mineral Diseases, Department of Internal Medicine, Washington University School of Medicine, United States, [2]Center for Metabolic Bone Disease and Molecular Research, Shriners Hospital for Children, United States, [3]Indiana University-Purdue University Fort Wayne, United States

Disclosures: Michael P. Whyte, Alexion Pharmaceuticals, New Haven, CT USA, Grant/Research Support

MO0706 **Type I Collagen C-propeptide Cleavage Deficiency Increases Bone Mineralization and Alters Bone Cell Differentiation**

Aileen M. Barnes*[1], Joseph E. Perosky[2], Basma Khoury[2], Stephane Blouin[3], M. Helen Rajpar[1], MaryAnn Weis[4], Klaus Klaushofer[3], Paul Roschger[3], David Eyre[5], Nadja Fratzl-Zelman[3], Kenneth M. Kozloff[2], Joan C. Marini[1]. [1]NICHD/NIH, United States, [2]University of Michigan, United States, [3]Ludwig Boltzmann Institute of Osteology, Austria, [4]University of Washington, United States, [5]Unversity of Washington, United States

Disclosures: Aileen M. Barnes, None

MO0707 **TransCon CNP, a sustained-release prodrug of C-type natriuretic peptide, prevents premature synchondrosis closure in an achondroplasia mouse model**

Vibeke Miller Breinholt*[1], Maxence Cornille[2], Nabil Kaci[3], Kennett Sprogoe[1], Laurence Legeai-Mallet[2]. [1]Ascendis Pharma A/S, Denmark, [2]Imagine Institute, France, [3]Imagine Insttute, France

Disclosures: Vibeke Miller Breinholt, None

MO0708 **NF1-Related Pseudarthrosis: Beyond the Pseudarthrosis Site**

Carlijn Brekelmans*[1], Silke Hollants[2], Caroline De Groote[2], Marijke Spaepen[2], Natalie Sohier[2], Marina Marechal[1], Frank Luyten[2], Johan Lammens[2], Eric Legius[1], Hilde Brems[1]. [1]KU Leuven, Belgium, [2]UZ Leuven, Belgium

Disclosures: Carlijn Brekelmans, None

MO0709 **IFITM5 (BRIL) p.S40L mutation causing atypical type VI OI results in unique bone material phenotype impacting both endochondral ossification and chondrocyte development**

Nadja Fratzl-Zelman*[1], Ingo Schmidt[2], Andreas Roschger[2], Francis H. Glorieux[3], Wolfgang Wagermaier[2], Klaus Klaushofer[1], Frank Rauch[3], Peter Fratzl[2], Paul Roschger[1], Joan C. Marini[4]. [1]Ludwig Boltzmann Institute of Osteology at Hanusch Hospital of WGKK and AUVA Trauma Centre Meidling, 1st Med. Dept. Hanusch Hospital, Austria, [2]Max Planck Institute of Colloids and Interfaces, Department of Biomaterials, Germany, [3]Genetics Unit, Shriners Hospital for Children and McGill University, Canada, [4]Bone and Extracellular Matrix Branch, NICHD, NIH, United States

Disclosures: Nadja Fratzl-Zelman, None

MO0710 **Bone morphology in *IKBKG* (NEMO) mutation positive women. A case-control study.**
Morten Frost*[1], Michaela Tencerova[2], Charlotte Ejersted[1], Dea Svaneby[3], Thomas Levin Andersen[4], Moustapha Kassem[2], William H McAlister[5], Deborah V Novack[6], Michael P Whyte[7], Anja L Frederiksen[8]. [1]Endocrine Research Unit, Odense University Hospital, Denmark, [2]Molecular Endocrinology Laboratory (KMEB), Department of Endocrinology, Odense University Hospital & University of Southern Denmark, Denmark, [3]Department of Clinical Genetics, Vejle Hospital, Denmark, [4]Clinical Cell Biology (KCB), Institute of Regional Health Research, University of Southern Denmark, Denmark, [5]Department of Pediatric Radiology, Mallinckrodt Institute of Radiology, Washington University School of Medicine at St.Louis Children´s Hospital, United States, [6]Division of Bone and Mineral Diseases. Department of Internal Medicine, Washington University School of Medicine at Barnes-Jewish Hospital, United States, [7]Center for Metabolic Bone Disease and Molecular Research, Shriners Hospital for Children, United States, [8]Department of Clinical Genetics, Odense University Hospital, Denmark
Disclosures: Morten Frost, None

MO0711 **Increased circulating FGF23 does not lead to cardiac hypertrophy in the Hyp mouse model of XLH**
Eva Liu*[1], Robrecht Thoonen[2], Elizabeth Petit[2], Binglan Yu[2], Marielle Scherrer-Crosbie[3], Emmanuel Buys[2], Marie Demay[4]. [1]Brigham and Women's Hospital and MGH, United States, [2]Massachusetts General Hospital, United States, [3]University of Pennsylvania, United States, [4]Massachusetts General Hospital, Harvard Medical School, United States
Disclosures: Eva Liu, None

MO0712 ***CLCN7*-dependent Autosomal Dominant Osteopetrosis type 2 (ADO2): more than a bone disease**
Antonio Maurizi*[1], Mattia Capulli[1], Rajvi Patel[1], Juliana Cortes[2], Nadia Rucci[1], Anna Teti[1]. [1]University of L'Aquila, Italy, [2]University of L'Aquila, Israel
Disclosures: Antonio Maurizi, None

MO0713 **High Diagnostic Yield and Higher Proportion of Non-Collagen Defects in Adults with Osteogenesis Imperfecta Analyzed Using Targeted Massively Parallel Sequencing**
Adriana M Fernandes*[1], Manuela GM Rocha-Braz[1], Monica M França[2], Regina M Martin[1], Antonio M Lerario[3], Berenice B Mendonca[3], Bruno Ferraz-de-Souza[1]. [1]Endocrinology/LIM-25, Hospital das Clinicas, University of Sao Paulo School of Medicine, Brazil, [2]SELA/LIM-42, Hospital das Clinicas, University of Sao Paulo School of Medicine, Brazil, [3]SELA/LIM-42, Hospital das Clinicas, University of Sao Paulo School of Medicine, Brazil, Brazil
Disclosures: Adriana M Fernandes, None

MO0714 **Pathological Analysis and Drug Discovery for Osteogenesis Imperfecta using Patient-specific induced Pluripotent Stem Cells and Fibroblasts**
Shinji Takeyari*[1], Makoto Fujiwara[1], Ohata Yasuhisa[1], Takuo Kubota[1], Yuki Taga[2], Kazunori Mizuno[2], Keiichi Ozono[1]. [1]Department of Pediatrics, Osaka University Graduate School of Medicine, Japan, [2]Nippi Research Institute of Biomatrix, Japan
Disclosures: Shinji Takeyari, None

MO0715 **Estimation of ground reaction forces by accelerometer in healthy youth and youth with osteogenesis imperfecta type I**
Louis-Nicolas Veilleux*[1], Bahare Samadi[2]. [1]Université de Montréal; Shriners Hospital for Children-Canada, Canada, [2]ÂÉcole Polytechnique de Montréal; Sainte-Justine University Hospital Researh Center, Canada
Disclosures: Louis-Nicolas Veilleux, None

MO0716 **Genetic engineering a sheep model of Hypophosphatasia**
Diarra K. Williams*[1], Jane H. Pryor[1], Shannon Huggins[1], Hannah M. Georges[1], Carlos A. Pinzon[1], Forrest Hermann[1], James Oldeschulte[1], Mark E. Westhusin[1], Charles R. Long[1], Dana Gaddy[1], Larry J. Suva[1]. [1]Texas A&M University College Veterinary Medicine and Biomedical Science, United States
Disclosures: Diarra K. Williams, None

MO0717 **Comparison of PET-based Imaging Tracers and MRI in Monitoring HO Progression and the Efficacy of anti-Activin A Antibody Treatment in FOP Mice**
Liqin Xie*[1], Jaymin Upadhyay[1], Lily Huang[1], Nanditha Das[1], Lauren Singletary[1], Xialing Wen[1], Rachel Stewart[2], Morgan Lyon[2], Keryn Palmer[2], Saathyaki Rajamani[1], Chris Graul[2], Merry Lobo[2], Tyler Wellman[2], Ed Soares[2], Matt Silva[2], Jacob Hesterman[2], Kalyan Nannuru[1], Vincent Idone[1], Andrew Murphy[1], Sarah Hatsell[1], Aris Economides[1]. [1]Regeneron, United States, [2]InviCRO, United States
Disclosures: Liqin Xie, None

MO0718 **Balance Assessment in Older Adults Using Novel Methodologies**
Bjoern Buehring*[1], Ellen Siglinsky[1], Diane Krueger[1], Neil Binkely[1]. [1]UW-Madison, United States
Disclosures: Bjoern Buehring, None

MO0719 **Altered Physical Performance Tests are Risk Factors for Falls and Osteoporotic Fractures**
Adriana Graciela Diaz*[1], Sabrina Paola Lucas[1], Maria Gabriela Torres[1], Claudia Martinez[1], Felipe Silva Pavon[1], Reynaldo Gomez[1], Beatriz Oliveri[2]. [1]Division Endocrinologia, Hospital de Clinicas-UBA, Argentina, [2]Laboratorio Osteoporosis y Enfermedades Metabolicas Oseas (INIGEM, UBA-CONICET), Argentina
Disclosures: Adriana Graciela Diaz, None

MO0720 **Combined efficacy of different exercise interventions in osteosarcopenic men**
Franca Genest*[1], Sarah Lindström[2], Nicole Luksche[2], Franz Jakob[3], Lothar Seefried[2]. [1]Clinical trial Unit department of orthopedic surgery University of Wuerzburg, Germany, [2]Clnical trial Unit department of orthopedic surgery University of Wuerzburg, Germany, [3]Musculoskeletal Center Wuerzburg, Germany
Disclosures: Franca Genest, None

MO0721 **Comparison of calf skeletal muscle composition among rural south Indian, US Caucasian and Afro-Caribbean older men**
Guru Rajesh Jammy*[1], Iva Miljkovic[1], Robert M Boudreau[1], Tushar Singh[1], Pawan Kumar Sharma[2], Kristine E Ensrud[3], Joseph M Zmuda[1], P S Reddy[2], Anne B Newman[1], Jane A Cauley[1]. [1]Department of Epidemiology, University of Pittsburgh, United States, [2]SHARE INDIA - Mediciti Institute of Medical Sciences, India, [3]Division of Epidemiology & Community Health, University of Minnesota; Department of Medicine, University of Minnesota; Center for Chronic Disease Outcomes Research, VA Health Care System, Minneapolis., United States
Disclosures: Guru Rajesh Jammy, None

MO0722 **Sarcopenia and Estimates of Fracture Risk**
Julie Pasco*[1], Kara Holloway[1], Pamela Rufus[1], Natalie Hyde[1], Monica Tembo[1], Sophia Sui[1], Lana Williams[1], Mark Kotowicz[1]. [1]Deakin University, Australia
Disclosures: Julie Pasco, None

MO0723 **Sarcopenia is Associated with Low Bone Mineral Density in Japanese Elderly Women**
Shinjiro Takata*[1]. [1]Department of Orthopedics and Rehabilitation, Tokushima National Hospital, National Hospital Organization, Japan
Disclosures: Shinjiro Takata, None

MO0724 **Prevalence of sarcopenia and characterisation of the muscle bone unit in a rural population in Sub-Saharan Africa**

Ayse Zengin*[1], Ann Prentice[2], Landing Jarjou[3], Peter Ebeling[1], Kate Ward[4]. [1]Monash University, Australia, [2]MRC Elsie Widdowson Laboratory, United Kingdom, [3]MRC The Gambia Unit, Gambia, [4]MRC Lifecourse Epidemiology, University of Southampton, United Kingdom

Disclosures: Ayse Zengin, None

MO0725 **Does sarcopenia and osteoporosis increase the risk of occurrence of frailty? Four-year observations between the second and third ROAD study surveys.**

Noriko Yoshimura*[1], Shigeyuki Muraki[1], Hiroyuki Oka[2], Toshiko Iidaka[1], Rie Kodama[3], Hiroshi Kawaguchi[4], Kozo Nakamura[5], Toru Akune[5], Sakae Tanaka[3]. [1]Department of Prevention Medicine for Locomotive Organ Disorders, 22nd Century Medical and Research Center, The University of Tokyo, Japan, [2] Department of Medical Research and Management for Musculoskeletal Pain, 22nd Century Medical and Research Center, The University of Tokyo, Japan, [3]Department of Orthopaedic Surgery, Sensory and Motor System Medicine, Graduate School of Medicine, The University of Tokyo, Japan, [4]JCHO Tokyo Shinjuku Medical Center, Japan, [5] National Rehabilitation Center for Persons with Disabilities, Japan

Disclosures: Noriko Yoshimura, None

LATE-BREAKING POSTERS III

12:00 pm - 2:00 pm **Colorado Convention Center**

ASBMR Discovery Hall - Exhibit Hall A & B1

LB-MO0726 **Human osteoblast VEGF-A expression after short-term exposure to hyperglycemic conditions**

Jesse Hernandez*[1], Zachary Child[1], Todd Bredbenner[2], Roberto Fajardo[1]. [1]UT Health San Antonio, United States, [2]Southwest Research Institute, United States

Disclosures: Jesse Hernandez, None

LB-MO0727 **Change in BMD over 12 to 24 Months Is Strongly Associated with Fracture Reductions in Randomized Trials: A Study-Level Meta-Regression using the FNIH Bone Quality Study Project Database**

Dennis Black*[1], Richard Eastell[2], Douglas Bauer[1], Li-Yung Lui[3], Charles McCulloch[1], Anne de Papp[4], Sundeep Khosla[5], Steven Hoffmann[6], Mary Bouxsein[7]. [1]University of California, San Francisco, United States, [2]University of Sheffield, United Kingdom, [3]California Pacific Medical Center, United States, [4]Merck and Co., Inc. Kenilworth, NJ, USA, United States, [5]Mayo Clinic College of Medicine, United States, [6]Foundation for National Institute of Health, United States, [7]Harvard Medical School, United States

Disclosures: Dennis Black, Radius Pharmaceuticals, Asahi-Kasei, Consultant

LB-MO0728 **Myogenic Autoregulation in Bone Marrow Arterioles and *In Vivo* Intramedullary Pressure in Femora of Conscious Female Long Evans Rats**

Seungyong Lee*[1], Rhonda Prisby[1], Sophie Guderian[2]. [1]University of Texas at Arlington, United States, [2]University of Delaware, United States

Disclosures: Seungyong Lee, None

LB-MO0729 **Dietary fat and *de novo* derived lipid trafficking in bone *in vivo*.**

Vanessa Sherk*[1], David Presby[1], Janine Higgins[1], Matthew Jackman[2], Julie Houck[1], Paul MacLean[1]. [1]University of Colorado Anschutz Medical Campus, United States, [2]University of Colorado Anschutz Medical Campusa, United States

Disclosures: Vanessa Sherk, None

LB-MO0730 **Long-term response to intrauterine stress induced by teratogen 5-deoxy-2'-cytidine differs in adult offspring of C3H/HeJ and C57BL/6J mice**

Deepak Kumar Khajuria*[1], Maria Raygorodskaya[2], Yankel Gabet[3], Sahar Hiram Bab[3], Chen Shochat[1], David Karasik[1]. [1]The Musculoskeletal Genetics Laboratory, Faculty of Medicine in the Galilee, Bar Ilan University, Safed, Israel, Israel, [2]1The Musculoskeletal Genetics Laboratory, Faculty of Medicine in the Galilee, Bar Ilan University, Safed, Israel; 2 SRC BioClinicum, Moscow, Russia, Israel, [3]Department of Anatomy & Anthropology, Sackler Faculty of Medicine, Tel Aviv University, Tel-Aviv, Israel, Israel

Disclosures: Deepak Kumar Khajuria, None

LB-MO0731 **The Bone Phenotype of the Klotho Mutant Mouse Does Not Reflect Changes in Skeletal Architecture that occur with Aging**

Lieve Verlinden*[1], Vaishali Veldurthy[2], Geert Carmeliet[1], Sylvia Christakos[2]. [1]KU Leuven, Belgium, [2]Rutgers, New Jersey Medical School, United States

Disclosures: Lieve Verlinden, None

LB-MO0732 **Corin is a key regulator of endochondral ossification and bone development via modulation of VEGF-A expression**

Rachel Nordberg*[1], Hao Wang[2], Qingyu Wu[2], Elizabeth Loboa[3]. [1]North Carolina State Univeristy, United States, [2]Cleveland Clinic, United States, [3]University of Missouri, United States

Disclosures: Rachel Nordberg, None

LB-MO0733 **The Perichondrium is Enriched for Mesenchymal Progenitors that Initiate Canal Formation during the Development of the Secondary Ossification Center**

Robert Tower*[1], Wei Tong[2], Chider Chen[1], Motomi Enomoto-Iwamoto[1], Songtao Shi[3], Ling Qin[1]. [1]University of Pennsylvania, United States, [2]Huazhong University of Science and Technology, China, [3]University of Pennslyvania, United States

Disclosures: Robert Tower, None

LB-MO0734 **Progranulin associates with ATG5-ATG12 conjugate and is required for autophagy activation in osteoarthritis**

Fengjin Guo*[1], Chuan-Ju Liu[1]. [1]Departments of Orthopaedic Surgery and Cell Biology, New York University School of Medicine, New York, NY10003, USA, United States

Disclosures: Fengjin Guo, None

LB-MO0735 **Establishing the functional role of *Cped1* in the osteoblast.**

Robert Maynard*[1], Madison Doolittle[1], Michael-John Beltejar[1], Kwangbom Choi[2], Cheryl Ackert-Bicknell[1]. [1]Center for Musculoskeletal Research, University of Rochester, United States, [2]The Jackson Laboratory, United States

Disclosures: Robert Maynard, None

LB-MO0736 **Leukotriene B_4 Is Related to Lower Osteogenic Profile**

Flávia Oliveira*[1], Cintia Tokuhara[1], José Guareschi Filho[1], João Domezi[1], Vimal Veeriah[2], Camila Peres-Buzalaf[3], Rodrigo Oliveira[1]. [1]Bauru School of Dentistry, University of Sao Paulo, Brazil, [2]Kennedy Institute of Rheumatology, University of Oxford, United Kingdom, [3]Pró-Reitoria de Pesquisa e Pós-Graduação, Universidade do Sagrado Coração, Brazil

Disclosures: Flávia Oliveira, None

LB-MO0737 **Bmp and Canonical Wnt Signaling Are Required at Separate Stages of Mature Chondrocytes to Osteoblasts Differentiation in Endochondral Bone Formation**

Xin Zhou*[1], Ailing Huang[1], Andrew Gladden[1], Yuji Mishina[2], Klaus von der mark[3], Benoit de Crombrugghe[1]. [1]UT MD Anderson Cancer Center, United States, [2]university of Michigan, United States, [3]University of Erlangen-Nuremberg, Germany

Disclosures: Xin Zhou, None

LB-MO0738 ***AdipoRon Inhibits Inflammation-Induced Osteoclastogenesis***
Wei Qiu*[1], Qisheng Tu[1], Xingwen Wu[1], Jake Chen[1], Xuedong Zhou[2]. [1]Tufts Univ.School of Dental Medicine, United States, [2]West China School of Stomatology, Sichuan University, China
Disclosures: Wei Qiu, None

LB-MO0739 **Nutrient Sensing by Tas1R Proteins is Required for Normal Bone Resorption**
Nicholas Weinstein*[1], Michael Eaton[2], Stephen Shively[2], Jonathan Lowery[1]. [1]Marian University College of Osteopathic Medicine- Division of Biomedical Science, United States, [2]Marian University College of Osteopathic Medicine- Division of Biomedical Sciences, United States
Disclosures: Nicholas Weinstein, None

LB-MO0740 **Potential Novel Mediators of PTH Signaling in Osteocytes**
Matthew Prideaux*[1], Gerald Atkins[2], Lynda Bonewald[1]. [1]Indiana University, United States, [2]The University of Adelaide, Australia
Disclosures: Matthew Prideaux, None

LB-MO0741 **Differences of Bone Mineral Density and Fatty Degeneration of Thigh Muscles in Hip Fracture Patients over 65 years old**
Myung Hoon Hahn*[1], ye yeon Won[2], Jun Han[2]. [1]1Department of Orthopaedics, Cheil General Hospital and Women's Healthcare Center, Dankook University College of Medicine,, Korea, Republic of, [2]Department of Orthopaedics, Ajou University school of Medicine, 1, Korea, Republic of
Disclosures: Myung Hoon Hahn, None

LB-MO0742 **Bone microarchitecture, density, and geometry predict incident fracture independently of DXA BMD in older women and men: The Bone Microarchitecture International Consortium (BoMIC)**

Elizabeth Samelson*[1], Serkalem Demissie[2], Jonathan Adachi[3], Shreyasee Amin[4], Elizabeth Atkinson[4], Claudie Berger[5], Emmanuel Biver[6], Steven Boyd[7], Kerry Broe[8], Lauren Burt[7], Roland Chapurlat[9], Thierry Chevalley[6], Serge Ferrari[6], David Goltzman [10], David Hanley[11], Marian Hannan[1], David Karasik[1], Sundeep Khosla [4], Ching-Ti Liu[2], Mattias Lorentzon[12], Robert McLean[1], Dan Mellstrom[13], Blandine Merle[14], Maria Nethander[15], Claes Ohlsson[16], René Rizzoli[6], Elisabeth Sornay- Rendu[17], Daniel Sundh[12], Pawel Szulc[18], Bert Van Rietbergen[19], Andy Wong[20], Hanfei Xu[2], Laiji Yang[8], Mary Bouxsein[21], Douglas Kiel[1]. [1]Institute for Aging Research, Hebrew SeniorLife, Harvard Medical School, United States, [2]Department of Biostatistics, Boston University School of Public Health, United States, [3]Department of Medicine, Michael G. DeGroote School of Medicine, St Joseph's Healthcare - McMaster University, Canada, [4]Mayo Clinic College of Medicine, United States, [5]Research Institute of the McGill University Health Centre, Canada, [6]Division of Bone Diseases, Geneva University Hospitals and Faculty of Medicine, Switzerland, [7]McCaig Institute for Bone and Joint Health, Canada, [8]Institute for Aging Research, Hebrew SeniorLife, United States, [9]INSERM UMR 1033, Université de Lyon, Hospices Civils de Lyon, Lyon, France, France, [10]Departments of Medicine, McGill University and McGill University Health Centre, Canada, [11]McCaig Institute for Bone & Joint Health, Canada, [12]Geriatric Medicine, Centre for Bone and Arthritis Research, Institute of Medicine, University of Gothenburg, Sweden, [13]Geriatric Medicine, Centre for Bone and Arthritis Research, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Sweden, [14]"INSERM UMR 1033, Pavillon F, Hôpital E Herriot", France, [15]"Bioinformatics Core Facility, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden Centre for Bone and Arthritis Research, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden", Sweden, [16]Centre for Bone and Arthritis Research, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden, Sweden, [17]INSERM UMR 1033, Pavillon F, Hôpital E Herriot, France, [18]INSERM UMR1033, University of Lyon, Hôpital Edouard Herriot Place d'Arsonval, France, [19]Department of Biomedical Engineering, Eindhoven University of Technology, Netherlands, [20]Toronto General Hospital, Canada, [21]Dept of Orthopedic Surgery, Harvard Medical School, Center for Advanced Orthopedic Studies, BIDMC, United States

Disclosures: Elizabeth Samelson, Amgen, Grant/Research Support

LB-MO0743 **Dietary patterns and longitudinal change in hip bone mineral density in older men**

Tara Rogers*[1], Stephanie Harrison[2], Suzanne Judd[3], Eric Orwoll[4], Lynn Marshall[4], Jackilen Shannon[4], Lisa Langsetmo[5], Nancy Lane[1], James Shikany[3]. [1]Center for Musculoskeletal Health and Department of Internal Medicine, University of California at Davis, United States, [2]California Pacific Medical Center Research Institute, United States, [3]University of Alabama at Birmingham, United States, [4]Oregon Health & Science University, United States, [5]University of Minnesota Epidemiology and Community Health, United States

Disclosures: Tara Rogers, None

LB-MO0744 **The contribution of AP-1 and TCF binding sites in the proximal promoter of the endogenous Tnfrsf11b (OPG) gene to basal expression and suppression by glucocorticoids**

Keisha Cawley*[1], Charles O'Brien[1]. [1]University of Arkansas for Medical Sciences, United States

Disclosures: Keisha Cawley, None

LB-MO0745 **Multiple Vertebral Fractures Following Osteoporosis Treatment Discontinuation: A Case-Report with Odanacatib**

Neil Binkley*[1], Diane Krueger[1]. [1]University of Wisconsin Osteoporosis Clinical Research Program, United States

Disclosures: Neil Binkley, None

LB-MO0746 **Bone Matrix Mineralization After Denosumab Treatment Discontinuation**
Jacques Brown*[1], David Dempster[2], Susan Yue[3], Sebastien Rizzo[4], Delphine Farlay[4], Rachel Wagman[3], Xiang Yin[3], Georges Boivin[4]. [1]Laval University and CHU de Quebec-(CHUL) Research Centre, Canada, [2]Columbia University, United States, [3]Amgen Inc., United States, [4]INSERM, UMR 1033, Univ Lyon, Université Claude Bernard Lyon 1, France
Disclosures: Jacques Brown, Amgen, Speakers' Bureau

LB-MO0747 **A selective p38 MAPK-MK2 axis inhibitor dampens inflammasome priming signals and causes remarkable efficacy in disease models**
Chun Wang*[1], Yael Allipe[1], Jianqiu Xiao[1], Susan Hockerman[2], Jon Jacobsen[2], Heidi Hope[2], Jeff Hirsch[2], Steve Mnich[2], Matt Saabye[2], Sheri Bonar[2], Hal Hoffman[3], Joseph Monahan[2], Gabriel Mbalaviele[1]. [1]Washington University School of Medicine, United States, [2]Confluence Life Sciences, Inc, United States, [3]University of California, San Diego, United States
Disclosures: Chun Wang, None

LB-MO0748 **Co-treatment with PTH and propranolol causes a site-specific improvement in trabecular and cortical microarchitecture while reducing marrow adiposity in C57BL/6J mice**
Annika Treyball*[1], Daniel Brooks[2], Anyonya R Guntur[1], Katherine J Motyl[1]. [1]Maine Medical Center Research Institute, United States, [2]Beth Israel Deaconess Medical Center, United States
Disclosures: Annika Treyball, None

LB-MO0749 **The small molecule SIK inhibitor YKL-05-099 increases trabecular bone mass and bone formation in hypogonadal female mice**
Maureen Omeara*[1], Janaina Da Silva Martins[1], Michael Armanini[1], Daniel Brooks[1], Jinhua Wang[2], Nathanael Gray[2], Mary Bouxsein[1], Henry Kronenberg[1], Marc Wein[1]. [1]MGH Endocrine Unit, United States, [2]Dana Farber Cancer Institute, United States
Disclosures: Maureen Omeara, None

LB-MO0750 **Enhanced bioavailability and reduced pharmacokinetic variability of Oral PTH (1-34) in man**
Gregory Burstien*[1], Jonathan C.Y. Tang[2], Ariel Rothner[1], Hillel Galitzer[1], Phillip Schwartz[1], William D. Fraser[2], Yoseph Caraco[3]. [1]Entera Bio Ltd., Israel, [2]University of East Anglia, United Kingdom, [3]Hadassah University Hospital, Israel
Disclosures: Gregory Burstien, None

LB-MO0751 **Improvements in Skeletal Manifestations and Growth With Up to 6 Years of Treatment With Asfotase Alfa in Infants and Children Aged =5 Years With Hypophosphatasia**
Christine Hofmann*[1], Johannes Liese[1], Paul Harmatz[2], Jerry Vockley[3], Wolfgang Högler[4], Shanggen Zhou[5], Andrew Denker[6], Anna Petryk[6], Cheryl Rockman-Greenberg[7]. [1]University Children's Hospital, University of Würzburg, Germany, [2]UCSF Benioff Children's Hospital Oakland, United States, [3]University of Pittsburgh School of Medicine and Graduate School of Public Health, United States, [4]Birmingham Children's Hospital and Institute of Metabolism and Systems Research, University of Birmingham, United Kingdom, [5]Chiltern International Inc., United States, [6]Alexion Pharmaceuticals, Inc., United States, [7]Children's Hospital Research Institute of Manitoba and University of Manitoba, Canada
Disclosures: Christine Hofmann, Alexion Pharmaceuticals, Inc., Grant/Research Support

PLENARY SYMPOSIUM: BONE-MUSCLE INTERACTIONS

2:00 pm - 3:15 pm **Colorado Convention Center**

Mile High Ballroom

Co-Chairs
Rivka Dresner-Pollack, M.D.
Hadassah-Hebrew University Medical Center, Israel
Disclosures: Rivka Dresner-Pollack, None

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

2:00 pm **Osteocalcin: A Bone-Derived Hormone Involved in Muscle Adaptation to Exercise**
Gerard Karsenty, M.D., Ph.D.
Columbia University, USA
Disclosures: Gerard Karsenty, None

2:25 pm **Circadian Rhythms, the Molecular Clock and Skeletal Muscle**
Karyn Esser, Ph.D
University of Florida, USA
Disclosures: Karyn Esser, Ph.D, None

2:50 pm **Drug Development and Discovery in Sarcopenia**
Roger Fielding, Ph.D
University of Florida, USA
Disclosures: Roger Fielding, Ph.D, None

CLOSING RECEPTION

3:15 pm - 4:00 pm **Colorado Convention Center**

Mile High Ballroom Foyer and Four Seasons Ballroom Foyer

EXHIBITS

We encourage you to visit the ASBMR Discovery Hall to learn about the newest bone and mineral related products and services, talk to experts about advancements in the bone and mineral field and thank our supporters for their participation. The company descriptions below were provided by each exhibiting company and do not represent an endorsement by ASBMR of any company, product or service.

Discovery Hall Hours

Friday, September 8, 2017 ..... 5:00 p.m.–7:00 p.m.

Saturday, September 9, 2017..... 9:30 a.m.–4:30 p.m.

Sunday, September 10, 2017 ..... 9:30 a.m.–4:30 p.m.

Monday, September 11, 2017..... 9:30 a.m.–2:30 p.m.

A&Z Pharmaceutical, Inc.
Booth #: 217
Hauppauge, New York
A&Z Pharmaceutical is a leading developer, manufacturer and marketer of premium quality pharmaceutical products, and nutritional supplements, for over 20 years. Our products encircle life, from newborns to active and aging adults, providing exceptional nutritional value and educational guidance for the well-being of the entire family.

Active Life Scientific, Inc.
Booth #: 516
Santa Barbara, California
Active Life Scientific develops technology for improving the way bone health is assessed and monitored. The Company's flagship product, OsteoProbe RUO (Research Use Only), enables direct, in vivo measurement of bone quality in less than 5 minutes in a routine clinical setting. OsteoProbe is nearing approaching regulatory approval in Europe.

Aginko Research AG
Booth #: 338
Fribourg, Switzerland
AGINKO Research is a premium CRO specialized in bone health and medical device development. The company provides comprehensive preclinical and clinical trial management services in bone tissue repair, cartilage, spine, as well as in the inflammation and pain therapeutic areas. What sets AGINKO apart is the unique approach to osteoarticular disease management and its large network of investigators

Alexion Pharmaceuticals, Inc.
Booth #: 101
New Haven, Connecticut
Alexion is a global biopharmaceutical company focused on developing and delivering life-transforming therapies for patients with devastating and rare disorders, including hypophosphatasia (HPP) and lysosomal acid lipase deficiency (LAL-D). Learn more at www.alexion.com.

Amgen
Booth #: 301
Thousand Oaks, California
Amgen is committed to unlocking the potential of biology for patients suffering from serious illnesses by discovering, developing, manufacturing and delivering innovative human therapeutics.
A biotechnology pioneer since 1980, Amgen has reached millions of patients around the world and is developing a pipeline of medicines with breakaway potential.

Biomomentum, Inc.
Booth #: 514
Quebec, Canada
Biomomentum manufactures and commercializes testing devices for the mechanical characterization of biomaterials and cartilage. The Mach-1™ multiaxial mechanical tester is the only all-in-one device designed for compression, tension, shear, friction, torsion and indentation mapping. Biomomentum also offers a full-service approach to biomechanical testing. In addition to performing highly controlled tests using a state-of-the-art technology, its expert team adheres to effective Standard Operating Procedures, develops reliable testing protocols, and delivers accurate data analysis reports in compliance with Good Laboratory Practice.

BIOQUANT Image Analysis Corporation
Booth #: 416
Nashville, Tennessee
BIOQUANT OSTEO software provides automated analysis of bone and muscle histology: skeletal phenotyping, muscle phenotyping, osseointegration, human bone, arthritis, cortical bone, chondrocyte proliferation, and metastasis. BIOQUANT SCAN software provides automated bright field, fluorescent, and polarized light slide-scanning. BIOQUANT RESEARCH SERVICES provides contract services in bone biology. http://osteo.bioquant.com

Bone Index
Booth #: 125
Kuopio, Finland
Bone Index Ltd. is one of Europe's top new manufacturers of medical devices. Our Bindex®, one of the World's best medical devices in 2016, is the world's first pocket-sized diagnostic device for osteoporosis. This new technology is used in the world's largest osteoporosis screening campaign with huge success!

Bone Research/Sichuan University
Booth #: 337
Chengdu, China
Bone Research was founded in 2013. As a new English-language periodical, Bone Research focuses on basic and clinical aspects of bone biology, pathophysiology and regeneration, and supports the foremost discoveries resulting from basic investigations and clinical research related to bone. According to the latest data released in Journal Citation Reports (JCR) by SCI database on June 14th, 2017, Bone Research scores 9.326 and ranks No.2 in the Category of CELL & TISSUE RESEARCH.

Bruker BioSpin
Booth #: 117
Billerica, Massachusetts
Bruker BioSpin offers advanced preclinical imaging solutions for a broad spectrum of application fields, including orthopedics. Drawing on over thirty years' experience, Bruker develops and manufactures systems for 3-dimensional, non-destructive investigation of an object's internal microstructure.

Charles River
Booth #: 322
Wilmington, Massachusetts
With a mission to deliver custom, flexible solutions, Charles River provides clients with exactly what they need to improve and expedite the development of new therapies. From discovery all the way through to clinical support, our scientific experts leverage an expansive safety assessment portfolio, a range of laboratory support services and global, state-of-the-art facilities to produce the quality data you need to optimize your drug development program, every step of the way.

Clementia Pharmaceuticals, Inc.
Booth #: 224
Montreal, Canada
Clementia is a clinical stage biopharmaceutical company that is developing palovarotene, a novel retinoic acid receptor gamma agonist (RARγ), for two rare bone diseases: fibrodysplasia ossificans progressiva (FOP) and multiple osteochondromas (MO), which is also known as HME (hereditary multiple exostoses) or MHE. Please stop by our booth.

Cyagen Biosciences
Booth #: 424
Santa Clara, California
Founded in 2006, Cyagen Biosciences is the world's largest provider of custom transgenic, knockout, and knockin mouse/rat services. Cyagen also offers research-use stem cells; culture reagents; custom vectors, virus packaging and cloning services through VectorBuilder.com; premium customer service, complimentary consultations, confidentiality and the industry's best service guarantee.

DIAsource ImmunoAssays SA
Booth #: 237
Louvain-la-Neuve, Belgium

Elsevier
Booth #: 234
New York, New York

Faxitron
Booth #: 423
Tucson, Arizona
Faxitron is the pioneer and leading brand in cabinet x-ray with over 7000 systems installed worldwide. We offer compact, fully-shielded digital radiography and pre-clinical DXA systems for BMD and body composition. Our systems offer the highest resolution (down to 8 micron) with the largest field of view (up to 9"x11.5"). Multiple cabinet and detector sizes with microfocus sources up to 100kV make our systems ideal for small animal in vivo/ex vivo imaging and longitudinal studies.

GALGO MEDICAL
Booth #: 214
Barcelona, Spain
GALGO MEDICAL develops 3D medical image post-processing software solutions to add predictive value to personalized treatment strategies. One of the Galgo focus is in Osteoporosis, to improve disease management by turning DXA images into 3D patient-specific models. Our product 3D SHAPER allows clinicians to assess the cortical bone and trabecular macrostructure in routine clinical practice.

GE Healthcare
Booth #: 323
Madison, Wisconsin
GE Healthcare provides transformational medical technologies and services to meet the demand for increased access, enhanced quality and more affordable healthcare. From medical imaging, software & IT, patient monitoring & diagnostics to drug discovery, biopharmaceutical manufacturing technologies and performance improvement, GE Healthcare helps medical professionals focus on delivering better outcomes.

Hologic
Booth #: 315
Marlborough, Massachusetts
Hologic, Inc., a leading supplier of innovative imaging solutions showcases the HorizonTM DXA System. The Horizon DXA System provides high quality images that go beyond accurately determining bone mineral density. The powerful images can assess vertebral fractures, pinpoint incomplete atypical femur fractures, identify aortic calcifications, and measure body composition.
Horizon Pharma
Booth #: 536
Lake Forest, Illinois
Horizon Pharma Public Limited Company is a specialty pharmaceutical company that develops and markets medicine through its subsidiaries in the United States. The company was founded in 2005 and is based in Dublin, Ireland

KUBTEC
Booth #: 225
Stratford, Connecticut
Kubtec offers unprecedented high-resolution, high-contrast cabinet x-ray with the widest array of configurations that support BMD/BMC and Body composition measurements (Digimus software). All Kubtec cabinets, including Parameter - Tomosynthesis (2D/3D) system support Digimus software, including the proprietary SXA method for reduced radiation exposure.

Lilly USA, LLC
Booth #: 139
Indianapolis, Indiana
Lilly is a global healthcare leader that unites caring with discovery to make life better for people around the world. We were founded in 1876 by a man committed to creating high-quality medicines that meet real needs, and today we remain true to that mission. To learn more, visit www.lilly.com.

MEDIMAPS GROUP
Booth #: 434
Geneva, Switzerland
Medimaps group is developing seamless solutions for clinical routine. Our core product, TBS iNsight, allows clinicians from a spine DXA image to quickly estimate bone micro architecture. In clinical practice, TBS significantly improves osteoporosis management in conjunction with BMD and clinical risk factors. In research, the patented TBS algorithm reanalyzes the changes in any gray-scale images of different skeletal sites (e.g. DXA, X-ray, CT) to evaluate bone fragility.

MicroPhotonics
Booth #: 115
Allentown, Pennsylvania
Micro Photonics, and partner Bruker MicroCT are leading the advancement in high resolution micro-CT solutions for bone, biomaterials, orthopedics, and other life science research with a focus on bone morphology and BMD. The SkyScan product line meets the high-resolution and versatility required for any demanding research laboratory.

MilliporeSigma
Booth #: 235
St. Louis, Missouri
MilliporeSigma is a global leader in the life science business. We offer 300,000 products, state-of-the-art tools, services and expertise to help the scientific community solve the toughest problems of R&D. Our Immunoassay Platforms Solutions include MILLIPLEX® MAP multiplex panels for Luminex®, ultrasensitive SMC™ and ELISA kits for biomarker detection.

Mindways Software, Inc.
Booth #: 522
Austin, Texas
Mindways produces Quantitative CT (QCT) bone densitometry products for clinical and investigational use. QCT PRO™ uses CT images to derive DXA-like hip BMD measurements and volumetric spine BMD measurements. The QCT PRO™ Asynchronous Calibration Module supports retrospective and incidental screening for low bone mass from routine CT scans.

National Institute of Arthritis and Musculoskeletal and Skin Diseases
Booth #: 215
Rockville, Maryland
The mission of the National Institute of Arthritis and Musculoskeletal and Skin Diseases is to support research into the causes, treatment, and prevention of arthritis and musculoskeletal and skin diseases; the training of basic and clinical scientists to carry out this research; and the dissemination of information on research progress in these diseases.

National Osteoporosis Foundation
Booth #: 524
Arlington, Virginia
The National Osteoporosis Foundation is the leading health organization dedicated to preventing osteoporosis and fractures through public and clinician awareness, education, advocacy and research. NOF's journal, Osteoporosis International, is a joint initiative with IOF focusing on communication and the exchange of ideas concerning osteoporosis and other metabolic bone diseases.

Osteogenesis Imperfecta Foundation (OIF)
Booth #: 425
Gaithersburg, Maryland
The Osteogenesis Imperfecta Foundation is the only voluntary national organization dedicated to improving the quality of life for people affected by osteogenesis imperfecta through research to find treatments and a cure, education, awareness, and mutual support.

OsteoMetrics, Inc.
Booth #: 334
Decatur, Georgia
With 350+ OsteoMeasure systems worldwide, OsteoMetrics has been redefining Bone Histomorphometry since 1989. The system of choice, OsteoMeasure is now available with live digital camera support, on-screen pen measurement, thresholding, a complete set of Cortical Bone measurements, a greatly expanded set of non-specific measurements, and a comprehensive GLP validation package.

PerkinElmer
Booth #: 534
Hopkinton, Massachusetts
Learn more about pathway characterization, therapeutic effect, and treatment with PerkinElmer's imaging and analysis solutions for bone and mineral research. Our intuitive, high-performance software, broad portfolio of reagents and leading imaging systems enable you to see and understand more in the area of bone research.

PharmaLegacy Laboratories
Booth #: 239
Shanghai, China
PharmaLegacy is a CRO with extensive experience in bone physiopathology, especially in osteoporosis and orthopedics. Our IND/IDE filling expertise has enable multiple drug candidates to successfully reach the market. Our Scientists are on the cutting edge in the areas of animal models, biomaterials, biologics, surgical procedures and tissue engineering. Our familiarity with IDE and 501(k) and SOP driven GLP quality assurance operations can aid your regulatory submission.

Pharmatest Services Ltd
Booth #: 135
Turku, Finland
Pharmatest Services Ltd is a preclinical CRO that offers efficacy services in the fields of skeletal diseases and oncology. Our service products include in vitro bone cell assays (osteoclasts and osteoblasts) and in vivo models of osteoporosis, osteoarthritis and cancer-induced bone disease, as well as bone safety studies.

Quidel Corporation
Booth #: 222
San Diego, California
Quidel® Corporation is committed to enhancing health and well-being through innovative diagnostic solutions. Quidel assays use lateral-flow, direct fluorescent antibody, molecular and other technologies to improve patient outcomes and give economic benefits to healthcare providers. With leading brands - QuickVue®, AmpliVue®, Lyra®, MicroVue™, D3® Direct Detection, Thyretain®, Sofia®, and Solana®, Quidel aids in the detection and diagnosis of critical diseases and conditions. www.quidel.com

Radius Health, Inc.
Booth #: 201
Waltham, Massachusetts
Radius is a science-driven biopharmaceutical company committed to developing innovative therapeutics in the areas of osteoporosis, oncology and endocrine diseases. Established in 2003 by world-renowned researchers, our history is rooted incscience and our R&D efforts are focused on disease areas with unmet needs. For more information, please visit www.radiuspharm.com.

Rare Bone Disease Patient Network
Booth #: 336
Stamford, Connecticut
The Rare Bone Disease Patient Network (RBDPN), founded in 2006, is a coalition of patient organizations focusing on rare bone disease research, education and patient assistance. The RBDPN is affiliated with the Rare Bone Disease Alliance, www.rbdalliance.org, which includes medical and scientific leaders and industry working in the rare bone disease field.

Ratoc System Engineering Co.,Ltd.
Booth #: 339
Tokyo, Japan
We, Ratoc System Engineering Co., Ltd. focus on developing softwares specially such as 3D image analysis, 3D reconstruction, bone morphometry, nano-particle analysis, FEM analysis and otolith daily ring measurement and so on for Laboratories, Universities, Hospitals,Enterprise and Govenrmennt Institutes.

Research Diets, Inc.
Booth #: 223
New Brunswick, New Jersey
Research Diets, Inc. formulates and produces purified OpenSource Diets® for laboratory animals. Custom diets shipped in 5-7 days. BioDAQ® Food and Liquid Intake Monitor for mice and rats mounts to home cage and records the time, duration, amount of each meal automatically. BioDAQ NHP monitors food intake of socially housed NHPs.

Scanco USA, Inc.
Booth #: 335
Southeastern, Pennsylvania
Scanco Medical (www.scanco.ch) is a global provider of microCT, VivaCT and XtremeCT (HR-pQCT) systems as well as scan/analysis services. Sophisticated, yet easy to use, analysis and visualization software as well as automatic specimen changers (specimen systems only) are standard on all systems. Optional hardware and software include mechanical testing stage, GPU reconstruction and FE analysis.

Shire
Booth #: 415
Lexington, Massachusetts
Shire is the leading global biotechnology company focused on serving people with rare diseases and other highly specialized conditions. We strive to develop best-in-class products across our core therapeutic areas including Hematology, Immunology, Neuroscience, Ophthalmics, Lysosomal Storage Disorders, Gastrointestinal/Internal Medicine/Endocrine, Hereditary Angioedema, and Oncology.

Soft Bones, Inc., The US Hypophosphatasia Foundation
Booth #: 216
Boonton, New Jersey
Soft Bones Inc., The US Hypophosphatasia Foundation provides information and a community to educate, empower and connect patients living with hypophosphatasia (HPP), their families and caregivers. The Foundation also promotes research of this rare bone disease through awareness and fundraising efforts.

Stratec Medizintechnik
Booth #: 414
Pforzheim, Germany
Stratec Medizintechnik and Novotec Medical offer systems for musculoskeletal diagnosis and therapy. The XCT pQCT systems allow diagnosis of bone and muscle characteristics. Leonardo Mechanography is used to measure muscular function under physiological conditions. Galileo vibration devices improve neuromuscular function and mobility in patients with chronic diseases and sarcopenia.

TAmiRNA/Biomedica
Booth #: 435
Vienna, Austria
TAmiRNA and Biomedica offer fully validated biomarker tools and customized service analysis for clinical research of osteoporosis and bone metabolism diseases. Biomarker ELISAs: bioactive Sclerostin, DKK-1, free sRANKL, OPG, Periostin, FGF23, Semaphorin4D. osteomiR™: a simple and standardized qPCR kit to quantify microRNA bone biomarkers in serum or plasma. www.bmgrp.com. www.tamirna.com.

Ultragenyx Pharmacuetical
Booth #: 314
Novato, California
Ultragenyx is a clinical-stage biopharmaceutical company committed to bringing to market novel products for the treatment of rare and ultra-rare diseases. Ultragenyx formed a collaboration with Kyowa Hakko Kirin to jointly develop KRN23 for the treatment of X-Linked Hypophosphatemia (XLH), a rare genetic metabolic bone disease, and Tumor-Induced Osteomalacia (TIO).

United Rheumatology
Booth #: 123
Hauppauge, New York
At United Rheumatology, our mission is to optimize the provision of best care by supporting the autonomy of independent rheumatology practices and their financial viability through strategies for payer engagement, group purchasing services, and practice management services. We are succeeding together with over 350 Rheumatologists in over 125 practices in 26 states.

University of Minnesota Hard Tissue Research Lab
Booth #: 422
Minneapolis, Minnesota
The University of Minnesota Hard Tissue Research Laboratory collaborates with researchers around the world investigating bone using undecalcified histotechnology and histomorphometric analysis. Our research involves implants, various bone grafting materials, orthopedics and bone augmentation and growth enhancement factors in numerous models using natural or genetically engineered chemicals.

ValiFinn
Booth #: 538
Oulu, Finland
ValiFinn is a CRO that offers biomarker measurement services, including bone turnover marker measurements, performed using commercially available automated and manual immunoassays. The services also include gene expression analysis performed using novel patented TRAC technology, which is more effective, faster, and less expensive than traditional qPCR and microarray analysis.

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