
ASBMR 2017 Annual Meeting

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Thomas Funck-Brentano MD, PhD

2017 ASBMR YOUNG INVESTIGATOR AWARD RECIPIENTS

Supported by donations from AMGEN, Inc. and Lilly, USA, LCC.

Deepak Haresh Balani, D.M.D., M.Sc., Ph.D.

Claudia Beaudoin, Ph.D. Candidate

Sarah Catheline, M.S.

Lulu Chen, Ph.D.

Mariam Dessay, Ph.D.

Neha S. Dole, Ph.D.

Monika Frysz, B.Sc

Olja Grgić, Ph.D. Student

Yuchen Guo, Ph.D.

Qing He, Ph.D.

Candice Herber, Ph.D.

Amanda Herberger, Ph.D.

Thao P. Ho-Le, Ph.D. Student

A. Ram Hong, M.D.

Namki Hong, M.D.

Ferran Jardí, Ph.D.

Youngjae Jeong, Ph.D.

Fadia Kamal, Ph.D.
Malek Kammoun, Ph.D.
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Tiffany Kim, Ph.D.
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GENERAL MEETING INFORMATION

ASBMR 2017 Annual Meeting Location

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

Annual Meeting Evaluation

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 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

ASBMR Press Office

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
Monday, September 11	8:00 am – 4:00 pm

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

ASBMR POLICIES

Re-Use of ASBMR Annual Meeting Material

The ASBMR Annual Meeting is held to facilitate the open, non-commercial dissemination of scientific knowledge in the bone and related fields. Material presented at the ASBMR Annual Meeting is subject to copyright or other re-use restrictions. Information about these restrictions, ASBMR policies regarding re-use of such material, and procedures for obtaining permission are detailed below.

Abstracts

Abstracts submitted to the ASBMR 2017 Annual Meeting are copyrighted by the American Society for Bone and Mineral Research and published in the *JBMR*[®]. Reproduction, distribution, or transmission of the abstracts in whole or in part, by electronic, mechanical or other means, or other intended use, is prohibited without the express written permission of the American Society for Bone and Mineral Research. Information about how to obtain permission to re-use ASBMR Annual Meeting abstracts is provided below in the section entitled “Re-Use of ASBMR Annual Meeting Abstracts.”

Other Material

Information presented at the ASBMR 2017 Annual Meeting other than abstracts, including but not limited to posters, on-screen presentations (e.g. PowerPoint), and hand-outs, are the intellectual property of individual presenters or organizations other than the ASBMR. Such material may not be re-used without the written consent of the relevant individual or organization and, in some cases, the ASBMR. Details are provided below in the section entitled “Re-Use of Other ASBMR Meeting Materials.”

Re-Use of ASBMR Annual Meeting Abstracts

Embargo

The Abstracts On-Line, Itinerary Builder, and a printable PDF of the *Abstracts* book are made available to Annual Meeting attendees and to members of the ASBMR in advance but are embargoed until one hour after the time of their presentation at the Annual Meeting. ASBMR does not grant permission for reproduction or reuse of any ASBMR Annual Meeting abstract until after that abstract has been presented at the meeting.

The ASBMR is sensitive to issues of commercial confidentiality and relevant aspects of the U.S. Securities and Exchange Commission (SEC) regulations. Therefore, the ASBMR reminds all readers that all must adhere to the U.S. Securities and Exchange Commission regulations and treat all scientific information as confidential until the embargo has been lifted – one hour after the abstract has been presented. Any reader of, or listener to, ASBMR Annual Meeting content may be viewed as an “insider” by the SEC due to knowledge of information included in abstracts, particularly clinical trial abstracts. SEC regulations may call for criminal penalties for using such information.

Permission for Re-Use of Abstracts: Individuals and News Media

Permission requests for individual or news media reproduction or reuse of *JBMR*® material or for reproduction or reuse of *JBMR*® material in a professional work (e.g., a journal or professional reference book) must be made in writing to the Permissions Department, John Wiley & Sons, Inc., 111 River Street MS 4-02, Hoboken, NJ 07030-5774 USA; fax: +1 (201) 748-6008; e-mail: permissionsus@wiley.com, and should include a statement of intended use, as well as explicit specifications of the materials to be reproduced. When submitting your permission request, please include the following information:

- A complete citation of the requested material (title of journal, volume number, issue number, year, author name, article or abstract title, specific page numbers, and, if applicable, abstract number)
- The intended use of the material (for publication, slides, handouts, etc.)
- If for handouts: the number of copies being made
- If for republication: the publisher and the name of the new publication
- How the material will be reproduced and distributed
- Complete contact details (name, institution/company name, address, telephone, fax, email)

Permission for Re-Use of Abstracts: Corporate Purposes

Permission for reproduction or reuse of *JBMR*® material, including abstracts, for corporate purposes (e.g., storage on a corporate intranet, corporately-sponsored distribution to physicians) is subject to approval by the ASBMR. Requests for commercial reprints or similar reuse of *JBMR*® material, including abstracts, must be directed to Beth Ann Rocheleau, Reprints and Eprints Manager, Rockwater, Inc., PO Box 2211, Lexington, SC 29071, USA, phone: +1 (803) 359-4578; email: info@rockwaterinc.com.

Should ASBMR grant permission for abstract reproduction, the following must occur: A disclaimer must be prominently displayed/printed (often this appears on the inside front cover), indicating that the choice of abstracts to reproduce full-text was not made by the ASBMR. *Example: Selection of abstracts was made by {company name} and does not necessarily include all abstracts presented on this subject at the 2017 Annual Meeting of the American Society for Bone and Mineral Research {Denver, Colorado, USA 9/8/2017-9/11/2017}. The compilation does not constitute an endorsement by ASBMR of the product, assay or information contained herein. No responsibility is assumed and responsibility is hereby disclaimed by the American Society for Bone and Mineral Research for any injury and/or damage to persons or property as a matter of product liability, negligence or otherwise, or from any use or operation of methods, products, instructions or ideas presented in the abstracts. Independent verification of diagnosis and drug dosages should be made. Discussions, views and recommendations as to medical procedures, choice of drugs and drug dosages are the responsibilities of the authors.*

Translation of Abstracts

Translation of *JBMR*® material, including abstracts, into languages other than English is subject to the approval of the ASBMR. Translations must carry the following disclaimer in English and in the language of the translation: *The American Society for Bone and Mineral Research takes no responsibility for the*

accuracy of the translation from the published English original and is not liable for any errors which may occur. No responsibility is assumed, and responsibility is hereby disclaimed, by the American Society for Bone and Mineral Research for any injury and/or damage to persons or property as a matter of product liability, negligence or otherwise, or from any use or operation of methods, products, instructions or ideas presented in the Journal. Independent verification of diagnosis and drug dosages should be made. Discussions, views, and recommendations as to medical procedures, choice of drugs and drug dosages are the responsibility of the authors.

Re-Use of Other ASBMR Annual Meeting Material

Re-Use for Commercial purposes

Organizations may not re-use material presented at the Annual Meeting for commercial purposes without the written consent of the presenter or other appropriate party (e.g., the copyright holder) and the ASBMR. Commercial purposes include but are not limited to symposia, educational programs, and other forms of presentation, whether developed or offered by for-profit or not-for-profit entities, and that involve funding from for-profit firms or a registration fee that is other than nominal. Questions regarding this policy or requests for re-use of Annual Meeting materials may be directed to the ASBMR Business Office at +1 (202) 367-1161 or asbmr@asbmr.org.

Disclaimer

All authored abstracts, findings, conclusions, recommendations, or oral presentations are those of the author(s) and do not reflect the views of the ASBMR or imply any endorsement. No responsibility is assumed, and responsibility is hereby disclaimed, by the American Society for Bone and Mineral Research for any injury and/or damage to persons or property as a matter of products liability, negligence or otherwise, or from any use or operation of methods, products, instructions, or ideas presented in the materials herein (2017 Abstracts). Independent verification of diagnosis and drug dosages should be made. Discussions, views, and recommendations as to medical procedures, choice of drugs, and drug dosages are the responsibility of the authors.

Audio, Photo and Video Recording Policy

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.

Use of ASBMR Name and Logo

ASBMR reserves the right to approve the use of its name in all materials disseminated to the press, public and professionals. The ASBMR name, meeting name, and meeting logo may not be used without permission. Use of the ASBMR logo is prohibited without the express written permission of the ASBMR Executive Director. All ASBMR corporate supporters and exhibitors should share their media outreach plans with the ASBMR before release.

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)™*. 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 Poster Session II: Sunday, September 10	1:00 p.m. 1:00 p.m.	ASBMR Booth, Discovery Hall 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 All Sunday and Monday Posters*	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 Econis, 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

FRIDAY, SEPTEMBER 8, 2017

DAY-AT-A-GLANCE

Time/Event/Location	All locations in the Colorado Convention Center unless otherwise noted
7:00 am	3
ASBMR Registration Open <i>Registration Hall - Lobby A Foyer</i>	
8:00 am - 9:30 am	3
Gerald D. Aubach Lecture and the Presentation of the William F. Neuman, Lawrence G. Raisz, and Frederic C. Bartter Awards <i>Mile High Ballroom</i>	
9:30 am - 10:00 am	3
Networking Break <i>Mile High Ballroom Foyer and Four Seasons Ballroom Foyer</i>	
10:00 am - 11:30 am	3
Highlights of the ASBMR 2017 Annual Meeting <i>Mile High Ballroom</i>	
11:30 am - 12:30 pm	4
Meet-the-Professor Sessions <i>Rooms 102-113</i>	
11:30 am - 1:00 pm	5
Hands-On Workshop: Functional In-Silico Assessment of Genomic Regions Influencing Bone Mineral Density <i>Room 402</i>	
11:30 am - 1:00 pm	5
Hands-On Workshop: Histomorphometry: An Interactive Introduction <i>Room 403/404</i>	
11:30 am - 12:45 pm	5
Grant Writing Workshop: What to Choose and How to Fund It <i>Mile High Ballroom 4A-B</i>	
12:30 pm - 1:00 pm	5
Networking Break <i>Mile High Ballroom Foyer and Four Seasons Ballroom Foyer</i>	
1:00 pm - 2:00 pm	6
Concurrent Orals: Chondrocytes <i>Four Seasons Ballroom I</i>	
1:00 pm - 2:00 pm	6
Concurrent Orals: Energy Metabolism, Bone and Fat <i>Four Seasons Ballroom IV</i>	
1:00 pm - 2:00 pm	7
Concurrent Orals: Genetic Models of Musculoskeletal Disease and Aging <i>Four Seasons Ballroom II-III</i>	
1:00 pm - 2:00 pm	8
Concurrent Orals: Osteoporosis Treatment - Adverse Effects <i>Mile High Ballroom</i>	
2:00 pm - 2:15 pm	9
Networking Break <i>Mile High Ballroom Foyer and Four Seasons Ballroom Foyer</i>	

Friday

2:15 pm - 3:30 pm	9
Concurrent Orals: Musculoskeletal Aging	
<i>Four Seasons Ballroom IV</i>	
2:15 pm - 3:30 pm	10
Concurrent Orals: Musculoskeletal Determinants	
<i>Four Seasons Ballroom I</i>	
2:15 pm - 3:30 pm	11
Concurrent Orals: Osteoporosis Pathophysiology	
<i>Four Seasons Ballroom II-III</i>	
2:15 pm - 3:30 pm	12
Concurrent Orals: Osteoporosis Treatment I	
<i>Mile High Ballroom</i>	
3:30 pm - 4:00 pm	13
Networking Break	
<i>Mile High Ballroom Foyer and Four Seasons Ballroom Foyer</i>	
3:45 pm - 5:00 pm	13
Basic Science Session: CRISPR-CAS9: Gene Editing and Beyond	
<i>Four Seasons Ballroom II-III</i>	
4:00 pm - 5:00 pm	13
ASBMR/ECTS Clinical Debate – Anti-Resorptive Therapy During the Menopausal Transition Prevents Bone Fractures Later in Life	
<i>Mile High Ballroom</i>	
5:00 pm - 7:00 pm	14
ASBMR 40th Anniversary Welcome Reception and Plenary Poster Session	
<i>ASBMR Discovery Hall - Exhibit Hall A & B1</i>	
5:00 pm - 7:00 pm	45
New Investigator Reception	
<i>ASBMR Discovery Hall - Exhibit Hall A & B1</i>	
7:15 pm - 8:30 pm	45
Young Investigator Networking Happy Hour	
<i>Hyatt Regency Denver, Capitol Ballroom 1</i>	
7:15 pm - 9:45 pm	46
Rare Bone Disease Working Group	
<i>Room 205/207</i>	
7:15 pm - 9:45 pm	46
Muscle and Bone Working Group	
<i>Room 210/212</i>	
8:00 pm - 9:30 pm	47
Women in Bone and Mineral Research Evening Networking Reception	
<i>Hyatt Regency Denver, Capitol Ballroom 3</i>	

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 <i>Disclosures: Judith Campisi, None</i>	
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
<i>Disclosures: Teresita Bellido, None</i>
Kenneth Saag, M.D., MSc.
University of Alabama at Birmingham, USA
<i>Disclosures: Kenneth Saag, None</i>
Anna Teti, Ph.D.
University of L'Aquila, Italy
<i>Disclosures: Anna Teti, None</i>
10:00 am Basic Science Meeting Overview
Roland Baron, DDS, PhD
Harvard Medical School and School of Dental Medicine, USA
<i>Disclosures: Roland Baron, None</i>
10:45 am Clinical Science Meeting Overview
John Bilezikian, M.D.
Columbia University College of Physicians and Surgeons, USA
<i>Disclosures: John Bilezikian, None</i>

Friday

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

Friday

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 LaGory², Laura Mangiavini¹, Jiarui Hu¹, Christophe Merceron³, Krishna Vemulapalli¹, Mohd Parvez Khan¹, Zachary Tata¹, Amato J. Giaccia², Ernestina Schipani¹. ¹University of Michigan, United States, ²Stanford University, United States, ³University of Michigan , United States

Disclosures: Qing Yao, None

1:15 pm PiT1/Slc20a1-mediated endoplasmic reticulum homeostasis and cell survival in growth plate chondrocytes

1002
Greig Couasnay^{*1}, Nina Bon¹, Claire-Sophie Devignes², Sophie Source¹, Arnaud Bianchi³, Joelle Veziers¹, Pierre Weiss¹, Sylvain Provot⁴, Jerome Guicheux¹, Sarah Beck-Cormier⁵, Laurent Beck¹. ¹INSERM U1229, University of Nantes, France, ²INSERM 1132, Paris Diderot University, France, ³CNRS UMR 7365, University of Lorraine, France, ⁴INSERM U1132, Paris Diderot University, France, ⁵INSERM U1132, University of Nantes, France

Disclosures: Greig Couasnay, None

1:30 pm HIF Prolyl Hydroxylase 2 Controls Chondrocyte Metabolism and Affects Endochondral Ossification

1003
Steve Stegen^{*1}, Kjell Laperre¹, Guy Eelen², Gianmarco Rinaldi³, Sophie Torrekens¹, Sarah-Maria Fendt³, Peter Carmeliet², Geert Carmeliet¹. ¹Clinical and Experimental Endocrinology, KU Leuven, Belgium, ²Angiogenesis and Vascular Metabolism, Vesalius Research Center, VIB/KU Leuven, Belgium, ³Cellular 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 Schott¹, Heather Le Bleu¹, Monaliza El-Quadi¹, John Ketz¹, Reyad Elbarbary¹, Michael Zuscik¹, Fadia Kamal¹. ¹University 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 Rohatgi², Yan Zhang², Charles Harris³, Steven L. Teitelbaum⁴.
¹Department of Pathology and Immunology, Washington University School of Medicine, United States, ²Department of Pathology and Immunology, Washington University School of Medicine, United States, ³Division of Endocrinology, Metabolism and Lipid Research, Department of Medicine, Washington University School of Medicine, United States, ⁴Department 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 Schlein², Brigitte Müller², Jörg Herren², Andreas Niemeier³.
¹Department of Osteology and Biomechanics, University Medical Center Hamburg Eppendorf, Germany, ²Institute of Biochemistry and Molecular Cell Biology IBMZ, University Medical Center Hamburg-Eppendorf, Hamburg 20246, Germany., Germany, ³Department 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 Ding¹, Jianrui Xu¹, Paul Bernard¹, Kanglun Yu¹, Carlos Isales¹, Xingming Shi¹, Meghan McGee-Lawrence¹. ¹Medical College of Georgia, Augusta University, United States
Disclosures: Jessica Pierce, None

1:45 pm ASBMR 2017 Annual Meeting Young Investigator Award

- 1008** **PPAR γ in Inflammation and Aging**
Raysa Rosario^{*1}, Babak Baban¹, Mark Hamrick¹, Carlos Isales¹, Xing-Ming Shi¹.
¹Augusta 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 TGF β /BMP signaling activation rescues disc degeneration in *Flnb*-/- Spondylocarpotarsal Synostosis murine model**
Jennifer Zieba^{*1}, Kimberly Forlenza², Kelly Heard², Jorge Martin², Lukas Balek³, Michaela Kunova Bosakova³, Pavel Krejci³, Deborah Krakow². ¹Baylor College of Medicine, United States, ²University of California, Los Angeles, United States, ³Masaryk 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 Khonsari¹, Morad Bensidhoum², Federico Di Rocco³, Laurence Legeai-Mallet¹. ¹INSERM U1163, France, ²UMR CNRS 7052, France, ³Lyon 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 in cancellous versus cortical bone, and in young versus old mice**
1011 Rafael Pacheco-Costa^{*1}, Emily Atkinson¹, Julian Dilley¹, Hannah Davis¹, Carmen Herrera¹, Roger Thompson², Teresita Bellido¹, Lilian Plotkin¹. ¹Indiana University School of Medicine, United States, ²Hotchkiss 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 Skeletal Homeostasis**
1012 Archana Sanjay^{*1}, Jungeun Yu¹, Lauren Schilling¹, Christopher Schoenherr², Aris Economides², Ernesto Canalis¹. ¹UConn Health, United States, ²Regeneron 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 Fractures**
1013 Cherie Chiang^{*1}, roger zebaze², Hanh Nguyen³, Yu Peng⁴, Maria Zanchetta⁵, Peter Ebeling⁶, Ego Seeman⁷. ¹Austin Hospital, Australia, ²Department of Medicine, Austin Health, Australia, ³Department of medicine, Monash University, Australia, ⁴Straxcorp.com Pty Ltd, Australia, ⁵IDIM, Instituto de Diagnóstico e Investigaciones Metabólicas, Buenos Aires, Argentina, Argentina, ⁶Medecine, Monash University, Australia, ⁷Department of Medecine, Austin Health, 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 Smits², Sanne Buitendijk², Merel Stegenga², M. Carola Zillikens². ¹Bone Center, Erasmus MC , Netherlands, ²Bone 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 Wall², Etienne Belzile³, Laetitia Michou⁴, Louis-Georges Ste-Marie⁵, Edward Harvey¹, Prism Schneider⁶, Sonia Jean⁷, Jacques Brown³. ¹McGill University, Canada, ²Research Institute of the McGill University Health Center, Canada, ³Laval University, Canada, ⁴Centre de Recherche du CHU de Quebec, Canada, ⁵University de Montreal, Canada, ⁶University of Calgary, Canada, ⁷Institut 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 Butler², Neil Binkley³, John T Grbic⁴, Michael McClung⁵, Antoniette Tierney², Rachel B Wagman², Xiang Yin². ¹Mercy Health, United States, ²Amgen Inc., United States, ³University of Wisconsin School of Medicine and Public Health, United States, ⁴Columbia University, United States, ⁵Oregon Osteoporosis Center, United States
Disclosures: Nelson B Watts, Shire, Grant/Research Support

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 IKK β activation in postnatal chondrocytes accelerates the onset of age-associated murine osteoarthritis
 Sarah Catheline^{*1}, Christopher Dean¹, Michael Zuscik¹, Brendan Boyce¹, Jennifer Jonason¹. ¹University of Rochester Medical Center, United States
Disclosures: Sarah Catheline, None
- 2:30 pm - 1018 Multi-photon laser scanning microscopy reveals reduced angiogenesis and PDGFR β -expressing mesenchymal progenitors in long bone fracture callus of aged mice**
 Hengwei Zhang^{*1}, Jianguo Tao¹, Longze Zhang¹, Rana Gupta², Edward Schwarz¹, Brendan Boyce¹, Lianping Xing¹. ¹University of Rochester, United States, ²University 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 CXCL12/CXCR4 Signaling to Contribute to Age-related Bone Loss**
1019 Jinbo Li^{*1}, Zhenqiang Yao¹, Lianping Xing¹, Brendan Boyce¹. ¹URMC, United States
Disclosures: Jinbo Li, None
- 3:00 pm** **Serum Amyloid A3 (SAA3) Causes Age-Related Bone Loss**
1020 Shilpa Choudhary^{*1}, Siu-Pok Yee², Douglas Adams¹, Renata Rydzik¹, Joseph Lorenzo¹, Carol Pilbeam¹. ¹UConn Musculoskeletal Institute, UConn Health, United States, ²Department 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+ and Osteoprogenitor Differentiation**
1021 Ha-Neui Kim^{*1}, Han Li¹, Srividhya Iyer¹, Aaron Warren¹, Stavros Manolagas¹, Maria Almeida¹. ¹University 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 Hadjiafragiou, Ph.D.
New York Institute of Technology, USA
Disclosures: Michael Hadjiafragiou, None

- 2:15 pm** **Maternal genotype has life-long effects on bone mass, shape and strength in *Dmp1Cre.Pthlhlf* mice**
1022 Niloufar Ansari^{*1}, Narelle McGregor¹, Christopher S Kovacs², Jonathan H Gooi³, T John Martin¹, Natalie A Sims¹. ¹St. Vincent's Institute of Medical Research, Australia, ²Memorial University of Newfoundland, Canada, ³The University of Melbourne, Australia
Disclosures: Niloufar Ansari, None
- 2:30 pm** **ASBMR 2017 Fund for Research and Education Young Investigator Award**
1023 **Palmitoleylation of WNTs is a Major Determinant of Both Trabecular and Cortical Bone Mass in Mice**
Thomas Funck-Brentano^{*1}, Karin Nilsson¹, Petra Henning¹, Ulf Lerner¹, Antti Koskela², Juha Tuukkanen², Robert Brommage¹, Sofia Movérale-Skrtic¹, Claes Ohlsson¹. ¹Centre for Bone and Arthritis Research, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Sweden, ²Unit 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 Veksler², Jerome Piquereau², Gisele Bonne³, Isabelle Nelson³, Philippe Poulettaut⁴, Molly Nelson Holte⁴, Malayannan Subramaniam⁴, Sabine Bensamoun¹, John Hawse⁴. ¹Université de Technologie de Compiègne, France, ²University of Paris-Sud, France, ³UPMC University Paris, France, ⁴Mayo Clinic, United States
Disclosures: Malek Kammoun, None

- 3:00 pm** **The Calcium-Sensing Receptor, a Class C GPCR, Spatially-Directs G-protein Selectivity via Endosomal Signaling**
1025 Caroline Gorvin^{*1}, Angela Rogers¹, Benoit Hastoy¹, Andrei Tarasov¹, Morten Frost¹, Asuka Inoue², Michael Whyte³, Patrik Rorsman¹, Aylin Hanyaloglu⁴, Gerda Breitwieser⁵, Rajesh Thakker¹. ¹University of Oxford, United Kingdom, ²Tohoku University, Japan, ³Shriners Hospital for Children, United States, ⁴Imperial College London, United Kingdom, ⁵Geisinger Center, United States
Disclosures: Caroline Gorvin, None
- 3:15 pm** **Extracellular vesicles (EVs) are biological and therapeutic tools in osteoblast communication**
1026 Alfredo Cappariello^{*1}, Alexander Loftus¹, Argia Ucci¹, Maurizio Muraca², Nadia Rucci¹, Anna Teti¹. ¹University of L'Aquila, Italy, ²University 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** **The Senolytic ABT263 Eliminates Senescent Osteoprogenitors in Old Mice**
1027 Ha-Neui Kim^{*1}, Srividhya Iyer¹, Jianhui Chang², Li Han¹, Aaron Warren¹, Stavros Manolagas¹, Robert Jilka¹, Charles O'Brien¹, Daohong Zhou², Maria Almeida¹. ¹University of Arkansas for Medical Sciences and Central Arkansas Veterans Healthcare System, United States, ²University of Arkansas for Medical Sciences , United States
Disclosures: Ha-Neui Kim, None
- 2:30 pm** **Characterization of long- and short-range compositional and mechanical bone tissue heterogeneity in patients with atypical femoral fractures**
1028 Ashley Lloyd^{*1}, Emma Luengo¹, Carmen Ngai¹, Amy Cao¹, Joseph Lane², Eve Donnelly¹. ¹Cornell University, United States, ²Hospital for Special Surgery, United States
Disclosures: Ashley Lloyd, None
- 2:45 pm** **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**
1029 Amy Y. Sato^{*1}, Meloney Gregor¹, Kevin McAndrews¹, Keith W. Condon¹, Lilian I. Plotkin¹, Teresita Bellido¹. ¹Indiana University School of Medicine, United States
Disclosures: Amy Y. Sato, None
- 3:00 pm** **Bone-Targeted Pharmacological Inhibition of Notch Signaling Decreases Resorption and Induces Bone Gain in Skeletally Mature Mice**
1030 Jesus Delgado-Calle^{*1}, Matthew E. Olson¹, Jessica H. Nelson¹, Emily G. Atkinson¹, Kevin McAndrews¹, Lifeng Xiao², Frank H. Ebetino², Robert K. Boeckman Jr², G. David Roodman³, Teresita Bellido¹. ¹Anatomy and Cell Biology, Indiana University School of Medicine, United States, ²Department of Chemistry, University of Rochester, United States, ³Department 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 Liu², Zhi Chen². ¹State 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, ²State 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 Jiang¹, Mary Bouxsein², Benjamin Leder¹. ¹Massachusetts General Hospital, United States, ²Beth 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 Wang¹, Ego Seeman², Arkadi Chines³, Yifei Shi³, Andrea T Wang³, X Edward Guo¹. ¹Bone Bioengineering Laboratory, Department of Biomedical Engineering, Columbia University, United States, ²Austin Health, University of Melbourne, Australia, ³Amgen 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 Langdahl², Saeko Fujiwara³, Kenneth Saag⁴, Nicola Napoli⁵, Satoshi Soen⁶, Damon Disch⁷, Fernando Marin⁸, Hiroyuki Enomoto⁹, John Krege¹⁰. ¹Cedars-Sinai/UCLA Medical Center and OMC Clinical Research Center, United States, ²Arhus University Hospital, Denmark, ³Health Management and Promotion Center, Japan, ⁴University of Alabama at Birmingham, United States, ⁵University Campus Bio-Medico, Italy, ⁶Department of Orthopaedic Surgery and Rheumatology, Kindai University Nara Hospital, Japan, ⁷Eli Lilly and Company, United States, ⁸Lilly Research Centre, United Kingdom, ⁹Eli Lilly Japan K.K., Japan, ¹⁰Elli 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 Guo¹, Richard Barron², Lionel Pinto². ¹Minneapolis Medical Research Foundation, United States, ²Global 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 Women Treated with a Local Osteo-Enhancement Procedure Involving Injection of a Resorbable, Triphasic Calcium-based Implant Material**

Tony Keaveny^{*1}, David Lee², Dominique Favell³, Ronald Hill³, James Howe³, Bryan Huber⁴, Mary Bouxsein⁵. ¹University of California, Berkeley, United States, ²O.N. Diagnostics LLC, United States, ³AgNovos Healthcare, United States, ⁴Copley Hospital, United States, ⁵Harvard 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

Friday

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 Kurniawan², Grahame Elder³. ¹Centre for Endocrinology and Metabolism, Hudson Institute of Medical Research; School of Clinical Sciences, Monash University, Australia, ²The University of Notre Dame , Australia, ³Department 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 Liu², Azeez Farooki³. ¹New York Presbyterian Hospital - Weill Cornell, United States, ²Hospital for Special Surgery, United States, ³Memorial 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 Gervais¹, Andréanne Samson¹, Jacques P. Brown², Laëtitia Michou². ¹CHU de Québec-Université Laval research centre, Canada, ²Division 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 Gazes¹, Bucovsky Mariana¹, Colon Ivelisse¹, Kevin Slane¹, Arindam RoyChoudhury¹, Minghao Liu¹, Yu-Kwang Tay¹, Randolph Marshall¹, Ronald Lazar¹, Shonni Silverberg¹, Marcella Walker¹. ¹Columbia 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 Auguste², Catherine Fortier³, Sonia Jean⁴, Lynne Moore⁵, Louis-Charles Desbiens³, Yue Pei Wang⁶, Fabrice Mac-Way⁷. ¹Centre 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, ²Centre de Recherche du CHU de Québec, Hôpital Saint-Sacrement, Faculty of Medicine, Department of Social and Preventive Medicine, Laval University, Quebec Canada, Canada, 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, ⁴Institut National de Santé Publique du Québec, Medicine Faculty, Department of social and preventive medicine, Laval University, Quebec Canada , Canada, ⁵Centre 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, ⁶CHU 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, ⁷Centre 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 Psaltos¹, Katherine Lo¹, Robert Urban², Stephanie McCarthy², Deborah Hall², Thomas Turner², Mary Bouxsein¹. ¹Beth Israel Deaconess Medical Center, United States, ²Rush 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 Walk¹, Shefford Baker¹, G. Elizabeth Pluhar², Adele Boskey³, Christopher Hernandez¹, Marjolein van der Meulen¹. ¹Cornell University, United States, ²University of Minnesota, United States, ³Hospital 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 Miller¹, Jing Han Zhang¹, Heather Hunt¹, Kendall Moseley², Eve Donnelly¹. ¹Cornell University, United States, ²Johns 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 Tseng¹, Chantal de Bakker¹, Hongbo Zhao¹, X. Sherry Liu¹. ¹University 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 Alwood², Mohit Nalavadi³, Sulekha Anand⁴, Yasaman Shirazi-Fard², Alesha Castillo⁵. ¹NASA Ames Research Center, San Jose State University, United States, ²NASA Ames Research Center, United States, ³Blue Marble Space Institute of Science, United States, ⁴San Jose State University, United States, ⁵New 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 Campos², João P. B. Ximenez³, Raquel A. Silva⁴, José B. Volpon². ¹Medical School of Ribeirão Preto, University of São Paulo, Brazil, ²Medical School of Ribeirão Preto, Brazil, ³School of Pharmaceutical Sciences of Ribeirão Preto, Brazil, ⁴School 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 Krstic², Eloise Cook², Stefania D'Angelo¹, Sarah Crozier¹, Rebecca Moon³, Robert Murray², Emma Garratt², Paula Costello², Nicholas Bishop⁴, Stephen Kennedy⁵, Aris Papageorgiou⁵, Inez Schoenmakers⁶, Robert Fraser⁷, Saurabh Gandhi⁷, Ann Prentice⁸, Kassim Javaid⁹, Hazel Inskip¹, Keith Godfrey¹⁰, Christopher Bell¹¹, Karen Lillycrop², Cyrus Cooper¹², Nicholas Harvey¹⁰. ¹MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, ²Institute of Developmental Sciences, University of Southampton, United Kingdom, ³MRC Lifecourse Epidemiology Unit, University of Southampton; Paediatric Endocrinology, University Hospitals Southampton NHS Foundation Trust, United Kingdom, ⁴Academic Unit of Child Health, Sheffield Children's Hospital, University of Sheffield, United Kingdom, ⁵Nuffield Department of Obstetrics and Gynaecology, John Radcliffe Hospital, University of Oxford, United Kingdom, ⁶MRC Elsie Widdowson Laboratory; Department of Medicine, Faculty of Medicine and Health Sciences, University of East Anglia, United Kingdom, ⁷Sheffield Hospitals NHS Trust, University of Sheffield, United Kingdom, ⁸MRC Elsie Widdowson Laboratory, United Kingdom, ⁹National Institute for Health Research (NIHR) Biomedical Research Centre, University of Oxford, United Kingdom, ¹⁰MRC Lifecourse Epidemiology Unit, University of Southampton; NIHR Southampton Nutrition Biomedical Research Centre, University of Southampton and University Hospital Southampton NHS Foundation Trust, United Kingdom, ¹¹MRC Lifecourse Epidemiology Unit, University of Southampton; Institute of Developmental Sciences, University of Southampton, United Kingdom, ¹²MRC 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. Leary¹, Dan G. Hoernschemeyer¹, Laura L. Tosi², Richard J. Sherwood¹. ¹University of Missouri, United States, ²Children'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 Nettlefold¹, Heather Macdonald¹, Heather McKay². ¹Centre for Hip Health and Mobility, Canada, ²University of British Columbia, Canada
Disclosures: Leigh Gabel, None
- FR0032** **Does Peak Bone Mass Coincide with Peak Bone Strength?**
 Erik Lindgren^{*1}, Bjorn Rosengren¹, Magnus Karlsson¹. ¹Department of Clinical Sciences and Orthopaedics, Lund University, Malmö, 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 Caksa², Amy Yuan², Mary Bouxsein², Madhusmita Misra³, Sherri-Ann Burnett-Bowie². ¹Pediatric Endocrine Unit, Massachusetts General Hospital, United States, ²Endocrine Unit, Massachusetts General Hospital, United States, ³Pediatric 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 Gales¹, Katheleen Noche², Isidro I Salusky¹, Katherine Wesseling-Perry¹. ¹David Geffen School of Medicine at UCLA, Los Angeles, California, United States of America, United States, ²University of California, United States
Disclosures: Renata C Pereira, None
- FR0037 Effects of Sclerostin Depletion on Hematopoietic Stem Cells**
 Cristine Donham^{*1}, Gabriela Loots², Jennifer Manilay³, Aris Economides⁴. ¹University of California Merced, United States, ²Lawrence Livermore National Laboratories, United States, ³University of California, Merced, United States, ⁴Regeneron Pharmaceuticals, United States
Disclosures: Cristine Donham, None
- FR0038 Targeting the Endosteal Niche in Myelodysplasia and Acute Myeloid Leukemia**
 Marta Galán-Díez^{*1}, Govind Bhagat¹, Julie Teruya-Feldstein², Azra Raza¹, Ellin Berman³, Stavroula Kousteni¹. ¹Columbia University, United States, ²Mount Sinai, United States, ³Memorial 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 Saadalla¹, Molly Nelson Holte¹, Megan Weivoda¹, Merry Jo Oursler¹, Khashayarsha Khazaie¹, Russell Turner², Urszula Iwaniec², John Hawse¹. ¹Mayo Clinic, United States, ²Oregon State University, United States
Disclosures: Malayannan Subramaniam, None
- FR0041 Erythropoietin regulates bone marrow stromal cell differentiation**
 Sukanya Suresh^{*}, Luis Fernandez De Castro Diaz², Soumyadeep Dey¹, Pamela Robey², Constance Noguchi¹. ¹Molecular Medicine Branch, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, United States, ²Skeletal 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 Dowell², Katrina Clines¹, Hyun Sik Moon¹, Charlotte Cialek¹, Alexander Smith¹, Hui Jiang¹, Colm Morrissey³, Shi Wei², Riley Brien¹, Euisik Yoon¹, Yu-Chih Chen¹, Kathryn Luker¹, Gary Luker¹, Gregory Clines¹. ¹University of Michigan, United States, ²University of Alabama at Birmingham, United States, ³University 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 Chang¹, Justin Williams¹, Austin Pucylowski¹, Khalid Mohammad², Theresa Guise², Uma Sankar¹. ¹Department of Anatomy and Cell Biology, Indiana University School of Medicine, United States, ²Division 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 Sunamura¹, Hiroki Ochi¹, Toru Fukuda², Atsushi Okawa³, Mitsuru Futakuchi⁴, Shu Takeda⁵, Shingo Sato¹. ¹Department of Physiology and Cell Biology, Graduate School and Faculty of Medicine, Tokyo Medical and Dental University, Japan, ²Department of Foodscience, Tokyo Seiei College, Japan, ³Department of Orthopaedic Surgery, Graduate School and Faculty of Medicine, Tokyo Medical and Dental University, Japan, ⁴Department of Molecular Toxicology, Graduate School of Medical Sciences, Nagoya City University, Japan, ⁵Division 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 Park², Colin Crean², Denise Toscani³, Judith Anderson², Rebecca Silbermann², G. David Roodman⁴. ¹Indiana University, Department of Medicine/Hematology-Oncology, United States, ²Department of Medicine/Hematology-Oncology, Indiana University School of Medicine, United States, ³Myeloma Unit, Dept. of Clinical and Experimental Medicine, University of Parma, Italy, ⁴Department of Medicine/Hematology-Oncology, Indiana University School of Medicine and Rodebusch 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 Mayhew¹, Samuel Dooyema¹, Rachelle W Johnson². ¹Vanderbilt University, United States, ²Vanderbilt 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 Hiasa², Asuka Oda³, Hirofumi Tenshin⁴, Ryota Amachi⁴, Takeshi Harada³, Shingen Nakamura³, Hirokazu Miki⁵, Itsuro Endo³, Tatsuji Haneji¹, Toshio Matsumoto⁶, Masahiro Abe³. ¹Department of Histology and Oral Histology, Tokushima University, Japan, ²Department of Biomaterials and Bioengineering, Tokushima University, Japan, ³Department of Hematology, Endocrinology and Metabolism, Tokushima University, Japan, ⁴Department of Orthodontics and Dentofacial Orthopedic, Tokushima University, Japan, ⁵Division of Transfusion and Cell Therapy Medicine, Tokushima University Hospital, Japan, ⁶Fujii 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 Luo¹, Ruohan Zhang¹, Yuqi Guo¹, Xin Li¹. ¹New 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 Rohan¹, Amy Buros¹, Daisy Alapat¹, Jerry Walters¹, Thomas G Pait¹, Nancy A. Ghaleb¹, Sharmilan Thanendrarajan¹, Frits van Rhee¹, Faith Davies¹, Gareth Morgan¹, Carolina Schinke¹, Larry J. Suva², Maurizio Zangari¹. ¹University of Arkansas for Medical Sciences, United States, ²Texas 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 Yu², Mingquan Yan², Connor Dolan², Ken Muneoka². ¹Texas A & M University, United States, ²Texas 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 Schott¹, Elijah Carlson¹, Monaliza El-Quadi¹, Heather Le Bleu¹, Matthew Hilton², Jennifer Jonason¹, Michael Zuscik¹. ¹University of Rochester, United States, ²Duke University School of Medicine, United States
Disclosures: Fadia Kamal, None
- FR0061 Ghrelin Protects against Osteoarthritis through Interplaying with Akt and NF- κ B Signaling Pathways**
 Weiwei Li^{*1}, Wenhua Wang², Yunpeng Zhao¹. ¹Shandong University Qilu Hospital, China, ²Shandong University, China
Disclosures: Weiwei Li, None
- FR0063 Global and Chondrocyte-specific Deletion of FGF2 Contribute to Trauma-induced Osteoarthritis**
 Patience Meo Burt^{*1}, Liping Xiao¹, Siu-Pok Yee², Brya G. Matthews³, Marja Marie Hurley¹. ¹Department of Medicine/Endocrinology, School of Medicine, UConn Health, United States, ²Department of Cell Biology, UConn Health, United States, ³Department 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. Wein¹, Henry M. Kronenberg¹. ¹Endocrine 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 Herzog¹, Paul Baldock². ¹Neuroscience Division, Garvan Institute of Medical Research, Australia, ²The Division of Bone Biology, Garvan Institute of Medical Research, Australia
Disclosures: Nikki Lee, None
- FR0070 Vitamin K₂-Induced Carboxylation of Osteocalcin and Matrix Gla Protein Improves Bone and Lipid Metabolism in Overweight Children**
 Mary Ellen Fain^{*1}, Celestine Williams¹, Allison Jasti¹, Reda Bassali², Catherine Davis², Norman Pollock². ¹Georgia Prevention Institute, Medical College of Georgia, Augusta University, United States, ²Department 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 Garnham², Glenn McConell¹, Nigel Stepto¹, David Hare³, Elizabeth Byrnes⁴, Peter Ebeling⁵, Ego Seeman⁶, Tara Brennan-Speranza⁷, Itamar Levinger¹. ¹Clinical Exercise Science Research Program, Institute of Sport, Exercise and Active Living (ISEAL), Victoria University, Melbourne, Australia., Australia, ²School of Exercise & Nutrition Sciences, Deakin University, Melbourne, Australia, Australia, ³University of Melbourne and the Department of Cardiology, Austin Health, Melbourne Australia., Australia, ⁴PathWest QEII Medical Centre, Perth, Australia, Australia, ⁵Department of Medicine, School of Clinical Sciences, Faculty of Medicine, Nursing and Health Sciences, Monash University, Australia, Australia, ⁶University of Melbourne and the Department of Endocrinology, Austin Health, Melbourne, Australia, Australia, ⁷Department 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 Shum², Roman Eliseev¹. ¹University of Rochester, United States,
²University 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 Regan², Sarah Tersey³, Sutha John¹, Yun She⁴, Sreemala Murthy⁴, Xu Cao⁵, Khalid Mohammad⁴, Theresa Guise⁴. ¹ Division of Endocrinology, Department of Medicine, Indiana University , United States, ²Division of Endocrinology, Department of Medicine, Indiana University , United States, ³Department of Pediatrics, Indiana University School of Medicine, United States, ⁴Division of Endocrinology, Department of Medicine, Indiana University, United States, ⁵Department 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 Calabrese², Angela Verado¹, Larry Mesner², Thomas Clemens¹, Charles Farber². ¹Johns Hopkins University, United States, ²University 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 Williams¹, Hua Pan², Terri Pietka³, Nada A Abumrad³, Samuel Wickline², Gwendalyn J Randolph¹, Steven L Teitelbaum⁴. ¹Department of Pathology and Immunology, Washington University School of Medicine, United States, ²University of South Florida Morsani College of Medicine, United States, ³Department of Internal Medicine, Division of Nutritional Science, Washington University School of Medicine, United States, ⁴Department 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-Costa¹, Alexandra Aguilar-Perez¹, Carmen Herrera¹, Greg Smith², Joaquin Lugo², Lilian I. Plotkin¹. ¹Indiana University School of Medicine, United States, ²Baylor 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 Huang², Lan Zhao², Ge Zhang³, Guang-qian Zhou⁴, Andre J. van Wijnen⁵, Di Chen². ¹Department of Orthopedic Surgery, Rush University Medical Centre, United States, ²Department of Orthopedic Surgery, Rush University Medical Center, United States, ³Institute for Advancing Translational Medicine in Bone & Joint Diseases, Hong Kong Baptist University, China, ⁴Department of Medical Cell Biology and Genetics, Shenzhen Key Laboratory and the Center for Anti-Ageing and Regenerative Medicine, Shenzhen University Medical School, China, ⁵Department 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 OBrien¹. ¹University 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. Kaplan², Eileen M. Shore³. ¹Center for Research in FOP and Related Disorders, Department of Orthopaedic Surgery, Perelman School of Medicine, University of Pennsylvania, United States, ²Center for Research in FOP and Related Disorders, Departments of Orthopaedic Surgery and Medicine, Perelman School of Medicine, University of Pennsylvania, United States, ³Center 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 Kronenberg¹, Li Chen¹, Zhihua Wu¹, Liping Wang¹, Xi Jiang², David Rowe¹, Alexander Lichtler¹. ¹UConn Health, United States, ²University 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 Croucher², Paul Baldock², Tuan Nguyen², Robert Brink², Daniel Hesselson², Sing Nguyen², Mohammad Moni², Scott Youlden². ¹Garvan Institute of Medical Research; School of Medicine Sydney, University of Notre Dame Australia; St Vincents Hospital; UNSW Sydney, NSW, Australia, Australia, ²Garvan 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. Center², John A. Eisman³, Hung T. Nguyen¹, Tuan V. Nguyen⁴. ¹Centre of Health Technologies, FEIT, University of Technology Sydney, Australia, ²Bone Biology Division, Garvan Institute of Medical Research; St Vincent Clinical School, UNSW, Australia , Australia, ³Bone Biology Division, Garvan Institute of Medical Research; St Vincent Clinical School, UNSW, Australia;School of Medicine, Sydney University of Notre Dame , Australia, ⁴University 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 Kinyua², Ching-Ti Liu³, Maria Nethander⁴, Emmanuel Biver⁵, Elizabeth J. Atkinson⁶, Elisabeth Sornay-Rendu⁷, Claire Watson⁸, Andy Kin On Wong⁹, Shreyasee Amin¹⁰, Elise Lim³, Michelle Yau¹¹, Laiji Yang¹², Eric Lespessailles¹³, Roby Joehanes¹⁴, Kerry Broe¹², Jonathan D. Adachi¹⁵, Serkalem Demissie¹⁶, David Karasik¹², Blandine Merle¹⁷, Dan Mellström¹⁸, L. Adrienne Cupples¹⁶, Brent Richards¹⁹, David Goltzman²⁰, David A. Hanley²¹, Steven K. Boyd²², Mary L. Bouxsein²³, Ronald Y Kwon⁸, Mattias Lorentzon²⁴, Claes Ohlsson²⁵, Paweł Szulc²⁶, Serge Ferrari²⁷, Roland D. Chapurlat²⁶, Sundeep Khosla¹⁰, Douglas P. Kiel¹⁴.
¹HSL Institute for Aging Research, Harvard Medical School, Broad Institute of MIT and Harvard, United States, ²Institute for Aging Research, Hebrew SeniorLife, United States, ³Biostatistics, Boston University School of Public Health, United States, ⁴University of Gothenberg, Sweden, ⁵University of Geneva, Switzerland, ⁶Mayo Clinic, United States, ⁷INSERM and University of Lyon, France, ⁸Musculoskeletal Systems Biology Lab, Orthopaedics and Sports Medicine, University of Washington, United States, ⁹Toronto General Research Institute, University Health Network and McMaster University, Canada, ¹⁰Mayo Clinic College of Medicine, United States, ¹¹Institute for Aging Research, Hebrew SeniorLife and Department of Medicine, Beth Israel Deaconess Medical Center and Harvard Medical School, United States, ¹²Institute for Aging Research, Hebrew SeniorLife, United States, ¹³University of Orleans, France, ¹⁴Institute for Aging Research, Hebrew SeniorLife and Harvard Medical School, United States, ¹⁵Charlton Medical Centre, McMaster University, Canada, ¹⁶Biostatistics, Boston University School of Public Health, United States, ¹⁷INSERM, University of Lyon, France, ¹⁸Univ of Gothenburg, Sweden, ¹⁹Lady Davis Institute and Department of Human Genetics, McGill University, Canada, ²⁰Departments of Medicine and Physiology, McGill University, Canada, ²¹Cumming School of Medicine, University of Calgary, Canada, ²²University of Calgary, Canada, ²³Beth Isreal Deaconess Medical Center, Harvard Medical School, United States, ²⁴Sahlgrenska University Hospital, Sweden, ²⁵Center for Bone and Arthritis Research at the Sahlgrenski Academy, Sweden, ²⁶INSERM and University of Lyon, Hospital E. Herriot, France, ²⁷Geneva 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 Roohani¹², Qing Wu¹². ¹University of Nevada, Las vegas, United States, ²University 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 Slavic¹, Flora Klinger¹, Flora Klinger¹, Marlies Dolezal¹, Ute Zeitz¹, Karolina Hilse-Koller¹, Elena Pohl¹, Reinhold G Erben¹, Olena Andrukova¹.
¹Department 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 Li¹, Tracy Nelson¹, Karin Finberg¹. ¹Yale School of Medicine, United States
Disclosures: Jackie Fretz, None

- FR0098 Phosphorylation of S122 in ER α Is Important for the Skeletal Response to Estrogen Treatment in Male Mice**
 Karin Gustafsson^{*1}, Helen Farman¹, Sofia Movérare-Skrtic¹, Vikte Lionikaite¹, Jianyao Wu¹, Petra Henning¹, Sara Windahl¹, Klara Sjögren¹, Andree Krust², Pierre Chambon², Claes Ohlsson¹, Marie Lagerquist¹. ¹Centre for Bone and Arthritis Research at Institute of Medicine, Sahlgrenska Academy at University of Gothenburg, Sweden, ²Departement 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 Yamawaki¹, Takuya Murakami¹, Kenji Nagao¹, Makoto Kakitani², Kazuma Tomizuka². ¹Nephrology Research Laboratories, Kyowa Hakko Kirin Co., Ltd., Japan, ²Innovative 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 Laurent², Na Ri Kim¹, Ferran Jardi¹, Frank Claessens³, Brigitte Decallonne¹, Dirk Vanderschueren¹. ¹Laboratory of Clinical and Experimental Endocrinology, KU Leuven, Belgium, ²Center for Metabolic Bone Diseases, Geriatrics Department, University Hospitals Leuven, Belgium, ³Laboratory 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 Adams¹, M.N. Weitzmann¹, Roberto Pacifici¹. ¹Emory 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 Imanishi¹, Daichi Miyaoka¹, Noriyuki Hayashi¹, Tomomi Maeda¹, Masanori Emoto¹, Masaaki Inaba¹. ¹Osaka 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 Eby², Vasyl Nesin¹, Peter Ngo¹, Maria Luisa Brandi³, Wenhan Chang⁴, Mary Beth Humphrey¹, Kai Lau², Leonidas Tsikas¹. ¹Department of Cell Biology, University of Oklahoma Health Sciences Center, Oklahoma City, OK73104, USA, United States, ²Department of Medicine, Division of Nephrology, University of Oklahoma Health Sciences Center, Oklahoma City, OK73104, USA, United States, ³Università degli Studi di Firenze, CTO-SOD Malattie del Metabolismo Minerale e Osseo, Florence, Italy, Italy, ⁴Department 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 Kim², Jae-yeon Yang², Ji-yeon Lee², Kyoung Min Kim³, Jung Hee Kim¹, Chan Soo Shin¹, Sang Wan Kim⁴. ¹Seoul National University College of Medicine, Korea, Republic of, ²Seoul National University Hospital Biomedical Research Institute, Korea, Republic of, ³Seoul National University Bundang Hospital, Korea, Republic of, ⁴Seoul 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 Nemitz¹, Anita Ignatius¹. ¹University of Ulm, Germany
Disclosures: Astrid Liedert, None
- FR0113 Shared Molecular Mechanisms Contributing to PTOA in Loading-Mediated Injury Models**
Amy Sebastian^{*1}, Jiun Chang¹, Nicholas Hum¹, Deepa Murugesh¹, Gabriela Loots¹, Blaine Christiansen². ¹Lawrence Livermore National Laboratories, United States, ²UC Davis Medical Center, Department of Orthopedic Surgery, United States
Disclosures: Amy 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 Menuki¹, Kayoko Okuma¹, Manabu Tsukamoto¹, Hokuto Fukuda¹, Yasuaki Okada¹, Kenji Kosugi¹, Akinori Sakai¹. ¹Department 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 Lippo¹, Paolo Pignataro¹, Lorenzo Sanesi¹, Giovanna Spiro², Ilenia Severi³, Giovanni Passeri⁴, Giacomina Brunetti¹, Umberto Tarantino⁵, Silvia Colucci¹, Janne Reseland⁶, Roberto Vettor², Saverio Cinti³, Maria Grano⁷. ¹Department of Basic Medical Science, Neuroscience and Sense Organs, University of Bari, Italy, ²Department of Medicine-DIMED, Internal Medicine 3, University of Padova, Italy, ³Department of Experimental and Clinical Medicine, Center of Obesity, United Hospitals, University of Ancona, Italy, ⁴Department of Clinical and Experimental Medicine, University of Parma, Italy, ⁵Department of Orthopedics and Traumatology, Tor Vergata University of Rome, Italy, ⁶Department of Biomaterials, Institute for Clinical Dentistry, University of Oslo, Blindern, Norway, ⁷Department 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}, Sébastien Gariepy¹, Luc Tremblay², Aurore Varela¹. ¹Charles River Laboratories Montreal, Canada, ²CIMS-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 Zhao², Jennifer Rosser³, Michael J. Wacker³, Julian Vallejo³, Marco Brotto⁴, Lynda F. Bonewald². ¹Indiana University, United States, ²Indiana University, United States, ³University of Missouri-Kansas City, United States, ⁴University 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 Liu¹, Cinyee Cai², Ian Mahaffey³, Stephanie Norman³, Whitney Cole³, Alesha Castillo¹. ¹Dept 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, ²Dept of Orthopaedic Surgery, School of Medicine, New York University, United States, ³Veterans 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 scimeca¹, Federica Centofanti¹, maurizio feola¹, annalisa botta¹, Umberto Tarantino¹. ¹University of Rome Tor Vergata, Italy
Disclosures: monica celi, None
- FR0126 Regulation of Protein Kinase A (PKA) by Protein Kinase Inhibitor γ (PKI γ) Reduces Osteogenesis in Aged Mice**
 Bryan S. Hausman^{*1}, Xin Chen², Hyonmin Choe³, Ozan Akkus⁴, Edward M Greenfield¹. ¹Department of Orthopaedics, Case Western Reserve University, United States, ²Gene Therapy Center, University of North Carolina at Chapel Hill, United States, ³Department of Orthopaedics, Yokohama City University, Japan, ⁴Departments 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 George¹², Kimberly Kelly¹², Suresh Tyagi¹², Neetu Tyagi¹². ¹University of Louisville, United States, ²University of Louisville, United States
Disclosures: Jyotirmaya Behera, None
- FR0130 The Novel Role of PINCH in Skeletogenesis**
 Xin Liu^{*1}, Guozhi Xiao¹. ¹SUSTech, China
Disclosures: Xin Liu, None
- FR0132 Identifying A Novel Regulator Of Anabolic Bone Metabolism**
 Yu Shao^{*1}, Kylie Jacobs², James Hamilton³, Thomas M O'Connell⁴, Nickolay Brustovetsky³, Jeanette McClintick⁵, Ronald Wek⁵, Joseph Bidwell². ¹Medical & Molecular Genetics, Indiana University School of Medicine, United States, ²Anatomy & Cell Biology, Indiana University School of Medicine, United States, ³Pharmacology & Toxicology, Indiana University School of Medicine, United States, ⁴Otolaryngology & Head/Neck Surgery, Indiana University School of Medicine, United States, ⁵Biochemistry & 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 Yuan², Fang Fang¹, Fei Liu¹. ¹University of Michigan School of Dentistry, United States, ²University of Michigan, United States
Disclosures: Han Kyoung Choi, None

- FR0135 Identification of Murine Circulating CD34+ OCN+ Cells**
 Ryan Kelly^{*1}, Lindsay McDonald², James Cray¹, Amanda LaRue². ¹Medical University of South Carolina, United States, ²Ralph 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 Chiu¹, Ding-Cheng Chan¹, Rong-Sen Yang¹. ¹National 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**
 Jeyant Srinivas Sankaran^{*1}, Buer Sen¹, Zhihui Xie¹, Cody McGrath¹, Maya Styner¹, Rebekah Samsonraj², Andre van Wijnen², Janet Rubin¹. ¹University of North Carolina, Chapel Hill, United States, ²Mayo Clinic, United States
Disclosures: Jeyant Srinivas Sankaran, None
- FR0139 Conditional ablation of Prx1 expressing cells and haploinsufficiency of Prrx1 gene lead to impaired fracture healing**
 Lai Wang^{*1}, Alessandra Esposito¹, Joseph Temple¹, Ji Eun Han¹, Tieshi Li¹, Anna Spagnoli¹. ¹Department of Pediatrics, Rush University Medical Center, Chicago, United States
Disclosures: Lai Wang, None
- FR0140 PDGFR β signaling regulates osteogenesis of periosteal mesenchymal stem cells.**
 Xi Wang^{*1}, Brya G Matthews¹, Jungeon Yu², Archana Sanjay¹, Danka Grcevic³, Ivo Kalajzic¹. ¹UConn Health, United States, ²UConn Health, United States, ³University 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 Tian², Lin Ling², Wasima Mayer², Ling Chen³, Misun Kang³, Sunita Ho³, Daniel Bikle⁴. ¹Endocrine Unit, University of California, San Francisco/ San Francisco VA Health Care System, United States, ²Endocrine Unit, University of California, San Francisco /San Francisco VA Health Care System, United States, ³Bioengineering & Biomaterials Micro-CT and Imaging Facility, University of California, San Francisco, United States, ⁴Endocrine 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 Gregory², Denis Baird³, Richard Aspden², Lavinia Paternoster¹, Jonathan Tobias³. ¹School of Social and Community Medicine, University of Bristol, UK; MRC Integrative Epidemiology Unit at the University of Bristol, UK, United Kingdom, ²Arthritis and Musculoskeletal Medicine, Institute of Medical Sciences, University of Aberdeen, UK, United Kingdom, ³Musculoskeletal 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 Ljuhar¹, Stefan Nehrer², Davul Ljuhar³, Astrid Fahrleitner-Pammer⁴, Hans-Peter Dimai⁴. ¹ImageBiopsy Lab, Austria, ²Danube University Krems, Austria, ³Braincon Technologies Research , Austria, ⁴Medical 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 Teece¹, Andrew Gee¹, Thomas Turmezei², Fjola Johannesdottir³, Sigurdur Sigurdsson⁴, Thor Aspelund⁴, Vilmundur Gudnasson⁴, Helgi Jonsson⁵, Kenneth Poole¹. ¹University of Cambridge, United Kingdom, ²Addenbrooke's Hospital, Cambridge, United Kingdom, ³Beth Israel Deaconess Medical Center, United States, ⁴The Icelandic Heart Association, Iceland, ⁵Landsptitalinn 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 Solovieva², Eira Viikari-Juntura³, Steven Bowe⁴, Paul Kowal⁵, Nirmala Naidoo⁵, Ilana Ackerman⁶, Anita Wluka⁶, Michelle Leech⁶, Richard Page⁴, Gustavo Duque⁷, Fernando Gomez⁸, Mohammadreza Mohebbi⁴. ¹University of Melbourne, Australian Institute for Musculoskeletal Science (AIMSS), Australia, ²Finnish Institute of Occupational Health, Finland, ³Finnish Institute of Occupational Health, Finland, ⁴Deakin University, Australia, ⁵World Health Organization, Switzerland, ⁶Monash University, Australia, ⁷University of Melbourne; Australian Institute for Musculoskeletal Science (AIMSS), Australia, ⁸Facultad 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 Wildman¹, Mohammad Rehan¹, Harunur Rashid¹, Mohammad Hassan¹, Chris Lengner², Amjad Javed¹. ¹School of Dentistry, University of Alabama, United States, ²School 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 Takeno¹, Ken-ichiro Tanaka¹, Masakazu Notsu¹, Toshitsugu Sugimoto¹. ¹Shimane University Faculty of Medicine, Japan
Disclosures: Ippei Kanazawa, None
- FR0158 Murine model for type VI OI (*Serpinf1-l-*) reveals dynamic regulation of vascularization and mineralization in bone**
 Heeseog Kang^{*1}, Smriti Aryal A.C.¹, Valentin David², Aline Martin², Susan Crawford³, Joan Marini¹. ¹NIH, United States, ²Northwestern University, United States, ³NorthShore University, United States
Disclosures: Heeseog Kang, None
- FR0160 A novel osteoblast subpopulation initiates endochondral ossification by forming osteogenic capillaries**
 Yukiko Kuroda^{*1}, Ayako Sakamoto¹, Masaki Yoda¹, Yanlin Wu², Hidekazu Takano², Atsushi Momose², Koichi Matsuo¹. ¹Keio University School of Medicine, Japan, ²Tohoku University, Japan
Disclosures: Yukiko Kuroda, None
- FR0163 WNT16 Overexpression Protects Against Glucocorticoid-Induced Bone Loss**
 Karin Nilsson^{*1}, Sofia Movérale-Skrtic², Petra Henning², Jianyao Wu², Karin Gustafsson², Matti Poutanen², Ulf Lerner², Claes Ohlsson². ¹Centre for Bone and Arthritis Research, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden, ²Centre for Bone and Arthritis Research, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden
Disclosures: Karin Nilsson, None

- FR0166 Transcriptional Coactivator JAB1 Promotes Osteoblast Differentiation and Postnatal Bone Formation**
 William Samsa^{*1}, Lindsay Bashur¹, Murali Mamidi¹, Guang Zhou¹. ¹Case Western Reserve University, United States
Disclosures: William Samsa, None
- FR0168 Tgif1 Controls Bone Remodeling and Anabolic Response to Parathyroid Hormone**
 Hanna Taipaleenmäki^{*1}, Hiroaki Saito¹, Andreas Gasser¹, Simona Bolamperti¹, Miki Maeda¹, Matthias Ring¹, Yang Shi¹, Levi Matthies¹, Hartmut Schlüter², Steven A. Johnsen³, Katharina Jähn¹, Courtney L. Long¹, Carl Haasper⁴, Thorsten Gehrke⁵, Vaibhav Saini⁶, Paola Divieti Pajevic⁶, Teresita Bellido⁷, Andre van Wijnen⁸, Khalid S Mohammad⁹, Theresa Guise⁹, Eric Hesse¹. ¹Molecular Skeletal Biology Laboratory, Department of Trauma, Hand and Reconstructive Surgery, University-Medical Center Hamburg-Eppendorf, Germany, ²Institute 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, ⁴HELIOS ENDO Hospital Hamburg, Germany, ⁵HELIOS ENDO Hospital Hamburg , Germany, ⁶Department of Molecular and Cell Biology, Boston University, School of Dental Medicine, United States, ⁷Department of Anatomy and Cell Biology, Indiana University School of Medicine, United States, ⁸Department of Biochemistry and Molecular Biology, Department of Orthopedic Surgery, Mayo Clinic, United States, ⁹Division 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 takahashi². ¹orthopedics, Japan, ²Kyushu 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}. ¹Institute 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 Baltz¹, Charles O'Brien¹. ¹University 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 Jung², Hao-Han Guo¹, Jin-Xiu Pan¹, Xiang-Dong Sun², Lin Mei¹, Wen-Cheng Xiong¹. ¹Department of Neuroscience and Regenerative Medicine, and Department of Neurology, Medical College of Georgia; Charlie Norwood VA Medical Center, United States, ²Department 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 Kawai¹, Tsunao Kishida², Osam Mazda². ¹Nova Southeastern University, United States, ²Kyoto 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. Christie¹, Mitch J. McDonald¹, Nicole J. Ethen¹, Cassandra R. Diegel¹, Bart O. Williams². ¹Van Andel Research Institute, United States, ²Van 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. Charles², Elizabeth P. Henske¹, David J. Kwiatkowski¹, Haoming Liu², Sabah Nobakhti³, Sandra J. Shefelbine³. ¹Division of Pulmonary and Critical Care Medicine, Department of Medicine, Brigham and Women's Hospital and Harvard Medical School, Boston, Massachusetts, USA, United States, ²Division of Rheumatology, Allergy, and Immunology, Department of Medicine, Brigham and Women's Hospital and Harvard Medical School, Boston, Massachusetts, USA, United States, ³Department 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 Wang¹, Biancamaria Ricci², Jianqiu Xiao³, Wei Zou⁴, Deborah Novack⁵, Yousef Abu-Amer², Roberto Civitelli³, Gabriel Mbalaviele³. ¹Division of Bone and Mineral Diseases - Washington University School of Medicine, United States, ²Department of Orthopaedic Surgery-Washington University School of Medicine, United States, ³Division of Bone and Mineral Diseases-Washington University School of Medicine, United States, ⁴Department of Pathology and Immunology-Washington University School of Medicine, United States, ⁵Division 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 ERR α**
 Seyeon Bae^{*1}, Min Joon Lee¹, Se Hwan Mun¹, Kyung-Hyun Park-Min¹. ¹Hospital for special surgery, United States
Disclosures: Seyeon Bae, None
- FR0180 Regulation of Adhesion Signaling in Osteoclasts by Tetraspanin CD82**
 Alexis Bergsma^{*1}, Bart Williams², Cindy Miranti³. ¹Van Andel Institute Graduate School, United States, ²Van Andel Institute, United States, ³University of Arizona Cancer Center, United States
Disclosures: Alexis Bergsma, None
- FR0185 miR-182 regulates osteoclastogenesis and bone remodeling in both physiological and pathological conditions**
 Kazuki Inoue^{*1}, Christine Miller², Gregory Vitone², Mahmoud Elguindy², Liang Zhao³, Baohong Zhao¹. ¹Hospital for Special Surgery/Weill Cornell Medicine, United States, ²Hospital for Special Surgery, United States, ³Nanfang Hospital, The Southern Medical University, China
Disclosures: Kazuki Inoue, None
- FR0187 MMP14 Derived From Macrophages Mediates TRAP+ Osteoclast-independent Inflammatory Bone Destruction In c-Fos-deficient SH3BP2 Cherubism Mice.**
 Mizuho Kittaka^{*1}, Kotoe Mayahara², Tomoyuki Mukai³, Tetsuya Yoshimoto¹, Teruhito Yoshitaka¹, Jeffery P Gorski¹, Yasuyoshi Ueki¹. ¹University of Missouri-Kansas City, School of Dentistry, United States, ²Nihon University School of Dentistry, Japan, ³Department of Rheumatology, Kawasaki Medical School, Japan
Disclosures: Mizuho Kittaka, None

- FR0188 Tgif1-Deficiency Attenuates Aging-Related Bone Loss through ERK1/2 Signaling in Osteoclasts**
Miki Maeda^{*1}, Hiroaki Saito¹, Hanna Taipaleenmäki¹, Eric Hesse¹. ¹Molecular Skeletal Biology Laboratory, Department of Trauma, Hand and Reconstructive Surgery, University-Medical Center Hamburg-Eppendorf, Germany
Disclosures: Miki Maeda, None
- FR0191 Collagen Type VI α 2 Chain Deficiency Causes Trabecular Bone Loss by Enhancing Osteoclast Differentiation**
Hai Pham^{*1}, Ainnie Dar¹, Vardit Kram¹, Li Li¹, Tina Kilts¹, Marian Young¹. ¹Craniofacial and Skeletal Diseases Branch, National Institute of Dental and Craniofacial Research, National Institutes of Health, United States
Disclosures: Hai Pham, None
- FR0192 Identification of the signals provided by osteoclasts to induce FoxP3 in T cells**
Elena Shashkova^{*1}, Anna Cline-Smith¹, Grant Kolar¹, Macey Peterson¹, Suman Nellore¹, Rajeev Aurora¹. ¹Saint Louis University, United States
Disclosures: Elena Shashkova, None
- FR0193 Critical role of Endothelin in Osteoclast Differentiation and Function**
Ji Su Sun^{*1}, Sueyoung Oh², Dong Min Shin¹, Inik Chang². ¹Department of Oral Biology, BK21 PLUS Project, Yonsei University College of Dentistry, Korea, Republic of, ²Department of Oral Biology, Yonsei University College of Dentistry, Korea, Republic of
Disclosures: Ji Su Sun, None
- FR0194 Transgenic expression of TBK1 In Osteoclast Lineage Cells Increased Both Osteoclasts and Bone Formation**
Quanhong Sun^{*1}, Peng Zhang¹, Juraj Adamik¹, Mark Subler², Jolene J. Windle², Laëtitia Michou³, Jacques P. Brown⁴, Noriyoshi Kurihara⁵, G. David Roodman⁵, David W. Dempster⁶, Kostas Verdelis⁷, Hua Zhou⁶, Deborah L. Galson¹. ¹Department of Medicine, Hematology-Oncology Division, University of Pittsburgh Cancer Institute, The McGowan Institute for Regenerative Medicine, University of Pittsburgh, PA, USA, United States, ²Department of Human and Molecular Genetics, Virginia Commonwealth University, Richmond, VA, United States, ³Department of Medicine, Laval University, CHU de Quebec Research Center and Department of Rheumatology, CHU de Quebec, Quebec City, Canada, Canada, ⁴Department of Medicine, Laval University, CHU de Quebec Research Center and Department of Rheumatology, CHU de Quebec, Quebec City, Canada, United States, ⁵Department of Medicine, Hem-Onc Division, Indiana University, Indianapolis, IN, United States, ⁶Regional Bone Center, Helen Hayes Hospital, Route 9W, West Haverstraw, NY 10993, USA, United States, ⁷The Center for Craniofacial Regeneration, Department of Oral Biology, The McGowan Institute for Regenerative Medicine, University of Pittsburgh, Pittsburgh, PA, USA, United States
Disclosures: Quanhong Sun, None
- FR0197 Deletion of the transferrin receptor 1 gene in murine osteoclasts attenuates mitochondria metabolism and cytoskeletal organization and increases trabecular bone mass**
Lei Wang^{*1}, Toshifumi Fujiwara², Bin Fang³, Nukhet Aykin-burns⁴, Zhichang Zhang⁵, Xiaolin Li⁵, Michael L Jennings⁶, Stavros C Manolagas⁷, Jian Zhou¹, Haibo Zhao⁷. ¹Department of Orthopedics, First Affiliated Hospital, Anhui Medical University, China, ²Department of Orthopedic Surgery, Kyushu University, Japan, ³Department of Dermatology, University of Arkansas for Medical Sciences, United States, ⁴Division of Radiation Health, Department of Pharmaceutical Sciences, University of Arkansas for Medical Sciences, United States, ⁵Department of Orthopedics, Shanghai Jiao Tong University Affiliated Sixth People's Hospital, China, ⁶Department of Physiology and Biophysics, University of Arkansas for Medical Sciences, United States, ⁷Division of Endocrinology and Metabolism, Department of Internal Medicine, University of Arkansas for Medical Sciences, United States
Disclosures: Lei Wang, None

- FR0198 Kindlin-2 in Osteocytes Controls Bone Remodeling**
 Huijing Cao^{*1}, Guozhi Xiao¹. ¹SUSTech, China
Disclosures: Huijing Cao, None
- FR0200 Acute Increase in Osteocyte Oxidative Stress at Focal Microdamage Site in Bone**
 Dorra Frikha-Benayed^{*1}, Jelena Basta-Plajkic¹, Robert J Majeska¹, Mitchell B Schaffler¹.
¹City College of New York, United States
Disclosures: Dorra Frikha-Benayed, None
- FR0201 Autoregulation of osteocyte through estrogen-miRNA-Sema3A-Nrp1 axis**
 Mikihito Hayashi^{*1}, Tomoki Nakashima², Hiroshi Takayanagi³. ¹Department of Cell Signaling, Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University, Japan, ²Department of Cell Signaling, Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University; Core Research for Evolutional Science and Technology (CREST), Japan Agency for Medical Research and Development (AMED), Japan, ³Department of Immunology, Graduate School of Medicine and Faculty of Medicine, The University of Tokyo, Japan
Disclosures: Mikihito Hayashi, None
- FR0202 Changes in osteocyte calcium signaling *in vivo* due to estrogen withdrawal**
 Karl Lewis^{*1}, Joyce Louie¹, Samuel Stephen¹, David C. Spray², Mia M. Thi², Zeynep Seref-Ferlengez², Robert J. Majeska¹, Sheldon Weinbaum¹, Mitchell B. Schaffler¹.
¹The City College of New York, United States, ²Albert Einstein College of Medicine, United States
Disclosures: Karl Lewis, None
- FR0205 Unexpected decrease in osteoclast number and bone resorption with increased osteocyte apoptosis in the absence of osteocytic miR21**
 Rafael Pacheco-Costa^{*1}, Hannah Davis¹, Emily Atkinson¹, Julian Dilley¹, Carmen Herrera¹, Keith Condon¹, Mircea Ivan¹, Teresita Bellido¹, Lilian Plotkin¹. ¹Indiana University School of Medicine, United States
Disclosures: Rafael Pacheco-Costa, None
- FR0208 Finite Element Analysis of 3D-DXA Femur Reconstructions to Predict Hip Fracture**
 Luis Del Rio^{*1}, Carlos Ruiz², Andy Luis Olivares², Silvana Di Gregorio¹, Simone Tassani³, Silvia Martinez-Pardo⁴, Mihail Gregorov⁴, Jérôme Noailly³, Miguel Angel Gonzalez³.
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Disclosures: Luis Del Rio, None
- FR0209 Analyzing the cortical and trabecular bone of the femur of patients with vertebral fractures by 3D-DXA.**
 AM Galich^{*1}, L Humbert², R Winzenreith², L Maffei¹, V Premrou¹, A Frigeri¹, E Vega¹.
¹Endocrinologist, Argentina, ²Researcher, Spain
Disclosures: AM Galich, None

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- FR0211 Prediction of Hip Fracture in Post-menopausal Women using Artificial Neural Network Approach**
 Thao P. Ho-Le^{*1}, Jackie R. Center², John A. Eisman³, Hung T. Nguyen¹, Tuan V. Nguyen⁴.
¹Centre of Health Technologies, FEIT, University of Technology Sydney, Australia, ²Bone Biology Division, Garvan Institute of Medical Research; St Vincent Clinical School, UNSW, Australia , Australia, ³Bone Biology Division, Garvan Institute of Medical Research; St Vincent Clinical School, UNSW, Australia;School of Medicine, Sydney University of Notre Dame , Australia, ⁴University 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
- FR0212 Vertebral Fracture Discrimination for QCT, HR-QCT, and CTXA based DXA**
 Lukas Huber^{*1}, Timo Damm¹, Wolfram Timm², Julian Ramin Andresen³, Claus-Christian Glüer¹, Reimer Andresen⁴. ¹Section Biomedical Imaging, Department of Radiology and Neuroradiology, UKSH, Christian-Albrechts-Universität zu Kiel, Germany, Germany,
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Disclosures: Lukas Huber, None
- FR0214 Associations of TBS and fractures differ among ethnicities: a study of NHANES 2005-2008**
 Rajesh Jain^{*1}, Tamara Vokes¹. ¹University of Chicago Medicine, United States
Disclosures: Rajesh Jain, None
- FR0216 Adding Cortical Porosity to Garvan or FRAX tools Improve Identification of Postmenopausal Women with Nonvertebral Fracture: The Tromsø Study**
 Rita Kral^{*1}, Marit Osima², Tove T. Borgen³, Elin Richardsen⁴, Åshild Bjørnerem¹.
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²Department of Community Medicine, UiT The Arctic University of Norway, Tromsø, Department of Orthopaedic Surgery, University Hospital of North Norway, Tromsø, Norway, ³Department of Rheumatology, Vestre Viken Hospital Trust, Hospital of Drammen, Norway, ⁴Department of Medical Biology, UiT The Arctic University of Norway, Tromsø, Department of Pathology, University Hospital of North Norway, Tromsø, Norway, Norway
Disclosures: Rita Kral, None
- FR0217 Are grade 1 vertebral fracture, fractures?**
 Brian Lentle^{*1}, Claudio Berger², Linda Probyn³, Jacques P. Brown⁴, Lisa Langsetmo⁵, Ben Fine³, Kevin Lian¹, Arvind Shergill³, Jacques Trollip¹, Stuart Jackson⁶, William D. Leslie⁷, Jerilynn C. Prior¹, Stephanie M. Kaiser⁸, David A. Hanley⁹, Angela M. Cheung³, Jonathan D. Adachi¹⁰, Tanveer Towheed¹¹, K. Shawn Davison¹², David Goltzman¹³. ¹University of British Columbia, Canada, ²McGill University Health Centre- Researc Institute, Canada, ³University of Toronto, Canada, ⁴Université Laval, Canada, ⁵University of Minnesota, United States, ⁶University of Alberta, Canada, ⁷University of Manitoba, Canada, ⁸Dalhousie University, Canada, ⁹University of Calgary, Canada, ¹⁰McMaster University, Canada, ¹¹Queens University, Canada, ¹²University of Victoria, Canada, ¹³McGill 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 Shevroja², Helena Johansson³, Anders Oden³, Eugene McCloskey³, John Kanis³, Didier Hans². ¹University of Manitoba, Canada, ²Lausanne University Hospital, Switzerland, ³University 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 Kopperdahl², Cora Lewis¹, Michael Saddekni¹, Kenneth Saag¹, Tony Keaveny³. ¹University of Alabama Birmingham, United States, ²O.N. Diagnostics, United States, ³University of California Berkeley, United States
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- FR0222 Changes in Bone Marrow Fat Overestimate Trabecular Bone Loss by Single-Energy Quantitated Computed Tomography**
 Jad Sfeir^{*1}, Matthew Drake¹, Elizabeth Atkinson¹, Jon Camp¹, Amanda Tweed¹, Louise McCready¹, Lifeng Yu¹, Mark Adkins¹, Shreyasee Amin¹, Sundeep Khosla¹. ¹Mayo 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 Clarke¹, Robert Wermers¹, Robert Tiegs¹, Ann Kearns¹, Kurt Kennel¹, Sundeep Khosla¹, Matthew Drake¹. ¹Mayo 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 Greendale¹, Jane Cauley², Joan Lo³, Arun Karlamangla¹. ¹UCLA, United States, ²University of Pittsburgh, United States, ³Kaiser, United States
Disclosures: Albert Shieh, None
- FR0229 Peripheral Arterial Disease Predicts Hip Fracture in Men. Results from the MrOS Sweden Study**
 Tove Bokrantz^{*1}, Claes Ohlsson², Mattias Lorentzon³, Magnus Karlsson¹, sten Ljunggren⁴, Karin Manhem¹, Dan Mellström⁵. ¹Department of Molecular and Clinical Medicine, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden, Sweden, ²Centre for Bone and Arthritis Research(CBAR), Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden, Sweden, ³Department of Geriatric Medicine, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden, Sweden, ⁴Department of Medical Sciences, University of Uppsala, Uppsala, Sweden, Sweden, ⁵Department of Geriatrics, Institute of Medicine, Sahlgrenska Academy, Centre for Bone and Arthritis Research(CBAR)University of Gothenburg, Gothenburg, Sweden, Sweden
Disclosures: Tove Bokrantz, None
- 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 Vo¹, Lisa Langsetmo¹, John Schousboe², Kristine Yaffe³, Kristine Ensrud⁴. ¹University of Minnesota, United States, ²Health Partners Research Foundation, United States, ³University of California, United States, ⁴Minneapolis 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 Oei¹, Taulant Muka¹, Enisa Shevroja², Josje Schoufour¹, Oscar Franco¹, Carola Zillikens¹, Eugene Mc Closkey³, William Leslie⁴, Olivier Lamy², Edwin Oei¹, Didier Hans², Fernando Rivadeneira¹. ¹Erasmus MC, Netherlands, ²University of Lausanne, Switzerland, ³University of Sheffield, United Kingdom, ⁴University of Manitoba, Canada
Disclosures: Fjorda Koromani, None

- FR0234 Prevalence and Characteristics of Atypical Periprosthetic Femoral Fractures**
 Jean-Thomas Leclerc^{*1}, Laëtitia Michou², François Vaillancourt¹, Stéphane Pelet¹, David Simonyan³, Etienne Belzile¹. ¹Division of orthopedic surgery, CHU de Québec-Université Laval, Canada, ²Division of rheumatology, CHU de Québec-Université Laval, Canada, ³CHU de Québec-Université Laval, research centre, Canada
Disclosures: Jean-Thomas Leclerc, None
- FR0238 Cathepsins B and S Are Novel Biomarkers for Bone Mineral Density: A Mendelian Randomization Study**
 John Morris^{*1}, John Kemp², David Evans², Brent Richards³. ¹Department of Human Genetics, McGill University, Canada, ²The University of Queensland Diamantina Institute, Australia, ³Department of Medicine, McGill University, Canada
Disclosures: John Morris, None
- FR0241 The association between type 2 diabetes mellitus, hip fracture, and post-hip-fracture mortality: a multi-state cohort analysis**
 Cristian Tebé^{*1}, Daniel Martínez-Laguna², Cristina Carbonell-Abella³, Carlen Reyes³, Daniel Prieto-Alhambra⁴. ¹Statistical Assessment Service at Bellvitge Biomedical Research Institute (IDIBELL), Spain, ²GREMPAL Research Group (Idiap Jordi Gol Primary Care Research Institute) and CIBERFes, Universitat Autònoma de Barcelona, Spain, ³GREMPAL Research Group, Idiap Jordi gol, CIBERFes and Universitat Autònoma de Barcelona, Spain, ⁴Centre for Statistics in Medicine and Nuffield Department of Orthopaedics, Rheumatology, and Musculoskeletal Sciences (NDORMS), University of Oxford, United Kingdom
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 Ernst², Fergus Caskey³, Nigel Arden⁴, Yoav Ben-Shlomo³, Mads Nybo⁵, Katrine Hass Rubin², Andrew Judge¹, Cyrus Cooper¹, M Kassim Javaid⁴, Pernille Hermann⁶, Bo Abrahamsen², Daniel Prieto-Alhambra¹. ¹Centre for Statistics in Medicine and Nuffield Department of Orthopaedics, Rheumatology, and Musculoskeletal Sciences (NDORMS), University of Oxford, United Kingdom, ²OPEN, Department of Health, University of Southern Denmark, Denmark, ³School of Social and Community Medicine, University of Bristol, United Kingdom, ⁴Nuffield Department of Orthopaedics, Rheumatology, and Musculoskeletal Sciences (NDORMS), University of Oxford, United Kingdom, ⁵Department of Clinical Biochemistry, Odense University Hospital, Denmark, ⁶Department of Endocrinology, Odense University Hospital, Denmark
Disclosures: Sanni Ali, None
- 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 Magaziner¹, Michelle Shardell², Laura Yerges-Armstrong³, Denise Orwig¹, Gregory Hicks⁴, Marc Hochberg¹. ¹University of Maryland School of Medicine, United States, ²National Institute on Aging, United States, ³GlaxoSmithKline, United States, ⁴University 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 Koromani², William Leslie³, Berengere Aubry-Rozier⁴, Edwin Oei⁵, Olivier Lamy⁶, Fernando Rivadeneira⁷, Didier Hans⁶. ¹Center of Bone diseases, Bone and Joint Department, Lausanne University Hospital and Departments of Internal Medicine and Epidemiology, Erasmus MC, Rotterdam, The Netherlands, Switzerland, ²Departments of Internal Medicine and Epidemiology, Erasmus MC, Rotterdam, The Netherlands, Netherlands, ³Department of Internal Medicine, University of Manitoba, Winnipeg, Manitoba, Canada, Canada, ⁴1 Center of Bone diseases, Bone and Joint Department, Lausanne University Hospital, Lausanne, Switzerland, Switzerland, ⁵Department of Radiology, Erasmus Medical Center, Rotterdam, The Netherlands, Netherlands, ⁶Center of Bone diseases, Bone and Joint Department, Lausanne University Hospital, Switzerland, ⁷Departments 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**
 Pawel Szule^{*1}, Jean Charles Rousseau¹, Cindy Bertholon¹, Roland Chapurlat¹. ¹INSERM UMR1033, University of Lyon, Hospices Civils de Lyon, France
Disclosures: Pawel Szule, None
- FR0247 Does High Serum 25-Hydroxyvitamin D Prevent Falls in Older Women After All?**
 Kirsti Uusi-Rasi^{*1}, Radhika Patil¹, Saija Karinkanta¹, Kari Tokola¹, Pekka Kannus¹, Christel Lamberg-Allardt², Harri Sievänen¹. ¹The UKK Institute for Health Promotion Research, Finland, ²University 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 Buzkova², Po-Yin Chang³, Neil A. Zakai⁴, Howard A. Fink⁵, John A. Robbins⁶, Joy Y. Wu¹, Jennifer S. Lee⁷. ¹Division of Endocrinology, Stanford University School of Medicine, United States, ²University of Washington, United States, ³University of California, Davis, United States, ⁴Department of Medicine and Department of Pathology and Laboratory Medicine, University of Vermont, United States, ⁵GRECC, Veteran Affairs Health Care System, United States, ⁶University of California, Davis, United States, ⁷Division of Endocrinology, Stanford University School of Medicine and Palo Alto Veteran Affairs Health Care System, United States
Disclosures: Rodrigo J. Valderrabano, None
- 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 Burt², Eva Szabo¹, Steven K. Boyd², Shannon Reitsma³, Hana Gillick³, Hugo J.W. Fung⁴, Tiffany Yan⁵, Claudie Berger⁶, Heather Macdonald⁷, Leigh Gabel⁷, Maureen C. Ashe⁷, Danmei Liu⁸, Jerilynn Prior⁷, David A. Hanley², Chantal Kawalilak⁹, Andrew Frank-Wilson¹⁰, Saija Kontulainen⁹, Shawn Davison¹¹, Wojciech Olszynski⁹, George Ioannidis³, Christopher L. Gordon³, Colin E. Webber³, Karen A. Beattie³, Alexandra Papaioannou³, Lora Giangregorio¹², Robert G. Josse¹³, Norma MacIntyre³, Tassos Anatassiades¹⁴, David Goltzman⁶, Angela M. Cheung¹, Jonathan D. Adachi³, CaMos Bone Quality Study for the³. ¹University Health Network, Canada, ²University of Calgary, Canada, ³McMaster University, Canada, ⁴University of Toronto, Canada, ⁵Ryerson University, Canada, ⁶McGill University, Canada, ⁷University of British Columbia, Canada, ⁸Centre for Hip Health and Mobility, Canada, ⁹University of Saskatchewan, Canada, ¹⁰National Institute on Aging, United States, ¹¹University of Victoria, Canada, ¹²University of Waterloo, Canada, ¹³St. Michael's Hospital, Canada, ¹⁴Queen's University, Canada
Disclosures: Andy Kin On Wong, None

- FR0250 Trends in Post-fracture Care for Manitoba, Canada 2000-2014: A Population-Based Analysis**
 Yang Cui^{*1}, Shuman Yang², Colleen Metge³, William Leslie², ¹George & Fay Yee Centre for Healthcare Innovation, University of Manitoba, Canada, ²University of Manitoba, Canada, ³George & Fay Yee Centre for Healthcare Innovation, Canada
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 King², Phillip Lawrence³, Richard Nelson¹, Joanne LaFleur¹, Grant Cannon¹, Scott Nelson⁴. ¹Salt Lake City Veterans Affairs Medical Center and University of Utah, United States, ²Kaiser Permanente Colorado, United States, ³Roseman University of Health Sciences, United States, ⁴Vanderbilt University Medical Center, United States
Disclosures: Karla Miller, None
- FR0252 Opportunistic Identification of Vertebral Fractures from Cross-Sectional Imaging and Impact on Fracture Liaison Services**
 Emily Russell^{*1}, Emma Fower², Kassim Javaid². ¹Oxford Medical School, United Kingdom, ²Oxford University Hospitals, United Kingdom
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 Adachi², David Goltzman², Alexandra Papaioannou², Tanveer Towheed², Tassos Anastassiades², Rich Barron³. ¹Policy Analysis Inc. (PAI), United States, ²Canadian Multicentre Osteoporosis Study (CaMos), Canada, ³Amgen, 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 Robertson², Roumen Stamenkov³, Catherine Stapledon², Gerald Atkins², Peter Clifton¹, Lucian Solomon⁴, Paul Anderson¹, Howard Morris¹. ¹University of South Australia, Australia, ²The University of Adelaide, Australia, ³Royal Adelaide Hospital, Australia, ⁴The 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 Walkup², Walter Ambrosius², Stephen Kritchevsky², Leon Lenchik², Sue Shapses³, Barbara Nicklas², Anthony Marsh¹, W. Jack Rejeski¹. ¹Wake Forest University, United States, ²Wake Forest School of Medicine, United States, ³Rutgers 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 Shikany², Andrew Burghardt³, Peggy Cawthon³, Jane Cauley⁴, Eric Orwoll⁵, Douglas Bauer³, John Schousboe⁶, Brent Taylor⁷, Tien Vo¹, Elizabeth Barrett-Connor⁸, Kristine Ensrud⁷. ¹University of Minnesota, United States, ²University of Alabama, United States, ³University of California, San Francisco, United States, ⁴University of Pittsburgh, United States, ⁵Oregon Health and Science University, United States, ⁶Park Nicollet Clinic and Health Partners Institute, United States, ⁷University of Minnesota and VA Health Care System, United States, ⁸University 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 Fu¹, Micaela Karlsen¹, Joachim Sackey¹, Jian Shi¹, Karl Insogna², Meryl LeBoff³, Sue Shapses⁴, Connie Weaver⁵, Taylor Wallace⁶, Mei Chung¹.
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Disclosures: Marissa Shams-White, None
- FR0261 Type of Sports Participation Modulates Risk For Low BMD in Athletes With Female Athlete Triad**
 Adam Tenforde^{*1}, Kristin Sainani², Jennifer Carlson², Neville Golden², Michael Fredericson². ¹Spaulding Rehabilitation Hospital, Harvard University, United States, ²Stanford University, United States
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 Blocki², Kim Hilgers², Jennifer Fenske², Brianne Thicke¹, Joshua Farr¹, Sundeep Khosla¹. ¹Mayo Clinic, United States, ²DiaSorin, 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 Alawady², Mohamed Meghil³, Pheba Abraham⁴, Mohamed Awad⁵, Christopher Cutler⁶, Mohammed Elsalanty⁷. ¹Oral Biology Dept., graduate school, Augusta University, United States, ²University of Florida College of Dentistry, United States, ³Departments of Oral Biology and Periodontics, Augusta University, United States, ⁴oral biology, Augusta University, United States, ⁵Augusta University, United States, ⁶professor and chair Dept. of periodontics, Associate Dean for Research, Dental College of Georgia, Augusta University, United States, ⁷Associate 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**
 Yuqi Guo^{*1}, Jian Yang¹, Xin Li¹. ¹New York University, United States
Disclosures: Yuqi Guo, None
- FR0268 Type 2 Diabetes Impairs Insulin-Stimulated Blood Flow in Femur and Lumbar Vertebra of Hyperphagic OLETF Rats**
 Pamela Hinton^{*1}, Rebecca Dirkes¹, T. Dylan Olver¹. ¹University of Missouri, United States
Disclosures: Pamela Hinton, None
- FR0270 MFG-E8 deficiency: A model of inflamm-aging associated bone loss robustly rescued by teriparatide**
 Megan Michalski^{*1}, Anna Seydel¹, Erica Siisnets¹, Benjamin Sinder¹, Amy Koh², Kamran Atabai³, Jose Aguirre⁴, Hernan Roca¹, Laurie McCauley¹. ¹University of Michigan, United States, ²University of Michigan, United States, ³University of California, San Francisco, United States, ⁴University 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 Fang¹, Hartmut Malluche², Keith Hruska¹. ¹Department of Pediatrics, Nephrology, Washington University School of Medicine, United States, ²Division of Nephrology, Bone and Mineral Metabolism, University of Kentucky, United States
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- FR0272 Role of Progranulin in Skeletal Homeostasis in Female Mice**
 Liping Wang^{*1}, Theresa Roth¹, Robert Nissenson¹. ¹San 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 Grebennikova¹, Alexey Nikitin², Olga Brovkina², Alexander Solodovnikov³, Liudmila Rozhinskaya¹, Galina Melnichenko¹. ¹Endocrinology Research Centre, Russian Federation, ²Federal Research and Clinical Center FMBA, Russian Federation, ³Ural 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**
 Louis-Charles Desbiens^{*1}, Aboubacar Sidibe¹, Rémi Goupil², François Madore², Fabrice Mac-Way¹. ¹CHU de Québec Research Center, L'Hôtel-Dieu-de-Québec Hospital, Endocrinology and Nephrology axis, Faculty and Department of Medicine, Laval University, Canada, ²Centre de recherche de l'Hôpital du Sacré-Coeur de Montréal, Faculty and Department of Medicine, Montreal University, Canada
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 Yasui¹, Kenjiro Kohri², Toshio Matsumoto³, Adrian LeBlanc⁴, Jean Sibonga⁵, Elisabeth Spector⁶, Jeff Jones⁴, Jay Shapiro⁷, Thomas Lang⁸, Linda Shackelford⁹, Scott Smith⁵, Harlan Evans⁹, Joyce Keyak¹⁰, Hiroshi Ohshima¹¹.
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Disclosures: Atsushi Okada, None
- FR0282 Hip QCT for Assessment of Trabecular Bone Loss and Recovery after Space Flight: A Pilot Study**
 Jean Sibonga^{*1}, Thomas Lang², Harlan Evans³, Elisabeth Spector³. ¹NASA-Johnson Space Center, United States, ²UCSF, United States, ³KBRwyle, United States
Disclosures: Jean Sibonga, None
- FR0286 Predictors of Improvement in Bone Mineral Density after Celiac Disease Diagnosis**
 Haley M. Zylberberg^{*1}, Benjamin Lebwohl¹, Arindam RoyChoudhury², Minghao Liu³, Marcella Walker⁴, Peter H.R. Green¹. ¹Celiac Disease Center at Columbia University, College of Physicians and Surgeons, United States, ²Mailman School of Public Health, Columbia University, United States, ³Dept of Medicine Endocrinology Columbia University, College of Physicians and Surgeons, United States, ⁴Division 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 Hansen¹, Justin Cobb¹, Richard Abel¹. ¹Imperial 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 Khosla¹, Robert Rizza¹, Jennifer Geske¹, Bart Clarke¹. ¹Mayo 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 Yoel¹, Lior Baraf¹, Dayana Cohen¹, Tamar Eshkoli¹, Avital Blum¹, Vera Polischuk¹, Poliana Shamgar¹, Michal Lamberger¹, Dvora Lieberman¹, Victor Novack¹, Ethel Siris², Merav Fraenkel¹. ¹Soroka University Medical Center and the Faculty of Health Sciences, Ben-Gurion University of the Negev, Israel, ²Columbia 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 Kang¹, Vance Warren¹, William Maxwell¹, Benjamin Levinson¹, Jarema Kochan¹, Ling He¹, Merav Baz-Hecht¹, Chie Fukuda², Junichi Koga², Eisuke Tsuda², Ko Watanabe². ¹Daiichi Sankyo, Inc, United States, ²Daiichi 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 Kim², Jae Suk Chang², Jai Hyung Park³, Hyun Chul Shon⁴, Kwang Hwan Jung⁵, Chul-Ho Kim², Seong-Eun Byun⁶, Chang-wug Oh⁷. ¹Haeundae Paik Hospital, Inje University, Korea, Republic of, ²Asan Medical Center, University of Ulsan, Korea, Republic of, ³Kangbuk Samsung Hospital, Sungkyunkwan University, Korea, Republic of, ⁴Chungbuk National University Hospital, Korea, Republic of, ⁵Ulsan University Hospital, Korea, Republic of, ⁶CHA Bundang Medical Center, CHA university, Korea, Republic of, ⁷Kyungpook 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 Park², Jae Young Hong¹, Tae Wook Kang¹. ¹Korea Univeresity Hospital, Korea, Republic of, ²Korea 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. Parsons², N. C Harvey¹, L. Shephstone³, J. A. Kanis⁴, E. Lenaghan³, S. Clarke⁵, R. Fordham³, N. Gittoes⁶, I. Harvey³, R. Holland³, A. Heawood⁵, N. Redmond⁵, A. Howe³, T. Marshall³, T.J. Peters⁵, D. Torgerson⁷, T.W. O'Neill⁸, E. McCloskey⁹. ¹MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, ²RC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, ³University of East Anglia, United Kingdom, ⁴Centre for Metabolic Bone Diseases, University of Sheffield and Institute for Health and Ageing, Catholic University of Australia , United Kingdom, ⁵University of Bristol, United Kingdom, ⁶Queen Elizabeth Hospital, United Kingdom, ⁷University of York, United Kingdom, ⁸University of Manchester, United Kingdom, ⁹Centre 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 Warner¹, Pooja Kulkarni¹, Mahalakshi Honasoge¹, Arti Bhan¹, Shiri Levy¹, George Divine¹, D. Sudhaker Rao¹. ¹Henry 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 Pannacciulli², P Geusens³, J Adachi⁴, E Lespessailles⁵, J Malouf-Serra⁶, O Messina⁷, A Wang², RB Wagman², WF Lems⁸. ¹University of Alabama, United States, ²Amgen Inc., United States, ³Maastricht University, Netherlands, ⁴McMaster University, Canada, ⁵University Hospital Orleans, France, ⁶Hospital San Pablo, Spain, ⁷Cosme Argerich Hospital, Argentina, ⁸VU 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 Karabelas², Ahmed Kaseb³. ¹Philadelphia College of Osteopathic Medicine (PCOM), United States, ²Private Investigator, United States, ³Department 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 Edwards², Elaine Gregory¹, Keith Gordon¹, Rama Parachuri³, Ifaz Haider², Karen Troy⁴, Thomas Schnitzer¹. ¹Northwestern University, United States, ²University of Calgary, Canada, ³Edward Hines Jr. VA Hospital, United States, ⁴Worchester Polytechnic Institute, United States
Disclosures: Narina Simonian, None
- FR0305 Combination treatment with teriparatide and denosumab improves spine trabecular microarchitecture in DATA-Switch: a randomized controlled trial**
 Joy Tsai^{*1}, Linda Jiang¹, Hang Lee¹, Didier Hans², Benjamin Leder¹. ¹Massachusetts General Hospital, United States, ²Lausanne 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 Minamizaki¹, Shota Ito², Nushrat Sarmin¹, Chise Fujimoto¹, Yuko Nakao², Kotaro Tanimoto², Shinji Hiyama³, Yuji Yoshioka¹. ¹Department of Calcified Tissue Biology, Graduate School of Biomedical & Health Sciences, Hiroshima University, Japan, Japan, ²Department of Orthodontics and Craniofacial Developmental Biology, Hiroshima University Graduate School of Biomedical & Health Sciences, Hiroshima, Japan, Japan, ³Department 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 Kremer¹. ¹McGill University, Canada
Disclosures: Jiarong Li, None
- FR0313 Exosomes Derived from Mesenchymal Stem Cells Promotes Osteogenesis and Angiogenesis during Hyperhomocysteinemia in Bone**
 Neetu Tyagi^{*1}, jyotirmaya behera¹, Kimberly E. Kelly Kimberly E. Kelly¹, Akash George¹, Suresh Tyagi¹. ¹University of Louisville, United States
Disclosures: Neetu Tyagi, None

- FR0314 The Deleterious Effects of IGF1 Signaling on the Development of Post-Traumatic Osteoarthritis**
 Yongmei Wang^{*1}, Faming Tian¹, Alexis Dang², Zara Butte³, Ling Chen⁴, Misun Kang⁴, Sunita Ho⁴, Daniel Bikle¹. ¹Endocrine Unit, University of California, San Francisco/ San Francisco VA Health Care System, United States, ²Department of Orthopaedic Surgery, University of California, San Francisco/San Francisco VA Health Care System, United States, ³Department of Orthopaedic Surgery, University of California, San Francisco/ San Francisco VA Health Care System, United States, ⁴Bioengineering & Biomaterials Micro-CT and Imaging Facility, University of California, San Francisco, United States
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- 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 Chang¹, Lin Kang², Yi-Shan Lin¹, Sung-Yen Lin³, Je-Ken Chang³, Shih-Tse Chen⁴, Mei-Ling Ho¹. ¹Kaohsiung Medical University, Taiwan, Province of China, ²National Cheng Kung University Hospital, Taiwan, Province of China, ³Kaohsiung Medical University Hospital, Taiwan, Province of China, ⁴National 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 Neuburg¹, Claire Gerber¹, Xueyan Wang¹, Corey Dussold¹, Lixin Qi¹, Guillaume Courbon¹, Aline Martin¹, Myles Wolf², Valentin David¹. ¹Division 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, ²Division 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 Okada¹, Tsuyoshi Karibe¹, Yoshiharu Hiruma¹, Seiichiro Kumakura¹, Eisuke Tsuda². ¹R&D Division, Daiichi Sankyo Co., Ltd, Japan, ²R&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 Tsuda¹, Akiko Okada¹, Norio Amizuka², Tomoka Hasegawa², Tsuyoshi Karibe¹, Yoshiharu Hiruma¹, Nana Takagi¹, Seiichiro Kumakura¹. ¹R&D Division, Daiichi Sankyo Co., Ltd, Japan, ²Department of Developmental Biology of Hard Tissue, Faculty of Dental Medicine, Hokkaido University, Japan
Disclosures: Chie Fukuda, None
- FR0320 A Novel H₂S-releasing Amino-Bisphosphonate Which Combines Bone Anti-Catabolic And Anabolic Functions**
 Francesco Grassi^{*1}, Laura Gambari¹, Gina Lisignoli². ¹Lab RAMSES, Istituto Ortopedico Rizzoli, Italy, ²Lab Immunoreumatologia e Rigenerazione Tissutale, Istituto Ortopedico Rizzoli, Italy
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 Krusch², Lars Holten-Andersen¹, Joachim Zettler², Felix Cleemann², Caroline Rasmussen¹, Kennett Sprogoe¹, David Karpl³, Vibeke Miller Breinholt¹. ¹Ascendis Pharma A/S, Denmark, ²Ascendis Pharma GmbH, Germany, ³Ascendis Pharma Inc., United States
Disclosures: Susanne Pihl, None

- FR0325 High-throughput Genetic Screens Reveal Targets of Nitrogen-containing Bisphosphonates**
 Lauren Surface^{*1}, Zhou Yu¹, Ji Woong Park², Erin O'Shea³, Timothy Peterson², ¹Harvard University, United States, ²Washington University School of Medicine, United States, ³Harvard 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 Zhao¹, Wonsae Lee¹, Yang Liu¹, Yihan Li¹, Chantal de Bakkar¹, Ling Qin¹, X. Sherry Liu¹. ¹University 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 Imel², Agnès Linglart³, Annemieke Boot⁴, Wolfgang Höglér⁵, Raja Padidela⁶, William van't Hoff⁷, Anthony Portale⁸, Meng Mao⁹, Alison Skrinar¹⁰, Javier San Martin¹⁰, Michael Whyte¹¹. ¹Yale University School of Medicine, United States, ²Indiana University School of Medicine, United States, ³Hôpital Bicêtre, France, ⁴University of Groningen, Netherlands, ⁵Birmingham Children's Hospital, United Kingdom, ⁶Royal Manchester Children's Hospital, United Kingdom, ⁷Great Ormond Street Hospital, United Kingdom, ⁸University of California, San Francisco School of Medicine, United States, ⁹Ultragenyx Pharmaceutical Inc., United States, ¹⁰Ultragenyx Pharmaceutical Inc, United States, ¹¹Shriners 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. Hsiao², Genevieve Baujat³, Richard Keen⁴, Donna R. Grogan⁵, Robert J. Pignolo⁶. ¹The University of Pennsylvania, United States, ²Institute of Human Genetics and the Division of Endocrinology & Metabolism, University of California, San Francisco, United States, ³Laboratoire de Génétique Moléculaire, Institut de Recherche et Hôpital Necker-Enfants Malades, France, ⁴The Royal National Orthopaedic Hospital (Stanmore), United Kingdom, ⁵Clementia Pharmaceuticals Inc., United States, ⁶Geriatric Medicine & Gerontology, Mayo Clinic, United States
Disclosures: Frederick S. Kaplan, None
- FR0336 Transient Osteoporosis: Clinical Spectrum and Associated Risk Factors**
 Anupam Kotwal^{*1}, Daniela Hurtado¹, Jad Sfeir¹, Robert Wermers¹. ¹Division 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 He¹, Wen-Zhen Fu¹, Zhen-Lin Zhang¹. ¹Metabolic 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 Gonzalez², Sebastian Rodriguez³, Ana Monegal³, Ana Monegal³, Nuria Guanabens³. ¹Rheumatology Department, Hospital Clinic. University of Barcelona, Spain, ²Immunology Department. Hospital Clinic., Spain, ³Rheumatology 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 Sikjaer², Lars Rejnmark³. ¹MD/Ph.D.-student, Denmark, ²MD, Ph.D., Denmark, ³Clinical 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 Kaci², Oliver Keil³, Susann Aderman³, Ulrich Hersel³, Maxence Cornille⁴, Martin Guillot⁵, Nancy Doyle⁵, Per Mygind¹, Aurore Valera⁶, Kennett Sprogoe¹, Laurence Legeai-Mallet². ¹Ascendis Pharma A/S, Denmark, ²Imagine Institute, Denmark, ³Ascendis Pharma GmbH, Denmark, ⁴Imagine Institute, France, ⁵Charles River Laboratories, Canada, ⁶Charles 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 Sun², Yujie Sun³, Kenzo Morinaga³, QingQing Wu³, Mark Lundy⁴, Charles McKenna⁵, Frank Ebetino², Ichiro Nishimura³. ¹David Geffen School of Medicine at UCLA, United States, ²BioVinc LLC, United States, ³UCLA School of Dentistry, United States, ⁴Indiana University, United States, ⁵University of Southern California, United States
Disclosures: Akishige Hokugo, None
- FR0347 Inflammation and increased osteoclastogenesis in osteogenesis imperfecta murine**
 Ivo Kalajzic^{*12}, Emilie Roeder¹², Xi Wang¹², Hector Leonardo Aguila¹², Sun Kyong Lee¹², Danka Greovic³, Brya Matthews¹². ¹UConn Health, United States, ²UConn Health, United States, ³University 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 α 2(I) collagen chain**
 Elena Makareeva^{*1}, Shakib Omari¹, Anna Roberts-Pilgrim¹, Laura Gorrell¹, Edward Mertz¹, Sergey Leikin¹. ¹SPB, 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 Martins², Marie Demay³. ¹Brigham and Women's Hospital and MGH, United States, ²Massachusetts General Hospital, United States, ³Massachusetts 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 Guess¹, Kathryn Cheah², Masahiro Iwamoto³, Edwin Horwitz¹. ¹Center for Childhood Cancer and Blood Diseases, The Research Institute at Nationwide Children's Hospital, United States, ²Department of Biochemistry, and Centre for Reproduction, Development and Growth, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong, ³Department 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 Langaeel¹, Issam Hamadeh², Joseph Katz³, Alberto Riva⁴, Jan S Moreb⁵, Yan Gong¹. ¹Department of Pharmacotherapy and Translational Research and Center for Pharmacogenomics, College of Pharmacy, University of Florida, United States, ²Cancer Pharmacology Department, Levine Cancer Institute, Charlotte NC, USA., United States, ³Department of Oral Medicine, College of Dentistry, University of Florida, Gainesville FL, USA., United States, ⁴Bioinformatics Core, Interdisciplinary Center for Biotechnology Research, University of Florida, Gainesville FL, USA., United States, ⁵Department 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 Schilling¹, Stefano Zanotti¹. ¹UConn 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 Kim², Yoosik Youm³, Hyeon Chang Kim⁴, Yumie Rhee¹. ¹Department of Internal Medicine, Severance Hospital, Endocrine Research Institute, Yonsei University College of Medicine, Korea, Republic of, ²Division of Geriatrics, Department of Internal Medicine, Severance Hospital, Yonsei University College of Medicine, Korea, Republic of, ³Department of Sociology, Yonsei University College of Social Sciences, Korea, Republic of, ⁴Department 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 Bartosch¹, Linnea Malmgren¹, David Buchebner¹, Fiona E McGuigan¹. ¹Lund 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 Zhang², Shivani Sahni¹, Thomas Travison¹, Marian Hannan¹, Douglas Kiel¹. ¹Hebrew SeniorLife Institute for Aging Research and Harvard Medical School, United States, ²Hebrew 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 Hars¹, Fang-Chi Hsu², Kieran Reid³, Timothy Church⁴, Thomas Gill⁵, Abby King⁶, Christine Liu⁷, Todd Manini⁸, Mary McDermott⁹, Anne Newman¹⁰, W. Jack Rejeski¹¹, Jack Guralnik¹², Marco Pahor⁸, Roger Fielding³.

¹Division of Bone Diseases, Department of Internal Medicine Specialties, Geneva University Hospitals and Faculty of Medicine, Switzerland, ²Department of Biostatistical Sciences, Wake Forest School of Medicine, United States, ³Nutrition, Exercise Physiology and Sarcopenia Laboratory, Jean Mayer USDA Human Nutrition Research Center on Aging, Tufts University, United States, ⁴Department of Preventative Medicine, Pennington Biomedical Research Center, United States, ⁵Department of Internal Medicine, Yale School of Medicine, United States, ⁶Department of Health Research and Policy and Department of Medicine, Stanford University, School of Medicine, United States, ⁷Department of Medicine, Boston University School of Medicine, United States, ⁸Department of Aging and Geriatric Research, University of Florida, United States, ⁹Department of Medicine and Preventive Medicine, Northwestern University, Feinberg School of Medicine, United States, ¹⁰Department of Epidemiology, Graduate School of Public Health, University of Pittsburgh, United States, ¹¹Department of Internal Medicine, Wake Forest University and School of Medicine, United States, ¹²Department of Epidemiology and Public Health, University of Maryland School of Medicine, United States

Disclosures: Andrea Trombetti, None

Fri
day

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

SATURDAY, SEPTEMBER 9, 2017

DAY-AT-A-GLANCE

Time/Event/Location	All locations in the Colorado Convention Center unless otherwise noted
6:45 am - 8:00 am	50
ASBMR Networking Breakfast <i>Room 205/207</i>	
7:00 am - 5:00 pm	50
ASBMR Registration Open <i>Registration Hall - Lobby A Foyer</i>	
8:00 am - 9:30 am	50
Louis V. Avioli Lecture and Presentation of the Louis V. Avioli Founders, Paula Stern, and Gideon A. Rodan Awards <i>Mile High Ballroom</i>	
9:30 am - 4:30 pm	50
Posters Open <i>ASBMR Discovery Hall - Exhibit Hall A & B1</i>	
9:30 am - 9:45 am	50
Networking Break <i>Mile High Ballroom Foyer and Four Seasons Ballroom Foyer</i>	
9:30 am - 4:30 pm	50
Discovery Hall Open <i>ASBMR Discovery Hall - Exhibit Hall A & B1</i>	
9:45 am - 11:00 am	50
Plenary Orals: Basic Plenary I <i>Four Seasons Ballroom II-III</i>	
9:45 am - 11:00 am	51
Plenary Orals: Translational Plenary 1 <i>Mile High Ballroom</i>	
11:00 am - 12:00 pm	53
Meet-the-Professor Sessions <i>Rooms 102-113</i>	
11:00 am - 12:30 pm	53
Hands-On Workshop: Practical Biomechanical Phenotyping: How to Get the Most Out of a Phenotype <i>Room 402</i>	
11:00 am - 12:00 pm	54
Update on the American College of Physicians (ACP) Osteoporosis Guidelines <i>Four Seasons Ballroom 1</i>	
11:00 am - 12:00 pm	54
Publications Workshop: Increase Your Chances of Getting Published <i>Room 205/207</i>	
12:00 pm - 12:30 pm	54
Networking Break <i>Mile High Ballroom Foyer and Four Seasons Ballroom Foyer</i>	
12:30 pm - 2:30 pm	55
Poster Session I & Poster Tours <i>ASBMR Discovery Hall - Exhibit Hall A & B1</i>	

12:30 pm - 2:30 pm	107
Late-Breaking Posters I	
<i>ASBMR Discovery Hall - Exhibit Hall A & B1</i>	
2:45 pm - 4:00 pm	112
Symposium: Testosterone Treatment in Older Men	
<i>Four Seasons Ballroom II-III</i>	
2:45 pm - 4:00 pm	112
ASBMR/ECTS Symposium: Sleep, Energy Metabolism and Musculoskeletal Systems	
<i>Mile High Ballroom</i>	
4:00 pm - 4:30 pm	113
Networking Break	
<i>Mile High Ballroom Foyer and Four Seasons Ballroom Foyer</i>	
4:30 pm - 6:00 pm	113
Concurrent Orals: Bone Tumors and Metastasis I	
<i>Four Seasons Ballroom I</i>	
4:30 pm - 6:00 pm	114
Concurrent Orals: Epidemiology: Fractures, Falls, and Special Populations	
<i>Four Seasons Ballroom IV</i>	
4:30 pm - 6:00 pm	116
Concurrent Orals: Mesenchymal Stem Cells and Osteoprogenitors	
<i>Mile High Ballroom 4A-B</i>	
4:30 pm - 6:00 pm	117
Concurrent Orals: Osteoporosis Treatment II	
<i>Four Seasons Ballroom II-III</i>	
6:30 pm - 8:30 pm	118
Basic Evening – The Bone Marrow Niche and Hematopoiesis	
<i>Room 205/207</i>	
6:30 pm - 8:30 pm	119
Clinical Evening – Treating the Treatment Gap	
<i>Mile High Ballroom</i>	
8:30 pm - 11:30 pm	119
ASBMR Networking Event	
<i>Hyatt Regency Denver, Centennial Ballroom</i>	

Saturday

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 Gs α Is Required for Craniofacial Bone Formation by Regulating Hedgehog Signaling in a Hedgehog Ligand Independent Manner
Ruoshi Xu^{*1}, Yingzi Yang¹, Sanjoy Khan¹. ¹Department 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 endochondral bone development**
1038
Yuki Matsushita^{*1}, Sunny Wong², Noriaki Ono¹. ¹University of Michigan School of Dentistry, United States, ²University 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 Mizuhashi¹, Henry Kronenberg², Wanida Ono¹. ¹University of Michigan School of Dentistry, United States, ²Massachusetts 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 Mice**
1040
Yu Usami^{*1}, Aruni Gunawardena², Noelle Francois², Hajime Takano², Satoru Otsuru³, Masahiro Iwamoto⁴, Wentian Yang⁵, Satoru Toyosawa¹, Motomi Enomoto-Iwamoto⁴. ¹Osaka University, Japan, ²Children's Hospital of Philadelphia, United States, ³Nationwide Children's Hospital, United States, ⁴University of Maryland Baltimore, United States, ⁵Brown 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 Naja¹, Abdallah Husseini¹, Bachar Hamade¹, Alice Arabian¹, René St-Arnaud¹. ¹Shriners Hospitals for Children - Canada, Canada
Disclosures: Corine Martineau, None

Saturday

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 Weivoda¹, Ming Xu¹, David Monroe¹, Jad Sfeir¹, Mikolaj Ogrodnik¹, Nathan LeBrasseur¹, Matthew Drake¹, Robert Pignolo¹, Tamar Tchkonia¹, James Kirkland¹, Sundeep Khosla¹. ¹Mayo 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 dispensable for ovariectomy-induced bone loss**
1043
 Jinhu Xiong^{*1}, Keisha Cawley¹, Marilina Piemontese¹, Yuko Fujiwara¹, Ryan Macleod¹, Joseph Goellner¹, Haibo Zhao¹, Charles O'Brien¹. ¹University 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 Murine Model of Autosomal Recessive Hypophosphatemic Rickets Type 2**
1044
 Mark Horowitz^{*1}, Dillon Kavanagh¹, Xiaofeng Li¹, Tracy Nelson¹, Steven Tommasini¹, Demetrios Braddock¹. ¹Yale 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 Yang¹, Wei Zhang¹, Jie Chen¹, Wanxin Qiao¹, Li Mao¹, David Goltzman², Dengshun Miao¹. ¹Nanjing Medical University, China, ²McGill, 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 Shi², Jin Hee Kwak³, Justine Tanjaya⁴, Mengliu Yu², Pin Ha⁵, Chenchao Wang⁵, Dan Pan², Eric Chen², Xinli Zhang², Chia Soo⁶, Benjamin Wu⁷, Kang Ting⁸. ¹Division of Advanced Prosthodontics, School of Dentistry, UCLA; Department of Bioengineering, UCLA, United States, ²Division of Growth and Development, Section of Orthodontics, School of Dentistry, UCLA, United States, ³Division of Growth and Development, Section of Orthodontics, School of Dentistry, UCLA; Department of Orthodontics, College of Dentistry, Yonsei University, United States, ⁴Division of Growth and Development, Section of Orthodontics, School of Dentistry, United States, ⁵Orthopaedic Hospital Department of Orthopaedic Surgery and the Orthopaedic Hospital Research Center, UCLA, United States, ⁶Orthopaedic 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, ⁷Division of Advanced Prosthodontics, School of Dentistry, UCLA; Weintraub Center for Reconstructive Biotechnology, School of Dentistry, UCLA; Department of Bioengineering, UCLA, United States, ⁸Division 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

Saturday

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 Kurniawan², Grahame Elder³. ¹Centre for Endocrinology and Metabolism, Hudson Institute of Medical Research; School of Clinical Sciences, Monash University, Australia, ²The University of Notre Dame , Australia, ³Department 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 Pardi², Simona Borsari², Federica Saponaro², Liborio Torregrossa³, Chiara Mazzanti⁴, Paolo Aretini⁴, Marco La Ferla⁴, Sara Franceschi⁴, Francesca Lessi⁴, Prospero Civita⁴, Claudio Marcocci². ¹University-Hospital of Pisa, Italy, ²Departmet of Clinical and Experimental Medicine, University of Pisa, Italy, ³Department of Surgical, Medical and Molecular Pathology and Critical Area, University of Pisa, Italy, ⁴Fondazione 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 Liu², Azeez Farooki³. ¹New York Presbyterian Hospital - Weill Cornell, United States, ²Hospital for Special Surgery, United States, ³Memorial 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 Gervais¹, Andréanne Samson¹, Jacques P. Brown², Laëtitia Michou². ¹CHU de Québec-Université Laval research centre, Canada, ²Division 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 Boppre¹, Leandro Machado², João Vilas-Boas², Vitor Devezas³, John Preto³, Hugo Sousa³, José Oliveira¹, Hélder Fonseca¹. ¹CIAFEL, Faculty of Sport, University of Porto, Portugal, ²CIFI2D, Faculty of Sport, University of Porto, Portugal, ³Department 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 Park², Song Vogue Ahn³, Sihoon Lee¹. ¹Gachon University School of Medicine, Korea, Republic of, ²Cheil General Hospital, Dankook University College of Medicine, Korea, Republic of, ³Yonsei University Wonju College of Medicine, Korea, Republic of

Disclosures: Eunhyun Jee, None

Saturday

- SA0007 Primary Hyperparathyroidism: Role of Impaired Cerebrovascular Function in Cognitive Symptoms**
 Melissa Sum^{*1}, Yunglin Gazes¹, Bucovsky Mariana¹, Colon Ivelisse¹, Kevin Slane¹, Arindam RoyChoudhury¹, Minghao Liu¹, Yu-Kwang Tay¹, Randolph Marshall¹, Ronald Lazar¹, Shonni Silverberg¹, Marcella Walker¹. ¹Columbia 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 Auguste², Catherine Fortier³, Sonia Jean⁴, Lynne Moore⁵, Louis-Charles Desbiens³, Yue Pei Wang⁶, Fabrice Mac-Way⁷. ¹Centre 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, ²Centre de Recherche du CHU de Québec, Hôpital Saint-Sacrement, Faculty of Medicine, Department of Social and Preventive Medicine, Laval University, Quebec Canada, Canada, 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, ⁴Institut National de Santé Publique du Québec, Medicine Faculty, Department of social and preventive medicine, Laval University, Quebec Canada, Canada, ⁵Centre 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, ⁶CHU 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, ⁷Centre 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 parathyroideectomy in Primary hyperparathyroidism**
 Donovan Tay^{*1}, Natalie Cusano¹, John Williams¹, Beatriz Omeragic¹, John Bilezikian¹. ¹Columbia 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 Rotman², Peter Bisschop¹, Natasha Appelma-Dijkstra². ¹Academic Medical Center Amsterdam, Netherlands, ²Leiden 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 Psaltos¹, Katherine Lo¹, Robert Urban², Stephanie McCarthy², Deborah Hall², Thomas Turner², Mary Bouxsein¹. ¹Beth Israel Deaconess Medical Center, United States, ²Rush 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 Walk¹, Shefford Baker¹, G. Elizabeth Pluhar², Adele Boskey³, Christopher Hernandez¹, Marjolein van der Meulen¹. ¹Cornell University, United States, ²University of Minnesota, United States, ³Hospital 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 Okazaki¹, Kazuaki Yokota¹, Kazuteru Shiraishi¹, Makoto Osaki¹. ¹Nagasaki University, Japan
Disclosures: Ko Chiba, None

- SA0014 Effects of Progressive Glycemic Derangement on Bone Tissue Composition in Postmenopausal Women**
 Jared Pearl^{*1}, Nicholas Miller¹, Jing Han Zhang¹, Heather Hunt¹, Kendall Moseley², Eve Donnelly¹. ¹Cornell University, United States, ²Johns 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 Lumbar Fixation**
 Koji Ishikawa^{*1}, Tomoaki Toyone¹, Toshiyuki Shirahata¹, Yoshifumi Kudo¹, Akira Matsuoka¹, Hiroshi Maruyama¹, Soji Tani², Koki Tsuchiya¹, Takashi Nagai¹, Katsunori Inagaki¹. ¹Department of Orthopaedic Surgery, Showa University School of Medicine, Japan, ²Department 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 Kosniewski¹, Corinne Metzger², Jessica Brezicha³, Jon Elizondo¹, Amelia Looper⁴, Susan Bloomfield², Harry Hogan⁵. ¹Texas A&M University Department of Mechanical Engineering, United States, ²Texas A&M University Department of Health & Kinesiology, United States, ³Texas A&M University Department of Biomedical Engineering, United States, ⁴Texas A&M University College of Veterinary Medicine, United States, ⁵Texas 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 Tseng¹, Chantal de Bakker¹, Hongbo Zhao¹, X. Sherry Liu¹. ¹University 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 Jackman¹, Amira Hussein¹, Cameron Curtiss¹. ¹Boston University, United States
Disclosures: Elise Morgan, None
- SA0019 Multiscale characteristics of toughness in Lrp5A214v/A214v mice**
 Sabah Nobakhti^{*1}, Sandra Shefelbine¹. ¹Northeastern 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 Alwood², Mohit Nalavadi³, Sulekha Anand⁴, Yasaman Shirazi-Fard², Alesha Castillo⁵. ¹NASA Ames Research Center, San Jose State University, United States, ²NASA Ames Research Center, United States, ³Blue Marble Space Institute of Science, United States, ⁴San Jose State University, United States, ⁵New 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 YOTANI², Futoshi OGITA², Hikari KIRIMOTO¹, Kaishi HAYAO¹, Hideaki TAKAHASHI¹, Keigo TAMAKOSHI¹, Atsuhiko TSUBAKI¹, Hideaki ONISHI¹, Norikatsu KASUGA³, Noriaki YAMAMOTO⁴. ¹Niigata University of Health and Welfare, Japan, ²National Institute of Fitness and Sports in Kanoya, Japan, ³Aichi University of Education, Japan, ⁴Niigata 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 Robinson¹, Saija Kontulainen², James D Johnston², Peter VS Lee¹, John D Wark¹, Matthew McDonald³. ¹The University of Melbourne, Australia, ²University of Saskatchewan, Canada, ³Department 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 Campos², João P. B. Ximenez³, Raquel A. Silva⁴, José B. Volpon². ¹Medical School of Ribeirão Preto, University of São Paulo, Brazil, ²Medical School of Ribeirão Preto, Brazil, ³School of Pharmaceutical Sciences of Ribeirão Preto, Brazil, ⁴School of Dentistry of Ribeirão Preto, Brazil
Disclosures: Ariane Zamarioli, None
- SA0024 Bone quality and mechanical competence during pediatric skeletal growth**
Elizabeth Zimmermann^{*1}, Christoph Riedel¹, Kilian Stockhausen², Yuryi Chushkin³, Eric Schaible⁴, Felix Schmidt¹, Bernd Gludovatz⁵, Eik Vettorazzi⁶, Frederico Zontone³, Klaus Püschel⁷, Michael Amling², Robert Ritchie⁸, Björn Busse¹. ¹Department of Osteology and Biomechanics, University Medical Center Hamburg, Germany, ²Department of Osteology and Biomechanics, University of Medical Center Hamburg, Germany, ³European Synchrotron Radiation Facility, Grenoble, France, ⁴Advanced Light Source, Berkeley, United States, ⁵Lawrence Berkeley National Laboratory, United States, ⁶Department of Medical Biometry and Epidemiology, University Medical Center Hamburg, Germany, ⁷Department of Forensic Medicine, University Medical Center Hamburg, Germany, ⁸Department of Materials Science and Engineering, University of California, Berkeley, United States
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- SA0025 Bone Strength and Microarchitectural Deficits in Children with Cystinosis**
Andrew Burghardt^{*1}, Kyla Kent², Jin Long², Jessica Whalen², Mary Leonard². ¹University of California, San Francisco, United States, ²Stanford 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 LD², Julie Buchholtz, RDN LD³, Peter Tebben, MD⁴. ¹Mayo Clinic Department of Pediatric Endocrinology, United States, ²Mayo Clinic Home Enteral Nutrition, United States, ³Mayo Clinic Clinical Nutrition, United States, ⁴Mayo Clinic Department 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 Krstic², Eloise Cook², Stefania D'Angelo¹, Sarah Crozier¹, Rebecca Moon³, Robert Murray², Emma Garratt², Paula Costello², Nicholas Bishop⁴, Stephen Kennedy⁵, Aris Papageorgiou⁵, Inez Schoenmakers⁶, Robert Fraser⁷, Saurabh Gandhi⁷, Ann Prentice⁸, Kassim Javaid⁹, Hazel Inskip¹, Keith Godfrey¹⁰, Christopher Bell¹¹, Karen Lillycrop², Cyrus Cooper¹², Nicholas Harvey¹⁰. ¹MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, ²Institute of Developmental Sciences, University of Southampton, United Kingdom, ³MRC Lifecourse Epidemiology Unit, University of Southampton; Paediatric Endocrinology, University Hospitals Southampton NHS Foundation Trust, United Kingdom, ⁴Academic Unit of Child Health, Sheffield Children's Hospital, University of Sheffield, United Kingdom, ⁵Nuffield Department of Obstetrics and Gynaecology, John Radcliffe Hospital, University of Oxford, United Kingdom, ⁶MRC Elsie Widdowson Laboratory; Department of Medicine, Faculty of Medicine and Health Sciences, University of East Anglia, United Kingdom, ⁷Sheffield Hospitals NHS Trust, University of Sheffield, United Kingdom, ⁸MRC Elsie Widdowson Laboratory, United Kingdom, ⁹National Institute for Health Research (NIHR) Biomedical Research Centre, University of Oxford, United Kingdom, ¹⁰MRC Lifecourse Epidemiology Unit, University of Southampton; NIHR Southampton Nutrition Biomedical Research Centre, University of Southampton and University Hospital Southampton NHS Foundation Trust, United Kingdom, ¹¹MRC Lifecourse Epidemiology Unit, University of Southampton; Institute of Developmental Sciences, University of Southampton, United Kingdom, ¹²MRC 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 Zhang¹, Qian-qian Pang¹, Yan Jiang¹, Ou Wang¹, Mei Li¹, Xiaoping Xing¹, Weibo Xia¹. ¹Peking 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. Leary¹, Dan G. Hoernschemeyer¹, Laura L. Tosi², Richard J. Sherwood¹. ¹University of Missouri, United States, ²Children's National Medical Center, United States
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- SA0030 Withdrawn**
- SA0031 Frequency of vigorous physical activity predicts bone strength accrual during adolescence**
 Leigh Gabel^{*1}, Lindsay Nettlefold¹, Heather Macdonald¹, Heather McKay². ¹Centre for Hip Health and Mobility, Canada, ²University of British Columbia, Canada
Disclosures: Leigh Gabel, None
- SA0032 Does Peak Bone Mass Coincide with Peak Bone Strength?**
 Erik Lindgren^{*1}, Bjorn Rosengren¹, Magnus Karlsson¹. ¹Department 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 Caksa², Amy Yuan², Mary Bouxsein², Madhusmita Misra³, Sherri-Ann Burnett-Bowie². ¹Pediatric Endocrine Unit, Massachusetts General Hospital, United States, ²Endocrine Unit, Massachusetts General Hospital, United States, ³Pediatric Endocrine and Neuroendocrine Units, Massachusetts General Hospital, United States
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- SA0034 Increased FGF23 in chronic kidney disease results from osteocyte maturation delay**
 Renata C Pereira^{*1}, Barbara Gales¹, Katheline Noche², Isidro I Salusky¹, Katherine Wesseling-Perry¹. ¹David Geffen School of Medicine at UCLA, Los Angeles, California, United States of America, United States, ²University 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 Butscheidt¹, Anke Jeschke¹, Axel Neu², Jonas Dennecke², Christian Kubisch³, Miriam Meisler⁴, Klaus Püschel⁵, Florian Barvencik¹, Timur Yorgan¹, Ralf Oheim¹, Thorsten Schinke¹, Michael Amling¹. ¹Department of Osteology and Biomechanics, University Medical Center Hamburg-Eppendorf, Germany, ²Department of Neuroradiology, University Medical Center Hamburg-Eppendorf, Germany, ³Department of Human Genetics, University Medical Center Hamburg-Eppendorf, Germany, ⁴Department of Human Genetics, University of Michigan, Ann Arbor, MI, USA, United States, ⁵Department of Legal Medicine, University Medical Center Hamburg-Eppendorf, Germany
Disclosures: Tim Rolvien, None
- SA0036 A Role for Apolipoprotein E in Fracture Healing**
 Puviiandran Nadesan^{*1}, Gurpreet Baht². ¹Department of Orthopaedic Surgery, United States, ²Duke Molecular Physiology Institute, Department of Orthopaedic Surgery, United States
Disclosures: Puviiandran Nadesan, None
- SA0037 Effects of Sclerostin Depletion on Hematopoietic Stem Cells**
 Cristine Donham^{*1}, Gabriela Loots², Jennifer Manilay³, Aris Economides⁴. ¹University of California Merced, United States, ²Lawrence Livermore National Laboratories, United States, ³University of California, Merced, United States, ⁴Regeneron Pharmaceuticals, United States
Disclosures: Cristine Donham, None
- SA0038 Targeting the Endosteal Niche in Myelodysplasia and Acute Myeloid Leukemia**
 Marta Galán-Díez^{*1}, Govind Bhagat¹, Julie Teruya-Feldstein², Azra Raza¹, Ellin Berman³, Stavroula Kousteni¹. ¹Columbia University, United States, ²Mount Sinai, United States, ³Memorial 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-Ruedy¹, Ron Helderman¹, Anyonya Guntur¹, Victoria DeMambro¹, Beate Lanske², Daniel Brooks³, Mary Bouslein³, Clifford Rosen¹. ¹Maine Medical Center Research Institute, United States, ²Harvard School of Dental Medicine, United States, ³Beth 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 Saadalla¹, Molly Nelson Holte¹, Megan Weivoda¹, Merry Jo Oursler¹, Khashayarsha Khazaei¹, Russell Turner², Urszula Iwaniec², John Hawse¹. ¹Mayo Clinic, United States, ²Oregon 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 Diaz², Soumyadeep Dey¹, Pamela Robey², Constance Noguchi¹. ¹Molecular Medicine Branch, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, United States, ²Skeletal 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 Okamoto¹, Hiroshi Takayanagi². ¹Department of Osteoimmunology, Graduate School of Medicine and Faculty of Medicine, The University of Tokyo, Japan, ²Department 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 Sun², Nida Meednu³, Hengwei Zhang¹, Brendan F Boyce¹, Jennifer H Anolik⁴, Lianping Xing¹. ¹Department of Pathology and Laboratory Medicine, University of Rochester Medical Center, United States, ²Department of Pathology and Laboratory Medicine, University of Rochester Medical Center; Nanjing Medical University, Nanjing 210029, People's Republic of China, United States, ³Department of Medicine, Division of Allergy, Immunology and Rheumatology, University of Rochester Medical Center, United States, ⁴DDepartment 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 Dowell², Katrina Clines¹, Hyun Sik Moon¹, Charlotte Cialek¹, Alexander Smith¹, Hui Jiang¹, Colm Morrissey³, Shi Wei², Riley Brien¹, Euisik Yoon¹, Yu-Chih Chen¹, Kathryn Luker¹, Gary Luker¹, Gregory Clines¹. ¹University of Michigan, United States, ²University of Alabama at Birmingham, United States, ³University 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 Chang¹, Justin Williams¹, Austin Pucylowski¹, Khalid Mohammad², Theresa Guise², Uma Sankar¹. ¹Department of Anatomy and Cell Biology, Indiana University School of Medicine, United States, ²Division 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 Sunamura¹, Hiroki Ochi¹, Toru Fukuda², Atsushi Okawa³, Mitsuru Futakuchi⁴, Shu Takeda⁵, Shingo Sato¹. ¹Department of Physiology and Cell Biology, Graduate School and Faculty of Medicine, Tokyo Medical and Dental University, Japan, ²Department of Foodscience, Tokyo Seiei College, Japan, ³Department of Orthopaedic Surgery, Graduate School and Faculty of Medicine, Tokyo Medical and Dental University, Japan, ⁴Department of Molecular Toxicology, Graduate School of Medical Sciences, Nagoya City University, Japan, ⁵Division 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 Park², Colin Crean², Denise Toscani³, Judith Anderson², Rebecca Silbermann², G. David Roodman⁴. ¹Indiana University, Department of Medicine/Hematology-Oncology, United States, ²Department of Medicine/Hematology-Oncology, Indiana University School of Medicine, United States, ³Myeloma Unit, Dept. of Clinical and Experimental Medicine, University of Parma, Italy, ⁴Department 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 Fairfield¹, Clifford Rosen¹, Carolyne Falank¹. ¹Maine 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 Tu¹, Jake Chen¹. ¹Division 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 Mayhew¹, Samuel Dooyema¹, Rachelle W Johnson². ¹Vanderbilt University, United States, ²Vanderbilt 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 Hiasa², Asuka Oda³, Hirofumi Tenshin⁴, Ryota Amachi⁴, Takeshi Harada³, Shingen Nakamura³, Hirokazu Miki⁵, Itsuro Endo³, Tatsuji Haneji¹, Toshio Matsumoto⁶, Masahiro Abe³. ¹Department of Histology and Oral Histology, Tokushima University, Japan, ²Department of Biomaterials and Bioengineering, Tokushima University, Japan, ³Department of Hematology, Endocrinology and Metabolism, Tokushima University, Japan, ⁴Department of Orthodontics and Dentofacial Orthopedic, Tokushima University, Japan, ⁵Division of Transfusion and Cell Therapy Medicine, Tokushima University Hospital, Japan, ⁶Fujii 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 Hirata¹, Tsukasa Tominari¹, Chiho Matsumoto¹, Hidenori Fujita², Kazuhiko Yonekura², Gillian Murphy³, Hideaki Nagase⁴, Chisato Miyaura¹, Masaki Inada¹. ¹Tokyo University of Agriculture and Technology, Japan, ²Taiho Pharmaceutical Co., Ltd., Japan, ³University of Cambridge, United Kingdom, ⁴Kennedy Institute of Rheumatology, United Kingdom
Disclosures: Kenta Watanabe, None
- SA0054 KPNA4 modulates osteoclastogenesis during the skeletal metastasis of prostate cancer**
 Jian Yang^{*1}, Liang Luo¹, Ruohan Zhang¹, Yuqi Guo¹, Xin Li¹. ¹New 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 Rohan¹, Amy Buros¹, Daisy Alapat¹, Jerry Walters¹, Thomas G Pait¹, Nancy A. Ghaleb¹, Sharmilan Thanendrarajah¹, Frits van Rhee¹, Faith Davies¹, Gareth Morgan¹, Carolina Schinke¹, Larry J. Suva², Maurizio Zangari¹. ¹University of Arkansas for Medical Sciences, United States, ²Texas 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**
 Jyun Chiun Chang^{*1}, Aimy Sebastian², Deepa Murugesh², Sarah Hatsell³, Aris Economides³, Blaine Christiansen⁴, Gabriela Loots¹. ¹Lawrence Livermore National Laboratories and University of California Merced, United States, ²Lawrence Livermore National Laboratories, United States, ³Regeneron Pharmaceuticals, United States, ⁴University of California Davis Medical Center, United States
Disclosures: Jyun Chiun Chang, None
- SA0057 Global Analysis of Runx2 Regulated Genes During Chondrocytes Differentiation**
 Haiyan Chen^{*1}, Jessica Boni¹, Harunur Rashid¹, Mohammad Hassan¹, Amjad Javed¹. ¹University 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 Yu², Mingquan Yan², Connor Dolan², Ken Muneoka². ¹Texas A & M University, United States, ²Texas 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 Fitzgerald¹. ¹Henry 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 Schott¹, Elijah Carlson¹, Monaliza El-Quadi¹, Heather Le Bleu¹, Matthew Hilton², Jennifer Jonason¹, Michael Zuscik¹. ¹University of Rochester, United States, ²Duke University School of Medicine, United States
Disclosures: Fadia Kamal, None
- SA0061 Ghrelin Protects against Osteoarthritis through Interplaying with Akt and NF- κ B Signaling Pathways**
 Weiwei Li^{*1}, Wenhan Wang², Yunpeng Zhao¹. ¹Shandong University Qilu Hospital, China, ²Shandong 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 Cheng¹, Sheila Pourteymoor¹, Catrina Godwin¹, Subburaman Mohan¹. ¹VA 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 Xiao¹, Siu-Pok Yee², Brya G. Matthews³, Marja Marie Hurley¹. ¹Department of Medicine/Endocrinology, School of Medicine, UConn Health, United States, ²Department of Cell Biology, UConn Health, United States, ³Department of Reconstructive Sciences, School of Dental Medicine, UConn Health, United States
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- SA0064 Actions of PTHrP, HDAC4, and SIK3 to Regulate Chondrocyte Hypertrophy**
 Shigeki Nishimori^{*1}, Marc N. Wein¹, Henry M. Kronenberg¹. ¹Endocrine 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 Herzog¹, Paul Baldeck². ¹Neuroscience Division, Garvan Institute of Medical Research, Australia, ²The 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 Weeks¹, Rossana Nogueira¹. ¹Griffith University, Australia
Disclosures: Belinda Beck, None
- SA0067 Circulating Fibroblast Growth Factor 23 Levels Decline Following Sleeve Gastrectomy**
Emma Billington^{*1}, Rinki Murphy², Karen Callon², Greg Gamble², Michael Booth³, Ian Reid². ¹University of Calgary, Canada, ²University of Auckland, New Zealand, ³Waitemata 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 Conte², Adriano Fonzino², Kejla Musaraj², Roberta Caloiero², Domenico Tricarico². ¹Dept. of Biomedical Sciences & Human Oncology, University of Bari, Italy, ²Dept. of Pharmacy – Drug Sciences, University of Bari, Italy
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- SA0069 FGF23 is associated with adiposity in dialysis patients: crosstalk between bone and adipose**
Janet Chiang^{*1}, George Kaysen², Anne Schafer¹, Kirsten Johansen¹. ¹University of California, San Francisco, United States, ²University of California, Davis, United States
Disclosures: Janet Chiang, None
- SA0070 Vitamin K₂-Induced Carboxylation of Osteocalcin and Matrix Gla Protein Improves Bone and Lipid Metabolism in Overweight Children**
Mary Ellen Fain^{*1}, Celestine Williams¹, Allison Jasti¹, Reda Bassali², Catherine Davis², Norman Pollock². ¹Georgia Prevention Institute, Medical College of Georgia, Augusta University, United States, ²Department 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}. ¹Endocrine Associates, United States
Disclosures: Robert Fredericks, None
- SA0072 Upregulation of Lipocalin 2 is a Protective Mechanism to Counteract Insulin Resistance**
Ioanna Mosialou^{*12}, Steven Shikhel¹², Stavroula Kousteni¹². ¹Columbia University, United States, ²Columbia 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 Garnham², Glenn McConell³, Nigel Stepto³, David Hare⁴, Elizabeth Byrnes⁵, Peter Ebeling⁶, Ego Seeman⁷, Tara Brennan-Speranza⁸, Itamar Levinger³.
¹Clinical Exercise Science Research Program, Institute of Sport, Exercise and Active Living (ISEAL), Victoria University, Melbourne, Australia, Australia, ²School of Exercise & Nutrition Sciences, Deakin University, Melbourne, Australia, Australia, ³Clinical Exercise Science Research Program, Institute of Sport, Exercise and Active Living (ISEAL), Victoria University, Melbourne, Australia., Australia, ⁴University of Melbourne and the Department of Cardiology, Austin Health, Melbourne Australia., Australia, ⁵PathWest QEII Medical Centre, Perth, Australia, Australia, ⁶Department of Medicine, School of Clinical Sciences, Faculty of Medicine, Nursing and Health Sciences, Monash University, Australia, Australia, ⁷University of Melbourne and the Department of Endocrinology, Austin Health, Melbourne, Australia, Australia, ⁸Department 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 Shum¹, Roman Eliseev¹. ¹University 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 Regan², Sarah Tersey³, Sutha John¹, Yun She², Sreemala Murthy², Xu Cao⁴, Khalid Mohammad², Theresa Guise². ¹ Division of Endocrinology, Department of Medicine, Indiana University, United States, ²Division of Endocrinology, Department of Medicine, Indiana University, United States, ³Department of Pediatrics, Indiana University School of Medicine, United States, ⁴Department of Orthopedic Surgery, Johns Hopkins University School of Medicine, United States
Disclosures: Trupti Trivedi, None
- SA0076 ASBMR 2017 Annual Meeting Young Investigator Award
 Par1/Marck3 functions in osteoblasts to coordinate bone mineral density and body mass**
 Qian Zhang^{*1}, Gina Calabrese², Angela Verado¹, Larry Mesner², Thomas Clemens¹, Charles Farber². ¹Johns Hopkins University, United States, ²University 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 Williams¹, Hua Pan², Terri Pietka³, Nada A Abumrad³, Samuel Wickline², Gwendalyn J Randolph¹, Steven L Teitelbaum⁴. ¹Department of Pathology and Immunology, Washington University School of Medicine, United States, ²University of South Florida Morsani College of Medicine, United States, ³Department of Internal Medicine, Division of Nutritional Science, Washington University School of Medicine, United States, ⁴Department 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-Costa¹, Alexandra Aguilar-Perez¹, Carmen Herrera¹, Greg Smith², Joaquin Lugo², Lilian I. Plotkin¹. ¹Indiana University School of Medicine, United States, ²Baylor 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 Williams¹, Shannon Huggins¹, Alyssa Falck¹, Avery McIntosh¹, Friedhelm Schroeder¹, Ann Kier¹, Larry Suva¹, Dana Gaddy¹. ¹Texas 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**
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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 OBrien¹. ¹University 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 Adams¹, Renata Rydzik¹, Li Chen¹, Zhihua Wu¹, Seung-Hyun Hong², Gaven Garland³, Caibin Zhang¹, Dong-Guk Shin², John Sundberg³, Cheryl Ackert-Bicknell⁴. ¹University of Connecticut Health, United States, ²University of Connecticut, United States, ³The Jackson Laboratory, United States, ⁴University 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 Fontana¹, Jani Salmivaara², Oona Kivelä², Piaa Tiitola², Hinnerk Boriss². ¹Aptuit, Italy, ²ValiFinn, 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 Kronenberg¹, Li Chen¹, Zhihua Wu¹, Liping Wang¹, Xi Jiang², David Rowe¹, Alexander Lichtler¹. ¹UConn Health, United States, ²University of Pennsylvania, United States
Disclosures: Xiaonan Xin, None
- SA0086 Wnt signals control development of the periodontium.**
 xue yuan^{*1}, Yan Wu², yuan zhao³, Kristy Perez¹, G Pellegrini⁴, K Condon⁵, K McAndrews⁵, M Gregor⁵, Teresita Bellido⁵, Jill Helms¹. ¹Stanford University, United States, ²Stanford University & Stomatology Hospital of Chongqing Medical University, China, ³Stanford University & Lanzhou University, United States, ⁴Indiana University, United States, ⁵Indiana University, United States
Disclosures: xue yuan, None

- SA0087 Identification of anabolic bone genes using whole genome sequencing in high bone mass families**
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Disclosures: John Eisman, None
- SA0088 Genome-Wide Association Study Identifies Three Novel Genetic Determinants of Dental Maturation**
 Olja Grgic^{*1}, Carolina Medina-Gomez², Brunilda Dhamo³, Katerina Trajanoska⁴, Strahinja Vucic³, Edwin M Ongkosuwito⁵, Vincent W V Jaddoe⁶, Andre G Uitterlinden⁷, Marjo-Riitta Jarvelin⁸, Nicholas Timpson⁹, David M Evans¹⁰, Eppo B Wolvius³, Fernando Rivadeneira¹¹. ¹EMC, The Generation R Study Group, EMC, Internal Medicine, EMC, Oral & maxillofacial surgery, special dental care and orthodontics, Netherlands, ²EMC, The Generation R Study Group, EMC, Internal Medicine, EMC, Department of Epidemiology, Netherlands, ³EMC, The Generation R Study Group, EMC, Oral & maxillofacial surgery, special dental care and orthodontics, Netherlands, ⁴EMC, Internal Medicine, EMC, Department of Epidemiology, Netherlands, ⁵EMC, The Generation R Study Group, 3EMC, Oral & maxillofacial surgery, special dental care and orthodontics, Netherlands, ⁶EMC, The Generation R Study Group, Netherlands, ⁷EMC, The Generation R Study Group, 2EMC, Internal Medicine, Netherlands, ⁸NFBC1966/LifeCourse Epidemiology, Imperial College London/U.K., United Kingdom, ⁹ALSPAC/MRC Integrative Epidemiology Unit, Bristol University/U.K., United Kingdom, ¹⁰ALSPAC/MRC Integrative Epidemiology Unit, Bristol University/U.K., Diamantina Institute, University of Queensland/AU, United Kingdom, ¹¹EMC, 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. Center², John A. Eisman³, Hung T. Nguyen¹, Tuan V. Nguyen⁴. ¹Centre of Health Technologies, FEIT, University of Technology Sydney, Australia, ²Bone Biology Division, Garvan Institute of Medical Research; St Vincent Clinical School, UNSW, Australia, Australia, ³Bone Biology Division, Garvan Institute of Medical Research; St Vincent Clinical School, UNSW, Australia; School of Medicine, Sydney University of Notre Dame, Australia, ⁴University 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 Kinyua², Ching-Ti Liu³, Maria Nethander⁴, Emmanuel Biver⁵, Elizabeth J. Atkinson⁶, Elisabeth Sornay-Rendu⁷, Claire Watson⁸, Andy Kin On Wong⁹, Shreyasee Amin¹⁰, Elise Lim³, Michelle Yau¹¹, Laiji Yang¹², Eric Lespessailles¹³, Roby Joehanes¹⁴, Kerry Broe¹², Jonathan D. Adachi¹⁵, Serkalem Demissie¹⁶, David Karasik¹², Blandine Merle¹⁷, Dan Mellström¹⁸, L. Adrienne Cupples¹⁶, Brent Richards¹⁹, David Goltzman²⁰, David A. Hanley²¹, Steven K. Boyd²², Mary L. Bouxsein²³, Ronald Y Kwon⁸, Mattias Lorentzon²⁴, Claes Ohlsson²⁵, Pawel Szulc²⁶, Serge Ferrari²⁷, Roland D. Chapurlat²⁶, Sundeep Khosla¹⁰, Douglas P. Kiel¹⁴. ¹HSL Institute for Aging Research, Harvard Medical School, Broad Institute of MIT and Harvard, United States, ²Institute for Aging Research, Hebrew SeniorLife, United States, ³Biostatistics, Boston University School of Public Health, United States, ⁴University of Gothenberg, Sweden, ⁵University of Geneva, Switzerland, ⁶Mayo Clinic, United States, ⁷INSERM and University of Lyon, France, ⁸Musculoskeletal Systems Biology Lab, Orthopaedics and Sports Medicine, University of Washington, United States, ⁹Toronto General Research Institute, University Health Network and McMaster University, Canada, ¹⁰Mayo Clinic College of Medicine, United States, ¹¹Institute for Aging Research, Hebrew SeniorLife and Department of Medicine, Beth Israel Deaconess Medical Center and Harvard Medical School, United States, ¹²Institute for Aging Research, Hebrew SeniorLife, United States, ¹³University of Orleans, France, ¹⁴Institute for Aging Research, Hebrew SeniorLife and Harvard Medical School, United States, ¹⁵Charlton Medical Centre, McMaster University, Canada, ¹⁶Biostatistics, Boston University School of Public Health, United States, ¹⁷INSERM, University of Lyon, France, ¹⁸Univ of Gothenburg, Sweden, ¹⁹Lady Davis Institute and Department of Human Genetics, McGill University, Canada, ²⁰Departments of Medicine and Physiology, McGill University, Canada, ²¹Cumming School of Medicine, University of Calgary, Canada, ²²University of Calgary, Canada, ²³Beth Isreal Deaconess Medical Center, Harvard Medical School, United States, ²⁴Sahlgrenska University Hospital, Sweden, ²⁵Center for Bone and Arthritis Research at the Sahlgrenski Academy, Sweden, ²⁶INSERM and University of Lyon, Hospital E. Herriot, France, ²⁷Geneva 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 Hussein¹, Kyle Lybrand¹, Deven Carroll¹, Alexander Wulff¹, Heather Matheny¹, Brenna Hogue¹, Serkalem Demissie², Elise Morgan³, Louis Gerstenfeld¹. ¹Boston University School of Medicine, United States, ²Boston University School of Public Health, United States, ³Boston University, United States
Disclosures: Zi Jun Deng, None
- SA0092 Genetic Profiling of Decreased Bone Mineral Density in an Independent Sample of Caucasian Women**
 Xiangxue Xiao^{*12}, Darius Roohani¹², Qing Wu¹². ¹University of Nevada, Las Vegas, United States, ²University of Nevada, Las Vegas, United States
Disclosures: Xiangxue Xiao, None
- SA0093 Risedronate could reduce the glomerular basement membrane thickening in Pit-1 overexpressing transgenic rat**
 Yohei Asada^{*1}, Takeshi Takayanagi¹, Shogo Nakayama¹, Eisuke Tomatsu¹, Yasumasa Yoshino¹, Sahoko Sekiguchi-Ueda¹, Megumi Shibata¹, Atsushi Suzuki¹. ¹Fujita Health University, Japan
Disclosures: Yohei Asada, None

- SA0094 Membrane Estrogen Receptor- α is Essential for Estrogen Signaling in Bone of Male Mice**
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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 Slavic¹, Flora Klinger¹, Flora Klinger¹, Marlies Dolezal¹,
Ute Zeitz¹, Karolina Hilse-Koller¹, Elena Pohl¹, Reinhold G Erben¹, Olena Andrukova¹.
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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 Li¹, Tracy Nelson¹, Karin Finberg¹. ¹Yale School of Medicine, United States
Disclosures: Jackie Fretz, None
- SA0097 A Calcium-Sensing Receptor (*CASR*) Mutation Causes Hypocalcemia by Disrupting a Transmembrane Salt Bridge that Modulates β -arrestin Signaling**
Caroline Gorvin*¹, Valerie Babinsky¹, Tomas Malinauskas¹, Peter Nissen², Anders Schou³,
Christian Siebold¹, E. Yvonne Jones¹, Fadil Hannan⁴, Rajesh Thakker¹. ¹University of Oxford, United Kingdom, ²Aarhus University Hospital, Denmark, ³Odense University Hospital, Denmark, ⁴University of Liverpool, United Kingdom
Disclosures: Caroline Gorvin, None
- SA0098 Phosphorylation of S122 in ER α Is Important for the Skeletal Response to Estrogen Treatment in Male Mice**
Karin Gustafsson*¹, Helen Farman¹, Sofia Movérate-Skrptic¹, Vikte Lionikaite¹, Jianyao Wu¹, Petra Henning¹, Sara Windahl¹, Klara Sjögren¹, Andree Krust², Pierre Chambon², Claes Ohlsson¹, Marie Lagerquist¹. ¹Centre for Bone and Arthritis Research at Institute of Medicine, Sahlgrenska Academy at University of Gothenburg, Sweden, ²Departement of Functional Genomics, Institut de Génétique et de Biologie Moléculaire et Cellulaire, Collège de France, Université de Strasbourg, France
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- SA0099 Anabolic bone effects of soluble Frizzled1, 2 and 7 receptors in mice**
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Makoto Kakitani², Kazuma Tomizuka². ¹Nephrology Research Laboratories, Kyowa Hakko Kirin Co., Ltd., Japan, ²Innovative 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**
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Brigitte Decallonne¹, Dirk Vanderschueren¹. ¹Laboratory of Clinical and Experimental Endocrinology, KU Leuven, Belgium, ²Center for Metabolic Bone Diseases, Geriatrics Department, University Hospitals Leuven, Belgium, ³Laboratory 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 Han¹, Aaron Warren¹, Stavros Manolagas¹, Maria Almeida¹, Robert Jilka¹. ¹Division 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 Adams¹, M.N. Weitzmann¹, Roberto Pacifici¹. ¹Emory 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 Benkusky¹, Seong min Lee¹, Melda Onal¹, Martin Kaufmann², Glenville Jones², John Wesley Pike¹. ¹University of Wisconsin - Madison, United States, ²Queen'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 Imanishi¹, Daichi Miyaoka¹, Noriyuki Hayashi¹, Tomomi Maeda¹, Masanori Emoto¹, Masaaki Inaba¹. ¹Osaka City University Graduate School of Medicine, Department of Metabolism, Endocrinology, and Molecular Medicine, Japan
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- SA0105 Calcium Sensing Receptor and PTH Receptor responses are regulated by TRPC1 Ion Channel**
 Marta Onopiuk^{*1}, Bonnie Eby², Vasyl Nesin¹, Peter Ngo¹, Maria Luisa Brandi³, Wenhua Chang⁴, Mary Beth Humphrey¹, Kai Lau², Leonidas Tsikas¹. ¹Department of Cell Biology, University of Oklahoma Health Sciences Center, Oklahoma City, OK73104, USA, United States, ²Department of Medicine, Division of Nephrology, University of Oklahoma Health Sciences Center, Oklahoma City, OK73104, USA, United States, ³Università degli Studi di Firenze, CTO-SOD Malattie del Metabolismo Minerale e Osseo, Florence, Italy, ⁴Department of Medicine, UCSF Endocrinology and Metabolism, UCSF, San Francisco, CA, USA, United States
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- SA0106 Estrogen via Estrogen Receptor Alpha Inhibits Mandibular Condylar Fibrocartilage Degeneration through Upregulation of Protease Inhibitors**
 Jennifer Robinson^{*1}, Paola Soria¹, Jing Chen¹, Helen Lu¹, Sunil Wadhwa¹. ¹Columbia University, United States
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- SA0107 Ethnic Differences in the Diurnal Rhythms of Calcium and Phosphate Metabolism**
 Inez Schoenmakers^{*1}, Jean Redmond², Landling Jarjou³, Bo Zhou⁴, Ann Prentice², Tony Fulford⁵. ¹Medical Research Council (MRC) Human Nutrition Research, Cambridge, UK and Department of Medicine, University of East Anglia, Norwich, UK, United Kingdom, ²Medical Research Council (MRC) Human Nutrition Research, Cambridge, UK, United Kingdom, ³MRC Keneba, The Gambia, Gambia, ⁴Department of Public Health, Shenyang Medical College, Shenyang, PR China, China, ⁵MRC International Nutrition Group, London School of Hygiene and Tropical Medicine, London, UK, United Kingdom
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- SA0108 The influence of scaffold stiffness on murine fracture healing: an *in silico* study**
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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 Kim², Jae-yeon Yang², Ji-yeon Lee², Kyoung Min Kim³, Jung Hee Kim¹, Chan Soo Shin¹, Sang Wan Kim⁴. ¹Seoul National University College of Medicine, Korea, Republic of, ²Seoul National University Hospital Biomedical Research Institute, Korea, Republic of, ³Seoul National University Bundang Hospital, Korea, Republic of, ⁴Seoul 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 Nemitz², Anita Ignatius². ¹University of Ulm, Germany, ²University of Ulm , Germany
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- SA0111 Microtubule-dependent regulation of a signaling relay that tunes the osteocyte mechanical load response**
 James Lyons^{*1}, Humberto Joca¹, Robert Law², Jaclyn Kerr¹, Guoli Shi¹, Ramzi Khairallah³, Konstantinos Konstantopoulos², Christopher Ward¹, Joseph Stains¹. ¹University of Maryland, Baltimore, United States, ²Johns Hopkins University, United States, ³Myologica, LLC., United States
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- SA0112 TIEG1 is a Critical Mediator of Wnt Signaling in Calcific Aortic Valve Disease**
 Nalini Rajamannan^{*1}. ¹Mayo Clinic, United States
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- SA0113 Shared Molecular Mechanisms Contributing to PTOA in Loading-Mediated Injury Models**
 Aimy Sebastian^{*1}, Jiun Chang¹, Nicholas Hum¹, Deepa Murugesh¹, Gabriela Loots¹, Blaine Christiansen². ¹Lawrence Livermore National Laboratories, United States, ²UC 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 Menuki¹, Kayoko Okuma¹, Manabu Tsukamoto¹, Hokuto Fukuda¹, Yasuaki Okada¹, Kenji Kosugi¹, Akinori Sakai¹. ¹Department 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 Wright¹, Gabriel Pagnotti¹, Jenna Reagan¹, Gunes Uzer², Clinton Rubin³, Khalid Mohammad¹, Theresa Guise¹, William Thompson¹. ¹Indiana University, United States, ²Boise State University, United States, ³State 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 Ishihara¹, Naoya Odagaki¹, Masahiro Nakamura¹, Ei Ei Hsiao¹, Hiroshi Kamioka¹. ¹Okayama 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 Seliger², Wing-Lee Chan², Michael Thelen², Uwe Kornak², Bettina Willie³. ¹Beijing University of Technology, China, ²Charité-Universitätsmedizin Berlin, Germany, ³Shriners 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 Miyakoshi¹², Yuji Kasukawa¹², Hiroyuki Tsuchie¹², Yuichi Ono¹², Masazumi Suzuki¹², Tetsuya Kawano¹², Yusuke Yuasa¹², Itsuki Nagahata¹², Yoichi Shimada¹². ¹Akita university hospital, Japan, ²Akita 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 Lippo¹, Paolo Pignataro¹, Lorenzo Sanesi¹, Giovanna Spiro², Ilenia Severi³, Giovanni Passeri⁴, Giacomina Brunetti¹, Umberto Tarantino⁵, Silvia Colucci¹, Janne Reseland⁶, Roberto Vettor², Saverio Cinti³, Maria Grano⁷. ¹Department of Basic Medical Science, Neuroscience and Sense Organs, University of Bari, Italy, ²Department of Medicine-DIMED, Internal Medicine 3, University of Padova, Italy, ³Department of Experimental and Clinical Medicine, Center of Obesity, United Hospitals, University of Ancona, Italy, ⁴Department of Clinical and Experimental Medicine, University of Parma, Italy, ⁵Department of Orthopedics and Traumatology, Tor Vergata University of Rome, Italy, ⁶Department of Biomaterials, Institute for Clinical Dentistry, University of Oslo, Blindern, Norway, ⁷Department 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 Reppe¹, Håvard Wiig², Nils Helge Kvamme², Camilla Kirkegaard³, Truls Raastad², Vigdis T. Gautvik⁴, Karl J. Kvernevik⁵, Tor P. Utneim¹, Kaare M. Gautvik⁶. ¹Oslo University Hospital, Department of Medical Biochemistry, Norway, ²Norwegian School of Sport Sciences, Department of Physical Performance, Norway, ³Norwegian School of Sports Sciences, Department of Physical Performance, Norway, ⁴University of Oslo, Institute of Basic Medical Sciences, Norway, ⁵Lovisenberg Diakonale Hospital, Norway, ⁶Lovisenberg 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}, Sébastien Gariepy¹, Luc Tremblay², Aurore Varela¹. ¹Charles River Laboratories Montreal, Canada, ²CIMS-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 Zhao², Jennifer Rosser³, Michael J. Wacker³, Julian Vallejo³, Marco Brotto⁴, Lynda F. Bonewald². ¹Indiana University, United States, ²Indiana University, United States, ³University of Missouri-Kansas City, United States, ⁴University of Texas at Arlington, United States
Disclosures: Yukiko Kitase, None

- SA0123 Bone morphogenetic proteins and myostatin: key mediators of Sarcopenia-Osteoporosis connection**
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¹University 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 Liu¹, Cinyee Cai², Ian Mahaffey³,
 Stephanie Norman³, Whitney Cole³, Alesha Castillo¹. ¹Dept 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, ²Dept of Orthopaedic Surgery, School of Medicine, New York University, United States, ³Veterans 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 scimeca¹, Federica Centofanti¹, maurizio feola¹, annalisa botta¹, Umberto Tarantino¹. ¹University of Rome Tor Vergata, Italy
Disclosures: monica celi, None
- SA0126 Regulation of Protein Kinase A (PKA) by Protein Kinase Inhibitor γ (PKI γ) Reduces Osteogenesis in Aged Mice**
 Bryan S. Hausman^{*1}, Xin Chen², Hyonmin Choe³, Ozan Akkus⁴, Edward M Greenfield¹.
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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 Thakur¹, Walter Ramsey¹, Ying Han², Jianrui Xu¹, Qing Zhong¹, Wendy Bollag¹, Meghan McGee-Lawrence¹, William Hill¹, Xingming Shi¹, Monte Hunter¹, Mohammed Elsalanty³, Mark Hamrick¹, Carlos Isales¹. ¹Medical College of Georgia, United States, ²Jiaotong University, China, ³Augusta 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 Reddy¹. ¹University 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 George¹, Kimberly Kelly¹, Suresh Tyagi¹, Neetu Tyagi¹.
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Disclosures: Jyotirmaya Behera, None
- SA0130 The Novel Role of PINCH in Skeletogenesis**
 Xin Liu^{*1}, Guozhi Xiao¹. ¹SUSTech, China
Disclosures: Xin Liu, None
- SA0131 Thyroid hormone locally interacts with the Sympathetic Nervous System to control bone linear growth.**
 Manuela Rodrigues^{*1}, Bianca Papi¹. ¹University of Sao Paulo, Brazil
Disclosures: Manuela Rodrigues, None

- SA0132 Identifying A Novel Regulator Of Anabolic Bone Metabolism**
 Yu Shao^{*1}, Kylie Jacobs², James Hamilton³, Thomas M O'Connell⁴, Nickolay Brustovetsky³, Jeanette McClintick⁵, Ronald Wek⁵, Joseph Bidwell². ¹Medical & Molecular Genetics, Indiana University School of Medicine, United States, ²Anatomy & Cell Biology, Indiana University School of Medicine, United States, ³Pharmacology & Toxicology, Indiana University School of Medicine, United States, ⁴Otolaryngology & Head/Neck Surgery, Indiana University School of Medicine, United States, ⁵Biochemistry & Molecular Biology, Indiana University School of Medicine, United States
Disclosures: Yu Shao, None
- SA0133 TSC1 Regulates Bone Marrow Stromal Cell (BMSC) Lineage Commitment**
 Han Kyoung Choi^{*1}, Hebao Yuan², Fang Fang¹, Fei Liu¹. ¹University of Michigan School of Dentistry, United States, ²University of Michigan, United States
Disclosures: Han Kyoung Choi, None
- SA0134 miR-146a Is An Endogenous Regulator of Both Hematopoiesis And Bone Mass**
 Jennifer Geisler^{*1}, Blake Eason Hildreth III¹, James Lee¹, Michael Ostrowski¹, Sudarshana Sharma¹. ¹The Ohio State University, United States
Disclosures: Jennifer Geisler, None
- SA0135 Identification of Murine Circulating CD34+ OCN+ Cells**
 Ryan Kelly^{*1}, Lindsay McDonald², James Cray¹, Amanda LaRue². ¹Medical University of South Carolina, United States, ²Ralph 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 Chiu¹, Ding-Cheng Chan¹, Rong-Sen Yang¹. ¹National 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 Maye¹. ¹UConn Health, United States
Disclosures: Ryan Russell, None
- SA0138 Intranuclear actin assembly is critical for extracellular matrix mediated osteogenic differentiation of mesenchymal stem cells**
 Jeyantti Srinivas Sankaran^{*1}, Buer Sen¹, Zhihui Xie¹, Cody McGrath¹, Maya Styner¹, Rebekah Samsonraj², Andre van Wijnen², Janet Rubin¹. ¹University of North Carolina, Chapel Hill, United States, ²Mayo Clinic, United States
Disclosures: Jeyantti Srinivas Sankaran, None
- SA0139 Conditional ablation of Prx1 expressing cells and haploinsufficiency of Prrx1 gene lead to impaired fracture healing**
 Lai Wang^{*1}, Alessandra Esposito¹, Joseph Temple¹, Ji Eun Han¹, Tieshi Li¹, Anna Spagnoli¹. ¹Department of Pediatrics, Rush University Medical Center, Chicago, United States
Disclosures: Lai Wang, None
- SA0140 PDGFR β signaling regulates osteogenesis of periosteal mesenchymal stem cells.**
 Xi Wang^{*1}, Brya G Matthews¹, Jungeon Yu², Archana Sanjay¹, Danka Grcevic³, Ivo Kalajzic¹. ¹UConn Health, United States, ²UConn Health, United States, ³University of Zagreb, United States
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- SA0141 The fracture Callus is Formed by Progenitors of Different Skeletal Origins in a Site Specific Manner**
 Yongmei Wang^{*1}, Faming Tian¹, Lin Ling², Wasima Mayer², Ling Chen³, Misun Kang³, Sunita Ho³, Daniel Bikle¹. ¹Endocrine Unit, University of California, San Francisco/San Francisco VA Health Care System, United States, ²Endocrine Unit, University of California, San Francisco /San Francisco VA Health Care System, United States, ³Bioengineering & 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-Samani², Rene Chun³, John Adams³, Yi Xing². ¹Bioinformatic Interdepartmental Graduate Program, University of California, Los Angeles, United States, ²Department of Microbiology, Immunology and Molecular Genetics, University of California, Los Angeles, United States, ³Department 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**
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Disclosures: Liping Xiao, None
- SA0144 LOXL2 has a protective role in human and mouse cartilage in vivo**
 Mustafa Tashkandi^{*1}, Saeer Alsaqer¹, Weam Alshenibr², Pushkar Mehra¹, Mary B. Goldring³, Louis C. Gerstenfeld⁴, Manish V Bais¹. ¹Boston University Henry M. Goldman School of Dental Medicine, Boston, MA, United States, ²Boston University Henry M. Goldman School of Dental Medicine, Boston, MA, United States, ³Weill Cornell Medical College, New York, NY, United States, ⁴Boston 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**
 Monika Frysz^{*1}, Jenny Gregory², Denis Baird³, Richard Aspden², Lavinia Paternoster¹, Jonathan Tobias³. ¹School of Social and Community Medicine, University of Bristol, UK; MRC Integrative Epidemiology Unit at the University of Bristol, UK, United Kingdom, ²Arthritis and Musculoskeletal Medicine, Institute of Medical Sciences, University of Aberdeen, UK, United Kingdom, ³Musculoskeletal Research Unit, School of Clinical Sciences, University of Bristol, UK, United Kingdom
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 Burt¹, Liping Xiao¹. ¹UConn 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 Bell¹, Edward M Schwarz¹, Brendan F Boyce¹, Lianping Xing¹. ¹University 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 Liu¹, Mayuko Kinoshita¹, Masashi Nagao¹, Haruka Kaneko¹, Ryo Sadatsuki¹, Shinnosuke Hada¹, Anwarjan Yusup¹, Hitoshi Arita¹, Jun Shiozawa¹, Yoshinori Tamura¹, Hirotaka Watada¹, Kazuo Kaneko². ¹Juntendo Univ. Graduate Sch. of Med., Japan, ²Juntendo 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 Ljuhar¹, Stefan Nehrer², Davul Ljuhar³, Astrid Fahrleitner-Pammer⁴, Hans-Peter Dimai⁴. ¹ImageBiopsy Lab, Austria, ²Danube University Krems, Austria, ³Braincon Technologies Research , Austria, ⁴Medical 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 Treece¹, Andrew Gee¹, Thomas Turmezei², Fjola Johannesson³, Sigurdur Sigurdsson⁴, Thor Aspelund⁴, Vilmundur Gudnasson⁴, Helgi Jonsson⁵, Kenneth Poole¹. ¹University of Cambridge, United Kingdom, ²Addenbrooke's Hospital, Cambridge, United Kingdom, ³Beth Israel Deaconess Medical Center, United States, ⁴The Icelandic Heart Association, Iceland, ⁵Landspitalinn 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 Solovieva², Eira Viikari-Juntura³, Steven Bowe⁴, Paul Kowal⁵, Nirmala Naidoo⁵, Ilana Ackerman⁶, Anita Wluka⁶, Michelle Leech⁶, Richard Page⁴, Gustavo Duque⁷, Fernando Gomez⁸, Mohammadreza Mohebbi⁴. ¹University of Melbourne, Australian Institute for Musculoskeletal Science (AIMSS), Australia, ²Finnish Institute of Occupational Health, Finland, ³Finnish Institute of Occupational Health, Finland, ⁴Deakin University, Australia, ⁵World Health Organization, Switzerland, ⁶Monash University, Australia, ⁷University of Melbourne; Australian Institute for Musculoskeletal Science (AIMSS), Australia, ⁸Facultad 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**
 Xinhua Qu^{*1}, Zhifeng Yu¹, Xuqiang Liu², Tingting Tang¹. ¹Shanghai Key Laboratory of Orthopaedic Implants, Department of Orthopaedic Surgery, Shanghai Ninth People's Hospital, Shanghai Jiao Tong University School of Medicine, China, ²The First Affiliated Hospital of Nanchang University, China
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- SA0153 Up-regulation of inhibitors of DNA binding/differentiation gene during alendronate-induced osteoblast differentiation**
 hoon choi^{*1}, heung yeol kim². ¹Department of Ob/Gyn, Inje university Sanggyepaik Hospital, Korea, Republic of, ²Department of Ob/Gyn, College of Medicine, Kosin University, Korea, Republic of
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- SA0154 Synergistic Effects of 1 α , 25-Dihydroxyvitamin D and 17 β -Estradiol on Mesenchymal Stem Cells from Pre-pubertal Children**
 Jing Li*¹, Bonnie Padwa², Shuanhu Zhou³, Julia Mullokandova⁴, Meryl LeBoff⁵, Julie Glowacki⁵. ¹Brigham and Women's Hospital, United States, ²Boston Children's Hospital, United States, ³Brigham and Women' Hospital, United States, ⁴Brigam and Women's Hopsital, United States, ⁵Brigham 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 Wildman¹, Mohammad Rehan¹, Harunur Rashid¹, Mohammad Hassan¹, Chris Lengner², Amjad Javed¹. ¹School of Dentistry, University of Alabama, United States, ²School of Veterinary Medicine Member, Institute for Regenerative Medicine University of Pennsylvania, United States
Disclosures: Tanner Godfrey, None
- SA0156 Analysis of the role of Fam20C in Fam20C-transgenic mice**
 Katsutoshi Hirose*¹, Yu Usami², Sunao Sato¹, Kaori Oya¹, Toshihisa Komori³, Satoru Toyosawa¹. ¹Department of Oral Pathology, Osaka University Graduate School of Dentistry, Osaka, Japan , Japan, ²Department of Oral Pathology, Osaka University Graduate School of Dentistry, Osaka, Japan, Japan, ³Department 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 Takeno¹, Ken-ichiro Tanaka¹, Masakazu Notsu¹, Toshitsugu Sugimoto¹. ¹Shimane University Faculty of Medicine, Japan
Disclosures: Ippei Kanazawa, None
- SA0158 Murine model for type VI OI (*Serpinf1-l-*) reveals dynamic regulation of vascularization and mineralization in bone**
 Heeseog Kang*¹, Smriti Aryal A.C.¹, Valentin David², Aline Martin², Susan Crawford³, Joan Marini¹. ¹NIH, United States, ²Northwestern University, United States, ³NorthShore 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 Ryoo¹. ¹Seoul 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 Sakamoto¹, Masaki Yoda¹, Yanlin Wu², Hidekazu Takano², Atsushi Momose², Koichi Matsuo¹. ¹Keio University School of Medicine, Japan, ²Tohoku 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 Hebert², Joseph Stains³. ¹graduate student, United States, ²lab technician, United States, ³PI, United States
Disclosures: Megan Moorer, None

- SA0162 Proteomic comparison of extracellular vesicles secreted from osteogenic and vascular smooth muscle cells.**
 Sandeep Chaudhary^{*1}, Victoria Smethurst², Daisy Monier², James Mobley¹, Dobrawa Napierala². ¹University of Alabama at Birmingham, United States, ²University of Pittsburgh, United States
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- SA0163 WNT16 Overexpression Protects Against Glucocorticoid-Induced Bone Loss**
 Karin Nilsson^{*1}, Sofia Movérale-Skrtic², Petra Henning², Jianyao Wu², Karin Gustafsson², Matti Poutanen², Ulf Lerner², Claes Ohlsson². ¹Centre for Bone and Arthritis Research, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden, ²Centre for Bone and Arthritis Research, Institute of Medicine, Sahlgrenska Academy, 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 Nyman², Lihua Zhou¹, Laura Lambert¹, Robert Kesterson¹, Jayleen Grams¹. ¹University of Alabama at Birmingham, United States, ²University 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 Ezura¹, Masaki Noda¹. ¹Tokyo 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 Bashur¹, Murali Mamidi¹, Guang Zhou¹. ¹Case 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 Gao², Aiping Lu², Sarah Amra³, Xiaodong Mu⁴, Johnny Huard², Charles Huard⁵. ¹Department 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, ²Department 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, ³1. 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, ⁴1. 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, ⁵Department 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 Saito¹, Andreas Gasser¹, Simona Bolamperti¹, Miki Maeda¹, Matthias Ring¹, Yang Shi¹, Levi Matthies¹, Hartmut Schlüter², Steven A. Johnsen³, Katharina Jähn¹, Courtney L. Long¹, Carl Haasper⁴, Thorsten Gehrke⁴, Vaibhav Saini⁵, Paola Divieti Pajevic⁵, Teresita Bellido⁶, Andre van Wijnen⁷, Khalid S Mohammad⁸, Theresa Guise⁸, Eric Hesse¹. ¹Molecular Skeletal Biology Laboratory, Department of Trauma, Hand and Reconstructive Surgery, University-Medical Center Hamburg-Eppendorf, Germany, ²Institute 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, ⁴HELIOS ENDO Hospital Hamburg, Germany, ⁵Department of Molecular and Cell Biology, Boston University, School of Dental Medicine, United States, ⁶Department of Anatomy and Cell Biology, Indiana University School of Medicine, United States, ⁷Department of Biochemistry and Molecular Biology, Department of Orthopedic Surgery, Mayo Clinic, United States, ⁸Division 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
 hiroyuki inose^{*1}, akira takahashi². ¹orthopedics, Japan, ²Kyushu University, Japan
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- 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}. ¹Institute 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 Hu², Han Kyoung Choi¹, Andrea Alford³, Erin M.R. Bigelow³, Karl Jepsen³, Fei Liu¹. ¹University of Michigan School of Dentistry, United States, ²Jilin University School and Hospital of Stomatology, China, ³University 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 Baltz¹, Charles O'Brien¹. ¹University 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 Jung², Hao-Han Guo¹, Jin-Xiu Pan¹, Xiang-Dong Sun², Lin Mei¹, Wen-Cheng Xiong¹. ¹Department of Neuroscience and Regenerative Medicine, and Department of Neurology, Medical College of Georgia; Charlie Norwood VA Medical Center, United States, ²Department 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 Kawai¹, Tsunao Kishida², Osam Mazda². ¹Nova Southeastern University, United States, ²Kyoto 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. Christie¹, Mitch J. McDonald¹, Nicole J. Ethen¹, Cassandra R. Diegel¹, Bart O. Williams². ¹Van Andel Research Institute, United States, ²Van Andel Research 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. Charles², Elizabeth P. Henske¹, David J. Kwiatkowski¹, Haoming Liu², Sabah Nobakhti³, Sandra J. Shefelbine³. ¹Division of Pulmonary and Critical Care Medicine, Department of Medicine, Brigham and Women's Hospital and Harvard Medical School, Boston, Massachusetts, USA, United States, ²Division of Rheumatology, Allergy, and Immunology, Department of Medicine, Brigham and Women's Hospital and Harvard Medical School, Boston, Massachusetts, USA, United States, ³Department of Mechanical and Industrial Engineering, Northeastern University, Boston, Massachusetts, USA, United States
Disclosures: Nicola Alesi, None
- SA0177 Bone matrix components activate the NLRP3 inflammasome and promote osteoclast differentiation**
 Yael Alippe^{*1}, Chung Wang¹, Biancamaria Ricci², Jianqiu Xiao³, Wei Zou⁴, Deborah Novack⁵, Yousef Abu-Amer², Roberto Civitelli³, Gabriel Mbalaviele³. ¹Division of Bone and Mineral Diseases - Washington University School of Medicine, United States, ²Department of Orthopaedic Surgery-Washington University School of Medicine, United States, ³Division of Bone and Mineral Diseases-Washington University School of Medicine, United States, ⁴Department of Pathology and Immunology-Washington University School of Medicine, United States, ⁵Division 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 Lee¹, Se Hwan Mun¹, Kyung-Hyun Park-Min¹. ¹Hospital for special surgery, United States
Disclosures: Seyeon Bae, None
- SA0179 Development of an ELISA for the quantification of human soluble Semaphorin 4D in plasma**
 Anna Laber^{*1}, Gabriela Berg², Gottfried Himmller¹. ¹The Antibody Lab, Austria, ²Biomedica Medizinprodukte GmbH & Co KG, Austria
Disclosures: Anna Laber, None
- SA0180 Regulation of Adhesion Signaling in Osteoclasts by Tetraspanin CD82**
 Alexis Bergsma^{*1}, Bart Williams², Cindy Miranti³. ¹Van Andel Institute Graduate School, United States, ²Van Andel Institute, United States, ³University of Arizona Cancer Center, United States
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. Westendorf¹, Merry Jo Oursler¹, Elizabeth W. Bradley¹. ¹Mayo 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. Lazarenko¹, Matthew E. Ferguson¹. ¹Arkansas 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 Hwang¹, In-Kyung Jeong¹, Kyu Jeung Ahn¹, Hyoung-Moo Park², Ho-Yeon Chung³. ¹Kyung Hee Univ, Korea, Republic of, ²Chung-Ang, Korea, Republic of, ³Kyung 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 Pan², Sharon Morley³, Subburaman Mohan¹, Weirong Xing¹. ¹Musculoskeletal Disease Center, VA Loma Linda Healthcare System, United States, ²Proteomics Core Facility, University of California, United States, ³Department of Pediatrics; ⁵Department of Pathology and Immunology, Washington University School of Medicine, United States
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- SA0185 miR-182 regulates osteoclastogenesis and bone remodeling in both physiological and pathological conditions**
 Kazuki Inoue^{*1}, Christine Miller², Gregory Vitone², Mahmoud Elguindy², Liang Zhao³, Baohong Zhao¹. ¹Hospital for Special Surgery/Weill Cornell Medicine, United States, ²Hospital for Special Surgery, United States, ³Nanfang 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 Kim¹, Do Won Jung¹, Jong-Wan Park¹, Yang-Sook Chun¹. ¹Seoul 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 Mayahara², Tomoyuki Mukai³, Tetsuya Yoshimoto¹, Teruhito Yoshitaka¹, Jeffery P Gorski¹, Yasuyoshi Ueki¹. ¹University of Missouri-Kansas City, School of Dentistry, United States, ²Nihon University School of Dentistry, Japan, ³Department 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 Saito¹, Hanna Taipaleenmäki¹, Eric Hesse¹. ¹Molecular 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 Hokugo², Eric Richard³, Kimberly Hui³, Boris Kashemirov³, Charles McKenna³, Ichiro Nishimura¹. ¹Weintraub Center for Reconstructive Biotechnology, UCLA School of Dentistry, United States, ²Division of Plastic Surgery, David Geffen School of Medicine at UCLA, United States, ³Department 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 Asai¹, Fumie Shimokawa¹, Masaharu Hisasue²,
 Masayuki Funaba³. ¹Laboratory of Molecular Biology, Azabu University School of Veterinary Medicine, Japan, ²Laboratory of Veterinary Internal Medicine II, Azabu University School of Veterinary Medicine, Japan, ³Division of Applied Biosciences, Kyoto University Graduate School of Agriculture, Japan
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- SA0191 Collagen Type VI α 2 Chain Deficiency Causes Trabecular Bone Loss by Enhancing Osteoclast Differentiation**
 Hai Pham^{*1}, Ainnie Dar¹, Vardit Kram¹, Li Li¹, Tina Kilts¹, Marian Young¹. ¹Craniofacial and Skeletal Diseases Branch, National Institute of Dental and Craniofacial 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**
 Elena Shashkova^{*1}, Anna Cline-Smith¹, Grant Kolar¹, Macey Peterson¹, Suman Nellore¹, Rajeev Aurora¹. ¹Saint Louis University, United States
Disclosures: Elena Shashkova, None
- SA0193 Critical role of Endothelin in Osteoclast Differentiation and Function**
 Ji Su Sun^{*1}, Sueyoung Oh², Dong Min Shin¹, Inik Chang². ¹Department of Oral Biology, BK21 PLUS Project, Yonsei University College of Dentistry, Korea, Republic of, ²Department of Oral Biology, Yonsei University College of Dentistry, Korea, Republic of
Disclosures: Ji Su Sun, None
- SA0194 Transgenic expression of TBK1 In Osteoclast Lineage Cells Increased Both Osteoclasts and Bone Formation**
 Quanhong Sun^{*1}, Peng Zhang¹, Juraj Adamik¹, Mark Subler², Jolene J. Windle², Laëtitia Michou³, Jacques P. Brown⁴, Noriyoshi Kurihara⁵, G. David Roodman⁵, David W. Dempster⁶, Kostas Verdelis⁷, Hua Zhou⁶, Deborah L. Galson¹. ¹Department of Medicine, Hematology-Oncology Division, University of Pittsburgh Cancer Institute, The McGowan Institute for Regenerative Medicine, University of Pittsburgh, PA, USA, United States, ²Department of Human and Molecular Genetics, Virginia Commonwealth University, Richmond, VA, United States, ³Department of Medicine, Laval University, CHU de Quebec Research Center and Department of Rheumatology, CHU de Quebec, Quebec City, Canada, Canada, ⁴Department of Medicine, Laval University, CHU de Quebec Research Center and Department of Rheumatology, CHU de Quebec, Quebec City, Canada, United States, ⁵Department of Medicine, Hem-Onc Division, Indiana University, Indianapolis, IN, United States, ⁶Regional Bone Center, Helen Hayes Hospital, Route 9W, West Haverstraw, NY 10993, USA, United States, ⁷The 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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- SA0195 Monocyte-Specific Knockout of C/Ebp α Results in Osteopetrosis Phenotype, Blocks Bone Loss in Ovariectomized Mice and Reveals the Indispensable Function of C/EBP α in Osteoclast Differentiation and Function**
 Jun Tang^{*1}, Guochun Zhu¹, Joel Jules¹, Yi-Ping Li¹, Wei Chen¹. ¹Department of Pathology, University of Alabama at Birmingham, United States
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- SA0196 Characterization of a Novel TCIRG1 Mutation Responsible for a Mild Form of Autosomal Recessive Osteopetrosis**
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- SA0197 Deletion of the transferrin receptor 1 gene in murine osteoclasts attenuates mitochondria metabolism and cytoskeletal organization and increases trabecular bone mass**
 Lei Wang^{*1}, Toshifumi Fujiwara², Bin Fang³, Nukhet Aykin-burns⁴, Zhichang Zhang⁵, Xiaolin Li⁵, Michael L Jennings⁶, Stavros C Manolagas⁷, Jian Zhou¹, Haibo Zhao⁷.
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Disclosures: Lei Wang, None
- SA0198 Kindlin-2 in Osteocytes Controls Bone Remodeling**
 Huiling Cao^{*1}, Guozhi Xiao¹. ¹SUSTech, China
Disclosures: Huiling Cao, None
- SA0199 The role of osteocytes in regulating bone marrow fat: insight into large and small animal models of osteoporosis**
 Thaqif El Khassawna^{*1}, Deeksha Malhan¹, Diaa Eldin Daghma¹, Sabine Stoetzel¹, Stefanie Kern¹, Fathi Hassan¹, Katrin Susanne Lips¹, Christian Heiss². ¹Experimental Trauma Surgery, Faculty of Medicine, Justus-Liebig University of Giessen, Germany, ²Department of Trauma, Hand and Reconstructive Surgery, University Hospital of Giessen - Marburg, Germany
Disclosures: Thaqif El Khassawna, None
- 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**
 Karl Lewis^{*1}, Joyce Louie¹, Samuel Stephen¹, David C. Spray², Mia M. Thi², Zeynep Seref-Ferlengez², Robert J. Majeska¹, Sheldon Weinbaum¹, Mitchell B. Schaffler¹.
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Disclosures: Karl Lewis, None
- SA0203 Osteocyte role in osteoporotic sheep model: cell-specific gene profiling**
 Deeksha Malhan^{*1}, Diaa Eldin S. Daghma¹, Sabine Stoetzel¹, Stefanie Kern¹, Fathi Hassan¹, Katrin Susanne Lips¹, Thaqif El Khassawna¹, Christian Heiss². ¹Experimental Trauma Surgery, Faculty of Medicine, Justus Liebig University of Giessen, Germany, ²Department 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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Disclosures: Jerahme Martinez, None
- SA0205 Unexpected decrease in osteoclast number and bone resorption with increased osteocyte apoptosis in the absence of osteocytic miR21**
 Rafael Pacheco-Costa^{*1}, Hannah Davis¹, Emily Atkinson¹, Julian Dilley¹, Carmen Herrera¹, Keith Condon¹, Mircea Ivan¹, Teresita Bellido¹, Lilian Plotkin¹. ¹Indiana University School of Medicine, United States
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- SA0206 Effects of Glucose Uptake Inhibition by Phloretin on Expressions of RANKL and Osteocalcin in Osteocytic MLO-Y4-A2 Cells**
 Ayumu Takeno^{*1}, Ippei Kanazawa¹, Masakazu Notsu¹, Ken-ichiro Tanaka¹, Toshihiko Sugimoto¹. ¹Internal Medicine 1, Shimane University Faculty of Medicine, Japan
Disclosures: Ayumu Takeno, None
- SA0207 Diagnostic Error Rates of Bone Mineral Density and Other Proxies for Bone Strength**
 Lyn Bowman^{*1}, Gabriel C. Hausfeld¹, Emily R. Ellerbrock¹, Jennifer M. Neumeyer¹, Tyler C. Beck¹, Maureen A. Dean¹, McKenzie L. Nelson¹, Anne B. Loucks¹. ¹Ohio 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 Ruiz², Andy Luis Olivares², Silvana Di Gregorio¹, Simone Tassani³, Silvia Martinez-Pardo⁴, Mihail Gregorov⁴, Jérôme Noailly³, Miguel Angel Gonzalez³. ¹CETIR Grupo Medic, Spain, ²Simulation, Imaging and Modelling for Biomedical Systems, Universitat Pompeu Fabra, Spain, Spain, ³Simulation, Imaging and Modelling for Biomedical Systems, Universitat Pompeu Fabra, Spain, ⁴Servicio reumatología, Hospital Universitarios Mutua de Terrassa, Spain
Disclosures: Luis Del Rio, None
- SA0209 Analyzing the cortical and trabecular bone of the femur of patients with vertebral fractures by 3D-DXA.**
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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**
 Young Ho Shin^{*1}, Hyun Sik Gong². ¹Department of Orthopedic Surgery, Asan Medical Center, Korea, Republic of, ²Department of Orthopedic Surgery, Seoul National University Bundang Hospital, Seoul National University College of Medicine, Korea, Republic of
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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**
 Lukas Huber^{*1}, Timo Damm¹, Wolfram Timm², Julian Ramin Andresen³, Claus-Christian Glüer¹, Reimer Andresen⁴. ¹Section Biomedical Imaging, Department of Radiology and Neuroradiology, UKSH, Christian-Albrechts-Universität zu Kiel, Germany, Germany, ²MINDWAYS CT, Austin, TX, USA, United States, ³Medical School, Sigmund Freud University, Vienna, Austria, Austria, ⁴Institute of Diagnostic and Interventional Radiology/ Neuroradiology, Westküstenklinikum Heide, Academic Teaching Hospital of the Universities of Kiel, Luebeck and Hamburg, Heide, Germany, Germany
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- SA0213 Preliminary Computed Tomography (CT) Multi-scale Investigation of Cortical Bone Quality in Non-osteoporotic Males**
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Disclosures: Randee Hunter, None
- SA0214 Associations of TBS and fractures differ among ethnicities: a study of NHANES 2005-2008**
 Rajesh Jain^{*1}, Tamara Vokes¹. ¹University of Chicago Medicine, United States
Disclosures: Rajesh Jain, None
- 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 Kim¹, In Joo Kim¹, Kyounjune Park¹, Myung-Jun Shin¹, Tae Sik Goh². ¹Pusan national University Hospital, Korea, Republic of, ²Pusan National University , 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**
 Rita Kral^{*1}, Marit Osima², Tove T Borgen³, Elin Richardsen⁴, Åshild Bjørnerem¹. ¹Department of Obstetrics and Gynaecology, University Hospital of North Norway, Department of Clinical Medicine, UiT The Arctic University of Norway, Norway, ²Department of Community Medicine, UiT The Arctic University of Norway, Tromsø, Department of Orthopaedic Surgery, University Hospital of North Norway, Tromsø, Norway, ³Department of Rheumatology, Vestre Viken Hospital Trust, Hospital of Drammen, Norway, ⁴Department of Medical Biology, UiT The Arctic University of Norway, Tromsø, Department of Pathology, University Hospital of North Norway, Tromsø, Norway, Norway
Disclosures: Rita Kral, None
- SA0217 Are grade 1 vertebral fracture, fractures?**
 Brian Lentle^{*1}, Claudio Berger², Linda Probyn³, Jacques P. Brown⁴, Lisa Langsetmo⁵, Ben Fine³, Kevin Lian¹, Arvind Shergill³, Jacques Trollip¹, Stuart Jackson⁶, William D. Leslie⁷, Jerilynn C. Prior¹, Stephanie M. Kaiser⁸, David A. Hanley⁹, Angela M. Cheung³, Jonathan D. Adachi¹⁰, Tanveer Towheed¹¹, K. Shawn Davison¹², David Goltzman¹³. ¹University of British Columbia, Canada, ²McGill University Health Centre- Researce Institute, Canada, ³University of Toronto, Canada, ⁴Université Laval, Canada, ⁵University of Minnesota, United States, ⁶University of Alberta, Canada, ⁷University of Manitoba, Canada, ⁸Dalhousie University, Canada, ⁹University of Calgary, Canada, ¹⁰McMaster University, Canada, ¹¹Queens University, Canada, ¹²University of Victoria, Canada, ¹³McGill 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 Shevroja², Helena Johansson³, Anders Oden³, Eugene McCloskey³, John Kanis³, Didier Hans². ¹University of Manitoba, Canada, ²Lausanne University Hospital, Switzerland, ³University of Sheffield Medical School, United Kingdom
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- SA0219 Trabecular Bone Score and Fracture Risk Prediction in HIV and Hepatitis C Infection**
 Roger Bedimo^{*1}, John Poindexter², Beverley Adams-Huet², Naim Maalouf². ¹VA North Texas Health Care System, United States, ²University of Texas Southwestern Medical Center, United States
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**
 Maria Pisu^{*1}, David Kopperdahl², Cora Lewis¹, Michael Saddekni¹, Kenneth Saag¹, Tony Keaveny³. ¹University of Alabama Birmingham, United States, ²O.N. Diagnostics, United States, ³University of California Berkeley, United States
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**
 Punam K Saha^{*1}, Xiaoliu Zhang¹, Elena M Letuchy¹, Kathleen F Janz¹, Trudy L Burns¹, James C Torner¹, Steven M Levy¹. ¹University of Iowa, United States
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 Drake¹, Elizabeth Atkinson¹, Jon Camp¹, Amanda Tweed¹, Louise McCready¹, Lifeng Yu¹, Mark Adkins¹, Shreyasee Amin¹, Sundeep Khosla¹. ¹Mayo Clinic, United States
Disclosures: Jad Sfeir, None
- 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**
 Jad Sfeir^{*1}, Bart Clarke¹, Robert Wermers¹, Robert Tiegs¹, Ann Kearns¹, Kurt Kennel¹, Sundeep Khosla¹, Matthew Drake¹. ¹Mayo Clinic, United States
Disclosures: Jad Sfeir, None
- 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 Greendale¹, Jane Cauley², Joan Lo³, Arun Karlamangla¹. ¹UCLA, United States, ²University of Pittsburgh, United States, ³Kaiser, United States
Disclosures: Albert Shieh, None
- 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**
 Jingmei Wang^{*1}, Yun Sun², Tom Sanchez³. ¹Department of Research and Development, Norland at Swissray, China, ²Department of Radiology, Hospital of Tsinghua University, China, ³Department of Research and Development, Norland at Swissray, United States
Disclosures: Jingmei Wang, None
- SA0227 Utilization of Trabecular Bone Score in Fracture Risk Assessment Tool (FRAX)**
 Li Hao Richie Xu^{*1}, Alberto Cabo-Chan¹. ¹University of Texas Southwestern Medical Center, United States
Disclosures: Li Hao Richie Xu, None

- 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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¹Internal Medicine 1, Shimane University Faculty of Medicine, Japan, ²Health and Nutrition, The University of Shimane, Japan
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- SA0229 Peripheral Arterial Disease Predicts Hip Fracture in Men.Results from the MrOS Sweden Study**
 Tove Bokrantz^{*1}, Claes Ohlsson², Mattias Lorentzon³, Magnus Karlsson¹, sten Ljunggren⁴, Karin Manhem¹, Dan Mellström⁵. ¹Department of Molecular and Clinical Medicine, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden, Sweden, ²Centre for Bone and Arthritis Research (CBAR), Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden, Sweden, ³Department of Geriatric Medicine, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden, ⁴Department of Medical Sciences, University of Uppsala, Uppsala, Sweden, Sweden, ⁵Department of Geriatrics, Institute of Medicine, Sahlgrenska Academy, Centre for Bone and Arthritis Research (CBAR) University of Gothenburg, Gothenburg, Sweden, Sweden
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- SA0230 Factors Associated with Readiness for Adopting Osteoporosis Treatment Change**
 Maria Danila^{*1}, Elizabeth Rahn¹, Amy Mudano¹, Ryan Outman¹, Peng Li¹, David Redden¹, Fred Anderson², Susan Greenspan³, Andrea LaCroix⁴, Jeri Nieves⁵, Stuart Silverman⁶, Ethel Siris⁷, Nelson Watts⁸, Sigrid Ladore¹, Karen Meneses¹, Jeffrey Curtis¹, Kenneth Saag¹. ¹University of Alabama at Birmingham, United States, ²University of Massachusetts Medical School, United States, ³University of Pittsburgh, United States, ⁴University of California at San Diego, United States, ⁵Helen Hayes Hospital, United States, ⁶Cedars-Sinai Medical Center, United States, ⁷Columbia University Medical Center, United States, ⁸Mercy Health Osteoporosis and Bone Health Services, United States
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)**
 Susan Diem^{*1}, Tien Vo¹, Lisa Langsetmo¹, John Schousboe², Kristine Yaffe³, Kristine Ensrud⁴. ¹University of Minnesota, United States, ²Health Partners Research Foundation, United States, ³University of California, United States, ⁴Minneapolis Veterans Affairs Medical Center and University of Minnesota, United States
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**
 Howard Fink^{*1}, Lisa Langsetmo², Tien Vo², Eric Orwoll³, John Schousboe⁴, Kristine Ensrud⁵. ¹GRECC, VA Health Care System, United States, ²University of Minnesota School of Public Health, United States, ³Oregon Health Sciences University, United States, ⁴Park Nicollet Clinic, United States, ⁵VA Health Care System, United States
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 Oei¹, Taulant Muka¹, Enisa Shevroja², Josje Schoufour¹, Oscar Franco¹, Carola Zillikens¹, Eugene McCloskey³, William Leslie⁴, Olivier Lamy², Edwin Oei¹, Didier Hans², Fernando Rivadeneira¹. ¹Erasmus MC, Netherlands, ²University of Lausanne, Switzerland, ³University of Sheffield, United Kingdom, ⁴University of Manitoba, Canada
Disclosures: Fjorda Koromani, None

- SA0234 Prevalence and Characteristics of Atypical Periprosthetic Femoral Fractures**
 Jean-Thomas Leclerc^{*1}, Laëtitia Michou², François Vaillancourt¹, Stéphane Pelet¹, David Simonyan³, Etienne Belzile¹. ¹Division of orthopedic surgery, CHU de Québec-Université Laval, Canada, ²Division of rheumatology, CHU de Québec-Université Laval, Canada, ³CHU de Québec-Université Laval, research centre, Canada
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- SA0235 Gender-different association between age-related body composition change and hip bone loss: Ansung cohort study**
 Ji Hyun Lee^{*1}, Jung Hee Kim¹, Seo Young Lee¹, A Ram Hong¹, Hyung Jin Choi², Sang Wan Kim³, Nam H. Choi⁴, Chan Soo Shin³. ¹Department of Internal Medicine, Seoul National University College of Medicine, Korea, Republic of, ²Department of Anatomy, Seoul National University College of Medicine, Korea, Republic of, ³Department of Internal Medicine, Seoul National University Hospital, Korea, Republic of, ⁴Department of Preventive Medicine, Ajou University School of Medicine, Korea, Republic of
Disclosures: Ji Hyun Lee, None
- SA0236 Characteristics and Consequences of Hip Fracture in an Elderly Irish Population**
 James Mahon^{*1}, Oisin Hannigan², Georgina Steen², Nessa Fallon², Niamh Maher², Aoife Dillon², Geraldine McMahon³, Alison Reynolds⁴, Thomas McCarthy⁴, Irina Tomita², Laura Clowry², Ronan O'Toole², MC Casey², JB Walsh², Kevin McCarroll². ¹Osteoporosis and Bone Health Unit, St James's Hospital, Dublin 8, Ireland, ²Osteoporosis and Bone Health Unit, St James's Hospital, Dublin 8, Ireland, ³Department of Emergency Medicine, St James's Hospital, Dublin 8, Ireland, ⁴Department of Orthopaedic Surgery, St James's Hospital, Dublin 8, Ireland
Disclosures: James Mahon, None
- SA0237 Bone-Formers and Bone-Losers in a 200yr old Archaeological Population**
 Simon Mays^{*1}. ¹Historic England, United Kingdom
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- SA0238 Cathepsins B and S Are Novel Biomarkers for Bone Mineral Density: A Mendelian Randomization Study**
 John Morris^{*1}, John Kemp², David Evans², Brent Richards³. ¹Department of Human Genetics, McGill University, Canada, ²The University of Queensland Diamantina Institute, Australia, ³Department of Medicine, McGill University, Canada
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- 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 Kocjan¹, Andreas Baierl², Rainer Dormann¹, Xaver Feichtinger³, Judith Haschka¹, Gabriela Katharina Muschitz⁴, Jakob Schanda⁵, Peter Pietschmann⁶, Heinrich Resch¹, Hans Peter Dimai⁷. ¹St. Vincent Hospital - VINFORCE, Austria, ²Department of Statistics and Operations Research, the University of Vienna, Austria, ³AUVA Trauma Center Meidling - Department of Surgery, Austria, ⁴Division of Plastic and Reconstructive Surgery, Department of Surgery, the Medical University of Vienna, Austria, ⁵AUVA Trauma Center Meidling, Austria, ⁶Department of Pathophysiology and Allergy Research, Center for Pathophysiology, Infectiology and Immunology, the Medical University of Vienna, Austria, ⁷Department 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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Disclosures: Cristian Tebé, Amgen, Other Financial or Material Support
- 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 Ernst², Fergus Caskey³, Nigel Arden⁴, Yoav Ben-Shlomo³, Mads Nybo⁵, Katrine Hass Rubin², Andrew Judge¹, Cyrus Cooper¹, M Kassim Javaid⁴, Pernille Hermann⁶, Bo Abrahamsen², Daniel Prieto-Alhambra¹. ¹Centre for Statistics in Medicine and Nuffield Department of Orthopaedics, Rheumatology, and Musculoskeletal Sciences (NDORMS), University of Oxford, United Kingdom, ²OPEN, Department of Health, University of Southern Denmark, Denmark, ³School of Social and Community Medicine, University of Bristol, United Kingdom, ⁴Nuffield Department of Orthopaedics, Rheumatology, and Musculoskeletal Sciences (NDORMS), University of Oxford, United Kingdom, ⁵Department of Clinical Biochemistry, Odense University Hospital, Denmark, ⁶Department of Endocrinology, Odense University Hospital, Denmark
Disclosures: Sanni Ali, None
- 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 Magaziner¹, Michelle Shardell², Laura Yerges-Armstrong³, Denise Orwig¹, Gregory Hicks⁴, Marc Hochberg¹. ¹University of Maryland School of Medicine, United States, ²National Institute on Aging, United States, ³GlaxoSmithKline, United States, ⁴University of Delaware, United States
Disclosures: Alan Rathbun, None
- SA0244 Rest-activity circadian rhythm and bone mineral density in older men**
 Tara S Rogers^{*1}, Stephanie Harrison², Christine Swanson³, Jane A. Cauley⁴, Elizabeth Barrett-Connor⁵, Eric Orwoll⁶, Katie Stone², Nancy Lane⁷. ¹Center for Musculoskeletal Health and Department of Internal Medicine, University of California at Davis, United States, ²California Pacific Medical Center Research Institute, United States, ³University of Colorado Anschutz Medical Campus, Division of Endocrinology, United States, ⁴Department of Epidemiology, Graduate School of Public Health, University of Pittsburgh, United States, ⁵University of California, San Diego, United States, ⁶Bone and Mineral Unit, Oregon Health & Science University, United States, ⁷Center for Musculoskeletal Health and Department of Internal Medicine, United States
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 Koromani², William Leslie³, Berengere Aubry-Rozier⁴, Edwin Oei⁵, Olivier Lamy⁶, Fernando Rivadeneira⁷, Didier Hans⁶. ¹Center of Bone diseases, Bone and Joint Department, Lausanne University Hospital and Departments of Internal Medicine and Epidemiology, Erasmus MC, Rotterdam, The Netherlands, Switzerland, ²Departments of Internal Medicine and Epidemiology, Erasmus MC, Rotterdam, The Netherlands, Netherlands, ³Department of Internal Medicine, University of Manitoba, Winnipeg, Manitoba, Canada, Canada, ⁴1 Center of Bone diseases, Bone and Joint Department, Lausanne University Hospital, Lausanne, Switzerland, Switzerland, ⁵Department of Radiology, Erasmus Medical Center, Rotterdam, The Netherlands, Netherlands, ⁶Center of Bone diseases, Bone and Joint Department, Lausanne University Hospital, Switzerland, ⁷Departments of Internal Medicine and Epidemiology, Erasmus MC, Netherlands
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- SA0246 Increased Mortality in Older Home-dwelling Men with High Serum Periostin Levels – the Prospective STRAMBO Study**
 Pawel Szulc^{*1}, Jean Charles Rousseau¹, Cindy Bertholon¹, Roland Chapurlat¹. ¹INSERM 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 Patil¹, Saja Karinkanta¹, Kari Tokola¹, Pekka Kannus¹, Christel Lamberg-Allardt², Harri Sievänen¹. ¹The UKK Institute for Health Promotion Research, Finland, ²University 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**
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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 Burt², Eva Szabo¹, Steven K. Boyd², Shannon Reitsma³, Hana Gillick³, Hugo J.W. Fung⁴, Tiffany Yan⁵, Claudie Berger⁶, Heather Macdonald⁷, Leigh Gabel⁷, Maureen C. Ashe⁷, Danmei Liu⁸, Jerilynn Prior⁷, David A. Hanley², Chantal Kawalilak⁹, Andrew Frank-Wilson¹⁰, Saja Kontulainen⁹, Shawn Davison¹¹, Wojciech Olszynski⁹, George Ioannidis³, Christopher L. Gordon³, Colin E. Webber³, Karen A. Beattie³, Alexandra Papaioannou³, Lora Giangregorio¹², Robert G. Josse¹³, Norma MacIntyre³, Tassos Anatassiades¹⁴, David Goltzman⁶, Angela M. Cheung¹, Jonathan D. Adachi³, CaMos Bone Quality Study for the³. ¹University Health Network, Canada, ²University of Calgary, Canada, ³McMaster University, Canada, ⁴University of Toronto, Canada, ⁵Ryerson University, Canada, ⁶McGill University, Canada, ⁷University of British Columbia, Canada, ⁸Centre for Hip Health and Mobility, Canada, ⁹University of Saskatchewan, Canada, ¹⁰National Institute on Aging, United States, ¹¹University of Victoria, Canada, ¹²University of Waterloo, Canada, ¹³St. Michael's Hospital, Canada, ¹⁴Queen'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 Yang², Colleen Metge³, William Leslie². ¹George & Fay Yee Centre for Healthcare Innovation, University of Manitoba, Canada, ²University of Manitoba, Canada, ³George & 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 King², Phillip Lawrence³, Richard Nelson¹, Joanne LaFleur¹, Grant Cannon¹, Scott Nelson⁴. ¹Salt Lake City Veterans Affairs Medical Center and University of Utah, United States, ²Kaiser Permanente Colorado, United States, ³Roseman University of Health Sciences, United States, ⁴Vanderbilt 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 Fower², Kassim Javaid². ¹Oxford Medical School, United Kingdom, ²Oxford 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 Nicholls¹, Nicole Ball¹, John Dutton¹, Isabelle Piec¹, James Rudge², Christopher Washbourne¹, William Fraser¹. ¹University of East Anglia, United Kingdom, ²Neoteryx, 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 Adachi², David Goltzman², Alexandra Papaioannou², Tanveer Towheed², Tassos Anastassiades², Rich Barron³. ¹Policy Analysis Inc. (PAI), United States, ²Canadian Multicentre Osteoporosis Study (CaMos), Canada, ³Amgen, 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 Robertson², Roumen Stamenkov³, Catherine Stapledon², Gerald Atkins², Peter Clifton¹, Lucian Solomon⁴, Paul Anderson¹, Howard Morris¹. ¹University of South Australia, Australia, ²The University of Adelaide, Australia, ³Royal Adelaide Hospital, Australia, ⁴The 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 Walkup², Walter Ambrosius², Stephen Kritchevsky², Leon Lenchik², Sue Shapses³, Barbara Nicklas², Anthony Marsh¹, W. Jack Rejeski¹. ¹Wake Forest University, United States, ²Wake Forest School of Medicine, United States, ³Rutgers 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 Stieben², Raquel Dobry³, Lilian Anca³, Adrián González³, María Isabel López³, Salvador Bayo³, Ariel Sánchez⁴, Lucas R Brun⁵.
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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 Shikany², Andrew Burghardt³, Peggy Cawthon³, Jane Cauley⁴, Eric Orwoll⁵, Douglas Bauer³, John Schousboe⁶, Brent Taylor⁷, Tien Vo¹, Elizabeth Barrett Connor⁸, Kristine Ensrud⁷. ¹University of Minnesota, United States, ²University of Alabama, United States, ³University of California, San Francisco, United States, ⁴University of Pittsburgh, United States, ⁵Oregon Health and Science University, United States, ⁶Park Nicollet Clinic and Health Partners Institute, United States, ⁷University of Minnesota and VA Health Care System, United States, ⁸University 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 Dongen², Douglas Kiel¹, Marian Hannan¹. ¹Institute for Aging Research, Hebrew SeniorLife, Harvard Medical School, United States, ²Wageningen 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 Fu¹, Micaela Karlsen¹, Joachim Sackey¹, Jian Shi¹, Karl Insogna², Meryl LeBoff³, Sue Shapses⁴, Connie Weaver⁵, Taylor Wallace⁶, Mei Chung¹. ¹Tufts University, United States, ²Yale University, United States, ³Harvard University, United States, ⁴Rutgers University, United States, ⁵Purdue University, United States, ⁶George 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 Sainani², Jennifer Carlson², Neville Golden², Michael Fredericson². ¹Spaulding Rehabilitation Hospital, Harvard University, United States, ²Stanford University, United States
Disclosures: Adam Tenforde, None
- SA0262 Local glucocorticoid metabolism regulates the effects of therapeutic glucocorticoids on bone**
 Chloe Fenton^{*1}, Craig Doig¹, Karim Raza¹, Gareth Lavery¹, Mark Cooper², Rowan Hardy¹. ¹University of Birmingham, United Kingdom, ²University of Sydney, Australia
Disclosures: Chloe Fenton, None

- SA0263 Disruption of Energy Metabolism in Postmenopausal Osteoporosis (PMO): Altered Fat Metabolism and Adipokines**
 Kaare Gautvik^{*1}, Michael Prediger², Yi-Hsiang Hsu³, Rachel Saunders⁴, Ole Olstad⁵, Marie Appleton⁴, Vigdis Gautvik⁶, Marco Ponzetti⁷, Yngve Bliksrud⁸, Nadia Rucci⁹, Mark Walker¹⁰, Anna Teti¹¹, Dermot Neely¹², Mark Birch-Machin⁴, Joseph Brain¹³, Sjur Reppe¹⁴, Harish Datta¹⁵. ¹Lovisenberg Diakonale Hospital, Unger-Vetlesen Institute, Oslo, Norway, ²Blood Sciences, Royal Victoria Infirmary, Newcastle Upon Tyne, United Kingdom, ³Institute of Ageing Research 1200 Centre Street, United States, ⁴Institute of Cellular Medicine, Faculty of Medicine, Newcastle University, United Kingdom, ⁵Oslo University Hospital, Department of Biochemistry , Norway, ⁶University of Oslo, Institute of Basic Medical Science, Norway, ⁷University of L'Aquila, Department of Biotechnological and Applied Clinical Sciences , Italy, ⁸Oslo University Hospital, Department of Medical Biochemistry, Norway, ⁹University of L'Aquila, Department of Biotechnological and Applied Sciences , Italy, ¹⁰Institute of Cellular Medicine (Diabetes), Faculty of Medicine, Newcastle University, United Kingdom, ¹¹University of L'Aquila, Department of Biotechnological and Applied Sciences, Italy, ¹²Blood Science (Biochemistry Section), The Newcastle Upon Tyne Hospitals, United Kingdom, ¹³Harvard T.H Chan School of Public Health, Department of Health Sciences, United States, ¹⁴Lovisenberg Diakonale Hospital, Unger-Vetlesen Institute, Norway, ¹⁵Institute 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**
 Matthew Drake^{*1}, Frank Blocki², Kim Hilgers², Jennifer Fenske², Brianne Thicke¹, Joshua Farr¹, Sundeep Khosla¹. ¹Mayo Clinic, United States, ²DiaSorin, United States
Disclosures: Matthew Drake, None
- SA0265 Interaction between *Porphyromonas gingivalis* (*P.gingivalis*) and Matrix Bound Bisphosphonates during Induction of Osteonecrosis**
 Ranya Elsayed^{*1}, Ahmed Alawady², Mohamed Meghil³, Pheba Abraham⁴, Mohamed Awad⁵, Christopher Cutler⁶, Mohammed Elsalanty⁷. ¹Oral Biology Dept., graduate school, Augusta University, United States, ²University of Florida College of Dentistry, United States, ³Departments of Oral Biology and Periodontics, Augusta University, United States, ⁴oral biology, Augsta University, United States, ⁵Augusta University, United States, ⁶professor and chair Dept. of periodontics, Associate dean for research, dental college of Georgia, Augusta university, United States, ⁷Associate 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 Gadermaier¹, Gabriela Berg¹, Venugopal Bhaskara², Emilio Casanova³, Gottfried Himmeler¹. ¹The Antibody Lab GmbH, Austria, ²Medical University of Vienna, Austria, ³Ludwig 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 Yang¹, Xin Li¹. ¹New 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 Dirkes¹, T. Dylan Olver¹. ¹University 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 Verroken¹, Stefan Goemaere¹, Jean-Marc Kaufman¹,
 Hans-Georg Zmierczak¹. ¹Unit for Osteoporosis and Metabolic Bone Diseases, Department
 of Endocrinology, Ghent University Hospital, Belgium
Disclosures: Bruno Lapauw, None
- SA0270 MFG-E8 deficiency: A model of inflamm-aging associated bone loss robustly rescued by teriparatide**
 Megan Michalski^{*1}, Anna Seydel¹, Erica Siisemets¹, Benjamin Sinder¹, Amy Koh¹,
 Kamran Atabai², Jose Aguirre³, Hernan Roca¹, Laurie McCauley¹. ¹University of Michigan,
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Disclosures: Megan Michalski, None
- SA0271 Activin A Signaling Is Critical For Renal Osteodystrophy in the CKD-MBD**
 Toshi Sugatani^{*1}, Yi-Fu Fang¹, Hartmut Malluche², Keith Hruska¹. ¹Department of
 Pediatrics, Nephrology, Washington University School of Medicine, United States, ²Division
 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**
 Liping Wang^{*1}, Theresa Roth¹, Robert Nissen¹. ¹San Francisco VA Medical Center,
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Disclosures: Liping Wang, None
- SA0273 BMP2 Impaired Mineralization Potential in Primary Human Osteoblasts Isolated from Osteoporotic Patients**
 Hilary Weidner^{*1}, Anja Nohe¹, Mark Eskander², Debbie Dibert². ¹University of Delaware,
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- SA0274 HPMA Copolymer Dexamethasone Conjugates Prevent Osteoporosis induced by Traumatic Brain Injury**
 Gang Zhao^{*1}, Xin Wei¹, Dong Wang¹. ¹University of Nebraska Medical Center, United
 States
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 Grebennikova¹, Alexey Nikitin², Olga Brovkina², Alexander
 Solodovnikov³, Liudmila Rozhinskaya¹, Galina Melnichenko¹. ¹Endocrinology Research
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Disclosures: Zhanna Belaya, None
- SA0276 Risk Factors of Fractures in Patients With Stage 3 Chronic Kidney Disease : Analysis of Cartagene**
 Louis-Charles Desbiens^{*1}, Aboubacar Sidibe¹, Rémi Goupil², François Madore²,
 Fabrice Mac-Way¹. ¹CHU de Québec Research Center, L'Hôtel-Dieu-de-Québec Hospital,
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Disclosures: Louis-Charles Desbiens, None

- SA0277 Relationship between depression and anxiety and low bone mineral density in patients hospitalized with severe anorexia nervosa.**
 Julia Herrou^{*1}, Adrien Etcheto¹, Sami Kolta¹, Nathalie Godart², Nicole Barthe³, Alain Daragon⁴, Yves Maugars⁵, Thierry Thomas⁶, Christian Roux¹, Karine Briot¹. ¹Cochin Hospital, Rheumatology Department, France, ²INSERM U1178, Psychiatry Unit, Institut Mutualiste Montsouris, France, ³Médecine Nucléaire, Centre Hospitalier de Bordeaux, France, ⁴Rheumatology, CHU Rouen, France, ⁵Rheumatology, CHU Nantes, France, ⁶Rheumatology, 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 Kanayama², Kyosuke Hattori¹, Nobunori Takahashi³, Naoki Ishiguro³, Toshihisa Kojima³. ¹Department of Rheumatology, Toyohashi Municipal Hospital, Japan, ²Department of Orthopaedic Surgery and Rheumatology, Toyota Kosei Hospital, Japan, ³Department of Orthopaedic Surgery, Nagoya University Graduate School of Medicine, Japan
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- SA0279 Denosumab increased bone mineral density but did not affect trabecular bone score (TBS) during first year after kidney transplantation**
 Shogo Nakayama^{*1}, Yasumasa Yoshino¹, Izumi Hiratsuka¹, Megumi Shibata¹, Taihei Ito², Hitomi Sasaki³, Midori Hasegawa⁴, Mamoru Kusaka³, Ryoichi Shiroki³, Takashi Kenmochi², Yukio Yuzawa⁴, Kiyotaka Hoshinaga³, Atsushi Suzuki¹. ¹Division of Endocrinology and Metabolism, Department of Internal Medicine, Fujita Health University, Japan, ²Department of Organ Transplant Surgery, Fujita Health University, Japan, ³Department of Urology, Fujita Health University, Japan, ⁴Division of Nephrology, Department of Internal Medicine, Fujita Health University, Japan
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- SA0280 Alendronate ameliorates the risk of urinary stone formation of astronauts on the International Space Station for 6 months**
 Atsushi Okada^{*1}, Takahiro Yasui¹, Kenjiro Kohri², Toshio Matsumoto³, Adrian LeBlanc⁴, Jean Sibonga⁵, Elisabeth Spector⁶, Jeff Jones⁴, Jay Shapiro⁷, Thomas Lang⁸, Linda Shackelford⁵, Scott Smith⁵, Harlan Evans⁶, Joyce Keyak⁹, Hiroshi Ohshima¹⁰. ¹Department of Nephro-urology, Nagoya City University Graduate School of Medical Sciences, Japan, ²Nagoya City University, Japan, ³University of Tokushima Fujii Memorial Institute of Medical Sciences, Japan, ⁴Baylor College of Medicine, United States, ⁵NASA Johnson Space Center, United States, ⁶KBRWyle, United States, ⁷Kennedy Krieger Institute, United States, ⁸UCSF, United States, ⁹University of California at Irvine, United States, ¹⁰Japan 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 Guañabens¹, Andres Combalia¹, Pilar Peris¹, Ana Monegal¹, Albert Parés¹. ¹Liver 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 Lang², Harlan Evans³, Elisabeth Spector³. ¹NASA-Johnson Space Center, United States, ²UCSF, United States, ³KBRwyle, United States
Disclosures: Jean Sibonga, None

- SA0283 The role of Trabecular Bone Structure Analysis in predicting Incidental Fractures in Rheumatoid Arthritis**
 Ikuko Tanaka^{*1}, Motokazu Kai², Kunikazu Ogawa², Shigenori Tamaki¹, Mari Ushikubo³, Keisuke Izumi⁴, Kumiko Akiya³, Hisaji Oshima³. ¹Nagoya Rheumatology Clinic, Japan, ²Mie Rheumatology Clinic, Japan, ³Tokyo Medical Center, Japan, ⁴Tokyo Medical Center, Jersey
Disclosures: Ikuko Tanaka, None
- SA0284 Risk factors for reduced bone mineral density in patients with rheumatoid arthritis.**
 Jun Hashimoto^{*1}, Shoichi Kaneshiro², Yoshio Nagayama³, Hideki Tsuboi². ¹Osaka Minami Medical Center, Japan, ²Osaka Rosai Hospital, Japan, ³Nagayana Rheumatic/Orthopaedic clinic, Japan
Disclosures: Jun Hashimoto, None
- SA0285 Efficacy and safety of denosumab on post-kidney transplantation recipients**
 Yasumasa Yoshino^{*1}, Shogo Nakayama¹, Izumi Hiratsuka¹, Megumi Shibata¹, Taihei Ito², Hitomi Sasaki³, Midori Hasegawa⁴, Ryoichi Shiroki³, Takashi Kenmochi², Yukio Yuzawa⁴, Kiyotaka Hoshinaga³, Atsushi Suzuki¹. ¹Division of Endocrinology and Metabolism, Department of Internal Medicine, Fujita Health University, Japan, ²Department of Organ Transplant Surgery, Fujita Health University, Japan, ³Department of Urology, Fujita Health University, Japan, ⁴Division of Nephrology, Department of Internal Medicine, Fujita Health University, Japan
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- SA0286 Predictors of Improvement in Bone Mineral Density after Celiac Disease Diagnosis**
 Haley M. Zylberberg^{*1}, Benjamin Lebwohl¹, Arindam RoyChoudhury², Minghao Liu³, Marcella Walker⁴, Peter H.R. Green¹. ¹Celiac Disease Center at Columbia University, College of Physicians and Surgeons, United States, ²Mailman School of Public Health, Columbia University, United States, ³Dept of Medicine Endocrinology Columbia University, College of Physicians and Surgeons, United States, ⁴Division 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 Hansen¹, Justin Cobb¹, Richard Abel¹. ¹Imperial 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 Sami², Stephen Robertson², David Kendler³. ¹King Fahad Medical City, Saudi Arabia, ²Prohealth clinical research, Canada, ³University 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 Zhu¹, Thomas Travison², Alyssa B. Dufour¹, John Caloyeras³, Rich Barron³, Elizabeth Samelson¹. ¹Hebrew SeniorLife, Institute for Aging Research, United States, ²Hebrew SeniorLife, United States, ³Amgen, United States
Disclosures: Sarah Berry, Amgen, Grant/Research Support
- SA0290 Denosumab Improves Glycemic Control of Type 2 Diabetic or Prediabetic Patients with Osteoporosis**
 Chee Kian Chew^{*1}, Sunddeep Khosla¹, Robert Rizza¹, Jennifer Geske¹, Bart Clarke¹. ¹Mayo Clinic, United States
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 Jasqui², Carlos Salinas³, Amador E Macias⁴, Alfonso J Zarain⁵, Alfredo Reza⁶, Hugo D Pena⁷, Jorge Morales⁸, Lucio J Balcazar⁹, Jaime Elizondo¹⁰, Pilar de la Pena¹¹. ¹Centro Investigacion Artritis y Osteoporosis, Mexico, ²Clinica Osteoporosis Dr. Salomon Jasqui, Mexico, ³Clinica Menopausia Dr.Carlos Salinas Dorantes, Mexico, ⁴Centro Medico San Francisco, Mexico, ⁵Centro de Climaterio y Osteoporosis, Mexico, ⁶Clinica Osteoporosis Dr Alfredo Reza, Mexico, ⁷Centro Diagnostico de Osteoporosis, Mexico, ⁸Hospital Aranda de la Parra, Mexico, ⁹Hospital Regional “Dr. Manuel Cárdenas de la Vega”, Mexico, ¹⁰Centro de Investigación Clinica, Mexico, ¹¹Clinica 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 Yoel¹, Lior Baraf¹, Dayana Cohen¹, Tamar Eshkoli¹, Avital Blum¹, Vera Polischuk¹, Poliana Shamgar¹, Michal Lamberger¹, Dvora Lieberman¹, Victor Novack¹, Ethel Siris², Merav Fraenkel¹. ¹Soroka University Medical Center and the Faculty of Health Sciences, Ben-Gurion University of the Negev, Israel, ²Columbia 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 Kang¹, Vance Warren¹, William Maxwell¹, Benjamin Levinson¹, Jarema Kochan¹, Ling He¹, Merav Baz-Hecht¹, Chie Fukuda², Junichi Koga², Eisuke Tsuda², Ko Watanabe². ¹Daiichi Sankyo, Inc, United States, ²Daiichi 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}. ¹Ken-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 Kim², Jae Suk Chang², Jai Hyung Park³, Hyun Chul Shon⁴, Kwang Hwan Jung⁵, Chul-Ho Kim², Seong-Eun Byun⁶, Chang-wug Oh⁷. ¹Haeundae Paik Hospital, Inje University, Korea, Republic of, ²Asan Medical Center, University of Ulsan, Korea, Republic of, ³Kangbuk Samsung Hospital, Sungkyunkwan University, Korea, Republic of, ⁴Chungbuk National University Hospital, Korea, Republic of, ⁵Ulsan University Hospital, Korea, Republic of, ⁶CHA Bundang Medical Center, CHA university, Korea, Republic of, ⁷Kyungpook 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 Kim¹, Young Ji Kim¹, Sunghwan Suh², Su Jin Lee³, Sang Wan Kim⁴, Chan Soo Shin⁵. ¹Seoul National University Bundang Hospital and Seoul National University College of Medicine, Korea, Republic of, ²Dong-A University Medical Center, Dong-A University College of Medicine, Korea, Republic of, ³Division of Endocrinology, Department of Internal Medicine, National Health Insurance Service Ilsan Hospital, Korea, Republic of, ⁴Borame Hospital and Seoul National University College of Medicine, Korea, Republic of, ⁵Seoul 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 Kawano¹, Shinkichi Arisumi¹, Muneyuki Takahashi¹, Satoshi Ikemura², Satoshi Hamai², Gen Matsui¹, Takahiro Iguchi¹, Hiroaki Mitsuyasu¹, Shinya Kawahara¹, Yasuharu Nakashima². ¹Hamanomachi Hospital, Japan, ²Kyushu University, Japan
Disclosures: Taro Mawatari, None
- SA0298 The effect of teriparatide on fracture healing of vertebral compression fracture in post menopausal women**
Seung Woo Suh^{*1}, Si Young Park², Jae Young Hong¹, Tae Wook Kang¹. ¹Korea Univeresity Hospital, Korea, Republic of, ²Korea University Hospital, Korea, Republic of
Disclosures: Seung Woo Suh, None
- SA0299 Effect of fracture risk assessment on anti-osteoporosis medication use and adherence: Findings from the SCOOP Trial**
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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 Warner¹, Pooja Kulkarni¹, Mahalakshi Honasoge¹, Arti Bhan¹, Shiri Levy¹, George Divine¹, D. Sudhaker Rao¹. ¹Henry 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 Pannacciulli², P Geusens³, J Adachi⁴, E Lespessailles⁵, J Malouf-Serra⁶, O Messina⁷, A Wang², RB Wagman², WF Lems⁸. ¹University of Alabama, United States, ²Amgen Inc., United States, ³Maastricht University, Netherlands, ⁴McMaster University, Canada, ⁵University Hospital Orleans, France, ⁶Hospital San Pablo, Spain, ⁷Cosme Argerich Hospital, Argentina, ⁸VU 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**
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- SA0303 The Effects of Teriparatide, Vibration and the Combination on Bone Mass, Architecture and Metabolism in Chronic Spinal Cord Injury**
Narina Simonian^{*1}, Brent Edwards², Elaine Gregory¹, Keith Gordon¹, Rama Parachuri³, Ifaz Haider², Karen Troy⁴, Thomas Schnitzer¹. ¹Northwestern University, United States, ²University of Calgary, Canada, ³Edward Hines Jr. VA Hospital, United States, ⁴Worchester 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 Tanaka², Hiromi Oda². ¹Nagata orthopedic hospital, Japan,
²Saitama medical university, Japan
Disclosures: Katsuya Kanesaki, None
- SA0305 Combination treatment with teriparatide and denosumab improves spine trabecular microarchitecture in DATA-Switch: a randomized controlled trial**
 Joy Tsai^{*1}, Linda Jiang¹, Hang Lee¹, Didier Hans², Benjamin Leder¹. ¹Massachusetts General Hospital, United States, ²Lausanne 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 Shiraki², Satoko Ueda³, Yasuhiro Takeuchi⁴, Toshitsugu Sugimoto⁵, Toshitaka Nakamura⁶. ¹Corporate Research & development, Asahi Kasei Corporation, Japan, ²Department of Internal Medicine, Research Institute and Practice for Involutional Diseases, Japan, ³Medical Affairs, Asahi Kasei Pharma Corporation, Japan, ⁴Toranomon Hospital Endocrine Center, Japan, ⁵Internal Medicine 1, Shimane University Faculty of Medicine, Japan, ⁶Aoba 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 Zbozinkova². ¹Charles university hospital, Bone disease center, Czech Republic, ²Institute 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 Gregorio², E. Bonel², Ludovic Humbert¹, M. García², Luis Del Rio². ¹Galgo Medical, Spain, ²CETIR 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 Laarschot¹, Sandra Smits¹, Fjorda Koromani¹, Fernando Rivadeneira Ramirez², Thomas Beck³, M. Carola Zillikens¹. ¹Bone Center, Erasmus MC, Netherlands, ²Epidemiology, Erasmus MC, Netherlands, ³Beck Radiological Innovations, United States
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- SA0310 MicroRNA-125b Derived from Osteoblasts Exerts its Anti-Osteolytic Effect through Targeting Preosteoclasts**
 Faisal Ahmed^{*1}, Tomoko Minamizaki¹, Shota Ito², Nushrat Sarmin¹, Chise Fujimoto¹, Yuko Nakao², Kotaro Tanimoto², Shinji Hiyama³, Yuji Yoshiko¹. ¹Department of Calcified Tissue Biology, Graduate School of Biomedical & Health Sciences, Hiroshima University, Japan, Japan, ²Department of Orthodontics and Craniofacial Developmental Biology, Hiroshima University Graduate School of Biomedical & Health Sciences, Hiroshima, Japan, Japan, ³Department 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**
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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 Kremer¹². ¹McGill university, Canada, ²McGill 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 behera¹²³, Kimberly E. Kelly¹²³, Akash George¹²³, Suresh Tyagi¹²³. ¹University of Louisville, United States, ²University of Louisville, United States, ³university of louisville, United States
Disclosures: Neetu Tyagi, None
- SA0314 The Deleterious Effects of IGF1 Signaling on the Development of Post-Traumatic Osteoarthritis**
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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 Pierce¹, Jeffery Brown¹, Michael Ominsky¹, Gary Hattersley¹. ¹Radius 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 Chang¹, Lin Kang², Yi-Shan Lin¹, Sung-Yen Lin³, Je-Ken Chang³, Shih-Tse Chen⁴, Mei-Ling Ho¹. ¹Kaohsiung Medical University, Taiwan, Province of China, ²National Cheng Kung University Hospital, Taiwan, Province of China, ³Kaohsiung Medical University Hospital, Taiwan, Province of China, ⁴National 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 Neuburg¹, Claire Gerber¹, Xueyan Wang¹, Corey Dussold¹, Lixin Qi¹, Guillaume Courbon¹, Aline Martin¹, Myles Wolf², Valentin David¹. ¹Division 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, ²Division of Nephrology and Hypertension, Duke University, United States
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- 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 Okada¹, Tsuyoshi Karibe¹, Yoshiharu Hiruma¹, Seiichiro Kumakura¹, Eisuke Tsuda². ¹R&D Division, Daiichi Sankyo Co., Ltd, Japan, ²R&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 Tsuda¹, Akiko Okada¹, Norio Amizuka², Tomoka Hasegawa², Tsuyoshi Karibe¹, Yoshiharu Hiruma¹, Nana Takagi¹, Seiichiro Kumakura¹. ¹R&D Division, Daiichi Sankyo Co., Ltd, Japan, ²Department of Developmental Biology of Hard Tissue, Faculty of Dental Medicine, Hokkaido University, Japan
Disclosures: Chie Fukuda, None
- SA0320 A Novel H₂S-releasing Amino-Bisphosphonate Which Combines Bone Anti-Catabolic And Anabolic Functions**
 Francesco Grassi^{*1}, Laura Gambari¹, Gina Lisignoli². ¹Lab RAMSES, Istituto Ortopedico Rizzoli, Italy, ²Lab 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 Uchibe², Ivan Alferiev³, Joshua M Abzug¹, Min Liu⁴, Motomi Enomoto-Iwamoto¹, Michael Chorny³, Masahiro Iwamoto¹. ¹Department of Orthopaedics, University of Maryland School of Medicine, United States, ²Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Japan, ³Pediatrics, The Children's Hospital of Philadelphia , United States, ⁴University of Pennsylvania School of Dentistry, United States
Disclosures: Masatake Matsuoka, None
- SA0322 Effects of Eldecalcitol and Ibandronate on Bone Mineral Density, Arthritis and Muscle Atrophy in Rats with Adjuvant-induced Arthritis**
 Yuichi Ono^{*1}, Naohisa Miyakoshi¹, Yuji Kasukawa¹, Manabu Akagawa¹, Masazumi Suzuki¹, Tetsuya Kawano¹, Itsuki Nagahata¹, Yusuke Yuasa¹, Yoichi Shimada¹. ¹Department 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 Sapkota², Liang Li², Sewoong Kim². ¹Department of Dental Pharmacology, School of Dentistry, Chonbuk National University, Korea, Republic of, ²Department 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 Krusch², Lars Holten-Andersen¹, Joachim Zettler², Felix Cleemann², Caroline Rasmussen¹, Kennett Sprogøe¹, David Karpf³, Vibeke Miller Breinholt¹. ¹Ascendis Pharma A/S, Denmark, ²Ascendis Pharma GmbH, Germany, ³Ascendis Pharma Inc., United States
Disclosures: Susanne Pihl, None
- SA0325 High-throughput Genetic Screens Reveal Targets of Nitrogen-containing Bisphosphonates**
 Lauren Surface^{*1}, Zhou Yu¹, Ji Woong Park², Erin O'Shea³, Timothy Peterson². ¹Harvard University, United States, ²Washington University School of Medicine, United States, ³Harvard 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 Zhao¹, Wonsae Lee¹, Yang Liu¹, Yihan Li¹, Chantal de Bakkar¹, Ling Qin¹, X. Sherry Liu¹. ¹University 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. Yumol¹, Sandra M. Sacco¹, Phillip J. Sullivan¹, Elena M. Comelli², Wendy E. Ward¹. ¹Brock University, Canada, ²University 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 Isogai², Takayuki Ishida¹, Keisuke Hagiwara³. ¹Department of Medical Science and Technology, Division of Health Sciences, Graduate School of Medicine, Osaka University, Japan, ²Medical Affairs Department, Pharmaceutical Business Administration Division, Asahi Kasei Pharma Corporation, Japan, ³Department 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 Chaudhari², Yuan Lay¹, Mie Jin Lim¹, Alexander Kot¹, Donald Kimmel³, Nancy Lane¹. ¹UC Davis Medical Center, United States, ²UC Davis, United States, ³University 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 Rolvien², Uwe Kornak³, Felix N. Schmidt⁴, Thorsten Schinke⁵, Michael Amling⁶, Ralf Oehm⁷. ¹SB, Germany, ²TR, Germany, ³UK, Germany, ⁴FNS, Germany, ⁵TS, Germany, ⁶MA, Germany, ⁷RO, 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 Imel², Agnès Lingart³, Annemieke Boot⁴, Wolfgang Höglér⁵, Raja Padidela⁶, William van't Hoff⁷, Anthony Portale⁸, Meng Mao⁹, Alison Skrinar¹⁰, Javier San Martin¹⁰, Michael Whyte¹¹. ¹Yale University School of Medicine, United States, ²Indiana University School of Medicine, United States, ³Hôpital Bicêtre, France, ⁴University of Groningen, Netherlands, ⁵Birmingham Children's Hospital, United Kingdom, ⁶Royal Manchester Children's Hospital, United Kingdom, ⁷Great Ormond Street Hospital, United Kingdom, ⁸University of California, San Francisco School of Medicine, United States, ⁹Ultragenyx Pharmaceutical Inc., United States, ¹⁰Ultragenyx Pharmaceutical Inc., United States, ¹¹Shriners 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 Botman¹, Coen Netelenbos¹, Pim de Graaf², Pieter Raijmakers¹. ¹VU University Medical Center (VUmc), Netherlands, ²VU 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. McAlister², Angela Nenninger¹, Rebecca Green³, Steven Mumm⁴, Michael P. Whyte⁴. ¹Shriners Hospital for Children - St. Louis, United States, ²Mallinckrodt Institute of Radiology, Washington University School of Medicine, United States, ³Springfield Clinic, United States, ⁴Shriners 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. Hsiao², Genevieve Baujat³, Richard Keen⁴, Donna R. Grogan⁵, Robert J. Pignolo⁶. ¹The University of Pennsylvania, United States, ²Institute of Human Genetics and the Division of Endocrinology & Metabolism, University of California, San Francisco, United States, ³Laboratoire de Génétique Moléculaire, Institut de Recherche et Hôpital Necker-Enfants Malades, France, ⁴The Royal National Orthopaedic Hospital (Stanmore), United Kingdom, ⁵Clementia Pharmaceuticals Inc., United States, ⁶Geriatric 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 Kocjan^{*1}, Ursula Renner¹, Martin Kuzma², Christian Muschitz¹, Judith Haschka¹, Daniel Kirchdörfer¹, Juraj Payer³, Heinrich Resch¹. ¹St. Vincent Hospital Vienna - Medical Department II, the VINforce study group, Austria, ²Comenius University Faculty for Medicine, 5th Department of Internal Medicine, University Hospital Bratislava, Slovakia, ³Comenius University Faculty of Medicine, 5th department of Internal Medicine, University Hospital Bratislava, Slovakia
Disclosures: Roland Kocjan, None
- SA0336 Transient Osteoporosis: Clinical Spectrum and Associated Risk Factors**
 Anupam Kotwal^{*1}, Daniela Hurtado¹, Jad Sfeir¹, Robert Wermers¹. ¹Division 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 He¹, Wen-Zhen Fu¹, Zhen-Lin Zhang¹. ¹Metabolic 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, CCRP², Erin Carrithers, NP³, Philostratos Klidaras, RPH, MRPharmS¹, Jared R.H. Foran, MD⁴. ¹Colorado Center for Bone Research, United States, ²Centura Health Physician Group Colorado Center for Bone Research, United States, ³Centura Health Physician Group Colorado Center for Bone Research, United States, ⁴Panorama 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**
 Emily Mills^{*1}, Louis Iorio¹, Carolyn Macica¹. ¹Frank H Netter MD School of Medicine at Quinnipiac University, United States
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 Gonzalez², Sebastian Rodriguez³, Ana Monegal³, Ana Monegal³, Nuria Guañabens³. ¹Rheumatology Department, Hospital Clinic. University of Barcelona, Spain, ²Immunology Department. Hospital Clinic., Spain, ³Rheumatology 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 Majoor¹, Casper Quispel¹, Neveen Hamdy¹, Sander Dijkstra¹, Ad Kaptein¹, Natasha Appelman-Dijkstra¹. ¹Leiden 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 Sikjaer², Lars Rejnmark³. ¹MD/Ph.D.-student, Denmark, ²MD, Ph.D., Denmark, ³Clinical 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 Kaci², Oliver Keil³⁴, Susann Aderman³⁴, Ulrich Hersel³⁴, Maxence Cornille⁵, Martin Guillot⁶, Nancy Doyle⁶, Per Mygind¹, Aurore Valera⁷, Kennett Sprogoe¹, Laurence Legeai-Mallet². ¹Ascendis Pharma A/S, Denmark, ²Imagine Institute, Denmark, ³Ascendis Pharma GmbH, Denmark, ⁴Ascendis Pharma GmbH, Denmark, ⁵Imagine Institute, France, ⁶Charles River Laboratories, Canada, ⁷Charles 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 Chen², Ziqi Li³, Wei He², Carlito Lebrilla⁴. ¹Department of Chemistry, United States, ²First Affiliated Hospital of Guangzhou University of Chinese Medicine, China, ³Guangdong Provincial Hospital of Chinese Medicine, China, ⁴Department 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 Petrillo¹, Federica Scotto di Carlo¹, Teresa Esposito², Fernando Gianfrancesco¹. ¹Institute of Genetics and Biophysics, National Research Council of Italy, Italy, ²Institute 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 Sun², Yujie Sun³, Kenzo Morinaga³, QingQing Wu³, Mark Lundy⁴, Charles McKenna⁵, Frank Ebetino², Ichiro Nishimura³. ¹David Geffen School of Medicine at UCLA, United States, ²BioVinc LLC, United States, ³UCLA School of Dentistry, United States, ⁴Indiana University, United States, ⁵University of Southern California, United States
Disclosures: Akishige Hokugo, None

- SA0347 Inflammation and increased osteoclastogenesis in osteogenesis imperfecta murine**
 Ivo Kalajzic^{*1}, Emilie Roeder¹, Xi Wang¹, Hector Leonardo Aguilera¹, Sun Kyeong Lee¹, Danka Grcic², Brya Matthews¹. ¹UConn Health, United States, ²University 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 $\alpha 2(I)$ collagen chain**
 Elena Makareeva^{*1}, Shakib Omari¹, Anna Roberts-Pilgrim¹, Laura Gorrell¹, Edward Mertz¹, Sergey Leikin¹. ¹SPB, 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 Martins², Marie Demay³. ¹Brigham and Women's Hospital and MGH, United States, ²Massachusetts General Hospital, United States, ³Massachusetts 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 Jimenez², LiQin Xie¹, Lily Huang¹, Xialing Wen¹, Lili Wang¹, Vincent Idone¹, Andrew Murphy¹, Sarah Hatsell¹, Aris Economides¹. ¹Regeneron Pharmaceuticals Inc, United States, ²Regeneron 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 Guess¹, Kathryn Cheah², Masahiro Iwamoto³, Edwin Horwitz¹. ¹Center for Childhood Cancer and Blood Diseases, The Research Institute at Nationwide Children's Hospital, United States, ²Department of Biochemistry, and Centre for Reproduction, Development and Growth, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong, ³Department 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 Liu¹, Peter Maye¹, Yasuyoshi Ueki², Ernst Reichenberger¹, Iping Chen¹. ¹UConn Health, United States, ²University of Missouri Kansas City, United States
Disclosures: Tulika Sharma, None
- SA0353 Deletion of *B3gact* disrupts craniofacial and skeletal development in mice: a model for Peters Plus syndrome**
 Sardar Uddin^{*1}, Richard Grady², Diana Rubel³, Takashi Sato⁴, Hisashi Narimatsu⁵, Robert Haltiwanger⁶, David Komatsu¹, Bernadette Holdener². ¹Department of Orthopaedics, Stony Brook University, United States, ²Department of Biochemistry and Cell Biology, Stony Brook University, United States, ³Department of Biochemistry and Cell Biology, Stony Brook University, United States, ⁴National Institute of Advanced Industrial Science and Technology in Japan, Japan, ⁵National Institute of Advanced Industrial Science and Technology, Japan, Japan, ⁶Complex 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 Langaeel¹, Issam Hamadeh², Joseph Katz³, Alberto Riva⁴, Jan S Moreb⁵, Yan Gong¹. ¹Department of Pharmacotherapy and Translational Research and Center for Pharmacogenomics, College of Pharmacy, University of Florida, United States, ²Cancer Pharmacology Department, Levine Cancer Institute, Charlotte NC, USA., United States, ³Department of Oral Medicine, College of Dentistry, University of Florida, Gainesville FL, USA., United States, ⁴Bioinformatics Core, Interdisciplinary Center for Biotechnology Research, University of Florida, Gainesville FL, USA., United States, ⁵Department 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 Schilling¹, Stefano Zanotti¹. ¹UConn 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 Kim², Yoosik Youm³, Hyeon Chang Kim⁴, Yumie Rhee¹. ¹Department of Internal Medicine, Severance Hospital, Endocrine Research Institute, Yonsei University College of Medicine, Korea, Republic of, ²Division of Geriatrics, Department of Internal Medicine, Severance Hospital, Yonsei University College of Medicine, Korea, Republic of, ³Department of Sociology, Yonsei University College of Social Sciences, Korea, Republic of, ⁴Department 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 Bartosch¹, Linnea Malmgren¹, David Buchebner¹, Fiona E McGuigan¹. ¹Lund 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 Zhang², Shivani Sahni¹, Thomas Travison¹, Marian Hannan¹, Douglas Kiel¹. ¹Hebrew SeniorLife Institute for Aging Research and Harvard Medical School, United States, ²Hebrew 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 Lucas², Maria Gabriela Torres², Claudia Martinez², Felipe Silva Pavon², Reynaldo Gomez², Adriana Graciela Diaz². ¹Laboratorio Osteoporosis y Enfermedades Metabolicas Oseas (INIGEM, UBA-CONICET), Argentina, ²Division 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 Park¹. ¹Guri 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 Wu², Ruban Dhaliwal³, Mona Al Mukaddam⁴. ¹Barbara Davis Center for Diabetes, United States, ²Jaeb Center for Health Research, United States, ³SUNY Upstate Medical University, United States, ⁴University of Pennsylvania, Perelman School of Medicine, 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 Chen², Daeyeol Kim³, Ryan Pohlig⁴, Michael Bemben², Debra Bemben². ¹Department of Physical Therapy and Rehabilitation Science, University of Maryland School of Medicine, United States, ²Department of Health and Exercise Science, University of Oklahoma, United States, ³Department of Physical Education, Chonnam National University, Korea, Republic of, ⁴Department 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 Holloway¹, Lana Williams¹, Sophia Sui¹, Sharon Brennan-Olsen¹, Mark Kotowicz¹, Sarah Hosking¹, Julie Pasco¹. ¹Deakin 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 Hars¹, Fang-Chi Hsu², Kieran Reid³, Timothy Church⁴, Thomas Gill⁵, Abby King⁶, Christine Liu⁷, Todd Manini⁸, Mary McDermott⁹, Anne Newman¹⁰, W. Jack Rejeski¹¹, Jack Guralnik¹², Marco Pahor⁸, Roger Fielding³. ¹Division of Bone Diseases, Department of Internal Medicine Specialties, Geneva University Hospitals and Faculty of Medicine, Switzerland, ²Department of Biostatistical Sciences, Wake Forest School of Medicine, United States, ³Nutrition, Exercise Physiology and Sarcopenia Laboratory, Jean Mayer USDA Human Nutrition Research Center on Aging, Tufts University, United States, ⁴Department of Preventative Medicine, Pennington Biomedical Research Center, United States, ⁵Department of Internal Medicine, Yale School of Medicine, United States, ⁶Department of Health Research and Policy and Department of Medicine, Stanford University, School of Medicine, United States, ⁷Department of Medicine, Boston University School of Medicine, United States, ⁸Department of Aging and Geriatric Research, University of Florida, United States, ⁹Department of Medicine and Preventive Medicine, Northwestern University, Feinberg School of Medicine, United States, ¹⁰Department of Epidemiology, Graduate School of Public Health, University of Pittsburgh, United States, ¹¹Department of Internal Medicine, Wake Forest University and School of Medicine, United States, ¹²Department 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 Dutton¹, Sulaiman Al-Riyami¹, Christopher Washbourne¹, Inez Schoenmakers¹, Hillel Galitzer², Gregory Burshtein², Phillip Schwartz², Jonathan Tang¹, William Fraser¹. ¹University of East Anglia, United Kingdom, ²Enter 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. Tng¹, S. Logan¹, Izzuddin M Aris¹, J. A. Cauley², E. L. Yong¹.
¹Department of Obstetrics and Gynaecology, National University of Singapore,
 Singapore, ²University 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 Astolpho¹, Vitor Correlo², Rui Reis², Jose Volpon¹,
 Ariane Zamarioli¹. ¹University of Sao Paulo, Brazil, ²B'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 Black², Mary Bouxsein³, Li-Yung Lui⁴, Jane Cauley⁵,
 Sundeep Khosla⁶, Charles McCulloch², Douglas Bauer². ¹University of Sheffield, United
 Kingdom, ²University of California, San Francisco, United States, ³Harvard Medical
 School, United States, ⁴California Pacific Medical Center, United States, ⁵University of
 Pittsburgh, United States, ⁶Mayo 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 Nathan¹, Thereza Piloya-Were², Zahra Mahamed¹,
 Sarah Cusick¹, Antoinette Moran¹, Anna Petryk³, Muna Sunni¹. ¹University of
 Minnesota, United States, ²University of Makerere, Uganda, ³University 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 Gonzalez¹, David Dean¹, Xiao-Dong Chen¹. ¹UT 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 McGuigan², Kristina Åkesson². ¹Novo Nordisk A/S, Lund
 University, Denmark, ²Lund 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 Chesi¹, Jonathan Mitchell¹, Heidi Kalkwarf²,
 Joan Lappe³, Vicente Gilsanz⁴, Sharon Oberfield⁵, John Shepherd⁶, Andrea Kelly¹,
 Shana McCormack¹, Benjamin Voight⁷, Babette Zemel¹, Struan Grant¹. ¹Children's
 Hospital of Philadelphia, United States, ²Children's Hospital Medical Center, United
 States, ³Creighton University, United States, ⁴Children's Hospital Los Angeles, United
 States, ⁵Columbia University, United States, ⁶University of California San Francisco,
 United States, ⁷University 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 Cauley², Dennis M Black³, Sharmila Majumdar³, Nancy E Lane⁴, Elizabeth Barrett-Connor⁵, Eric S Orwoll⁶, Andrew J Burghardt³.
¹University of Colorado, Denver, United States, ²University of Pittsburgh, United States, ³University of California, San Francisco, United States, ⁴University of California, Davis, United States, ⁵University of California, San Diego, United States, ⁶Oregon 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 Cao², Shuying Yang³. ¹University of Stanford, United States, ²Johns Hopkins School of Medicine, United States, ³University 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 Saedi¹, Ebrahim Bani Hassan¹, Gustavo Duque¹.
¹University 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 Gregory², Rebecca Barr², Fiona Saunders², Claudiu Giuraniuc², Lavinia Paternoster³, Daniel Evans⁴, Benjamin Faber¹, Benjamin Mullin⁵, Frederick Kinyua Kamau⁶, Debbie Lawlor³, Scott Wilson⁵, Tim Spector⁵, Eric Orwoll⁷, Steven Cummings⁴, David Karasik⁶, Douglas Kiel⁶, Richard Aspden², Jonathan Tobias¹.
¹Musculoskeletal Research Unit, School of Clinical Sciences, University of Bristol, United Kingdom, ²Arthritis and Musculoskeletal Medicine, Institute of Medical Sciences, University of Aberdeen, United Kingdom, ³MRC Integrative Epidemiology Unit, University of Bristol, United Kingdom, ⁴CPMC Research Institute, United States, ⁵Department of Twin Research and Genetic Epidemiology, King's College London, London, United Kingdom, ⁶Institute for Aging Research, Harvard Medical School Affiliate, United States, ⁷Oregon 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 Yang², Qianming Chen³, Elia Beniash², Hong-Jiao Ouyang⁴. ¹Department 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, ²The Center for Craniofacial Regeneration, Department of Oral Biology, School of Dental Medicine, University of Pittsburgh, United States, ³State Key Laboratory of Oral Diseases, National Clinical Research Center for Oral Diseases, West China Hospital of Stomatology, Sichuan University, China, ⁴Department 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 Hudnall¹, Jonathan Lowery¹. ¹Marian 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 Zeng¹, Deborah Novack¹. ¹Washington 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 Kim¹, Jue Yeon Lee², Yoon-Jeong Park¹, Kee-Yeon Kum¹, Cheol-Heui Yun³, Seung Hyun Han¹. ¹School of Dentistry, Seoul National University, Korea, Republic of, ²Nano Intelligent Biomedical Engineering Corporation, Korea, Republic of, ³Research 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 Li¹, Jiangmeng Han¹, Nancy Rojas¹, Yue-li Sun¹, Minyi Hu¹, Xiaodong Li², Huazhu Ke³, Yi-Xian Qin¹. ¹Stony Brook University, United States, ²Amgen, Inc, United States, ³UCB, 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. Brown¹, C.-C. Glüer², R. Andresen³. ¹Mindways Software, Inc., United States, ²Christian-Albrechts-Universität zu Kiel, Germany, ³Westküstenklinikum 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 Mahmoudzadeh¹, Bo Fan¹, Luke Chaplin², Timothy Cootes², Jane A Cauley³, Peggy Cawthon⁴, Steve Cummings⁵, Felix Liu¹, Claudia Lindner², Rachel Murphy⁶, Marjolein Visser⁷, Ann Schwartz¹. ¹University of California, San Francisco, United States, ²University of Manchester, United Kingdom, ³University of Pittsburgh, United States, ⁴California Pacific Medical Center, United States, ⁵UCSF School of Medicine, United Kingdom, ⁶National Institute on Aging Laboratory of Epidemiology and Population Sciences Bethesda MD USA, United States, ⁷VU 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 Nagaraj², Deborah Majchel², Poonam Sood², Robert Boudreau², Jane Cauley², Andrew Stewart³, Mara Horwitz². ¹University of Rochester, United States, ²University of Pittsburgh, United States, ³Mount 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 Fuleihan¹, Cyrus Cooper², Nicholas Harvey², Anwar Nassar¹, Maya Rahmeh¹, Sara Ajjour¹, Mariam Assad¹, Myriam Chlela¹, Joe Eid¹. ¹American University of Beirut, Lebanon, ²Southampton University, United Kingdom
Disclosures: Marlene Chakhtoura, None

- LB-SA0386 Cyclin-dependent Kinase 5 Inhibits Osteoblast Differentiation to Regulate Bone Integrity**
 Mubashir Ahmad*¹, Sabine Vettorazzi¹, David Carro Vázquez¹, Dilay Lai¹, Torsten Kroll², Maja Vujić-Spasic¹, Aspasia Ploubidou², Johanna Pachmayr³, Jan Tuckermann¹.
¹Institute for Comparative Molecular Endocrinology (CME), Ulm University, Germany,
²Leibniz Institute for Age Research – Fritz Lipmann Institute (FLI), Germany, ³Paracelsus Medizinische Privatuniverstät, 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 Craven², Lehana Thabane³, Alexandra Papaioannou³, Jonathan Adachi³, Lora Giangregorio¹. ¹University of Waterloo, Canada, ²Toronto Rehabilitation Institute, University Health Network, Canada, ³McMaster 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 Caskey², Antonella Delmestri¹, Daniel Dedman³, Nigel Arden⁴, Yoav Ben-Shlomo⁵, Bo Abrahamsen⁶, Andrew Judge¹, C Cooper⁷, M K Javaid⁸, Daniel Prieto-Alhambra¹. ¹Centre for Statistics in Medicine and Nuffield Department of Orthopaedics, Rheumatology, and Musculoskeletal Sciences (NDORMS), University of Oxford, Oxford, UK, United Kingdom, ²School of Social and Community Medicine, University of Bristol, Bristol, UK and UK Renal Registry, Bristol, UK., United Kingdom, ³Clinical Practice Research Datalink, MHRA, United Kingdom, ⁴Nuffield Department of Orthopaedics, Rheumatology, and Musculoskeletal Sciences (NDORMS), University of Oxford, Oxford, UK, United Kingdom, ⁵School of Social and Community Medicine, University of Bristol, Bristol, UK UK Renal Registry, Bristol, UK., United Kingdom, ⁶University of Southern Denmark, Odense, Denmark and Holbæk Hospital, Dept of Medicine, Holbæk, Denmark, Denmark, ⁷Centre 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, ⁸Centre 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 Hernández², Claudia Flores Moreno², Pilar De La Peña Rodríguez³, Hugo Gutierrez Hermosillo⁴, Roberto González Mendoza⁵, Alejandro Gaytán González⁵, Noe Albino González Gallegos⁶, Juan Lopez Y Taylor⁵. ¹Centro de Investigación Ósea y de la Composición Corporal, CIO, Mexico, ²Servicio de Endocrinología, Hospital Universitario, UANL, Mexico, ³De La Peña, Servicios Médicos de la Peña, Mexico, ⁴Asociación Mexicana De Metabolismo Óseo Y Mineral, AC, Mexico, ⁵Instituto de Ciencias Aplicadas a la Actividad Física y al Deporte, Universidad de Guadalajara, Mexico, ⁶Departamento 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 Lyu¹, Xu Cao¹. ¹Johns 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 Nakamura², Maya Sakashita², Motonori Yamaguchi², Mujo Kim², Ung-il Chung³, Shinsuke Ohba³. ¹Department of Bioengineering, The University of Tokyo, Japan, ²Pharma Foods International Co., Ltd., Japan, ³Center 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. Aguado¹, S. García¹, J. A Tenorio², P. Lapunzina², K. Heath², A. Buño³, J.M Iturzaeta³, I. Monjo¹, C. Plasencia¹, A. Balsa¹, Centro de Investigación en Red de Enfermedades Raras (CIBERER)⁴. ¹Rheumatology. La Paz University Hospital., Spain, ²Institute of Medical and Molecular Genetics (INGEMM). La Paz University Hospital., Spain, ³Laboratory medicine. La Paz University Hospital., Spain, ⁴H. 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 Kondo¹, Mizuho Kittaka¹, Yasuyoshi Ueki¹. ¹University 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 Bhushan, M.D.
Brigham and Women's Hospital, USA
Disclosures: Shalender Bhushan, 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 Growth of Surviving Cancer Cells in Bone**
1047 Hernan Roca^{*1}, Jacqueline Jones², Marta Purica¹, Savannah Weidner¹, Amy Koh¹, Robert Kuo¹, John Wilkinson¹, Yugang Wang¹, Stephanie Daignault-Newton¹, Kenneth Pienta³, Todd Morgan¹, Evan Keller¹, Jacques Nör¹, Lonnie Shea¹, Laurie McCauley¹. ¹University of Michigan, United States, ²Troy University, United States, ³Johns 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 Ark¹, Zachary Madaj¹, Galen Hostetter¹, Xiaohong Li¹. ¹Van Andel Institute, United States
Disclosures: Xiangqi Meng, None
- 5:00 pm N-cadherin in Extra-Skeletal Osterix (Osx) Positive Cells Modulates Tumor Growth Independently of Cell-Cell Adhesion**
1049 Francesca Fontana^{*1}, Biancamaria Ricci², Jingyu Xiang³, Ximming Su³, Giulia Leanza¹, Roberta Faccio², Katherine Weilbaecher³, Roberto Civitelli¹. ¹Division of Bone and Mineral Diseases, Washington University, United States, ²Department of Orthopaedic Surgery, Washington University, United States, ³Division of Molecular Oncology, Washington University, United States
Disclosures: Francesca Fontana, None

Saturday

- 5:15 pm** **Re-Expression of Estrogen Receptor Alpha in Osteosarcomas Leads to Osteoblast Differentiation**
1050 Susan Krum^{*1}, Gustavo Miranda-Carboni¹, Maria Angeles Lillo Osuna¹. ¹University 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 Feng², Lianfu Deng², Guochun Zhu², Dejun Shen¹, Selvarangan Ponnazhagan¹, Wei Chen¹, Yi-Ping Li¹. ¹University of Alabama at Birmingham, United States, ²Shanghai 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 mouse model of breast cancer bone metastasis**
1052 Tiina E Kähkönen^{*1}, Mari I Suominen¹, Jussi M Halleen¹, Azusa Tanaka², Michael Seiler², Jenni Bernoulli¹. ¹Pharmatest Services Ltd, Finland, ²Taconic 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 Jean¹, Lynne Moore², Philippe Gamache¹, Louis Bessette³, Louis-Georges Ste-Marie⁴, Jacques P. Brown³. ¹Institut national de santé publique du Québec, Canada, ²Université Laval, Canada, ³CHU de Québec Research Center, Canada, ⁴Université 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 Injuries Over One Year: Osteoporotic Fractures in Men (MrOS) Study.**
1054 Elsa Strotmeyer^{*1}, Paolo Caserotti², Stephanie Harrison³, Mary Winger¹, Robert Boudreau¹, Peggy Cawthon³, Kristine Ensrud⁴, Eric Orwoll⁵, Jane Cauley¹. ¹University of Pittsburgh, United States, ²University of Southern Denmark, Denmark, ³California Pacific Medical Center Research Institute, United States, ⁴University of Minnesota, United States, ⁵Oregon 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 Manitoba, Canada**
1055 Harminder Singh^{*1}, Saeed Al-Azazi², Lin Yan², Lisa Lix², Piotr Czaykowski¹, Beatrice Edwards³, William Leslie². ¹University of Manitoba, Cancercare Manitoba, Canada, ²University of Manitoba, Canada, ³MD 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. Romme⁴, Frank W.J.M. Smeenk⁴, Emiel F.M. Wouters, Joop P.W. van den Bergh.
¹Department of Internal Medicine, NUTRIM School of Nutrition and Translational Research in Metabolism, Maastricht University Medical Center+ (MUMC+), Netherlands,
²Department of Internal Medicine, Rheumatology, Maastricht University Medical Center+ (MUMC+), Netherlands, ³CAPHRI 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,
⁴Department of Respiratory Medicine, Catharina Hospital, Netherlands, ⁵Department of Respiratory Medicine, Maastricht University Medical Centre + (MUMC+), Netherlands,
⁶Department 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 fracture and its outcomes from two large population-based prospective cohort studies**
1057
 Thach Tran^{*1}, Dana Bluci¹, Hanh Pham¹, Tineke van Geel², Jonathan D Adachi³, Claudio Berger⁴, Joop van den Bergh⁵, John A Eisman⁶, Piet Geusens⁷, David Goltzman⁴, David A Hanley⁸, Robert G Josse⁹, Stephanie M Kaiser¹⁰, Christopher S Kovacs¹¹, Lisa Langsetmo¹², Jerilynn C Prior¹³, Tuan V Nguyen¹⁴, Jacqueline R Center¹⁵. ¹Garvan Institute of Medical Research, Australia, ²Maastricht University, Research school of CAPHRI, Netherlands, ³McMaster University, Canada, ⁴McGill University, Canada, ⁵Maastricht University Medical Center, Research School Nutrim; VieCuri Medical Centre of Noord-Limburg, Netherlands, ⁶Garvan Institute of Medical Research; Clinical School, St Vincent's Hospital; Faculty of Medicine, UNSW Sydney; School of Medicine Sydney, University of Notre Dame, Australia, ⁷Maastricht University Medical Center, Research School CAPHRI; University Hasselt, Biomedical Research Institute, Netherlands, ⁸University of Calgary, Canada, ⁹University of Toronto, Canada, ¹⁰Dalhousie University, Canada, ¹¹Memorial University, Canada, ¹²School of Public Health, University of Minnesota, United States, ¹³Department of Medicine and Endocrinology, University of British Columbia, Canada, ¹⁴Garvan Institute of Medical Research; Faculty of Medicine, UNSW Sydney, Canada, ¹⁵Garvan 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 Approach**
1058
 Thao P. Ho-Le^{*1}, Jackie R. Center², John A. Eisman³, Hung T. Nguyen⁴, Tuan V. Nguyen⁵. ¹Centre of Health Technologies, FEIT, University of Technology Sydney, Australia, ²Bone Biology Division, Garvan Institute of Medical Research; St Vincent Clinical School, UNSW, Australia, Australia, ³Bone Biology Division, Garvan Institute of Medical Research, NSW;St Vincent Clinical School, UNSW, Australia;School of Medicine, Sydney University of Notre Dame, Australia, Australia, ⁴Centre of Health Technologies, Faculty of Engineering and Information Technology, University of Technology, Sydn, Australia, ⁵University 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 1059 Selective requirement of the histone methyltransferase Ezh2 in distinct mesenchymal lineages during skeletal development

Amel Dudakovic^{*1}, Emily Camilleri¹, Deepanwita Pal², Sonia Rozario³, Christopher Paradise¹, Roman Thaler¹, Meghan McGee-Lawrence⁴, Elizabeth Bradley¹, Gary Stein⁵, Martin Montecino⁶, Jennifer Westendorf¹, Ronen Schweitzer², Emi Shimizu³, Andre van Wijnen¹. ¹Mayo Clinic, United States, ²Shriners Hospital for Children, United States, ³Rutgers School Dental Medicine, United States, ⁴Augusta University, United States, ⁵University of Vermont Medical School, United States, ⁶Universidad Andrés Bello, Chile

Disclosures: Amel Dudakovic, None

4:45 pm 1060 ASBMR 2017 Annual Meeting Young Investigator Award

Ubiquitin-specific protease 34 regulates osteogenic differentiation of mesenchymal stem cells
Yuchen Guo^{*1}, Mengyuan Wang², Shiwen Zhang³, ChenChen Zhou³, Yunshu Wu³, Liang Xie⁴, Ling Ye⁴, Qiamming chen⁵, Quan Yuan⁴. ¹author, China, ²teammate, China, ³workmate, China, ⁴mentor, China, ⁵teacher, China

Disclosures: Yuchen Guo, None

5:00 pm 1061 Identification of novel periosteal skeletal stem cells

Shawon Debnath^{*1}, Alisha Yallowitz¹, Jason Mc Cormick¹, Tuo Zhang¹, Yeon - Suk Yang², Yifang Liu¹, Sarfaraz Lalani¹, Srushti Kittane³, Hwanhee Oh¹, Jae Hyuck Shim⁴, Matthew Blake Greenblatt¹, Ren Xu¹. ¹Weill Cornell Medical College, Cornell University, United States, ²University of Massachusetts Medical School, United States, ³New York University, United States, ⁴University of Massachusetts Medical College, United States

Disclosures: Shawon Debnath, None

5:15 pm 1062 Identification of osteoprogenitor cells in the mouse periosteum

Francesca V Sbrana^{*1}, Danka Grcevic², Jessica Funnell³, Ivo Kalajzic¹, Brya Matthews¹. ¹UConn Health, United States, ²University of Zagreb, Croatia, ³Binghamton University, United States

Disclosures: Francesca V Sbrana, None

5:30 pm 1063 Gli1 Is A Common Lineage Marker For Osteogenic Mesenchymal Progenitors

Yu Shi^{*1}, Guangxu He², Wen-Chih Lee¹, Jennifer McKenzie¹, Matthew Silva¹, Fanxin Long¹. ¹Department of Orthopedic Surgery, Washington University School of Medicine, United States, ²Department of Orthopedic Surgery, The Second Xiangya Hospital, Central South University, China

Disclosures: Yu Shi, None

5:45 pm 1064 Hox genes regulate adult osteoprogenitor cell fate decisions

Vivian Bradaschia-Correa^{*1}, Anne Marie Josephson¹, Shane Neibart¹, Devan Mehta¹, Philipp Leucht¹. ¹NYU 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 Cusano¹, Zhou Hua¹, Ruksnaha Majeed¹, Beatriz Omeragic¹, David Dempster¹, John Bilezikian¹. ¹Columbia 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 Marin², David L Kendler³, Luis Russo⁴, Cristiano AF Zerbini⁵, Susan Greenspan⁶, Salvatore Minisola⁷, Alicia Bagur⁸, Peter Lakatos⁹, Enrique Casado¹⁰, Astrid Fahrleitner-Pammer¹¹, Jan Stepan¹², Eric Lespessailles¹³, Rüdiger Moericke¹⁴, Jean Jacques Body¹⁵, Pedro López-Romero ². ¹Maastricht University Medical Center, Netherlands, ²Lilly Research Center Europe, Spain, ³University of British Columbia, Canada, ⁴Centro de Analises e Pesquisas Clínicas LTDA, Brazil, ⁵Centro Paulista de Investigação Clínica, Brazil, ⁶Osteoporosis Center, University of Pittsburgh, United States, ⁷Policlinico Umberto I, Italy, ⁸Centro de Osteopatías Comlit, Argentina, ⁹Semmelweis University Medical School, Hungary, ¹⁰Hospital Parc Taulí, Spain, ¹¹Division of Endocrinology, Medical University of Graz, Austria, ¹²Institute of Rheumatology, Faculty of Medicine 1, Charles University, Czech Republic, ¹³Regional Hospital of Orleans, France, ¹⁴Institut Präventive Medizin & Klinische Forschung, Germany, ¹⁵CHU 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-Farsani², Mia Vuopio³, Kimmo Mattila³. ¹Turku University Hospital and University of Turku, Finland, ²University of Turku, Finland, ³Turku 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 Wee¹, Nicole PC Konijn², Debby den Uyl², Maarten Boers², Willem F Lems². ¹VU University medical center, department of Epidemiology and Biostatistics, Netherlands, ²Amsterdam Rheumatology and immunology center, location VU University medical center, Netherlands

Disclosures: Merel JJ Lucassen, None

Saturday

- 5:30 pm** **The Effect of Bisphosphonates on Mortality Risk Reduction is Partly Mediated Through a Reduction in the Rate of Bone Loss**
1069 Dana Bliuc^{*1}, Thach Tran¹, Tineke van Geel², Jonathan Adachi³, Claudie Berger⁴, Joop van den Bergh⁵, John A. Eisman⁶, Piet Geusens², David Goltzman⁷, David A. Hanley⁸, Robert G Josse⁹, Stephanie M Kaiser¹⁰, Christopher S Kovacs¹¹, Lisa Langsetmo¹², Jerilynn C Prior¹³, Tuan V. Nguyen¹, Jacqueline R Center¹⁴. ¹Osteoporosis and Bone Biology Program, Garvan Institute of Medical Research, Australia, ²Maastricht University Medical Center, Research School CAPHRI, Care and Public Health Research Institute, Netherlands, ³Department of Medicine, McMaster University, Canada, ⁴CaMos National Coordinating Centre, McGill University, Canada, ⁵Maastricht University Medical Center, Research School Nutrim, Department of Internal Medicine, Subdivision of Rheumatology, Netherlands, ⁶Osteoporosis 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, ⁷Department of Medicine, McGill University, Canada, ⁸Department of Medicine, University of Calgary, Canada, ⁹Department of Medicine, University of Toronto, Canada, ¹⁰Department of Medicine, Dalhousie University, Canada, ¹¹Faculty of Medicine, Memorial University, Canada, ¹²School of Public Health, University of Minnesota, United States, ¹³Department of Medicine and Endocrinology, University of British Columbia, Canada, ¹⁴Osteoporosis 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 Mild-to-Moderate Chronic Kidney Disease (CKD)**
1070 Aaron Broadwell^{*1}, Peter R Ebeling², Edward Franek³, Stefan Goemaere⁴, Rachel B Wagman⁵, Xiang Yin⁵, Susan Yue⁵, Paul D Miller⁶. ¹Rheumatology and Osteoporosis Specialists, United States, ²Monash University, Australia, ³Mossakowski Medical Research Centre, Polish Academy of Sciences, Poland, ⁴Ghent University Hospital, Belgium, ⁵Amgen Inc., United States, ⁶Colorado 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
-

Saturday

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

SUNDAY, SEPTEMBER 10, 2017

DAY-AT-A-GLANCE

Time/Event/Location	All locations in the Colorado Convention Center unless otherwise noted
7:00 am - 5:00 pm	122
ASBMR Registration Open <i>Registration Hall - Lobby A Foyer</i>	
8:00 am - 9:30 am	122
Plenary Symposium – ASBMR 40th Anniversary Symposium and Presentation of the Fuller Albright and Stephen M. Krane Awards <i>Mile High Ballroom</i>	
9:30 am - 4:30 pm	122
Posters Open <i>ASBMR Discovery Hall - Exhibit Hall A & B1</i>	
9:30 am - 9:45 am	122
Networking Break <i>Mile High Ballroom Foyer and Four Seasons Ballroom Foyer</i>	
9:45 am - 11:00 am	123
Plenary Orals: John H. Carstens Memorial Session: Osteoporosis Treatment III <i>Mile High Ballroom</i>	
9:45 am - 11:00 am	124
Plenary Orals: Translational Plenary Orals II <i>Four Seasons Ballroom II-III</i>	
11:00 am - 12:00 pm	125
Meet-the-Professor Sessions <i>Rooms 102-113</i>	
11:00 am - 12:30 pm	126
Hands-On Workshop: RNA-SEQ Computational Analysis Training Workshop <i>Room 402</i>	
11:00 am - 12:30 pm	126
Hands-On Workshop: Skeletal Muscle Biology and Function: An Introduction to Analytical Approaches <i>Room 401</i>	
11:00 am - 12:00 pm	126
ASBMR-IOF Joint Session: Reducing the Treatment Gap <i>Four Seasons Ballroom I</i>	
11:00 am - 12:00 pm	127
Career Development Session: Navigating Career Pathways: How to Develop, Adjust and Sustain a Career in Bone and Mineral Health for the Long-Term <i>Mile High Ballroom 4A-B</i>	
12:00 pm - 12:30 pm	127
Networking Break <i>Mile High Ballroom Foyer and Four Seasons Ballroom Foyer</i>	
12:30 pm - 2:30 pm	127
Poster Session II & Poster Tours <i>ASBMR Discovery Hall - Exhibit Hall A & B1</i>	

12:30 pm - 2:30 pm	177
Late-Breaking Posters II	
<i>ASBMR Discovery Hall - Exhibit Hall A & B1</i>	
2:30 pm - 4:00 pm	181
Concurrent Orals: FRAX: Risk Assessment and Practical Applications	
<i>Mile High Ballroom</i>	
2:30 pm - 4:00 pm	182
Concurrent Orals: Osteoblasts	
<i>Four Seasons Ballroom II-III</i>	
2:30 pm - 4:00 pm	183
Concurrent Orals: Rare Bone Diseases (Translational)	
<i>Four Seasons Ballroom I</i>	
2:30 pm - 4:00 pm	184
Concurrent Orals: Systemic Regulation	
<i>Four Seasons Ballroom IV</i>	
4:00 pm - 4:30 pm	185
Networking Break	
<i>Mile High Ballroom Foyer and Four Seasons Ballroom Foyer</i>	
4:30 pm - 5:45 pm	186
Concurrent Orals: Osteoclasts	
<i>Four Seasons Ballroom IV</i>	
4:30 pm - 5:45 pm	187
Concurrent Orals: Osteoporosis Treatment IV	
<i>Mile High Ballroom</i>	
4:30 pm - 5:45 pm	188
Concurrent Orals: Pediatric Bone Disorders	
<i>Four Seasons Ballroom II-III</i>	
4:30 pm - 5:45 pm	189
Concurrent Orals: Preclinical Models: Nutrition and Pharmacology	
<i>Four Seasons Ballroom I</i>	
6:00 pm - 7:00 pm	190
ASBMR Annual Town Hall Meeting and Reception	
<i>Mile High Ballroom 4A-B</i>	
7:00 pm - 8:30 pm	190
Diversity in Bone and Mineral Research Networking Reception	
<i>Hyatt Regency Denver, Capitol Ballroom I</i>	
7:00 pm - 9:00 pm	191
Clinical Evening – Management and Treatment of Rare Bone Diseases	
<i>Room 205/207</i>	
7:15 pm - 10:00 pm	191
Adult Bone and Mineral Working Group	
<i>Room 210/212</i>	
7:15 pm - 9:15 pm	192
Bone Turnover Markers Working Group	
<i>Room 406/407</i>	
7:15 pm - 9:15 pm	193
Working Group on Aging	
<i>Room 405</i>	
7:15 pm - 9:30 pm	193
Pediatric Bone and Mineral Working Group	
<i>Room 301/302</i>	

Sunday

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 FRACTION (FRActure study in postmenopausal woMen with osteoporosis) Extension**

E Michael Lewiecki^{*1}, Rajani V Dinavahi², Marise Lazaretti-Castro³, Peter R Ebeling⁴, Jonathan D Adachi⁵, Akimitsu Miyauchi⁶, Evelien Gielen⁷, Cassandra E Milmont², Cesar Libanati⁸, Andreas Grauer². ¹New Mexico Clinical Research & Osteoporosis Center, United States, ²Amgen Inc., United States, ³Federal University of São Paulo, Brazil, ⁴Monash University, Australia, ⁵McMaster University, Canada, ⁶Miyauchi Medical Center, Japan, ⁷University Hospitals Leuven, Belgium, ⁸UCB 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 Chapurlat¹, Nathalie Portero-Muzy¹, Pedro Garcia², Jacques P. Brown³, Stéphane Horlait⁴, Cesar Libanati⁵, Rogely Boyce⁶, Andrea Wang⁶, Andreas Grauer⁶. ¹INSERM UMR 1033, Université de Lyon, France, ²Hospital Universitario de Monterrey, Mexico, ³CHU de Quebec Research Centre and Laval University, Canada, ⁴Amgen, France, ⁵UCB BioPharma, Belgium, ⁶Amgen 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 Butler², DL Kendler³, PD Miller⁴, C Roux⁵, AT Wang², RB Wagman², EM Lewiecki⁶. ¹Geneva University Hospital, Switzerland, ²Amgen Inc., United States, ³University of British Columbia, Canada, ⁴Colorado Center for Bone Research, United States, ⁵Paris Descartes University, France, ⁶New Mexico Clinical Research & Osteoporosis Center, United States

Disclosures: S Ferrari, Agnovo, Amgen, Radius, UCB, Consultant

- 10:30 am 1074** **Sustained Fracture Risk Reduction with Sequential Abaloparatide/Alendronate: Results of ACTIVExtend**

Henry G Bone^{*1}, Felicia Cosman², Paul D Miller³, Gregory C Williams⁴, Gary Hattersley⁴, Ming-yi Hu⁴, Lorraine A Fitzpatrick⁴, Socrates Papapoulos⁵. ¹Michigan Bone and Mineral Clinic, United States, ²Helen Hayes Hospital and Columbia University, United States, ³Colorado Center for Bone Research, United States, ⁴Radius Health, Inc., United States, ⁵Leiden University Medical Center, Netherlands

Disclosures: Henry G Bone, Amgen, Consultant

Sunday

- 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 Bauer², Anne Schafer¹, Felicia Cosman³, Dennis Black², Richard Eastell⁴. ¹University of California, San Francisco, and the San Francisco VA Health Care System, United States, ²University of California, San Francisco, United States, ³Helen Hayes Hospital, West Haverstraw, and Columbia University, New York, United States, ⁴University 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 Bashur¹, Murali Mamidi¹, Alexander Miron¹, Robin Elliott¹, David Danielpour¹, Guang Zhou¹. ¹Case 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 to bone anabolic activity of marrow adipocytes**
1077
Lance Stechschulte^{*1}, Andrew Hendrix¹, Edwin Sanchez¹, Beata Lecka-Czernik¹. ¹University 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 Torres¹, Pablo Palomino¹, Rehan Saiyed², Karen King³, Joseph Lane², Christopher Hernandez¹, Eve Donnelly¹. ¹Cornell University, United States, ²Hospital for Special Surgery, United States, ³University 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 Krause¹, Corey Cain¹, Liping Wang¹, Edward Hsiao¹, Robert Nissenson¹, Aaron Fields¹, Stephanie Correa², Holly Ingraham¹. ¹University of California, San Francisco, United States, ²University of California, Los Angeles, United States
Disclosures: Candice Herber, None
- 10:45 am RAPID-THROUGHPUT SKELETAL PHENOMICS IN ZEBRAFISH**
1080
Matthew Hur^{*1}, Charlotte Gistelinck², Philippe Huber¹, Jane Lee¹, Marjorie Thompson¹, Adrian Monstad-Rios¹, Claire Watson¹, Sarah McMenamin³, Andy Willaert⁴, David Parichy⁵, Paul Coucke⁶, Ronald Kwon¹. ¹University of Washington, United States, ²Ghent University, Belgium, ³Boston College, United States, ⁴Ghent University, United States, ⁵University of Virginia, United States, ⁶University 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.
Nuffield 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

Sunday

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 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, Italy

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

Sunday

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 Saponaro², Marina Di Giulio², Elena Pardi², Simona Borsari², Claudio Marcocci². ¹University-Hospital of Pisa, Italy, ²Department 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 Park¹, Yu-Min Hong¹, Min-Su Han¹, Youn-Kwan Jung¹, Yu-Rae Choi¹, Xian Jin¹, Goo Taeg Oh², Shigeaki Kato³, Je-Yong Choi¹. ¹Department of Biochemistry and Cell Biology, Korea Mouse Phenotype Consortium, BK21 PLUS, School of Medicine Kyungpook National University, Korea, Republic of, ²Ewha Womans University, Korea, Republic of, ³Department 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 Brandi², John Germak³, Stefanie Hahner⁴, Pascal Houillier⁵, Olle Kampe⁶, Christian Kasperk⁷, Aliya Khan⁸, Michael A. Levine⁹, Michael Mannstadt¹⁰, Rebecca Piccolo¹¹, Lars Rejnmark¹², Dolores M. Shoback¹³, Tamara J. Vokes¹⁴, Neil Gittoes¹⁵. ¹Mayo Clinic Division of Endocrinology, Diabetes, Metabolism, and Nutrition, United States, ²University Hospital of Careggi, Italy, ³Shire International GmbH, Switzerland, ⁴University of Würzburg, Germany, ⁵Georges Pompidou Hospital and Paris Descartes University, France, ⁶Karolinska Institutet, Sweden, ⁷Medical University, Germany, ⁸McMaster University, Canada, ⁹Children's Hospital of Philadelphia, United States, ¹⁰Massachusetts General Hospital and Harvard Medical School, United States, ¹¹Shire Human Genetic Therapies, Inc., United States, ¹²Aarhus University Hospital, Denmark, ¹³SF Department of Veterans Affairs Medical Center, University of California, United States, ¹⁴University of Chicago Medicine, United States, ¹⁵University 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 Boppre¹, Leandro Machado², João Vilas-Boas², Vitor Devezas³, John Preto³, Hugo Sousa³, José Oliveira¹, Hélder Fonseca¹. ¹CIAFEL, Faculty of Sport, University of Porto, Portugal, ²CIFI2D, Faculty of Sport, University of Porto, Portugal, ³Department 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 Koga¹, Yuka Kinoshita¹, Masaki Katsura², Miwako Takahashi², Hiroshi Kobayashi³, Tetsuo Ushiku⁴. ¹Department of Endocrinology & Nephrology, University of Tokyo Hospital, Japan, ²Department of Radiology, University of Tokyo Hospital , Japan, ³Department of Orthopaedic Surgery Faculty of Medicine, University of Tokyo Hospital., Japan, ⁴Department 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 Almutairi¹, Rafik El-Werfalli¹, Adam Waldbillig¹, Namrah Siraj¹, Tayyab Khan¹, Reema Shah², Zubin Punthakee¹, Adam Millar³, Manoela Braga¹, JEM Young¹. ¹McMaster University, Canada, ²McMaster University, Canada, ³University 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 Wieliczko¹, Jolanta Buczyńska-Chyl², Piotr Koźmiński³, Paweł Łebrowski¹, Ewa Wojtaszek¹, Joanna Matuszkiewicz-Rowińska¹, Study Group⁴. ¹Chair and Department of Nephrology, Dialysis and Internal Medicine, Medical University of Warsaw, Poland, ²Dialysis Unit, Regional Specialist Hospital, Poland, ³Fresenius Dialysis Center, Poland, ⁴26 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 Loseva¹, David Terris¹, Seth Kay¹, Helena Spartz¹, Robert Brennan², Anthony Mulloy¹. ¹Medical College of Georgia, United States, ²Laurel 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 Liu¹, Melissa Sum¹, Leonardo Costa Bandeira¹, Mariana Bucovsky¹, Ivelisse Colon¹, James Lee², Shonni Silverberg³, Marcella Walker³. ¹Columbia University Medical Center, Dept of Medicine Endocrinology, United States, ²College of Physicians and Surgeons, Columbia University, 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 Zhang¹. ¹Metabolic 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 Hugenroth¹, Brett Rosauer¹, Robert Recker¹, Mohammed Akhter¹. ¹Creighton 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 Andreasen², Jesper Thomsen³, Annemarie Brueel⁴, Ellen Hauge⁴, Birgitte Kiil⁴, Jean-Marie Delaisse⁴, Thomas Andersen², Mariana Kersh¹. ¹University of Illinois at Urbana-Champaign, United States, ²University of Southern Denmark, Denmark, ³Aarhus University, Denmark, ⁴Aarhus 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 Massicotte¹, Alexandra M Monroy², Steven N Popoff¹. ¹Temple University Lewis Katz School of Medicine, United States, ²University 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 Marano¹, Yuk-Wai Wayne Lee², Tszy-Ping Lam², Ralph Müller¹. ¹ETH Zurich, Switzerland, ²The Chinese University of Hong Kong, China
Disclosures: Patrik Christen, None

Sunday

- SU0015 The Decrease in Fracture Resistance with Aging in BALB/c Mice Involves Alterations to the Bone Matrix**
Amy Creecy^{*1}, Sasidhar Uppuganti², Mathilde Granke³, Madeline Girard⁴, Siegfried Schlunk⁴, Paul Vozyan⁵, Jeffry Nyman⁶. ¹Vanderbilt University, VA Tennessee Valley Healthcare System, United States, ²Vanderbilt University Medical Center, VA Tennessee Healthcare System, United States, ³Vanderbilt University Medical Center, VA Tennessee Valley Healthcare System, United States, ⁴Vanderbilt University, United States, ⁵Vanderbilt University Medical Center, United States, ⁶Vanderbilt 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 Ural¹. ¹Villanova University, United States
Disclosures: Ahmet Demirtas, None
- SU0017 Characterization of a sandwich ELISA for the quantification of mouse periostin**
Elisabeth Gadermaier^{*1}, Manfred Tesarz¹, Jacqueline Wallwitz¹, Gabriela Berg¹, Gottfried Himmller¹. ¹The 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 Hu¹, Xingjian Zhang¹, X. Edward Guo¹. ¹Bone 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 Takahata², Tomohiro Shimizu², Kyosuke Kanazawa¹, Hiromi Kimura-Suda¹. ¹Chitose Institute of Science and Technology, Japan, ²Hokkaido University, Japan
Disclosures: Teppei Ito, None
- SU0020 Strain Magnitude Influences Structural Changes in the Radius of Healthy Adult Women**
Megan Mancuso^{*1}, Joshua Johnson², Sabahat Ahmed¹, Karen Troy¹. ¹Worcester Polytechnic Institute, United States, ²Worcester 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 Depalle², Alexandra Porter², Sandra Shefelbine¹. ¹Northeastern University, United States, ²Imperial College London, United States
Disclosures: Sabah Nobakhti, None
- SU0022 Evaluation of a new bovine biomaterial to conduct bone healing**
Gretel Pellegrini^{*1}, Macarena Gonzalez-Chaves², Francisco Duran³, Ricardo Orzuza⁴, Luciano Parodi⁵, Susana Zeni¹. ¹Instituto 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, ²Universidad de Buenos Aires, Facultad de Odontología, Cátedra de Bioquímica General y Bucal, Argentina, ³Instituto de Inmunología Genética y Metabolismo, Universidad de Buenos Aires-CONICET (INIGEM), Argentina, ⁴Universidad de Buenos Aires, Facultad de Odontología, Cátedra de Bioquímica General y Bucal, Argentina, Argentina, ⁵Comisión 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 Yao², Yong Wang², Don Kimmel³, Mark Johnson², Eve Donnelly¹, Nancy Lane⁴. ¹Cornell University, United States, ²University of Missouri-Kansas City, United States, ³University of Florida, United States, ⁴University 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 Ural¹. ¹Villanova 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. Leary¹, Richard J. Sherwood¹, Dana L. Duren¹. ¹University 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 Dencker², Björn Rosengren¹, Magnus Karlsson¹. ¹Clinical and Molecular Osteoporosis Research Unit, Department of Orthopedics and Clinical Sciences, Lund University, Skåne University Hospital, Sweden, ²Department 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 Bialo², Jason Machan³, Peter Kriz⁴, Catherine M Gordon⁵. ¹Institute for Physical Activity and Nutrition, Deakin University and Australian Institute for Musculoskeletal Sciences, St. Albans, Australia, ²Division of Pediatric Endocrinology, Rhode Island Hospital/Hasbro Children's Hospital, Warren Alpert Medical School of Brown University, Providence, RI, United States, ³Division of Biostatistics, Rhode Island Hospital, Warren Alpert Medical School of Brown University, Providence, RI, United States, ⁴Division of Sports Medicine, Rhode Island Hospital, Warren Alpert Medical School of Brown University, Providence, RI, United States, ⁵Division 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 Adapala¹, Harry K.W. Kim¹. ¹Texas 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}. ¹Dept. of Pediatrics, Klatovy Hospital, Czech Republic, Czech Republic
Disclosures: Stepan Kutilek, None
- SU0030 Nutritional ricket - the Norwegian experience**
 Haakon E. Meyer^{*1}, Kristina Skram², Ingvill Almås Berge², Ahmed Madar³, Hilde Johanne Bjørndalen². ¹University of Oslo and Norwegian Institute of Public Health, Norway, ²Department of Pediatrics, Oslo University Hospital, Norway, ³Section for Preventive Medicine and Epidemiology, Department of Community Medicine, University of Oslo, Norway
Disclosures: Haakon E. Meyer, None

Sunday

- SU0031 Established Adult Height Loci Operate in the Pediatric Setting to Influence Bone Mineral Density**
 Jonathan Mitchell^{*1}, Alessandra Chesi¹, Shana McCormack¹, Diana Cousminer¹, Heidi Kalkwarf², Joan Lappe³, Vicente Gilsanz⁴, Sharon Oberfield⁵, John Shepherd⁶, Andrea Kelly¹, Babette Zemel¹, Struan Grant¹. ¹Children's Hospital of Philadelphia, United States, ²Cincinnati Children's, United States, ³Creighton University, United States, ⁴Children's Hospital Los Angeles, United States, ⁵Columbia University, United States, ⁶UCSF 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 Hansson¹, Per Magnusson². ¹Department of Pediatrics, Institute for Clinical Sciences, The Queen Silvia Children's Hospital, The Sahlgrenska Academy at Göteborg University, Göteborg, Sweden, ²Department 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 Maharanj¹, Emily Bulik-Sullivan¹, Hong Yuan¹, Maureen Bower¹, Ian Carroll¹. ¹University 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 Miller², Melissa Ziegler¹, Christopher Modlesky¹, Chuan Zhang¹. ¹University of Delaware, United States, ²AI 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 Georger¹, Marian Ackun-Farmmer¹, Michael Becker¹, Danielle Benoit¹, Laura Calvi¹, Benjamin Frisch¹. ¹University 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 Ali¹, Miray Nilufer Cimsit¹, Can Ege Yalçın¹, Stavroula Kousteni¹, Azra Raza¹. ¹Columbia University, United States
Disclosures: Marta Galán-Díez, 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 Costa¹, Antonella Chillemi², Valeria Quarona², Marina Bolzoni¹, Valentina Marchica¹, Rosanna Vescovini³, Cristina Mancini⁴, Eugenia Martella⁴, Fabrizio Accardi¹, Alberto L Horenstein², Mario Pedrazzoni⁵, Franco Aversa⁶, Fabio Malavasi², Nicola Giuliani¹. ¹Myeloma Unit, Dept. of Medicine and Surgery, University of Parma, Italy, ²Laboratory of Immunogenetics, Dept. of Medical Sciences and CeRMS, University of Turin, Italy, ³Dept. of Medicine and Surgery, University of Parma, Italy, ⁴Pathology, "Azienda Ospedaliero-Universitaria di Parma, Italy, ⁵Internal Medicine, University of Parma, Italy, ⁶Hematology 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 Merke^{*1}, Joseph Vanderburgh², Shanik Fernando³, Scott Guelcher², Julie Sterling¹.
¹Center for Bone Biology, Vanderbilt University Medical Center, Nashville, TN. Department of Veterans Affairs, Tennessee Valley Healthcare System, Nashville, TN, United States,
²Center for Bone Biology, Vanderbilt University Medical Center, Nashville, TN. Department of Chemical and Biomolecular Engineering, Vanderbilt University, Nashville, TN, United States, ³Department of Chemical and Biomolecular Engineering, Vanderbilt University, Nashville, TN, United States
Disclosures: Alyssa Merke, None
- SU0039 Genetic Instability of the 2.3*Colla1-Cre* Transgenic Line reveals a threshold for leukemogenesis in a model of osteoblast-induced acute myeloid leukemia**
 Ioanna Mosialou^{*1}, Alvaro Cuesta-Domínguez¹, Julie Teruya-Feldstein², Ellin Berman³, Stavroula Kousteni¹. ¹Columbia University, United States, ²Mount Sinai, United States, ³Memorial 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 Hansen¹, Jean-Marie Delaisse², Lars Rolighed³, Anne-Marie Heegaard¹, Thomas Levin Andersen². ¹Department of Drug Design and Pharmacology, University of Copenhagen, Copenhagen, Denmark, Denmark, ²Department of Clinical Cell Biology, Vejle Hospital – Lillebaelt Hospital, Institute of Regional Health Research, University of Southern Denmark, Vejle, Denmark, Denmark, ³Department 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 Maroof¹, Rawiya Al-Hosni², Panagiotis Gikas³, Neil Gozzard¹, Stevan Shaw¹, Scott Roberts¹. ¹UCB Pharma, United Kingdom, ²Institute of Orthopaedics and Musculoskeletal Science, United Kingdom, ³The 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 Ho¹, Theresa Roth¹, Robert Nissenson¹. ¹San Francisco VA Medical Center, United States
Disclosures: Liping Wang, None
- SU0043 Soluble factors of prostate cancer cells induce bone pre-metastatic niche changes in mice with induced prostate tumors**
 Juan A Ardura^{*1}, Irene Gutierrez-Rojas¹, Luis lvarez-Carrión¹, Verónica Alonso¹. ¹IMMA-Universidad San Pablo CEU. Madrid , Spain
Disclosures: Juan A Ardura, None
- SU0044 A novel tubulin inhibitor induces apoptosis of human osteosarcoma cells**
 Yufan Chen^{*1}, Baohong Zhao², Jingle Xi¹, Liang Zhao¹. ¹NanFang Hospital, China, ²Cornell University, United States
Disclosures: Yufan Chen, None
- SU0045 *H3F3A* mutation is responsible for the rare Giant Cell Tumor of the Clivus.**
 Giuseppina Divisato^{*1}, Federica Scotto di Carlo¹, Maurizio Iacoangeli², Teresa Esposito³, Fernando Gianfrancesco¹. ¹Institute of Genetics and Biophysics, National Research Council of Italy, Italy, ²Department of Neurosurgery, Umberto I General Hospital, Italy, ³Institute of Genetics and Biophysics, National Research Council of Italy; IRCCS INM Neuromed, Italy
Disclosures: Giuseppina Divisato, None

Sunday

- SU0046 Transcriptional plasticity of tRNA fragments and microRNAs can be remodulated in chondrosarcoma**
Darrell Green^{*1}, William Fraser¹. ¹University 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 Sun², Patricia WM Ho², Natalie Sims², T John Martin².
¹Vanderbilt University Medical Center, United States, ²St. Vincent's Institute of Medical Research, Australia
Disclosures: Rachelle W Johnson, None
- SU0048 A potential JAB1-SOX9 link in chondrosarcoma pathogenesis**
Murali Mamidi^{*1}, William Samsa¹, David Danielpour², Guang Zhou³. ¹Department of Orthopaedics, Case Western Reserve University, United States, ²Case Comprehensive Cancer, Case Western Reserve University, United States, ³Department of Orthopaedics, Department of Genetics and Genome Sciences, Case Comprehensive Cancer, Case Western Reserve University, United States
Disclosures: Murali Mamidi, None
- SU0049 Roles of prostaglandin E2 in prostate cancer induced angiogenesis and bone metastasis**
Shosei Yoshinouchi^{*1}, Kenta Watanabe¹, Tsukasa Tominari¹, Michiko Hirata¹, Chiho Matsumoto¹, Takayuki Maruyama², Masaki Inada¹, Chisato Miyaura¹. ¹Tokyo University of Agriculture and Technology, Japan, ²Ono Pharmaceutical Co., Ltd., Japan
Disclosures: Shosei Yoshinouchi, None
- SU0050 Osteoblastic β 2 Adrenergic Receptor Contributes to the Immunosuppressive Activity of Myeloid-Derived Suppressor Cells in the Metastatic Bone Microenvironment**
Hyo Min Jeong^{*1}, Eun Jung Lee¹, Hye-Eun Kim¹, Bo Yeon Seo¹, Hyun-Ho Kim¹, Yun-Jae Kim¹, Hyun-Ju Lee¹, Seok-Hyung Lee¹, Young Mi Whang², Serk In Park¹.
¹Department of Biochemistry and Molecular Biology, Korea University College of Medicine, Korea, Republic of, ²Chungang University, Korea, Republic of
Disclosures: Hyo Min Jeong, None
- SU0051 Differentiation capacity of osteosarcoma cells transformed by distinct oncogenic drivers**
Kirby Rickel^{*1}, Fang Fang¹, Kaitlyn Dorn², Jianting Tao³. ¹Stanford Research, United States, ²Augustana University, United States, ³Sanford Research & University of South Dakota, United States
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 Calinescu¹, Catherine Van Poznak², Russell Taichman³, Greg Cline¹. ¹University of Michigan School of Medicine, United States, ²University of Michigan, United States, ³University 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**
Laura Wright^{*1}, Jenna Regan¹, Andrew Marks², Khalid Mohammad¹, Theresa Guise¹.
¹Indiana University, United States, ²Columbia University, United States
Disclosures: Laura Wright, None
- SU0054 miRNA-150, a novel regulator of post-traumatic osteoarthritis**
Asaad Al-Adlaan^{*1}, Fatima Jaber², Nazar Hussein², Fayez Safadi¹. ¹Northeast Ohio Medical University (NEOMED), United States, ²School of Biomedical Sciences, Kent State University, United States
Disclosures: Asaad Al-Adlaan, None

- SU0055 Lactosylceramide enhances chondrocytic differentiation**
 Lilit Antonyan^{*1}, Corine Martineau², René St-Arnaud². ¹McGill University and Shriners Hospitals for Children - Canada, Canada, ²Shriners Hospitals for Children - Canada, Canada
Disclosures: Lilit Antonyan, None
- SU0056 The role of TAK1 in postnatal articular cartilage homeostasis and OA pathogenesis**
 Christopher Dean^{*1}, Sarah Catheline¹, Jennifer Jonason¹. ¹University of Rochester Medical Center, United States
Disclosures: Christopher Dean, None
- SU0057 Involvement and therapeutic potential of Nell-1 in inflammatory arthritis**
 Chenshuang Li^{*1}, Zhong Zheng¹, Pin Ha², Jie Jiang³, Wenlu Jiang⁴, Seungjun Lee⁵, Richard Song⁶, Bernard Boback¹, Alireza Hourfari¹, Eric Chen¹, Cymbeline Culiat⁷, Xinli Zhang⁸, Kang Ting⁸, Chia Soo³. ¹Division of Growth and Development, Section of Orthodontics, School of Dentistry, University of California, Los Angeles, United States, ²Department of Cleft Lip and Palate Surgery, West China Stomatological Hospital, Sichuan University, China, ³Department of Orthopaedic Surgery and the Orthopaedic Hospital Research Center, University of California, Los Angeles, United States, ⁴State Key Laboratory of Oral Diseases, Department of Orthodontics, West China Hospital of Stomatology, Sichuan University, China, ⁵Department of Chemistry and Biochemistry, University of California, Los Angeles, United States, ⁶School of Dentistry, University of California, Los Angeles, United States, ⁷Oak Ridge National Laboratory, United States, ⁸Division 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 Jee¹, Presely Garrison¹, Shanna Yue¹, Michal Ad¹, Quang Nguyen¹, Bijal Kikani¹, Yoshiyuki Wakabayashi², Jeffrey Baron¹. ¹Section on Growth and Development, NICHD, United States, ²DNA 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 Jia¹, Wei Tong¹, Zhaochun Yang², Robert Tower¹, Kairui Zhang¹, Wei-Ju Tseng¹, X. Sherry Liu¹, James H-C. Wang², Lin Han³, Motomi Enomoto-Iwamoto¹, Ling Qin¹. ¹University of Pennsylvania, United States, ²University of Pittsburgh, United States, ³Drexel 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 Matsushita¹, Kenichi Mishima¹, Taisuke Seki¹, Naoki Ishiguro¹, Hiroshi Kitoh¹. ¹Department of Orthopaedic Surgery, Nagoya University Graduate School of Medicine, Japan
Disclosures: Toshiaki Okura, None
- SU0061 Phlpp Inhibitors Alter the Chondrocyte Epigenome and Promote Cartilage Regeneration**
 Ernest Taylor^{*1}, Elizabeth Bradley¹, Jennifer Westendorf¹. ¹Mayo Clinic, United States
Disclosures: Ernest Taylor, None
- SU0062 IGFBP-2 Mediated Effects of PTH on Bone and Cellular Respiration**
 Victoria DeMambro^{*1}, David Maridas¹, Anyonya Guntur¹, Elizabeth Rendina-Ruedy¹, Gang Xi², David Clemons², Clifford Rosen¹. ¹Maine Medical Research Institute, United States, ²University of North Carolina Chapel Hill, United States
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 Huang¹, Carrie Karvonen-Gutierrez², Joel Finkelstein³, Jane Cauley⁴, Kristine Ruppert⁵, Arun Karlamangla¹. ¹Division of Geriatrics, Geffen School of Medicine at UCLA, United States, ²School of Public Health, University of Michigan, United States, ³Massachusetts General Hospital, United States, ⁴Graduate 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 Chen¹, Zhen Liu¹, Shi-Shi Min¹, Qin Zeng¹, Hui Shen², Li-Jun Tan¹, Hong-Wen Deng². ¹Hunan Normal University, China, ²Tulane University, United States
Disclosures: Yuan Hu, None
- SU0065 Uncarboxylated osteocalcin attenuates the migration of vascular smooth muscle cells**
 Kyoung Min Kim^{*1}, Min Ji Kang², Ghayoung Lee², Sung Hee Choi¹, Soo Lim³, Hak Chul Jang¹. ¹Seoul National University Bundang Hospital , Korea, Republic of, ²Laboratory of Endocrinology, Biomedical Research Institute, Seoul National University Bundang Hospital, Korea, Republic of, ³Seoul National University Bundang Hospital, Korea, Republic of
Disclosures: Kyoung Min Kim, None
- SU0066 Misty mice are resistant to high fat diet-induced bone loss and have improved insulin sensitivity**
 Phuong Le^{*1}, Kathleen Bishop¹, Katherine Motyl¹, Daniel Brooks², Mary Bouxsein², Clifford Rosen¹. ¹Maine Medical Center Research Institute, United States, ²Beth Israel Deaconess Medical Center, United States
Disclosures: Phuong Le, None
- SU0067 Metabolomics of Osteoporosis in Southern Chinese**
 Grace Koon Yee Lee^{*1}, Ching-Lung Cheung¹. ¹Department 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 Lambert¹, Lihua Zhou¹, Maria Johnson¹, Timothy Nagy¹, Robert Kesterson¹, Jayleen Grams¹. ¹University 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 Hussein¹, Louis Gerstenfeld¹. ¹Boston 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 Shares¹, Roman Eliseev¹. ¹University 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 Williams¹, Mary Jane De Souza¹. ¹The 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 Wu², Jeyant Srinivas Sankaran¹, Buer Sen¹, Zhihui Xie¹, Martin Styner³, Xiaopeng Zong⁴, Weiqin Chen⁵, Janet Rubin¹, Rosalind A. Coleman⁶, Maya Styner¹. ¹Department of Medicine, Division of Endocrinology, University of North Carolina, United States, ²Department of Nutrition, School of Public Health, University of North Carolina, United States, ³Departments of Computer Science and Psychiatry, University of North Carolina, United States, ⁴Biomedical Research Imaging Center, University of North Carolina , United States, ⁵Department of Physiology, Medical College of Georgia at Augusta University, United States, ⁶Department 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 Lademann¹, Ulrike Baschant¹, Holger Henneicke¹, Martina Rauher¹, Lorenz Hofbauer¹. ¹Department 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**
 Dongdong Zhang^{*1}, Myeongmo Kang¹, Hye sun Park¹, Zeyu Jin¹, Weontae Lee¹, Sung-Kil Lim¹. ¹Yonsei University, Korea, Republic of
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 Zhang², Dana A. Godfrey¹, Renata Rydzik³, Olivia Hart³, Douglas J. Adams³, Cheryl L. Ackert-Bicknell¹. ¹Center for Musculoskeletal Research, University of Rochester Medical Center, United States, ²Department of Orthopedics, Zhejiang Provincial People's Hospital, China, ³Department 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 Corrado², Justin Bellizzi², Robert Romano², Elizabeth Saria², Kirsten Saucier², John Vu², Madison Rose², Samantha Cummins², Samip Shah², Cynthia Alander², Sanjay Mallya³, Andrew Arnold². ¹University of Connecticut School of Dental Medicine, United States, ²University of Connecticut School of Medicine, United States, ³UCLA 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 Frey¹², florent Elefteriou¹². ¹Baylor college of medicine, United States, ²Baylor 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 Dong², Yukiyo Ohnishi³, Takeshi Kondo³, Masahiro Hiasa³, Jumpei Teramachi³, Shinichi Aizawa⁴, Toshio Matsumoto⁵, Masahiro Abe³, Fukomoto Seiji⁵. ¹Department of Chronomedicine, Institute of Biomedical Sciences, Tokushima University Graduate School, Japan, ²Department of Endocrinology, Affiliated Hospital of Qingdao University, China, ³Department of Hematology, Endocrinology and Metabolism, Tokushima University, Japan, ⁴Genetic Engineering Team, RIKEN Center for Life Science Technologies, Japan, ⁵Fujii 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 *ob/ob* mice**
 Kenneth Philbrick^{*1}, Laurence Lindenmaier¹, Amy Colagiovanni¹, Dawn Olson¹, Satya Kalra², Adam Branscum¹, Urszula Iwaniec¹, Russell Turner¹. ¹Oregon State University, United States, ²University 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**
 Shannon Kaupp^{*1}, Alexander Robling², Matthew Warman³, Christina Jacobsen⁴. ¹Boston Children's Hospital, United States, ²Indiana University, United States, ³Boston Children's Hospital/Harvard Medical School/Howard Hughes Medical Institute, United States, ⁴Boston Children's Hospital/Harvard Medical School, United States
Disclosures: Shannon Kaupp, None
- SU0081** **Clinical Spectrum and Unifying Pathomechanisms in Ectopic Connective Tissue Mineralization Disorders**
 Qiaoli Li^{*1}, Jouni Uitto¹. ¹Department of Dermatology and Cutaneous Biology, Thomas Jefferson University, United States
Disclosures: Qiaoli Li, None
- SU0082** **Targeted Deletion of *Claudin (Clnd)-12* Gene Inhibits Chondrocyte Differentiation and Increases Articular Cartilage Thickness**
 Richard Lindsey^{*1}, Weirong Xing¹, Patrick Aghajanian¹, Catrina Godwin¹, Sheila Pourteymoor¹, Subburaman Mohan¹. ¹VA Loma Linda Healthcare System, United States
Disclosures: Richard Lindsey, None
- SU0083** **Assessment of genetics underlying the trabecular plate-rod ratio using whole exome sequencing**
 Melissa Sum^{*1}, Xiaolin Zhu¹, Minghao Liu¹, Edward Guo², David Goldstein¹, Marcella Walker¹. ¹Columbia University Medical Center, United States, ²Columbia 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 Hildreth¹, Jennifer Geisler², Sankha Ghosh², Ramiro Toribio², Michael Ostrowski², Sudarshana Sharma¹. ¹Ohio State University, United States, ²OSU, United States
Disclosures: Heather Carey, None
- SU0085** **Identification of rare variants in young adults with idiopathic osteoporosis**
 Corinne Collet^{*1}, Agnes Ostertag², Manon Riquebourg¹, Marine Delecourt³, Giulia Tueur³, Thomas Funck-Brentano¹, Phillippe Orcel¹, Jean-Louis Laplanche³, Martine Cohen-Solal¹. ¹Inserm U1132 and hopital Lariboisiere, France, ²Inserm U1132, hopital Lariboisiere, France, ³Department of Biochemistry, hopital Lariboisiere, France
Disclosures: Corinne Collet, None
- 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 Newell², Paul Leo², Lavinia Paternoster¹, Mhairi Marshall², Graeme Clark², John Morris³, Bing Ge³, Xiao Bao², Duncan Bassett⁴, Graham Williams⁴, Scott Youlten⁵, Peter Croucher⁵, George Davey Smith¹, David Evans⁶, John Kemp⁶, Matthew Brown², Jon Tobias¹, Emma Duncan². ¹University of Bristol, United Kingdom, ²Queensland University of Technology, Australia, ³McGill University, Canada, ⁴Imperial College London, United Kingdom, ⁵The Garvan Institute of Medical Research, Australia, ⁶University 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 Harvey², Cyrus Cooper¹, Stefania D'Angelo¹, Elizabeth Curtis¹, Sarah Crozier¹, Sheila Barton³, Sian Robinson¹, Keith Godfrey¹, Nikki Graham⁴, John Holloway⁴, Nicholas Bishop⁵, Stephen Kennedy⁶, Aris Papageorgiou⁶, Inez Schoenmakers⁷, Robert Fraser⁸, Saurabh Gandhi⁸, Ann Prentice⁹, Hazel Inskip¹, M Kassim Javaid¹⁰. ¹MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, ²MRC Lifecourse Epidemiology Unit, United Kingdom, ³MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, ⁴Human Health and Development, Faculty of Medicine, University of Southampton, United Kingdom, ⁵Academic Unit of Child Health, University of Sheffield, United Kingdom, ⁶Nuffield Department of Obstetrics and Gynaecology, John Radcliffe Hospital, United Kingdom, ⁷MRC Human Nutrition Research, United Kingdom, ⁸Sheffield Hospitals NHS Trust, United Kingdom, ⁹MRC Human Nutrition Research, United Kingdom, ¹⁰NIHR Musculoskeletal Biomedical Research Unit, University of Oxford, United Kingdom
Disclosures: Rebecca Moon, None
- SU0088 Genotype-phenotype Correlation Analysis in 419 Subjects with Germline *CDC73* Gene Mutations**
 Jianhua Zhang^{*1}, Bin Guan¹, James Welch¹, William F. Simonds¹, Yulong Li¹. ¹NIH, United States
Disclosures: Jianhua Zhang, None
- SU0089 Identification of new candidate markers crucial for fracture healing in mice**
 Deeksha Malhan^{*1}, Katharina Schmidt Bleek², Georg N. Duda³, Christian Heiss¹, Thaqif El Khassawna¹. ¹Experimental Trauma Surgery, Faculty of Medicine, Justus Liebig University of Giessen, Germany, ²Julius Wolff Institute and Center for Musculoskeletal Surgery, Charité - Universitätsmedizin , Germany, ³Julius 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-Solis¹, Clio Meghir¹, Gerard Karsenty¹. ¹Columbia 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 Bourgine¹, Greig Couasney¹, Sophie Source¹, Jérôme Guicheux², Sarah Beck-Cormier¹, Laurent Beck¹. ¹INSERM UMRS 1229 – Regenerative Medicine and Skeleton (RMeS), team Skeletal physiopathology and joint regenerative medicine (STEP), University of Nantes, School of Dental Surgery, France, ²INSERM 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
Disclosures: Nina Bon, None
- SU0092 Synergistic Actions of VDR and CaSR in Mediating PTH Secretion and Mineral and Skeletal Homeostasis in Mice**
 Amanda Herberger^{*1}, Zhiqiang Cheng¹, Alfred Li¹, Jenna Hwong¹, Chia-Ling Tu¹, Daniel Bikle¹, Dolores Shoback¹, Wenhan Chang¹. ¹University of California, San Francisco, United States
Disclosures: Amanda Herberger, None

- SU0093 Chromatin Landscape and GCM2 Targets in the Parathyroids**
 Youngsook Jung^{*1}, Wenping Zhao², Ian Li³, Amira Barkal⁴, Richard Sherwood⁵, Cassianne Cohen⁶, Bryan Kestenbaum⁶, Sareh Parangi⁷, Brad E. Bernstein⁸, Charles B. Epstein⁹, Peter Park¹⁰, Michael Mannstadt³. ¹Department of Biomedical Informatics, Harvard Medical School, United States, ²Endocrine Unit, Massachusetts General Hospital, United States, ³Endocrine Unit, Massachusetts General Hospital and Harvard Medical School, United States, ⁴Brigham and Women's Hospital, Department of Medicine, Division of Genetics., United States, ⁵Division of Genetics, Department of Medicine, Brigham and Women's Hospital and Harvard Medical School, United States, ⁶Kidney Research Institute, Division of Nephrology, University of Washington, United States, ⁷General and Endocrine Surgery, Massachusetts General Hospital and Harvard Medical School, United States, ⁸Department of Pathology and Center for Cancer Research, Massachusetts General Hospital and Harvard Medical School, United States, ⁹Epigenomics Program, Broad Institute, United States, ¹⁰Department 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 ER α Signaling on Cancellous Bone**
 Ha-Neui Kim^{*1}, Srividhya Iyer¹, Li Han¹, Haibo Zhao², Charles O'Brien¹, Robert Jilka¹, Maria Almeida¹, Stavros Manolagas¹, Philippe Tessier³. ¹University of Arkansas for Medical Sciences, United States, ²University of Arkansas for Medical Science, United States, ³Centre 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 Kocjan^{*1}, Elisabeth Geiger², Susanna Skalicky², Moritz Weigl², Gabriele Leinfellner³, James Ferguson³, Patrick Heimel³, Heinz Redl³, Johannes Grillari⁴, Matthias Hackl². ¹St. Vincent Hospital – Medical Department II, The VINFORCE Study Group, Academic Teaching Hospital of Medical University of Vienna, Austria, Austria, ²TAmiRNA GmbH, Austria, ³Ludwig Boltzmann Institute for Experimental and Clinical Traumatology, Austria, ⁴Department of Biotechnology, BOKU - University of Natural Resources and Life Sciences, Vienna, Austria
Disclosures: Roland Kocjan, 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 Meyer², Jinhu Xiong¹, Keisha Cawley¹, Yu Liu¹, Priscilla Baltz¹, Melda Onal², Nancy Benkusky², Wes Pike², Charles OBrien¹. ¹University of Arkansas for Medical Sciences, United States, ²University 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 Dick², Bart Williams². ¹Indiana University School of Medicine, United States, ²Van Andel Research Institute, United States
Disclosures: Kevin Maupin, None
- SU0098 Genetic Background Influences Cardiac Phenotype in Murine Chronic Kidney Disease**
 Samantha Neuburg^{*1}, Xueyan Wang¹, Connor Francis¹, Corey Dussold¹, Lixin Qi¹, Valentin David¹, Myles Wolf², Aline Martin¹. ¹Division of Nephrology and Hypertension, Center for Translational Metabolism and Health, Northwestern University, Chicago, IL, USA, United States, ²Division of Nephrology and Hypertension, Duke University, Durham, NC, USA, United States
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 Gardella². ¹Endocrine Unit, Massachusetts General Hospital, United States, ²Endocrine 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 Henaff¹, Alon Aminov¹, Ching-Yun Hsu¹, Nicola Partridge¹. ¹New York University, United States
Disclosures: Florante Ricarte, None
- SU0101 Half-life of 25(OH) Vitamin D₃ is Not Influenced by Vitamin D Supplementation Dose**
 Inez Schoenmakers^{*1}, Shima Assar², Terence Aspray³, Ann Prentice², Kerry Jones². ¹MRC Human Nutrition Research, Cambridge, UK and Medical School, University of East Anglia, UK, United Kingdom, ²MRC Human Nutrition Research, Cambridge, UK, United Kingdom, ³Newcastle University, Institute for Cellular Medicine, Newcastle upon Tyne, UK, United Kingdom
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 Henning¹, Klara Sjögren¹, Sofia Movérare-Skrtic¹, Claes Ohlsson¹. ¹Centre 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 Yoshikawa², Otoki Nakahashi², Tomohiro Kagawa², Mari Tajiri², Shiori Fukuda², Masashi Masuda², Masayuki Iwano³, Eiji Takeda², Yutaka Taketani². ¹University of Jin-ai, Japan, ²University of Tokushima, Japan, ³University 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 Kesavan¹, Heather Watt¹, Subburaman Mohan¹. ¹Musculoskeletal 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 Dawson¹, Felisha Imholt¹, Tae Jung Yang¹, Rihana Bohkari¹, Ken Muneoka¹. ¹Texas A&M University, United States
Disclosures: Connor Dolan, None
- SU0106 Particular adaptation of the human fibula to long-term exercise.**
 Laura Nocciolino^{*1}, Gustavo Cointry¹, Alex Ireland², Sergio Lüscher¹, Jose Ferretti¹, Joern Rittweger³, Ricardo Capozza¹. ¹Center of P-Ca Metabolism Studies (CEMFoC), National University of Rosario, Rosario, Argentina, Argentina, ²School of Healthcare Science, Manchester Metropolitan University, Manchester, UK, United Kingdom, ³Division of Space Physiology, Institute of Aerospace Medicine, German Aerospace Center, Cologne, Germany., Germany
Disclosures: Laura Nocciolino, None

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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 Frasca². ^{1,2}Team ITP - CSPBAT UMR 7244 CNRS – University Paris 13, France, ²Institut 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 Bai¹, Qingwen Ni², Jean X. Jiang³, Xiaodu Wang¹. ¹University of Texas at San Antonio, United States, ²Texas A&M International University, United States, ³UT 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 Ishihara¹, Ziyi Wang¹, Masahiro Nakamura¹, Ei Ei Hsu Hlaing¹, Hiroshi Kamioka¹. ¹Okayama University, Japan
Disclosures: Naoya Odagaki, None
- SU0110 Diverging Periosteal and Endosteal Modeling/Remodeling Under PTH and Mechanical Loading**
 Samuel Robinson^{*1}, Yizhong Hu¹, X. Edward Guo¹. ¹Columbia 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 Zejlon², Göran Wennergren¹, Barbara Obermayer-Pietsch³, Staffan Mårlind¹, Jovanna Dahlgren¹, Per Magnusson⁴, Diana Swolin-Eide¹. ¹Department of Pediatrics, Institute of Clinical Sciences, Sahlgrenska Academy, Gothenburg University, The Queen Silvia Children's Hospital, Gothenburg, Sweden, Sweden, ²Department of Internal Medicine, Sahlgrenska University Hospital, Gothenburg, Sweden, Sweden, ³Division of Endocrinology and Metabolism, Department of Internal Medicine, Medical University of Graz, A-8036, Graz, Austria, Austria, ⁴Department 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 Delisser¹, Lee Meakin¹, Lance E Lanyon¹, Joanna S Price², Sara H Windahl³. ¹School of Veterinary Sciences, University of Bristol, United Kingdom, ²Royal Agricultural University Cirencester, United Kingdom, ³Centre 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}. ¹Sichuan 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 mclennan¹, lewan parker¹, glenn mcConnell¹, xinmei zhang¹, alan hayes¹, tara brennan-speranza², itamar levinger¹. ¹Institute of Sport, Exercise and Active Living (ISEAL), Victoria University, Australia, ²Department of Physiology and Bosch Institute for Medical Research, University of Sydney, Australia
Disclosures: xuzhu lin, None

- SU0115 Low Intensity Vibrations increase strength, reduce fat, and improve glucose tolerance in mice with complete estrogen deprivation**
 Gabriel M. Pagnotti^{*1}, Laura E. Wright¹, Jenna A. Regan¹, William R. Thompson¹, Khalid S. Mohammad¹, Clinton T. Rubin², Theresa A. Guise¹. ¹IUPUI, United States, ²Stony 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**
 Maria Tsoumpra^{*1}, Itsuro Endo¹, Shun Sawatsubashi¹, Yuichi Takashi¹, Seiji Fukumoto¹, Toshio Matsumoto¹. ¹Tokushima University, Japan
Disclosures: Maria Tsoumpra, None
- SU0117 Muscle Paralysis Differentially Alters Expression of miR-206 and miR-133b**
 Leah Worton^{*1}, Edith Gardiner¹, Ronald Kwon¹, Brandon Ausk¹, Steven Bain¹, Ted Gross¹. ¹University of Washington, United States
Disclosures: Leah Worton, None
- SU0118 Advanced Glycation End Products-Mediated β-enolase Is Involved in the Diabetes-Impaired Muscle Function**
 Rong-Sen Yang^{*1}, Chen-Yuan Chiu², Ding-Cheng Chan³, Shing-Hwa Liu². ¹Department of Orthopaedics, College of Medicine, National Taiwan University, Taipei, Taiwan, Taiwan, Province of China, ²Institute of Toxicology, College of Medicine, National Taiwan University, Taiwan, Province of China, ³Superintendent's Office, National Taiwan University Hospital, Chu-Tung Branch, Taiwan, Province of China
Disclosures: Rong-Sen Yang, None
- SU0119 Pin1 regulates skeletal muscle fusion through structural modification of Smad3 in linker region**
 Rabia Islam^{*1}, Heein Yoon², Hye-rim Shin², Han-sol Bae², Bong-soo Kim², Won-joon Yoon², Kyung-Mi Woo², Jeong-Hwa Baek², Yun-Sill Lee², Hyun-Mo Ryoo². ¹Seoul National University, Bangladesh, ²Seoul National University, Korea, Republic of
Disclosures: Rabia Islam, None
- SU0120 Mouse digit regeneration: a new model to study age-related regenerative decline**
 Regina Brunauer^{*1}, Ken Muneoka¹. ¹Texas A&M University, United States
Disclosures: Regina Brunauer, None
- 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 Allaire², Dennis Anderson¹, Elizabeth J. Samelson³, Douglas Kiel⁴, Mary Bouxsein¹. ¹Harvard Medical School and Center for Advanced Orthopaedic Studies, Beth Israel Deaconess Medical Center, MA, USA, United States, ²Center for Advanced Orthopaedic Studies, Beth Israel Deaconess Medical Center, MA, USA, United States, ³Institute for Aging Research, Hebrew Senior Life and Harvard Medical School, United States, ⁴Institute for Aging Research, Hebrew Senior Life, Department of Medicine Beth Israel Deaconess Medical Center and Harvard Medical School, MA, USA, United States
Disclosures: Fjola Johannesdottir, None
- 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 Muthuri², Adam Moore², Judith Adams³, Cyrus Cooper¹, Di Kuh², Rachel Cooper². ¹MRC Lifecourse Epidemiology, University of Southampton, United Kingdom, ²MRC Unit for Lifelong Health and Ageing at UCL, United Kingdom, ³Central Manchester University Hospitals Foundation NHS Trust, United Kingdom
Disclosures: Kate Ward, None

Sunday

- SU0123 Ontogenetic Patterning of Human Subchondral Bone Microarchitecture in the Proximal Tibia**
 Jesse Goliath^{*1}, Timothy Ryan², James Gosman¹. ¹Department of Anthropology, The Ohio State University, United States, ²Department of Anthropology, Center for Quantitative Imaging, Pennsylvania State University , United States
Disclosures: Jesse Goliath, None
- SU0124 The Role of Discoidin Domain Receptor 2 in Craniofacial Morphogenesis**
 Fatma Mohamed^{*1}, Chunxi Ge¹, Nan Hatch¹, Abdulaziz Binrayes¹, Renny, Franceschi¹. ¹University of Michigan School of Dentistry, United States
Disclosures: Fatma Mohamed, None
- SU0125 Postnatal ablation of Smad4 enhances endochondral ossification in epiphyseal growth plate**
 Sho Tsukamoto^{*1}, Noriko Sekine¹, Mai Kuratani¹, Keigo Kumagai¹, Shinya Tanaka², Eijiro Jimi³, Hiromi Oda², Takenobu Katagiri¹. ¹Division of Pathophysiology, Research Center for Genomic Medicine, Saitama Medical University, Japan, ²Department of Orthopedic Surgery, Saitama Medical University, Japan, ³Division 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 Kuroda¹, Koichi Matsuo¹. ¹Keio university school of medicine, Japan
Disclosures: Masaki Yoda, None
- SU0127 Effects of human amniotic fluid stem cells and their conditioned medium on bone defect healing**
 Mariangela Basile^{*1}, Paola Vizzarri², Francesco Marchegiani³, Alexander C Lichtler¹, Ivo Kalajzic¹, Roberta Di Pietro⁴. ¹UConn Health, United States, ²Department of Medicine and Aging Sciences, Italy, ³Department of Medicine and Ageing Sciences, Italy, ⁴Dept of Medicine and Aging Sciences, Italy
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- 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 Bennie¹, Jenny Lei², Elise Morgan², Louis Gerstenfeld¹. ¹Boston University School of Medicine, United States, ²Boston University College of Engineering, United States
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- SU0129 Transcriptional Heterogeneity During Lineage Specification Defines Human Musculoskeletogenesis**
 Gabriel Ferguson^{*1}, Benjamin Van Handel¹, Denis Evseenko¹. ¹University 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 Corkill¹, Albena Gesheva², Jess Cunnick¹, John Arnott¹, Youngjin Cho¹. ¹Geisinger Commonwealth School of Medicine, United States, ²University 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 Rakian¹, Rebecca Neitzke¹, Michael Rediske¹, Marie a Harris¹, Ivo Kalajzic², Jian q Feng³, Lynda f Bonewald⁴, Brian f Foster⁵, Jelica Gluhak-Heinrich¹, Yong Cui¹. ¹UTHSCSA, United States, ²UCHC, United States, ³TAMHSC, United States, ⁴IU, United States, ⁵OSU, United States
Disclosures: stephen e harris, None

- SU0132 The role of Hedgehog signaling in large-scale bone repair**
Stephanie Kuwahara^{*1}, Francesca Mariani¹, Gage Crump¹, Sandeep Paul¹, Nikita Triparaneni¹, Jason Hsieh¹, Monica Liu¹, Ashlie Munoz¹, Neel Hedge¹, Lynette Lester¹. ¹USC, United States
Disclosures: Stephanie Kuwahara, None
- SU0133 Conservation of perivascular progenitor cell antigens and methods of isolation across mammalian species**
Carolyn Meyers^{*1}, Winters Hardy², Paul Hindle³, Greg Asatrian², Catherine Ding², Mihaela Crisan³, Noah Yan¹, Sonja Lobo², Pei Liang², Xinli Zhang², Kang Ting², Chia Soo², Bruno Peault², Aaron James¹. ¹Johns Hopkins University, United States, ²UCLA, United States, ³University 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 Dudakovic¹, Christopher Paradise¹, Buer Sen², Allan Dietz¹, Janet Rubin², Andre van Wijnen¹. ¹Mayo Clinic, United States, ²University of North Carolina, United States
Disclosures: Rebekah Samsonraj, None
- SU0135 Biglycan Regulates the Proliferation and Differentiation of Periosteum-Derived Cells**
Reut Shainer^{*1}, Megan Noonan¹, Vardit Kram¹, Tina Kilts¹, Marian Young¹. ¹NIH, United States
Disclosures: Reut Shainer, None
- SU0136 Oleic Acid Enhances Mesenchymal Stromal Cell Osteogenic Potential by Inhibition of Notch Signaling**
Guangxi Wang^{*1}, Bing Shu², Sheila Rogers¹, Dollie Smith¹, Massimo Morandi¹, Shane Barton¹, Yufeng Dong¹. ¹LSU Health Sciences Center, United States, ²Shanghai 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 Meng¹, Jing Li¹, Meryl LeBoff¹, Julie Glowacki¹. ¹Brigham 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 Paternoster², Jennifer Gregory³, Benjamin Faber¹, Richard Aspden³, Jonathan Tobias¹. ¹Musculoskeletal Research Unit, School of Clinical Sciences, University of Bristol, United Kingdom, ²MRC Integrative Epidemiology Unit, University of Bristol, United Kingdom, ³Arthritis 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 Kroker¹, Sarah Manske¹, Carolyn Emery², Steven Boyd¹. ¹McCaig Institute for Bone and Joint Health, Department of Radiology, Cumming School of Medicine, University of Calgary, Calgary, Canada, Canada, ²Sport Injury Prevention Research Centre, Faculty of Kinesiology, University of Calgary, Calgary, Canada, Canada
Disclosures: Jennifer Bhatla, None

Sunday

- SU0140 Semiautomatic analysis of bone erosion volume by HR-pQCT in patients with rheumatoid arthritis**
 Ko Chiba^{*1}, Narihiro Okazaki², Kazuteru Shiraishi², Naoki Iwamoto², Atsushi Kawakami², Makoto Osaki². ¹Nagasaki University , Japan, ²Nagasaki University, Japan
Disclosures: Ko Chiba, None
- SU0141 Hyperelastic Bone Composite: A Novel 3D-printed Biomaterial Ink used for Spinal Fusion**
 Andrew Schneider^{*1}, Adam Jakus², Gurmit Singh¹, Karina Katchko¹, Danielle Chun¹, Joseph Weiner¹, Ralph Cook¹, Michael Schallmo¹, Chawon Yun¹, Soyeon Jeong¹, Michael Newton³, Tristan Maerz³, Kevin Baker³, Ramille Shah², Wellington Hsu¹, Erin Hsu¹. ¹Northwestern University Department of Orthopaedic Surgery, United States, ²Northwestern University Department of Materials Science and Engineering, United States, ³Orthopaedic Research Laboratory, Beaumont Health, United States
Disclosures: Andrew Schneider, None
- SU0142 Association of Total 25-Hydroxyvitamin D Levels With Disease Activity In A Large Patient Cohort With Rheumatoid Arthritis**
 Sofie Malmstroem^{*1}, Lars Rejnmark², Jonathan Graf³, John B. Imboden³, Kara Lynch⁴, Dolores M. Shoback⁵. ¹Endocrine 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, ²Department of Endocrinology and Internal Medicine, Aarhus University Hospital, Denmark, ³Division of Rheumatology and Department of Medicine, Zuckerberg San Francisco General Hospital, University of California, San Francisco, United States, ⁴Department of Laboratory Medicine, Zuckerberg San Francisco General Hospital, University of California, San Francisco, United States, ⁵Endocrine Research Unit, San Francisco Department of Veterans Affairs Medical Center, University of California, San Francisco, United States
Disclosures: Sofie Malmstroem, None
- SU0143 Inhibition of CaMKK2 attenuates subchondral bone remodeling in post-traumatic osteoarthritis model**
 Elsa Mevel^{*1}, Anthony Huls¹, Yong Li¹, Uma Sankar¹. ¹Department of Anatomy and Cell Biology, Indiana University School of Medicine, Indianapolis Indiana, United States
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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 atkins². ¹University of Adelaide, Australia, ²adelaide 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 Chiba², Narihiro Okazaki², Makoto Osaki². ¹Nagasaki University, Japan, ²Nagasaki 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**
 Andy Kin On Wong^{*1}, John A. Lynch², Linda Probyn³. ¹University Health Network, Canada, ²University of California at San Francisco, United States, ³University of Toronto, Canada
Disclosures: Andy Kin On Wong, None

- SU0147 Regulatory Networks Involving Ror β and miR-219a-5p during Osteoblast Differentiation and in Age-related Bone Loss**
 Ruben Aquino-Martinez^{*1}, Joshua Farr¹, Brittany Negley¹, Andre van Wijnen¹, Sundeep Khosla¹, David Monroe¹. ¹Mayo Clinic College of Medicine, United States
Disclosures: Ruben Aquino-Martinez, None
- SU0148 Isoproterenol induces RANKL expression by activating NFAT and ATF4 in mouse osteoblastic cells**
 Kyunghwa Baek^{*1}, Hyun-Jung Park², Hyung-Ryong Kim³, Jeong-Hwa Baek². ¹Gangneung-Wonju National University, Korea, Republic of, ²Department of Molecular Genetics, Seoul National University School of Dentistry, Korea, Republic of, ³Graduate School, DGIST, Korea, Republic of
Disclosures: Kyunghwa Baek, None
- SU0149 Phlpp1 Regulates Osteoblast Differentiation and Maturation Through mTORC1**
 Dana Begun^{*1}, Elizabeth Bradley¹, Jennifer Westendorf¹. ¹Mayo Clinic - Orthopedic Surgery, United States
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 Liao¹, Ruei-Ming Chen¹. ¹Taipei 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 Bhadada², Sudhaker D. Rao³, D.K. Dhawan¹. ¹Panjab University, India, ²PGIMER, India, ³Henry Ford Hospital, United States
Disclosures: Vandana Dhiman, None
- SU0152 Brg1 Associated Factor 45a chromatin remodeling is key for bone formation**
 Tanner Godfrey^{*1}, Benjamin Wildman¹, Mohammad Rehan¹, Mohammad Hassan¹, Chis Lengner², Harunur Rashid¹, Amjad Javed¹. ¹University of Alabama at Birmingham, United States, ²University of Pennsylvania, United States
Disclosures: Tanner Godfrey, None
- SU0153 An Epigenetic Switch Confers Pleiotropic Risk for Bone Mineral Density and Hyperglycaemia**
 Yi-Hsiang Hsu^{*1}, Nicholas A Sinnott-Armstrong², Isabel S. Sousa², Elizabeth R Ruedy³, Richard Sallari², Xing Chen⁴, Simon E Nitter Dankel⁵, Gunnar Mellgren⁵, Anyonya Guntur³, David Karasik⁶, Hans Hauner⁷, Clifford Rosen³, Douglas Kiel⁴, Melina Claussnitzer⁸. ¹Harvard Medical School and Broad Institute of MIT and Harvard, United States, ²Broad Institute of MIT and Harvard, United States, ³Center for Molecular Medicine, Maine Medical Center Research Institute, United States, ⁴Institute for Aging Research, Hebrew SeniorLife and Harvard Medical School, United States, ⁵University of Bergen, Norway, Norway, ⁶Faculty of Medicine of the Galilee, Bar-Ilan University, Israel, Israel, ⁷Else Kröner Fresenius-Center for Nutritional Medicine, Technical University Munich, Germany, ⁸Beth 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 Lin¹. ¹Sichuan University, China
Disclosures: Qian Huang, None

Sunday

- 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 Choi², Hye Jung Ihn¹, Myung Ae Bae³, Hui-suk Yun⁴, Nack-Jeong Kim³, Hong-In Shin², Eui Kyun Park². ¹Department of Oral Pathology and Regenerative Medicine, School of Dentistry, Kyungpook National University, Korea, Republic of, ²Department of Oral Pathology and Regenerative Medicine, School of Dentistry, Kyungpook National University, Korea, Republic of, ³Korea Bio-Organic Science Division, Korea Research Institute of Chemical Technology, Korea, Republic of, ⁴Powder & 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 Ge¹, Ren Xu², Yeon-Suk Yang¹, Na Li², Odile Filhol-Cochet, Brigitte Boldyreff⁴, Minkyung Song², Matthew B. Greenblatt², Jae-Hyuck Shim¹. ¹Department of Medicine, University of Massachusetts Medical School, United States, ²Weill Cornell Medical College, United States, ³Institute de Recherches en Technologies et Sciences pour le Vivant/Biologie du Cancer et de l'Infection, Commissariat à l'Energie Atomique et aux Energies Alternatives Grenoble, France, ⁴KinaseDetect ApS, Denmark
Disclosures: Jung-Min Kim, None
- SU0157 Red Rooibos Tea Increases Mineral Deposition by Osteoblasts in a Concentration-Dependent Manner**
Michael McAlpine^{*1}, Wendy Ward¹, Adam MacNeil¹, William Gittings¹. ¹Faculty of Applied Health Sciences, Brock University, Canada
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 PPAR γ .**
Sifat Maria^{*1}, Fahima Munmun¹, Rebekah Samsonraj², Amel Dudakovic², Andre vanWijnen², Bruce Bunnell³, Matthew Burow⁴, Paula Witt-Enderby¹. ¹Duquesne University Graduate School of Pharmaceutical Sciences, United States, ²Mayo Clinic Department of Orthopedic Surgery, United States, ³Tulane University School of Medicine Department of Pharmacology, United States, ⁴Tulane 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**
Masashi Nakano^{*1}, Hirotaka Yoshioka², Saki Okita³, Kotaro Tanimoto³, Katsuyuki Koza⁴, Tomoko Minamizaki², Yuji Yoshiko². ¹Department of Calcified Tissue Biology, Department of Pediatric Dentistry, Graduate School of Biomedical & Health Sciences, Hiroshima University, Japan, ²Department of Calcified Tissue Biology, Graduate School of Biomedical & Health Sciences, Hiroshima University, Japan, Japan, ³Department of Orthodontics and Craniofacial Developmental Biology, Hiroshima University Graduate School of Biomedical & Health Sciences, Hiroshima, Japan, Japan, ⁴Department of Pediatric Dentistry, Graduate School of Biomedical & Health Sciences, Hiroshima University, Japan, Japan
Disclosures: Masashi Nakano, None

- SU0160 The effect of ROCK inhibitor on bone remodeling**
 Juri Nakata^{*1}, Yosuke Akiba², Kaori Eguchi², Jun Nihara³, Isao Saito³, Yoshito Kakihara⁴, Makio Saeki⁴. ¹Division of Dental Pharmacology, Division of Orthodontics, Niigata University Graduate School of Medical and Dental Sciences, Japan, ²Division of Bio-Prosthodontics, Niigata University Graduate School of Medical and Dental Sciences, Japan, ³Division of Orthodontics, Niigata University Graduate School of Medical and Dental Sciences, Japan, ⁴Division of Dental Pharmacology, Niigata University Graduate School of Medical and Dental Sciences, Japan
Disclosures: Juri Nakata, None
- SU0161 YAP Promotes Osteogenesis and Suppresses Adipogenic Differentiation**
 Jinxiu Pan^{*12}, Lei Xiong¹², Kai Zhao¹², Peng Zeng¹², Bo Wang¹², Xiao Yang¹², Wen-cheng Xiong¹². ¹Augusta University, United States, ²augusta university, United States
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 Dudakovic², Roman Thaler², Thomas O'Toole³, Pengfei Zan², Andre van Wijnen². ¹Mayo Clinic , United States, ²Mayo Clinic, United States, ³Mayo Clinic, United Kingdom
Disclosures: Christopher Paradise, None
- SU0163 Role of HERPUD1 and ERAD activation during differentiation and mineralization of osteoblast *in vitro***
 Luan Americo-Da-Silva^{*1}, Jheimmy Diaz², Mario Bustamante¹, Georthan Mancilla¹, Ingrid Oyarzún¹, Mia Memmel¹, Hugo Verdejo¹, Clara Quiroga¹. ¹División de Enfermedades Cardiovasculares, Facultad de Medicina, Pontificia Universidad Católica de Chile, Santiago, Chile & Advanced Center for Chronic Diseases (ACCDiS), Pontificia Universidad Católica de Chile, Santiago, Chile, Chile, ²División de Enfermedades Cardiovasculares, Facultad de Medicina, Pontificia Universidad Católica de Chile, Santiago, Chile, Chile
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- SU0164 Non-Mineralized and Mineralized Collagen Scaffolds induce Differential Osteogenic Signaling pathways in human mesenchymal Stem Cells**
 Qi Zhou^{*1}, Xiaoyan Ren²⁵, David Bischoff³, Daniel Weisgerber⁴, Dean Yamaguchi³, Timothy Miller²⁵, Brendan Harley⁴, Justine Lee²⁵. ¹UCLA and VA Great Los Angeles and Shandong University of China, United States, ²UCLA and VA Great Los Angeles, United States, ³VA Great Los Angeles, United States, ⁴University of Illinois at Urbana-Champaign, United States, ⁵UCLA 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 Panagopoulos¹, Peter Anderson², John Field³, Siamak Saifzadeh², Roland Steck², Mark DeNichilo⁴, Irene Zinonos¹, Shelley Hay⁵, Andreas Evdokiou¹. ¹University of Adelaide, Australia, ²Women's and Children's Hospital & University of Adelaide, Australia, ³Queensland University of Technology, Australia, ⁴University of South Australia, Australia, ⁵Basil 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 Zhu¹, Grace Lee¹, Dinah Foer², Joseph Belsky³, Rebecca Sullivan¹, Elizabeth Streeten⁴, Karl Insogna¹. ¹Yale University School of Medicine, United States, ²Brigham and Women's Hospital, United States, ³Danbury Hospital, United States, ⁴University of Maryland School of Medicine, United States
Disclosures: Christine Simpson, None

Sunday

- SU0167 Osteoblasts regulate type H endothelium via Schnurri-3-regulated production of proangiogenic factors**
 Ren Xu^{*1}, Alisha Yallowitz¹, Shawon Debnath¹, Dong Yeon Shin¹, Jung-Min Kim¹, Na Li¹, Sarfaraz Lalani¹, Han Dong², Chao Zhao³, Zhuhao Wu⁴, Michael G. Poulos⁵, Jason M. Butler⁵, Amanda Wach⁶, Jae-Hyuck Shim⁷, Laurie H. Glimcher², Matthew B. Greenblatt⁸. ¹Department of Pathology and Laboratory, Weill Cornell Medical College, Cornell University, United States, ²Department of Cancer Immunology and Virology, Dana-Farber Cancer Institute and Harvard University Medical School, United States, ³Institute for Computational Biomedicine, Weill Cornell Medical College, Cornell University , United States, ⁴Laboratory of Brain Development and Repair, The Rockefeller University, New York, NY, USA, United States, ⁵Department of Genetic Medicine, Ansary Stem Cell Institute, Weill Cornell Medical College, Cornell University, United States, ⁶Department of Biomechanics, Hospital for Special Surgery, United States, ⁷Department of Medicine/Division of Rheumatology, University of Massachusetts Medical School, United States, ⁸Department 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**
 XUEHUI YANG^{*1}, Robert Friesel¹. ¹MMCRI, United States
Disclosures: XUEHUI YANG, None
- SU0169 Glucocorticoids Suppress Notch Target Genes but not Notch Signaling in Osteoblasts**
 Stefano Zanotti^{*1}, Suyash Adhikari², Ernesto Canalis¹. ¹UConn Musculoskeletal Institute, UConn Health, United States, ²University of Connecticut, United States
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 Kanke², Hironori Hojo¹, Shoko Onodera³, Toshifumi Azuma³, Ung-il Chung⁴, Shinsuke Ohba⁴. ¹Department of Bioengineering, The University of Tokyo, Japan, ²Department of Oral and Maxillofacial Surgery, The University of Tokyo Hospital, Japan, ³Department of Biochemistry, Tokyo Dental College, Japan, ⁴Department 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**
 Tim (Hung-Po) Chen^{*1}, Gaurav Swarnkar², Amjad Nasir², Gabriel Mbalaviele², Yousef Abu-Amer². ¹Washington University School of Medicine , United States, ²Washington University School of Medicine, United States
Disclosures: Tim (Hung-Po) Chen, None
- SU0172 Novel Role For EZH2 Methyltransferase in Myeloma-Induced Abnormal Osteoclastogenesis**
 Juraj Adamik^{*1}, Rebecca Silbermann², Konstantinos Lontos¹, Peng Zhang¹, Quanhong Sun¹, Judy L Anderson², Jolene J Windle³, G David Roodman⁴, Deborah L Galson⁵. ¹Department of Medicine, Hematology-Oncology Division, University of Pittsburgh Cancer Institute, United States, ²Department of Medicine, Hematology-Oncology Division, Indiana University, Indianapolis, United States, ³Department of Human and Molecular Genetics, Virginia Commonwealth University, United States, ⁴Department of Medicine, Hematology-Oncology Division, Indiana University; Veterans Administration Medical Center, United States, ⁵Department of Medicine, Hematology-Oncology Division, University of Pittsburgh Cancer Institute, McGowan Institute for Regenerative Medicine, United States
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- SU0173 Intracellular Localization of *Staphylococcus aureus* in Osteoclasts**
 Emily Goering^{*1}, Jennifer Kraus¹, Deborah Novack¹. ¹Washington University, United States
Disclosures: Emily Goering, None
- SU0174 Gpnmb/Osteoactivin Plays a Novel Role in Autophagy-Mediated Osteoclast Differentiation and Function**
 Fatima Jaber^{*1}, Asaad Al-Adlaan¹, Nazar Hussein¹, Fayeza Safadi². ¹School of Biomedical Sciences, Kent State University, United States, ²Northeast 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 Huang¹, Wei Chen¹, Guochun Zhu¹, Diep Nguyen¹, Yi-Ping Li¹.
¹University 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. Goldshteyn¹, Atsushi Arai², No-Hee Park¹, Reuben Kim¹. ¹UCLA School of Dentistry, United States, ²Matsumoto 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 Park¹, Eun-Hye Lee², Seong-Hwan Kim¹, Suk-Hee Lee¹, Yeon-Ju Lee², Seung-Yoon Park³, Jung-Eun Kim⁴. ¹Kyungpook National University School of Medicine, BK21 Plus, Korea, Republic of, ²Kyungpook National University School of Medicine, CMRI, Korea, Republic of, ³School of Medicine, Dongguk University, Korea, Republic of, ⁴Kyungpook National University School of Medicine, CMRI, BK21 Plus, Korea, Republic of
Disclosures: Soon-Young Kim, None
- SU0178 Suppression of Osteoclastogenesis by Melatonin: A Melatonin Receptor-Independent Action**
 Hyung Joon Kim^{*1}, Yong Deok Kim². ¹Department of Oral Physiology, BK21 PLUS Project, and Institute of Translational Dental Sciences, School of Dentistry, Pusan National University, Korea, Republic of, ²Department of Oral and Maxillofacial Surgery, Dental Research Institute and Institute of Translational Dental Sciences, School of Dentistry, Pusan National University, Korea, Republic of
Disclosures: Hyung Joon Kim, None
- SU0179 LRF/OCZF Regulates Survival of Osteoclasts via Sam68, a Splicing Regulator of Bel-x**
 Xianghe Xu^{*1}, Makoto Shiraki¹, Asana Kamohara¹, Takeo Shobuike¹, Toshio Kukita², Akiko Kukita¹. ¹Department of Pathology and Microbiology, Faculty of Medicine, Saga University, Japan, ²Department of Molecular Cell Biology & Oral Anatomy, Faculty of Dentistry, Kyushu University, Japan
Disclosures: Xianghe Xu, None
- SU0180 Osteoclasts Formed under Stimulation by IL-1 β Possess Extremely High Ability to Secrete Protons and to Resorb Dentin with Abnormal Adhesiveness, Imaged by pH-Sensitive Fluorescence Probes**
 Takuma Shiratori^{*1}, Akiko Kukita², Yukari Kyumoto-Nakamura¹, Norihisa Uehara¹, Jingqi Zhang¹, Kinuko Koda³, Mako Kamiya³, Tamer Badawy¹, Xianghe Xu⁴, Takayoshi Yamaza¹, Yasuteru Urano³, Kiyoshi Koyano⁵, Toshio Kukita¹. ¹Molecular Cell Biology & Oral Anatomy, Faculty of Dental Science, Kyushu University, Japan, ²Microbiology, Faculty of Medicine, Saga University, Japan, ³Chemical Biology & Molecular Imaging, Grad.Sch.Medicine; Chemistry & Biology, Grad.Sch.Pharm.Sci., The University of Tokyo, Japan, ⁴Microbiology, Faculty of Medicine, Saga University; Molecular Cell Biology & Oral Anatomy, Faculty of Dental Science, Kyushu University, Japan, ⁵Implant Rehabilitation Dentistry, Faculty of Dental Science, Kyushu University, Japan
Disclosures: Takuma Shiratori, None

Sunday

- SU0181 *α 7nAchR is required to regulate osteoclasts and bone mass via TNF α -dependent regulation of OPG and RANKL***
 Kazuaki Mito^{*12}, Takeshi Miyamoto¹², Kazuki Sato¹², Morio Matsumoto¹², Masaya Nakamura¹². ¹Department of Orthopaedic Surgery, Keio University, Japan, ²Department of orthopaedic surgery, Keio University, Japan
Disclosures: Kazuaki Mito, None
- SU0182 *THOC5 is a positive regulator of human osteoclastogenesis***
 Se Hwan Mun^{*12}, Seyeon Bae¹², Kyung Hyun Parkmin¹². ¹Hospital for Special Surgery, United States, ²HOSPITAL FOR SPECIAL SURGERY, United States
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 Kuno², Akiko Hiyama¹, Yoichi Ezura³, Kiyoshi Ohura¹, Masaki Noda³. ¹Osaka dental university, Japan, ²Osaka City University, Japan, ³Tokyo 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 Hendrix², Jacob Curry², Jim Cassat³. ¹Department of Pathology, Microbiology, and Immunology, Vanderbilt University Medical Center, United States, ²Department of Pediatrics, Division of Pediatric Infectious Diseases, Vanderbilt University Medical Center, United States, ³Department 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 Souza², Marcell C Medeiros³, Shannon Wallet¹, Carlos Rossa Junior³. ¹University of Florida, United States, ²Federal University of Goias (UFG), School of Dentistry, Brazil, ³Sao 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 Bisson¹, Sophie Roux¹. ¹Rheumatology, 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 Won¹, Sun-Kyeong Lee¹. ¹University 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 Wang², Tzu-Hui Chu¹, Tien-Hua Chen³, Lo-Wei Chen¹, Jung-Ting Wu¹. ¹Department of Biology and Anatomy, National Defense Medical Center, Taiwan, Province of China, ²Department of Orthopedics, Chiali Hospital, Chi Mei Medical Center, Taiwan, Province of China, ³Institute of Anatomy and Cell Biology, School of Medicine, National Yang Ming University, Taiwan, Province of China
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SU0190 NUMBL Negatively Regulates NF- κ B Signaling via Interaction with TAK1/TRAFF/NEMO During Osteoclastogenesis

Gaurav Swarnkar^{*1}, Tim Hung-Po Chen¹, Manoj Arra¹, Gabriel Gabriel Mbalaviele², Yousef Abu-Amer³. ¹Department of Orthopedic Surgery, Washington University School of Medicine, United States, ²Bone and Mineral Division, Department of Medicine, Washington University School of Medicine, United States, ³Department of Orthopaedic Surgery and Cell Biology & Physiology, United States

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SU0191 Basic research on anti-Siglec-15 antibody and characterization of humanized anti-Siglec-15 antibody (DS-1501a)

Eisuke Tsuda^{*1}, Yoshiharu Hiruma¹, Chie Fukuda¹, Akiko Okada¹, Yumiko Fukushima², Wada Naoya², Kazuishi Kubota², Hiroyuki Hattori¹, Megumi Miyamoto¹, Reimi Kawaiida¹, Chigusa Yoshimura¹, Yoshitaka Isumi¹, Toshiaki Ohtsuka¹, Toshinori Agatsuma¹, Tohru Takahashi¹, Seiichiro Kumakura¹. ¹R&D Division, Daiichi Sankyo Co., Ltd., Japan, ²Daiichi 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 Shiraki¹, Asana Kamohara¹, Kenichi Nishioka², Fumikazu Matsuhisa³, Shuji Kitajima³, Toshio Kukita⁴, Akiko Kukita¹. ¹Department of Pathology and Microbiology, Faculty of Medicine, Saga University, Japan, ²Department of Biomolecular Sciences, Faculty of Medicine, Saga University, Japan, ³Division of Biological Resources and Development, Analytical Research Center for Experimental Sciences, Saga University, Japan, ⁴Department 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 Fujiwara², Bin Fang³, Nukhet Aykin-burns⁴, Zhichang Zhang⁵, Xiaolin Li⁵, Stavros C Manolagas⁶, Michael L Jennings⁷, Jian Zhou¹, Haibo Zhao⁶. ¹Department of Orthopedics, First Affiliated Hospital, Anhui Medical University, China, ²Department of Orthopedic Surgery, Kyushu University, Japan, ³Department of Dermatology, University of Arkansas for Medical Sciences, United States, ⁴Division of Radiation Health, Department of Pharmaceutical Sciences, University of Arkansas for Medical Sciences, United States, ⁵Department of Orthopedics, Shanghai Jiao Tong University Affiliated Sixth People's Hospital, China, ⁶Division of Endocrinology and Metabolism, Department of Internal Medicine, University of Arkansas for Medical Sciences, United States, ⁷Department of Physiology and Biophysics, University of Arkansas for Medical Sciences, United States

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SU0194 MLO-Y4 cells Modulate Human Peripheral Blood Mononuclear Cells Migration

daniel Aedo Martin^{*1}, Irene Buendia², Jose Adolfo Orellana Gomez-Rico¹, Francisco Javier Areta Jimenez¹, Juan Antonio Ardura², Arancha R. Gortazar². ¹Hospital Universitario Central de la Defensa Gómez-Ulla, Spain, ²Instituto de Medicina Molecular Aplicada (IMMA). Facultad de Medicina. Universidad San Pablo CEU, Spain

Disclosures: daniel Aedo Martin, None

Sunday

- SU0195 Increased bone FGF23 production in CKD is associated with altered osteocyte development and bone mineralization**
Corey Dussold^{*1}, Samantha Neuburg¹, Ying Liu², Jian Q. Feng², Xueyan Wang¹, Valentin David¹, Myles Wolf³, Aline Martin¹. ¹Division of Nephrology and Hypertension, Center for Translational Metabolism and Health, Northwestern University, Chicago, IL, USA, United States, ²Department of Biomedical Sciences, Baylor College of Dentistry, TXA&M University, Dallas, TX, USA, United States, ³Division 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 Julien²⁵, Anne Seliger¹, Annette Birkhold³, Michael Thelen¹, François Lefebvre⁴, Martin Pellicelli²⁵, René St-Arnaud²⁵, Michael Ominsky⁶, Georg Duda¹, Uwe Kornak⁷, Sara Checa¹, Bettina M. Willie²⁵. ¹Julius Wolff Institute, Universitätsmedizin Charité, Germany, ²Shriners Hospital for Children, Canada, ³University of Stuttgart, Germany, ⁴Canadian Centre for Computational Genomics, Canada, ⁵Shriners hospital for Children, Canada, ⁶Amgen, United States, ⁷Institute 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. Johnson¹. ¹University 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. Witcher¹, Alexander Robling¹. ¹Indiana 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 Gong², Miriam Aceves², Michelle A. Hook², Susan A. Bloomfield¹. ¹Texas A&M University, United States, ²Texas 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 Mazur¹, Dustin Marinelli¹, Zachary Rotter¹, Amit Chougule¹, Beata Lecka-Czernik¹. ¹University of Toledo, United States
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- SU0201 Mechanical Forces Regulate Osteocytes Gene Expression through Gsα -independent Signaling Pathways**
Ningyuan Sun^{*1}, Yuhei Uda², Chao Shi³, Keertik Fulzele⁴, Ehab Azab⁵, Paola Divieti Pajevic⁶. ¹PhD Candidate, United States, ²Research Fellow, United States, ³PhD Candidate, China, ⁴Reasearch Assistant Professor, United States, ⁵DSc Student, United States, ⁶Associate 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-Lipsmeyer¹, Milena Dimori¹, Charles O'Brien¹, Roy Morello¹. ¹University 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 Buros¹, Frits van Rhee¹, Larry J. Suva², Sharmilan Thanendrarajan¹, Carolina Schinke¹, Faith Davies¹, Gareth Morgan¹, Maurizio Zangari¹. ¹University of Arkansas for Medical Sciences, United States, ²Texas 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 Krueger¹, Gretta Borchardt¹, Gretta Borchardt¹, Marc Drezner¹, Chris Sempos². ¹University of Wisconsin-Madison, United States, ²Vitamin D Standardization Program, NIH-ODS, United States
Disclosures: Neil Binkley, None
- SU0205 Automated No-Dose Incidental Screening in the Context of Osteoporosis**
 J. Keenan Brown^{*1}, Wolfram Timm², Reimer Andresen³. ¹Mindways Software, Inc., United States, ²Mindways Software, Inc., Germany, ³Institute of Diagnostic and Interventional Radiology/Neuroradiology, Westküstenklinikum Heide, Academic Teaching Hospital of the Universities of Kiel, Lübeck and Hamburg, Heide, Germany, Germany
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 Yu¹, Sharmila Majumdar¹, Dennis Black¹, Eric Orwoll². ¹University of California, San Francisco, United States, ²Oregon 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 Hao¹, David Ng¹, Pushan Bharadwaj¹. ¹Singapore 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 Winzenrieth², Kristen Dunsmore³, Tamara Scerpella⁴. ¹SUNY Upstate Medical University, United States, ²Med-Imaps, France, ³Syracuse University, United States, ⁴University of Wisconsin- Madison, United States
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- SU0209 Vertebral Compression Deformities in Patients with Normal Bone Mineral Density**
 Jay Ginther^{*1}, Ann Ginther¹. ¹Cedar 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}. ¹DIAsource 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. Nguyen². ¹Ton Duc Thang University, Viet Nam, ²Garvan Institute of Medical Research, Australia
Disclosures: Lan T Ho-Pham, None

Sunday

- SU0212 A New Device for Ultrasonic Assessment of the 1/3 Radius**
 Emily Stein^{*1}, Gangming Luo², Mariana Bucovsky³, Fernando Rosete³,
 Mafo Kamanda-Kosseh³, Jonathan Kaufman², Elizabeth Shane³, Robert Siffert⁴. ¹Hospital
 for Special Surgery, United States, ²CyberLogic, Inc., United States, ³Columbia University,
 United States, ⁴The Mount Sinai School of Medicine, United States
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- SU0213 Longitudinal Changes of Lumbar Bone Mineral Densities in Korean Women**
 Young-Sang Kim^{*1}, Hyejin Chun², Kunhee Han², Soo-Hyun Lee², Bo Youn Won²,
 Seung-Gun Park². ¹CHA university, CHA Bundang Medical Center, Korea, Republic of,
²CHA university, Korea, Republic of
Disclosures: Young-Sang Kim, None
- SU0214 Leg Elevation Does Not Substantially Affect TBS Results**
 Diane Krueger^{*1}, Ellen Siglinsky¹, Doris Tran², Luis Del Rio Barquero³, Neil Binkley¹.
¹University of Wisconsin, United States, ²Medimaps SASU, France, ³CETIR 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 Leslie², Helena Johannsson³, Anders Oden³,
 Eugene McCloskey³, John Kanis³, Didier Hans⁴. ¹University of Ottawa, Department of
 Radiology, Canada, ²University of Manitoba, Canada, ³University of Sheffield Medical
 School, United Kingdom, ⁴Lausanne University Hospital, Switzerland
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- 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 Chiba¹, Kazuaki Yokota¹, Kazuteru Shiraishi¹, Makoto Osaki¹.
¹Department of Orthopaedic Surgery, Nagasaki University Hospital, Japan
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- 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. Lewis², Wai H. Lim³, Germaine Wong², Kevin E. Wilson⁴,
 Ben C. Khoo⁵, Kun Zhu⁶, Douglas P. Kiel⁷, John T. Schousboe⁸. ¹University of Western
 Australia, School of Medicine and Pharmacology, Australia, ²Centre for Kidney Research,
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 Israel Deaconess Medical Center, Harvard Medical School, United States, ⁸Park 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 Bochud¹, Quentin Vallet¹, Donatien Ramiandrisoa¹,
 Adrien Etcheto², Karine Briot², Sami Kolta², Christian Roux², Pascal Laugier¹. ¹Sorbonne
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 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**
 Maryam Buni^{*1}, Catherine G Ambrose¹, Joseph McCormick², Susan Fisher-Hoch², Nahid Rianon¹. ¹UTHealth McGovern Medical School, United States, ²UTHealth School of Public Health, United States
Disclosures: Maryam Buni, None
- SU0220 Assessment of Jawbone Quality as a Predictor of Lumber Fracture Probability**
 Yoshitomo Takaishi^{*1}, Megu Takaishi², Takami Miki³, Akira Itabashi⁴, Aiko Kamada⁵, Takashi Ikeo⁵, Takuo Fujita⁶. ¹Takaishi Dental Clinic, Japan, ²Center for the Special Needs Dentistry at Okayama University Hospital, Japan, ³Izumi Otsu Municipal Hospital, Japan, ⁴Saitama Center for Bone Research, Japan, ⁵Osaka Dental University, Japan, ⁶Kobe University professor emeritus, Japan
Disclosures: Yoshitomo Takaishi, None
- SU0221 Prescreening for Osteoporotic Hip BMD after Fracture with an accurate Pulse-Echo Ultrasound Device.**
 Peter van den Berg^{*1}, Dave Schweitzer¹. ¹Reinier de Graaf Gasthuis, Netherlands
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**
 Annika vom Scheidt^{*1}, Carolin Pokrant¹, Eric Flavio Grisolia Seifert¹, Klaus Püschel², Michael Amling¹, Björn Busse¹. ¹University Medical Center Hamburg-Eppendorf, Department of Osteology and Biomechanics, Germany, ²University Medical Center Hamburg-Eppendorf, Department of Legal Medicine, Germany
Disclosures: Annika vom Scheidt, None
- SU0223 Comorbidities and medication use in patients with a recent clinical fracture at the Fracture Liaison Service**
 Lisanne Vranken*, Caroline E Wyers, Robert Y van der Velde, Irma J de Bruin, Heinrich M Janzing², Sjoerd Kaarsemaker³, Piet P Geusens, Joop P van den Bergh.
¹Maastricht UMC+, NUTRIM, Department of Internal Medicine; VieCuri Medical Center, Department of Internal Medicine, Netherlands, ²Department of Surgery and Trauma Surgery, VieCuri Medical Centre, Netherlands, ³Department of Orthopedic Surgery and Trauma Surgery, VieCuri Medical Centre, Netherlands, ⁴Maastricht UMC+, CAPHRI, Department of Internal Medicine subdivision of Rheumatology; University of Hasselt, Netherlands, ⁵Maastricht UMC+, NUTRIM, Department of Internal Medicine; VieCuri Medical Center, Department of Internal Medicine; University of Hasselt, Netherlands
Disclosures: Lisanne Vranken, None
- SU0224 The Reproducibility of Measuring Trabecular Bone Parameters Using High-resolution Magnetic Resonance Imaging**
 Sarah West^{*1}, Chamith Rajapakse², Tammy Rayner³, Rhiannon Miller², Michelle Slinger², Greg Wells³. ¹Trent University, Canada, ²University of Pennsylvania School of Medicine, United States, ³SickKids Hospital, Canada
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.**
 Bo Abrahamsen^{*1}, Daniel Prieto-Alhambra², Martin T Ernst³, Mads Nybo⁴, Katrine H Rubin³, Pernille Hermann⁵. ¹University of Southern Denmark and Holbæk Hospital, Denmark, ²Centre for Statistics in Medicine and Nuffield Department of Orthopaedics, Rheumatology, and Musculoskeletal Sciences (NDORMS), University of Oxford, United Kingdom, ³OPEN, Institute of Clinical Research, University of Southern Denmark, Denmark, ⁴Dept of Clinical Biochemistry, Odense University Hospital, Denmark, ⁵Dept of Endocrinology M, Odense University Hospital, Denmark
Disclosures: Bo Abrahamsen, Novartis, Grant/Research Support

Sunday

- SU0226 Oral bisphosphonate use and all-cause mortality in patients with advanced (stage IIIB+) chronic kidney disease: a population-based cohort study.**
Dunia Alarkawi^{*1}, Sanni Ali², Fergus Caskey³, Daniel Dedman⁴, Nigel Arden², Yoav Ben-Shlomo⁵, Dana Bluci⁶, Bo Abrahamsen⁷, Jacqueline Center⁶, Andrew Judge⁸, Cyrus Cooper⁸, Kassim Javaid⁸, Daniel Prieto-Alhambra⁹. ¹Bone Biology Division, Garvan Institute of Medical Research, University of New South Wales, Australia, ²Centre for Statistics in Medicine and Nuffield Department of Orthopaedics, Rheumatology, and Musculoskeletal Sciences (NDORMS), University of Oxford, Oxford, UK, United Kingdom, ³School of Social and Community Medicine, University of Bristol, Bristol, UK, ⁴UK Renal Registry, Bristol, UK, United Kingdom, ⁵Clinical Practice Research Datalink, MHRA, London, UK, United Kingdom, ⁶School of Social and Community Medicine, University of Bristol, Bristol, UK, United Kingdom, ⁷Bone Biology Division, Garvan Institute of Medical Research, University of New South Wales, Sydney, Australia, Australia, ⁸University of Southern Denmark, Odense, Denmark, ⁹Holbæk Hospital, Dept of Medicine, Holbæk, Denmark, Denmark, ⁸Centre for Statistics in Medicine and Nuffield Department of Orthopaedics, Rheumatology, and Musculoskeletal Sciences (NDORMS), University of Oxford, Oxford, UK, United Kingdom, ⁹Centre for Statistics in Medicine and Nuffield Department of Orthopaedics, Rheumatology, and Musculoskeletal Sciences (NDORMS), University of Oxford, United Kingdom
Disclosures: Dunia Alarkawi, None
- SU0227 Fracture Incidence and Characteristics in Young Adults Age 18 to 49 years: A Population-Based Study**
Joshua Farr^{*1}, L. Joseph Melton III¹, Sara Achenbach¹, Elizabeth Atkinson¹, Sundeep Khosla¹, Shreyas Amin¹. ¹Mayo Clinic, United States
Disclosures: Joshua Farr, None
- SU0228 Glycemic traits are related to phosphate metabolism: A double-edged sword**
Ching-Lung Cheung^{*1}, Vincent Cheng¹, Victoria Wong¹, Grace Lee¹, Bernard Cheung¹. ¹The University of Hong Kong, Hong Kong
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 Larson², Andrea LaCroix³, Jane Cauley⁴, Meryl LeBoff⁵, Wenjun Li⁶, Erin LeBlanc⁷, Beatrice Edwards⁸, JoAnn Manson⁵, Kris Ensrud⁹. ¹University of California, Los Angeles, United States, ²Fred Hutchinson Cancer Research Center, United States, ³University of California, San Diego, United States, ⁴University of Pittsburgh, United States, ⁵Harvard Medical School, United States, ⁶University of Massachusetts Medical School, United States, ⁷Kaiser Permanente Center for Health Research, United States, ⁸The University of Texas MD Anderson Cancer Center, United States, ⁹University 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 Rahn¹, Amy Mudano¹, Ryan Outman¹, Peng Li¹, David Redden¹, Fred Anderson², Susan Greenspan³, Andrea LaCroix⁴, Jeri Nieves⁵, Stuart Silverman⁶, Ethel Siris⁷, Nelson Watts⁸, Sigrid Ladore¹, Karen Meneses¹, Jeffrey Curtis¹, Kenneth Saag¹. ¹University of Alabama at Birmingham, United States, ²University of Massachusetts Medical School, United States, ³University of Pittsburgh, United States, ⁴University of California, San Diego, United States, ⁵Helen Hayes Hospital, United States, ⁶Cedars-Sinai Medical Center, United States, ⁷Columbia University Medical Center, United States, ⁸Mercy 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. Giangregorio¹, Jerilynn Prior², Susan I. Barr², Claudio Berger³, Maryam S. Hamidi⁴, Jonathan D. Adachi⁵, K. Shawn Davison⁶, David Goltzman⁷, Robert G. Josse⁸, Stephanie M. Kaiser⁹, Christopher S. Kovacs¹⁰, William D. Leslie¹¹, Suzanne N. Morin⁷, Alexandra Papaioannou⁵, Angela M. Cheung¹².
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Disclosures: Jenna C. Gibbs, None
- SU0232** **Temporal Trends in Length of Stay after Hip, Femur and Pelvic Fracture in Québec, Canada**
 Sonia Jean^{*1}, Edward Harvey², Etienne Belzile³, Jacques Brown³, Suzanne Morin². ¹Institut national de santé publique du Québec, Canada, ²McGill University, Canada, ³Laval University, Canada
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)**
 James S. McGinley^{*1}, George Ioannidis², Christopher S. Kovacs³, Stephanie M. Kaiser⁴, David A. Hanley⁵, Jerilynn C. Prior⁶, K. Shawn Davison⁷, William D. Leslie⁸, Suzanne N. Morin⁹, Yawen Jiang¹⁰. ¹Vector Psychometric Group, LLC, United States, ²McMaster University, Canada, ³Memorial University of Newfoundland, Canada, ⁴Dalhousie University, Canada, ⁵University of Calgary, Canada, ⁶University of British Columbia, Canada, ⁷A Priori Medical Sciences Inc., Canada, ⁸University of Manitoba, Canada, ⁹McGill University, Canada, ¹⁰Amgen Inc., United States
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 Siggeirs Óttir², Nicholas C Harvey³, Anders Odén⁴, Vilmundur Gudnason⁵, Eugene McCloskey⁶, Gunnar Sigurdsson², John A Kanis⁷. ¹Institute for Health and Aging, Australian Catholic University, Melbourne, Australia, Sweden, ²Icelandic Heart Association, Kopavogur, Iceland, Iceland, ³MRC Lifecourse Epidemiology Unit, University of Southampton, Southampton, UK, NIHR Southampton Biomedical Research Centre, University of Southampton and University, United Kingdom, ⁴Centre for Metabolic Bone Diseases, University of Sheffield, Sheffield, UK, Sweden, ⁵Icelandic Heart Association, Kopavogur, Iceland, University of Iceland, Reykjavik, Iceland, Iceland, ⁶Centre 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, ⁷Institute for Health and Aging, Australian Catholic University, Melbourne, Australia, Centre for Metabolic Bone Diseases, University of Sheffield, Sheffield, UK, United Kingdom
Disclosures: Helena Johansson, None
- SU0235** **Association between osteoporosis and increased BMI in men and women: KNHANES 2008-2011**
 Ji Hyun LEE^{*1}, Jung Hee KIM¹, A Ram Hong¹, Sang Wan KIM¹, Chan Soo Shin¹. ¹Internal Medicine, Seoul National University College of Medicine, Korea, Republic of
Disclosures: Ji Hyun LEE, None
- SU0236** **A cross-sectional study of osteoporosis in urban and rural areas of Shanghai.**
 Jinlong Li^{*1}, Chenguang Li², Jing Wang², Bing Shu², Yan Zhang², Lin Chen³, Qiang Wang³, Hao Zhang³, Nannan Sha³, Yin Zhu³, Zhenxing Luo³, Yongjun Wang⁴. ¹self, China, ²workmate, China, ³Student, China, ⁴Professor, China
Disclosures: Jinlong Li, None

Sunday

- SU0237 Acetabular Fractures in Patients Aged Over 60 Years**
 Amanda Lorbergs^{*1}, Jenny Thain¹, Richard Crilly¹. ¹University of Western Ontario, Canada
Disclosures: Amanda Lorbergs, None
- SU0238 In-Hospital Mortality following Hip, Femur and Pelvic fractures in Québec, Canada**
 Suzanne Morin^{*1}, Etienne Belzile², Jacques Brown², Sonia Jean³. ¹McGill University, Canada, ²Laval University, Canada, ³Institut national de santé publique du Quebec, Canada
Disclosures: Suzanne Morin, Amgen, Grant/Research Support
- SU0239 Prospective Study of Proton Pump Inhibitor and H₂-Receptor Antagonist Use and Risk of Vertebral Fracture in Women**
 Julie M Paik^{*1}, Harold N Rosen², Catherine M Gordon³, Gary C Curhan¹. ¹Brigham and Women's Hospital, Harvard Medical School, United States, ²Beth Israel Deaconess Medical Center, Harvard Medical School, United States, ³Cincinnati Children's Hospital Medical Center, University of Cincinnati College of Medicine, United States
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.**
 Daniel Prieto-Alhambra^{*1}, Eduardo Vaquero-Cervino², Isabel Sierra Setién³, Miguel Sanz Sainz⁴, María Dolores Sanz Amaro⁵, Mónica Salomó Domènech⁶, Pilar Sáez-López⁷, Leocadio Rodríguez Mañas⁸, Iván Pérez Coto⁹, Jesús Mora Fernández¹⁰, Damián Mifsut¹¹, Jorge Martínez-Íñiguez Blasco¹², Miguel Martínez Ros¹³, Bartolomé Lladó Ferrer¹⁴, Paloma González García¹⁵, Míriam Garrido Clua¹⁶, Laura Ezquerro Herrando¹⁷, Iñigo Etxebarria-Foronda¹⁸, Pedro Carpintero Benítez¹⁹, José Ramón Caeiro Rey²⁰, Gaspar Adrados Bueno²¹, Antonio Herrera²², Adolfo Díez-Pérez²³. ¹Centre for Statistics in Medicine, Nuffield Department of Orthopaedics, Rheumatology, and Musculoskeletal Sciences (NDORMS), University of Oxford, United Kingdom, ²Complejo Hospitalario Universitario de Pontevedra, Spain, ³Departamento de Medicina Interna, Hospital Universitario M. Valdecilla-IDIVAL, Spain, ⁴Hospital Universitario Miguel Servet, IIS Aragón, Spain, ⁵Hospital Lluís Alcanyís, Spain, ⁶Hospital Universitari Parc Taulí, Spain, ⁷Geriatría Complejo Asistencial de Avila, Instituto de Investigación Hospital Universitario La Paz, Fundación Idi Paz, Spain, ⁸Servicio de geriatría, Hospital Universitario de Getafe, Spain, ⁹Hospital Universitario San Agustín, Spain, ¹⁰Hospital Clínico San Carlos, Spain, ¹¹Hospital Clínico de Valencia, Spain, ¹²Hospital San Pedro, Spain, ¹³Hospital Universitario Virgen de la Arrixaca, Spain, ¹⁴Unidad de Osteoporosis, Hospital Son Llàtzer, Spain, ¹⁵Hospital Obispo Polanco, Spain, ¹⁶Hospital Vall d'Hebron, Instituto de Recerca Vall d'Hebron (VHIR), Grupo de Recerca Aparato Locomotor, Spain, ¹⁷Servicio de Cirugía Ortopédica y Traumatología, Hospital Clínico Universitario Lozano Blesa, Spain, ¹⁸Alto Deba Hospital, Spain, ¹⁹Hospital Reina Sofía, Spain, ²⁰Servicio de Cirugía Ortopédica y Traumatología, Complejo Hospitalario Universitario de Santiago de Compostela, Spain, ²¹Servicio de Medicina Interna, Hospital Universitario Infanta Cristina, Spain, ²²Department of Surgery, University of Zaragoza, Aragon Health Research Institute, Spain, ²³Department of Internal Medicine, Hospital del Mar-IMIM and Autonomous University of Barcelona, Spain
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 Wang¹, Chenguang Li¹, Yan Zhang¹, Jinlong Li¹, Xiaofeng Qi¹, Liang Qiao¹, Yongjian Zhao¹, Lin Chen¹, Qiang Wang¹, Hao Zhang¹, Yongjun Wang². ¹Longhua Hospital, Shanghai University of Traditional Chinese Medicine, China, ²Longhua 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**
 Lynette Smith^{*1}, J Chris Gallagher², Glenville Jones³⁴, Martin Kaufmann³⁴. ¹University of Nebraska Medical Center, United States, ²Creighton univ, United States, ³queens univ, Canada, ⁴Queens univ, Canada
Disclosures: Lynette Smith, None
- SU0243 Extensive Undertreatment of Osteoporosis in Older Swedish Women**
 Daniel Sundh^{*1}, Anna G Nilsson¹, Helena Johansson², Dan Mellström¹, Mattias Lorentzon¹. ¹Geriatric Medicine, Department of Internal Medicine and Clinical Nutrition, Institute of Medicine, University of Gothenburg, Gothenburg, Sweden, Sweden, ²Centre for Metabolic Bone Diseases, University of Sheffield Medical School, Sheffield, UK, Sweden
Disclosures: Daniel Sundh, None
- SU0244 An association of a single missense nucleotide polymorphism in the ALDH2 gene with hip fracture**
 Kenichiro Takeshima^{*1}, Takeshi Miyamoto¹, Masaya Nakamura¹, Morio Matsumoto¹. ¹Department of Orthopedic Surgery, Keio University School of Medicine, Japan
Disclosures: Kenichiro Takeshima, None
- SU0245 Circulating steroid concentrations exhibit age-dependent associations with spinal muscle density: the Framingham Study**
 Timothy Tsai^{*1}, Brett Allaire², Robert McLean³, Marian Hannan³, Mary Bouxsein², Kiel Douglas³, Thomas Travison³. ¹Hebrew SeniorLife Institute for Aging Research, United States, ²Beth Israel Deaconess Medical Center, United States, ³Hebrew SeniorLife Institute for Aging Research and Harvard Medical School, United States
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 Xu², Sigurdur Sigurdsson³, Susan Ewing², Deborah Kado¹, Thomas Lang², Thomas Link², Gudny Eiriksdottir³, Trisha Hue², Eric Vittinghoff², Tamara Harris⁴, Clifford Rosen⁵, Vilmundur Gudnason⁶, Ann Schwartz², Xiaojuan Li². ¹University of California, San Diego, United States, ²University of California, San Francisco, United States, ³Icelandic Heart Association, Iceland, ⁴National Institute on Aging, NIH, United States, ⁵Maine Medical Center Research Institute, United States, ⁶University of Iceland, Iceland
Disclosures: Gina Woods, None
- SU0247 Patient ‘Self-Consultation’ as a Novel Strategy to Combat the Osteoporosis Treatment Mismatch: Experience from a Single-Centre Pilot**
 Emma Billington^{*1}, Lynn Feasel¹, Greg Kline¹. ¹University of Calgary, Canada
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 Tan¹, Nicolle Pereira¹, Thomas King¹, Joan Khoo¹. ¹Changi 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**
 Evelyn Walter^{*1}, Hanna Dellago², Johannes Grillari³, Hans Peter Dimai⁴, Matthias Hackl². ¹Institute for Pharmaeconomic Research, Austria, ²TAmiRNA GmbH, 1190 Vienna, Austria, Austria, ³Department of Biotechnology, BOKU - University of Natural Resources and Life Sciences, Vienna, Austria, ⁴Medical University of Graz, Department of Internal Medicine, Division of Endocrinology and Diabetology, Graz, Austria, Austria
Disclosures: Evelyn Walter, None

Sunday

- 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 Seeman², Suzanne Morin³, Lisa Lix¹, Sumit Majumdar⁴. ¹University of Manitoba, Canada, ²University of Melbourne, Australia, ³McGill University, Canada, ⁴University of Alberta, Canada
Disclosures: William Leslie, None
- SU0251 Implementation of Fracture Liaison Service: a Mixed Methods Research Project**
 Mireille Luc^{*1}, Marie-Claude Beaulieu¹, Hélène Corriveau¹, Gilles Boire¹, Isabelle Gaboury¹. ¹Université de Sherbrooke, Canada
Disclosures: Mireille Luc, None
- SU0252 Serum 25-hydroxyvitamin D Levels in Hospitalized Adults With Community-Acquired Pneumonia**
 Maria Lorena Brance^{*1}, Julio Miljevic², Raquel Tizziani³, María Eugenia Taberna³, Georgina P Grossi⁴, Pablo Toni⁴, Elina Valentini⁵, Andrea Trepat⁵, Julia Zaccardi⁶, Juan Moro⁶, Baltasar Finuci Curi⁷, Norberto Tamagnone⁷, Mariano Ramirez⁸, Javier Severini², Pablo Chiarotti², Francisco Consiglio⁹, Raúl Piñesky⁹, Albertina Ghelfi¹⁰, Jorge Kilstein¹⁰, Eduardo Street¹¹, Dino Moretti¹², Viviana Oliveto¹³, Marcelo Mariño¹⁴, Jorge Manera¹⁴, Lucas R Brun¹. ¹Conicet, Argentina, ²Hospital Juan Bautista Alberdi, Argentina, ³Hospital Roque Saenz Peña, Argentina, ⁴Hospital de Emergencias Clemente Alvarez, Argentina, ⁵Sanatorio de la Mujer, Argentina, ⁶Hospital Español, Argentina, ⁷Hospital Provincial, Argentina, ⁸Sanatorio Plaza, Argentina, ⁹Sanatorio Laprida, Argentina, ¹⁰Hospital Escuela Eva Perón, Argentina, ¹¹Sanatorio Rosendo García, Argentina, ¹²Sanatorio Delta, Argentina, ¹³Sanatorio IPAM, Argentina, ¹⁴Sanatorio Británico, Argentina
Disclosures: Maria Lorena Brance, None
- SU0253 Short-Term Increased Physical Activity during Early Life Protects High Fat Diet-Induced Bone Resorption in Adult Mice**
 Jin-Ran Chen^{*1}, Oxana P. Lazarenko¹, Michael L. Blackburn¹, Matthew E. Ferguson¹, Eugenia Carvalho², Kartik Shankar¹, Elisabet Børshesheim¹. ¹Arkansas Children's Nutrition Center and the Department of Pediatrics, University of Arkansas for Medical Sciences, United States, ²Department of geriatrics, University of Arkansas for Medical Sciences, United States
Disclosures: Jin-Ran Chen, None
- SU0254 Validity of Self-Reported Fractures in the VITamin D and OmegA-3 Trial (VITAL)**
 Sharon Chou^{*1}, Catherine Donlon², Nancy Cook³, Douglas Bauer⁴, Peggy Cawthon⁴, Dennis Black⁴, JoAnn Manson³, Julie Buring³, Meryl LeBoff⁵. ¹Brigham and Women's Hospital, Endocrinology, Diabetes and Hypertension Division, Instructor in Medicine, Harvard Medical School, United States, ²Brigham and Women's Hospital, Endocrinology, Diabetes and Hypertension Division, United States, ³Brigham and Women's Hospital, Division of Preventive Medicine, Professor of Medicine, Harvard Medical School, United States, ⁴University of California, San Francisco, United States, ⁵Brigham 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 Thabane², Jonathan Adachi², Maureen Ashe³, Robert Bleakney⁴, Angela Cheung⁵, Jenna Gibbs¹, Caitlin McArthur¹, Keith Hill⁶, Jeffrey Templeton¹, David Kendler³, Nicole Mittmann⁴, Sadhana Prasad², Aliya Khan², Sandra Kim⁷, Samuel Scherer⁸, John Wark⁸, Alexandra Papaioannou². ¹University of Waterloo, Canada, ²McMaster University, Canada, ³University of British Columbia, Canada, ⁴University of Toronto, Canada, ⁵University Health Network, Canada, ⁶Curtin University, Australia, ⁷Women's College Hospital, Canada, ⁸University 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**
 Catherine Donlon^{*1}, Sharon Chou², Nancy Cook³, Trisha Copeland⁴, JoAnn Manson³, Julie Buring³, Meryl LeBoff⁵. ¹Brigham and Women's Hospital, Endocrinology, Diabetes and Hypertension Division, United States, ²Brigham and Women's Hospital, Endocrinology, Diabetes and Hypertension Division, Instructor in Medicine, Harvard Medical School, United States, ³Brigham and Women's Hospital, Division of Preventive Medicine, Professor of Medicine, Harvard Medical School, United States, ⁴Brigham and Women's Hospital, Division of Preventive Medicine, United States, ⁵Brigham and Women's Hospital, Endocrinology, Diabetes and Hypertension Division, Professor of Medicine, Harvard Medical School, United States
Disclosures: Catherine Donlon, None
- SU0257 The Relationship of the Physical Performance and Osteoporosis Prevention with Vitamin D in Older African Americans (PODA)**
 John Aloia^{*1}, Mageda Mikhail¹, Mageda Mikhail¹. ¹Winthrop University Hospital, United States
Disclosures: John Aloia, None
- SU0258 Risk Factors for Osteoporosis and Muscle Loss in Hemodialysis Patients**
 Hiroyuki Tominaga^{*1}, Takao Setoguchi², Manei Oku³, Akio Ido⁴, Setsuro Komiya¹. ¹Department of Orthopaedic Surgery, Graduate School of Medical and Dental Sciences, Kagoshima University, Japan, ²The Near-Future Locomotor Organ Medicine Creation Course (Kusunoki Kai), Graduate School of Medical and Dental Sciences, Kagoshima University, Japan, ³Ikeda Hospital, Japan, ⁴Digestive and Lifestyle Diseases, Kagoshima University, Japan
Disclosures: Hiroyuki Tominaga, None
- SU0259 A Mechanism By Which Menopause Leads To Chronic Low-Grade Inflammation and Bone Loss**
 Anna Cline-Smith^{*1}, Elena Shashkova¹, Ariel Axelbaum¹, Rajeev Aurora¹. ¹Saint 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**
 Andreassen Christina M^{*1}, Jesper Skovhus Thomsen², Lydia Peteva Bakalova³, Annemarie Brüel⁴, Ellen M. Hauge⁵, Gete Toft Eschen⁶, Birgitte Jul Kiil⁶, Jean-Marie Delaisse⁷, Mariana Elisabeth Kersh³, Thomas Levin Andersen⁷. ¹Orthopedic Research Laboratory, Department of Orthopedic Surgery & Traumatology, Odense University Hospital, Department of Clinical Institute, University of Southern Denmark, Denmark, ²Dept. of Biomedicine, Aarhus University, Denmark, ³Dept. of Mechanical Science and Engineering, University of Illinois, United States, ⁴Dept. Biomedicine, Aarhus University, Denmark, ⁵Dept. of Rheumatology, Aarhus University Hospital, Denmark, ⁶Dept. of Plastic Surgery, Aarhus University Hospital, Denmark, ⁷Dept. of Clinical Cell Biology, Vejle Hospital/Lillebaelt Hospital, Institute of Regional Health Research, University of Southern Denmark, Denmark
Disclosures: Andreassen Christina M, None
- SU0261 STRA6 as a possible candidate gene for pathogenesis of osteoporosis from RNA-seq analysis of human mesenchymal stem cells**
 Insun Song^{*1}, Yong Jun Choi², Ye-Yeon Won², Yoon-Sok Chung². ¹School of Biological Sciences, Seoul National University, Korea, Republic of, ²Ajou University School of Medicine, Korea, Republic of
Disclosures: Insun Song, None
- SU0262 Supplementation with Calcium and Vitamin D prevents bone loss after Bariatric Surgery**
 Katrien Corbeels^{*1}, Lieve Verlinden¹, Mieke Verstuyf¹, Matthias Lannoo¹, Ann Mertens², Christophe Matthys¹, Ann Meulemans¹, Geert Carmeliet¹, Bart Van der Schueren¹. ¹Laboratory Clinical and Experimental Endocrinology, KU Leuven, Belgium, ²Department of Endocrinology, UZ Leuven, Belgium
Disclosures: Katrien Corbeels, None

- SU0263 Low bone mass and strength in juvenile rats with acquired epilepsy**
Hannah M. Davis^{*1}, Nicole D. Schartz², Carmen Herrera¹, Rafael Pacheco-Costa¹, Season K. Wyatt², Amy L. Brewster³, Lilian I. Plotkin¹. ¹Indiana University School of Medicine, United States, ²Purdue University, United States, ³Purdue University, United Kingdom
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 Riancho¹, Leandro Castellano², Maria Isabel Perez Nuñez³, Carolina Sañudo¹, Carmen Garcia Ibarbia⁴, Esther Laguna³, Manuel Sumillera³, Mario F Fraga⁵, Agustin F Fernandez⁵. ¹Department of internal medicine, Hospital Universitario Marqués de Valdecilla-IDIVAL, University of Cantabria, Spain, ²Department of Surgery and Cancer, Imperial College London, Imperial Centre for Translational and Experimental Medicine (ICTEM), Hammersmith Hospital, United Kingdom, ³Department of Traumatology/Hospital Universitario Marqués de Valdecilla, University of Cantabria, Spain, ⁴Department of internal medicine, Hospital Universitario Marqués de Valdecilla-IDIVAL, Universidad de Cantabria, Spain, ⁵Nanomaterials 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 Eriksen², Francis Glorieux³, Frank Rauch⁴, David Dempster⁵, Hua Zhou⁶, Elizabeth Shane⁷, Adi Cohen⁸, John Bilezikian⁸, Mishaela Rubin⁹, Carolina Moreira¹⁰, Imre Pavo¹¹, Jan Stepan¹², Wolfgang Brozek¹³, Peter Fratzl¹⁴, Klaus Klaushofer¹³, Eleftherios Paschalidis¹³. ¹Ludwig Boltzmann Institute of Osteology at the Hanusch Hospital of WGKK and AUVA Trauma Centre Meidling, 1st Medical Department, Hanusch Hospital, Vienna Austria , Austria, ²Dept. of Endocrinology, Morbid Obesity and Preventive Medicine Oslo University Hospital Pb 4596 Nydalen N-0424 Oslo, Norway, ³Shriners Hospital for Children-Canada, Canada, ⁴Shriners Hospital for Children, Montreal, Canada, ⁵College of Physicians and Surgeons Columbia university, New York, United States, ⁶Regional Bone Center, Helen Hayes Hospital , United States, ⁷Columbia University Medical Center, United States, ⁸Division of Endocrinology, Columbia University Medical Center, United States, ⁹ Department of Medicine, Metabolic Bone Diseases Unit, College of Physicians & Surgeons Columbia University, United States, ¹⁰Endocrinology Division, Federal University of Parana, Brazil, ¹¹Eli Lilly, Austria, ¹² Institute of Rheumatology, Faculty of Medicine, Charles University, Prague, Czech Republic, Czech Republic, ¹³Ludwig Boltzmann Institute of Osteology at the Hanusch Hospital of WGKK and AUVA Trauma Centre Meidling, 1st Medical Department, Hanusch Hospital, Austria, ¹⁴Max 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 Nieves², Sai Nudurupati³, David Metz⁴, Maria Claudia Perez⁵. ¹University of Wisconsin, United States, ²Columbia University, United States, ³AbbVie, Inc, United States, ⁴University of Pennsylvania, United States, ⁵Takeda 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**
Tom Sanchez^{*1}, Patrick Cunniff¹, Jingmei Wang². ¹Department of Research and Development, Norland at Swissray, United States, ²Department of Research and Development, Norland at Swissray, China
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 Kreitman¹, Lihong Hao¹, Stephen Schneider², Yvette Schlussel¹.
¹Rutgers University, United States, ²Robert Wood Johnson Medical Center , United States
Disclosures: Sue Shapses, None
- SU0269 Low-intensity repetitive blast injury results in long-term deleterious effects on bone**
 Joshua Swift^{*1}, Aaron Hall¹, Hanbing Zhou¹, Drew Brown², Sophia Kozlowski²,
 Matthew Allen². ¹Naval Medical Research Center, United States, ²Indiana University School of Medicine, United States
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 Goemaere¹, Hans-Georg Zmierczak¹, Jean-Marc Kaufman¹, Bruno Lapauw¹. ¹Unit 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 Wakamatsu¹, Yoshiko Iwasaki², Akemi Ito³, Ichiei Narita¹, Masafumi Fukagawa⁴, Junichiro Kazama⁵. ¹Division of Clinical Nephrology and Rheumatology Niigata University Graduate School of Medical and Dental Sciences, Japan, ²Department of Health Sciences, Oita University of Nursing and Health Sciences, Japan, ³Ito Bone Histomorphometry Institute, Japan, ⁴Tokai University, Japan, ⁵Fukushima 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 Pinheiro¹, Vera Szejnfeld¹, Aurora Cabral¹, Luis Eduardo Nery¹, Charles Castro¹. ¹Universidade 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 Guadalix¹, Maria Begoña Lopez Alvarez¹, Eduardo Ferrero Herrero¹, Guillermo Martinez Diaz-Guerra¹, Federico Hawkins¹. ¹University Hospital 12 Octubre , Spain
Disclosures: Maria Luisa De Mingo, None
- SU0274 Cumulative Epidural Steroid Dose is Associated with Lower Spine Volumetric Bone Density**
 Yi Liu^{*1}, Lulu Yang², John Carrino¹, Huong Do¹, Tariq Chukir³, Eric Holder¹, Richard Bockman¹, Joel Press¹, Emily Stein¹. ¹Hospital for Special Surgery, United States, ²Rutgers School of Public Health, United States, ³Weill Cornell Medical College, United States
Disclosures: Yi Liu, None
- SU0275 Analysing the Effect of Multiple Sclerosis on Vitamin D Related Biochemical Markers of Bone Remodelling**
 Malachi McKenna^{*1}, Barbara Murray¹, Niall Tubridy¹, Mark Kilbane¹. ¹St. Vincent's University Hospital, Ireland
Disclosures: Malachi McKenna, None
- SU0276 Bone Histomorphometry in type 2 Diabetic Premenopausal Women**
 Victoria Borba^{*1}, Carolina Moreira², Vicente Andrade¹, Cassio Ramos³, Cesar Boguszewski³, Cleber Rafael Da Costa⁴. ¹Endocrine Division of Federal University of Parana- SEMPR, Brazil, ²Endocrine Division of Federal University of Parana- SEMPR; Laboratory PRO, Bone Histomorphometry Section, Pro Renal Foundation, Brazil, ³Endocrine Division of Federal University of Parana - SEMPR, Brazil, ⁴Laboratory PRO, Bone Histomorphometry Section, Pro Renal Foundation, Brazil
Disclosures: Victoria Borba, None

Sunday

- SU0277 Long-term Effects of Severe Burn Injury on Bone Turnover and Microarchitecture**
 Gabriela Katharina Muschitz^{*1}, Elisabeth Schwabegger², Andreas Baierl³, Alexandra Fochtmann¹, Roland Kocjan⁴, Judith Haschka⁴, Wolfgang Gruther⁵, Jakob Schanda⁶, Heinrich Resch⁴, Thomas Rath¹, Peter Pietschmann⁷, Christian Muschitz⁴.
¹Division of Plastic and Reconstructive Surgery, Department of Surgery, Medical University Vienna, Austria, ²Department of Plastic, Reconstructive and Aesthetic Surgery, Medical University of Innsbruck, Austria, ³Department of Statistics and Operations Research, the University of Vienna, Austria, ⁴St. Vincent Hospital - VINFORCE, Austria, ⁵HealthPi Medical Center, Wollzeile 1, Austria, ⁶AUVA Trauma Center Meidling, Austria, ⁷Department 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 Dimango², Mariana Bucovsky², Kyle Nishiyama², Sanchita Agarwal², X. Edward Guo², Elizabeth Shane², Emily Stein¹. ¹Hospital for Special Surgery, United States, ²Columbia University, United States
Disclosures: Yi Liu, None
- SU0279 The Relationship between Severity of Chronic Obstructive Pulmonary Disease and Bone Metabolism Biomarkers**
 Manabu Tsukamoto^{*1}, Toshiharu Mori¹, Yasuaki Okada¹, Hokuto Fukuda¹, Ke-Yong Wang², Kazuhiro Yatera³, Akinori Sakai¹. ¹Department of Orthopaedic Surgery, University of Occupational and Environmental Health, Japan, ²Shared-Use Research Center, University of Occupational and Environmental Health, Japan, ³Department 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**
 Lalita Wattanachanya^{*1}, Tanakorn Apornpong², Tanya Do², Supalak Klungklang², Sarat Sunthornyoithin¹, Anchalee Avihingsanon². ¹Division of Endocrinology and Metabolism, Department of Medicine, Faculty of Medicine, Chulalongkorn University, Thailand, ²The HIV Netherlands Australia Thailand Research Collaboration (HIV-NAT), Thai Red Cross AIDS Research Centre, Thailand
Disclosures: Lalita Wattanachanya, None
- SU0281 3D femur assessment using DXA in patients with primary hyperparathyroidism (PHPT) before and one year after parathyroidectomy.**
 Eugenie Koumakis^{*1}, Renaud Winzenrieth², JC. Souberbielle³, E. Sarfati⁴, Catherine Cormier¹. ¹Rheumatology Department A, Cochin Hospital, APHP, France, ²Galgo Medical, Spain, ³Service d'Explorations Fonctionnelles, Hôpital Necker-Enfants-malades, France, ⁴Digestive and Endocrine Surgery, Hôpital de la Pitié-Salpêtrière, AP-HP, France
Disclosures: Eugenie Koumakis, None
- SU0282 A randomized trial of Vitamin D3 in HIV+ postmenopausal women**
 Michael Yin^{*12}, Arindam RoyChoudhury¹², Mariana Bucovsky¹², David Ferris³, Susan Olander¹², Anajali Sharma⁴, Kyle Nishiyama¹², Cosmina Zeana³, Barry Zingman⁴, Elizabeth Shane¹². ¹Columbia University Medical Center, United States, ²Columbia University Medical center, United States, ³Bronx Lebanon Hospital Center, United States, ⁴Albert 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 Tang¹, John Dutton¹, Christopher Washbourne¹, Hillel Galitzer², William Fraser¹. ¹Bioanalytical Facility, University of East Anglia, Norwich Research Park, Norwich, United Kingdom, ²Enter 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 Tang¹, Hillel Galitzer², William Fraser³. ¹Bioanalytical Facility, University of East Anglia, Norwich Research Park, Norwich, United Kingdom, ²Enter Bio Ltd, Hadassah Ein-Kerem, Jerusalem Bio Park, Jerusalem, Israel, ³Bioanalytical 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**
M Amine Amiche^{*1}, Linda Levesque¹, Tara Gomes¹, Jonathan D Adachi², Suzanne M Cadarette¹. ¹University of Toronto, Canada, ²McMaster University, Canada
Disclosures: M Amine Amiche, None
- SU0286 Tromsoporosis - Adherence to a Secondary Fracture Prevention Program in Tromsø, Norway**
Camilla Andreasen^{*1}, Marit Osima², Veronica G Rognli³, Dag E Grundel⁴, Jan Elvenes⁵, Gunnar Knutsen¹, Khaled Meknas¹, Ragnar M Joakimsen², Tove T Borgen⁶, Lene B Solberg⁷, Frede Frihagen⁸, Lars Nordsletten⁹, Erik F Eriksen¹⁰, Trude Bassø¹¹, Cecilie Dahl¹², Tone K Omsland¹³, Åshild Bjørnerem¹⁴. ¹University Hospital of North Norway, Tromsø, Norway, Norway, ²UiT The Arctic University of Norway, Tromsø, Norway, Norway, ³UiT The Arctic University of Norway, Tromsø, Norway, Norway, ⁴University Hospital of North Norway, Tromsø, Norway, Norway, ⁵University Hospital of North Norway, Tromsø, Norway, Norway, ⁶Vestre Viken Hospital Trust, Hospital of Drammen, Drammen, Norway, Norway, ⁷l.b.solberg@gmail.com, Norway, Norway, ⁸Oslo University Hospital, Oslo, Norway 2:University of Oslo, Oslo, Norway, Norway, ⁹Oslo University Hospital, Oslo, Norway 2: University of Oslo, Oslo, Norway, Norway, ¹⁰Oslo University Hospital, Oslo, Norway 2: University of Oslo, Oslo, Norway, Norway, ¹¹St. Olav University Hospital, Trondheim, Norway, Norway, ¹²University of Oslo, Oslo, Norway, Norway, ¹³University of Oslo, Oslo, Norway , Norway, ¹⁴University 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**
Ammara Aziz^{*1}, Ziyue Liu², Abby Church³, Jessica Weaver⁴, Andrea Kelley³, Erik Imel⁵. ¹Indiana University School of Medicine, United States, ²Richard M. Fairbanks School of Public Health at IUPUI, United States, ³Regenstrief Institute, Inc., United States, ⁴Merck, Sharp & Dhome Corp., United States, ⁵Indiana University School of Medicine; Regenstrief Institute, Inc., United States
Disclosures: Ammara Aziz, None
- SU0288 Dual Therapy with Teriparatide and Denosumab in Severe Osteoporosis**
Paul Claffey^{*1}, Aoife Broderick², Ronan O'Toole², James Mahon¹, Kevin McCarroll¹. ¹St. James's Hospital, Ireland, ²St James's Hospital, Ireland
Disclosures: Paul Claffey, None

Sunday

- SU0289 Quadruple-Labeled Transiliac Crest Biopsies Quantify Bone Formation Response to Teriparatide in Premenopausal Women with Idiopathic Osteoporosis**
 Adi Cohen^{*1}, David Dempster², Hua Zhou³, Robert Recker⁴, Joan Lappe⁴, Mafo Kamanda-Kosseh¹, Mariana Bucovsky¹, Arindam RoyChoudhury¹, Julie Stubby⁴, Emily Stein¹, Thomas Nickolas¹, Elizabeth Shane¹. ¹Columbia University, United States, ²Columbia University and Helen Hayes Hospital, United States, ³Helen Hayes Hospital, United States, ⁴Creighton 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 Zhou¹, John Krege², Jahangir Alam², Kathleen Taylor³, Valerie Ruff³. ¹Regional Bone Center, Helen Hayes Hospital, United States, ²Lilly Research Laboratories, Eli Lilly and Company, United States, ³Musculoskeletal and Men's Health, Lilly USA, LLC, United States
Disclosures: David Dempster, Eli Lilly and Company, Consultant
- SU0291 Association between Total Hip Bone Mineral Density at Baseline and Vertebral Fracture Incidence in the MOVER Study**
 Hiroshi Hagino^{*1}, Toshitaka Nakamura², Masako Ito³, Masato Tobinai⁴, Junko Hashimoto⁴, Seitaro Yoshida⁴. ¹School of Health Science & Rehabilitation Division, Tottori University Faculty of Medicine, Japan, ²Aoba Hospital, Japan, ³Center for Diversity & Inclusion, Nagasaki University, Japan, ⁴Chugai 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**
 Josef Hruska^{*1}, Flemming Kjaer Jorgensen², Erik Fink Eriksen³. ¹MeDACom GmbH, Switzerland, ²KLIFO A/S, Denmark, ³Oslo University Hospital, Norway
Disclosures: Josef Hruska, EffRx Pharmaceuticals, Consultant
- SU0293 Indications for Drug Holiday among Japanese Patients after Long-term Bisphosphonate Treatment**
 Yuji Kasukawa^{*1}, Naohisa Miyakoshi¹, Michio Hongo¹, Koji Nozaka¹, Yoshinori Ishikawa¹, Hiroyuki Tsuchie¹, Daisuke Kudo¹, Yoichi Shimada¹. ¹Department 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**
 Jai Hyung Park^{*1}, Ji Wan Kim², Hyun Chul Shon³, Jae Suk Chang⁴, Seong-Eun Byun⁵, Kwang Hwan Jung⁶, Chul-Ho Kim⁴. ¹Kangbuk Samsung Hospital, Sungkyunkwan University, Korea, Republic of, ²Haeundae Paik Hospital, Inje University, Korea, Republic of, ³Chungbuk National University Hospital, Korea, Republic of, ⁴Asan Medical Center, University of Ulsan, Korea, Republic of, ⁵CHA Bundang Medical Center, CHA university, Korea, Republic of, ⁶Ulsan University Hospital, Korea, Republic of
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 Kim¹, Sun-Jong Kim¹, Sang-Hwa Lee¹. ¹Ewha 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}. ¹Kishikawa 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 Weiss¹, Matthew Bouchonville II¹, David Chafey¹, Sanjeev Arora¹. ¹University 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**
 Jiannong Liu^{*1}, Haifeng Guo¹, Richard Barron², Lionel Pinto². ¹Minneapolis Medical research Foundation, United States, ²Global Health Economics, Amgen Inc., United States
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 Pannacciulli², J Malouf-Sierra³, A Singer⁴, E Czerwinski⁵, HG Bone⁶, C Wang², RB Wagman², JP Brown⁷. ¹Colorado Center for Bone Research, United States, ²Amgen Inc., United States, ³Hospital de la Santa Creu i Sant Pau, Spain, ⁴Georgetown University Medical Center, United States, ⁵Krakow Medical Center, Poland, ⁶Michigan Bone and Mineral Clinic, United States, ⁷CHU 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 Yun¹, Kwang-Jun Oh¹. ¹Department 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 Krege², Sonja Gamsjaeger¹, Erik Eriksen³, David Burr⁴, Damon Disch², Jan Stepan⁵, Astrid Fahrleitner-Pammer⁶, Klaus Klaushofer¹, Imre Pavo⁷. ¹Ludwig Boltzmann Institute of Osteology, Hanusch Hospital of WGKK, AUVA Trauma Centre Meidling, 1st Medical Department, Hanusch Hospital, Austria, ²Eli Lilly and Company, United States, ³Dept. of Clinical Endocrinology, Morbid Obesity and Preventive Medicine, Oslo University Hospital Institute of Clinical Medicine, Oslo University, Norway, ⁴Dept of Anatomy and Cell Biology, Indiana Univ School of Medicine, United States, ⁵Institute of Rheumatology, Faculty of Medicine 1, Charles University, Czech Republic, ⁶Department of Internal Medicine, Division of Endocrinology and Metabolism, Medical University of Graz, Austria, ⁷Eli 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. Dempster², Sonja Gamsjaeger¹, Klaus Klaushofer¹, Kathleen A. Taylor³. ¹Ludwig Boltzmann Institute of Osteology, Hanusch Hospital, Austria, ²Regional Bone Center, Helen Hayes Hospital, New York State Department of Health, United States, ³Lilly 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 Simpson¹, Elaine Cong², Andrea Haas³, Karl Insogna¹. ¹Yale University School of Medicine, United States, ²Englewood Hospital, United States, ³Brigham and Women's Hospital, United States
Disclosures: Anna Maria Santoro, None

Sunday

- SU0304 Fracture healing is expedited via preferential upregulation of Wnt/β-catenin using targeted nanoparticle GSK3β inhibitor delivery**
 Danielle Benoit^{*1}, Yuchen Wang¹, Maureen Newman¹, Tzong-Jen Sheu², J. Edward Puzas².
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Disclosures: Danielle Benoit, None
- SU0305 LIGHT/TNFSF14 deficiency affects basal bone remodeling through the regulation of osteoprotegerin expression**
 Giacomina Brunetti^{*1}, Luciana Lippo², Sara Bortolotti¹, Giuseppina Storlino¹, Isabella Gigante¹, Graziana Colaianni¹, Adriana Di Benedetto³, Paolo Pignataro¹, Lindsay Ward-Kavanagh⁴, Mariasevera Di Comite¹, Giorgio Mori², Koji Tamada⁵, Janne E. Reseland⁶, Carl F Ware⁴, Silvia Colucci¹, Maria Grano⁷. ¹Department of Basic and Medical Sciences, Neurosciences and Sense Organs, section of Human Anatomy and Histology, University of Bari, Italy, ²Department of Basic Medical Sciences, Neurosciences and Sense Organs, Section of Human Anatomy and Histology, University of Bari, Italy, ³Department of Clinical and Experimental Medicine, University of Foggia, Italy, ⁴Infectious and Inflammatory Disease Center, Sanford Burnham Prebys Medical Discovery Institute, United States, ⁵Department of Oncology, Johns Hopkins University School of Medicine, United States, ⁶Department of Biomaterials, Institute for Clinical Dentistry, University of Oslo, Norway, ⁷Department of Emergency and Organ Transplantation, Section of Human Anatomy and Histology, Italy
Disclosures: Giacomina Brunetti, None
- SU0306 Ablation of IGF-1R in Osteochondroprogenitors Increases CXCL12 Expression in Bone Lining Cells**
 Alessandra Esposito^{*1}, Lai Wang¹, Tieshi Li¹, Joseph Temple¹, Anna Spagnoli¹. ¹Rush University Medical Center, United States
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- SU0307 Stanniocalcin 1 inhibits RANKL-induced osteoclastogenesis**
 Hanna Gu^{*1}, Hwa Sung Chae¹, Kyung Mi Woo¹, Hyun-Mo Ryoo¹, Jeong-Hwa Baek¹. ¹Department 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**
 Xiaohong Bi^{*1}, Andrea Baker², Guijin Lu¹, Maria Mendoza-Rodriguez³, Vihang Narkar¹, Rebecca Berdeaux⁴, Catherine Ambrose². ¹The Institute of Molecular Medicine, UTHealth, United States, ²Dept of Orthopaedic Surgery, UTHealth, United States, ³Dept Integrative Biology and Pharmacology, UTHealth, United States, ⁴Dept of Integrative Biology and Pharmacology, UTHealth, United States
Disclosures: Xiaohong Bi, None
- SU0309 Inhibiting the WNT Inactivating Lipase NOTUM Stimulates Endocortical Bone Formation Independently of Sex Hormones**
 Robert Brommage^{*1}, Faika Mseeh¹, David Potter¹, Jeff Liu¹, Melanie Shadoan¹, Andrea Thompson¹, Peter Vogel¹, Brian Zambrowicz¹, David Powell¹, Qingyun Liu¹. ¹Lexicon Pharmaceuticals, United States
Disclosures: Robert Brommage, None
- SU0310 Abaloparatide, a Selective PTH1 Receptor Agonist, Reversed Bone Loss and Improved Trabecular Architecture in Orchiectomized Rats**
 Heidi Chandler^{*12}, Tara Mullarkey¹², Rachel Stewart³, Gary Hattersley¹². ¹Radius Health Inc, United States, ²Radius Health inc, United States, ³inviCRO, United States
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**
Fraser Collins^{*1}, A. Daniel Jones¹, Laura McCabe¹, Narayanan Parameswaran¹. ¹Michigan State University, United States
Disclosures: Fraser Collins, None
- SU0312 Chronic kidney disease and aging diminish both whole bone and microscale bone quality**
Chelsea Heveran^{*1}, Adam Rauff², Eric Livingston³, Ted Bateman³, Moshe Levi⁴, Dana Carpenter³, Karen King⁵, Virginia Ferguson³. ¹Department of Mechanical Engineering, University of Colorado, United States, ²Department of Bioengineering, United States, ³Department of Mechanical Engineering, United States, ⁴Department of Medicine, Division of Renal Diseases and Hypertension, University of Colorado School of Medicine, United States, ⁵Department 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 Demay¹. ¹Massachusetts 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. Frye², Julia A. Brickey¹, Paula B. Luis³, Claus Schneider³, Janet L. Funk². ¹Department of Nutritional Sciences, University of Arizona, United States, ²Department of Medicine, University of Arizona, United States, ³Department 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 Andrault¹, Adeleke H Aguda¹, Andrew Yamroz¹, Marcus Lee¹, Gary D Brayer¹, Dieter Bromme¹. ¹University 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 Liu¹, Minqun Du¹, Wenxiu Lai¹, Shuhui Li¹, Liao Cui¹. ¹Guangdong 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 Schneider², Jukka Vääräniemi¹, Jukka P Rissanen¹, Jussi M Halleen¹, Hubert Chen². ¹Pharmatest Services Ltd, Finland, ²Pfenex 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 Hirose², Takeshi Miyamoto³, Sakae Tanaka⁴. ¹oomiya9ort@yahoo.co.jp, Japan, ²j.hirose513@gmail.com, Japan, ³miyamoto@z5.keio.jp, Japan, ⁴tanakas-ort@h.u-tokyo.ac.jp, Japan
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Sunday

- SU0319 Glucocorticoid Induced Osteoporosis is Prevented by Probiotic *Lactobacillus reuteri* 6475 Supplementation.**
Jonathan Schepper^{*1}, Fraser Collins¹, Regina Irwin¹, Naiomy Rios¹, Narayanan Parameswaran¹, Laura McCabe¹. ¹Michigan State University , United States
Disclosures: Jonathan Schepper, None
- SU0320 Prior Focal Radiation Causes Atrophic Nonunion Healing in Mouse Long Bone Fracture**
Luciang Wang^{*1}, Abhishek Chandra², Robert Tower¹, Jaimo Ahn¹, Yejia Zhang¹, Ling Qin¹. ¹Department of Orthopaedic Surgery, Perelman School of Medicine, University of Pennsylvania, United States, ²Department of Physiology and Biomedical Engineering, Division of Geriatric Medicine & Gerontology, Mayo Clinic, United States
Disclosures: Luciang Wang, None
- SU0321 Gut Microbiome Contributes to Altered Bone Homeostasis in SCT and SCD Mice**
Liping Xiao^{*1}, Julia Oh², Patience Meo Burt¹, Kimberly Pantoja¹, Marja Hurley¹. ¹UConn Health, United States, ²Jackson Laboraroty, United States
Disclosures: Liping Xiao, None
- SU0322 Hypoparathyroidism Presenting as Acute Cardiomyopathy**
Rahul Agarwal^{*1}, Lee R. Goldberg², Mona Al Mukaddam¹. ¹University of Pennsylvania, Division of Endocrinology, Diabetes and Metabolism, United States, ²University 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 Ostertag², Sylvie Fernandez², Corinne Collet³, Martine Cohen-Solal². ¹Department of Rheumatology, Lariboisière Teaching Hospital, Univ Paris Diderot, Université Sorbonne Paris Cité, France, ²BIOSCAR UMRS 1132, Université Paris Diderot, Sorbonne Paris Cité, INSERM, France, ³Department 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. Campeau², Margaret Huskey³, Angela Nenninger¹, Deborah V. Novack³, William H. McAlister⁴, Steven Mumm³. ¹Center for Metabolic Bone Disease and Molecular Research, Shriners Hospital for Children, United States, ²Department of Pediatrics, University of Montreal, Canada, ³Division of Bone and Mineral Diseases, Washington University School of Medicine, United States, ⁴Mallinckrodt 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. Miller², Thomas J. Weber³, Munro Peacock⁴, Mary D. Ruppe⁵, Karl Insogna⁶, Diana Luca⁷, Christina Theodore-Oklota⁷, Javier San Martin⁷, Thomas Carpenter⁶. ¹Johns Hopkins University School of Medicine, United States, ²Colorado Center for Bone Research, United States, ³Duke University, United States, ⁴Indiana University School of Medicine, United States, ⁵Houston Methodist Hospital, United States, ⁶Yale University School of Medicine, United States, ⁷Ulragenyx Pharmaceutical Inc., United States
Disclosures: Suzanne Jan De Beur, Ulragenyx Pharmaceutical Inc., Consultant
- SU0326 Uptake of Influenza Vaccine in UK Patients with Fibrodysplasia Ossificans Progressiva**
Richard Keen^{*1}, Nataliya Gak¹, Jacqueline Vinton¹, Benjamin Jacobs¹. ¹Royal National Orthopaedic Hospital, United Kingdom
Disclosures: Richard Keen, None

- SU0327 Pulmonary Function in Adults with XLH who Display Kyphoscoliosis**
 Greg Newman^{*1}, Ilene Rosenberg¹, Ramon Gonzalez¹, Steven Tommasini², Carolyn Macica¹. ¹Quinnipiac University Frank H. Netter MD School of Medicine, United States, ²Yale School of Medicine, United States
Disclosures: Greg Newman, None
- SU0328 A novel COLIA2 C-propeptide cleavage site mutation causing osteogenesis imperfecta with high bone mass**
 Tim Rolvien^{*1}, Uwe Kornak², Julian Stürznickel¹, Stefan Mundlos², Thorsten Schinke¹, Michael Amling¹, Ralf Oheim¹. ¹Department of Osteology and Biomechanics, University Medical Center Hamburg-Eppendorf, Germany, ²Institute 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 Majoor¹, Cornelie Andela¹, Jens Bruggeman¹, Michiel van de Sande¹, Ad Kaptein¹, Neveen Hamdy¹, Sander Dijkstra¹, Natasha Appelman-Dijkstra¹. ¹Leiden 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 Noda¹, Thomas J Gardella², Harald Jüppner². ¹Massachusetts General Hospital, Harvard University, United States, ²Massachusetts 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 Amling¹, Florian Barvencik¹. ¹Department 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}. ¹Department 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 Haddock², Margarita Ramirez², Milliette Alvarado², Loida Gonzalez². ¹University of Puerto Rico, Endocrinology Department, Puerto Rico, ²University 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 Tomazos², Katy Gallop¹, Scott Moseley², Bonnie MK Donato², Gilbert L'Italian². ¹AcastaLloyd Consulting Ltd., United Kingdom, ²Alexion 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 Park¹, Xuan Lin Zheng¹, Hyun Soo Moon¹. ¹Yonsei University, Korea, Republic of
Disclosures: Kyu Hyun Yang, None

Sunday

- SU0336 Automated segmentation and analysis of heterotopic ossification using *in vivo* micro-computed tomography (μ CT)**
Ali Behrooz^{*1}, Peter Waterman¹, Julie Czupryna¹, Thomas Backus², Nikita Kondratiev², Jennifer Lachey². ¹PerkinElmer, United States, ²Keros 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 Hersel², Tom Woods³, Thomas Wegge², Frank Faltinger², Albert Brennauer³, Per Mygind¹, Kennett Sprogoe¹, Vibeke Miller Breinholt¹. ¹Ascendis Pharma A/S, Denmark, ²Ascendis Pharma GmbH, Denmark, ³Ascendis 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 Salmon², Carole-Anne Faraji-Bellée³, Olivier Fogel⁴, Aurélie Benoit⁵, Thorsten Schinke⁶, Agnès Linglart⁷, Corinne Miceli-Richard⁸, Christian Roux⁹, Catherine Chaussain¹⁰, Claire Bardet¹¹. ¹AP-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, ²EA 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, ³EA 4462, Laboratory Orofacial Pathologies, Imaging and Biotherapies, School of Dentistry Paris Descartes University Sorbonne Paris Cité, France, France, ⁴Department of Osteology and Biomechanics, University Medical Center Hamburg Eppendorf, Hamburg, Germany, Germany, ⁵Reference 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, ⁶AP-HP Service Rhumatologie B Hôpital Cochin, Paris, and Medical School Paris Descartes University, France.Pasteur Institute, Immunoregulation Unit, Paris, France, , France, ⁷AP-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, ⁸EA 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, ⁹EA 4462, Laboratory Orofacial Pathologies, Imaging and Biotherapies, School of Dentistry Paris Descartes University Sorbonne Paris Cité, France., France, ¹⁰EA 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 Macica². ¹Quinnipiac University, United States, ²Quinnipiac 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 Krakow¹. ¹UCLA, United States
Disclosures: Ivan Duran, None

- SU0341 Bone targeted bisphosphonate-antibiotic conjugates for the treatment of osteomyelitis biofilms**
 Parish Sedghizadeh *¹, Frank Ebetino², Shuting Sun², Keivan Sadrerafi², Adam Junka³, Susan Mahabady¹, Jeffrey Neighbors⁴, Graham Russell⁵, Charles E. McKenna⁶. ¹Ostrow School of Dentistry, University of Southern California, United States, ²BioVinc, United States, ³Wroclaw Medical University, Poland, ⁴Penn State University, United States, ⁵University of Oxford, United Kingdom, ⁶Dept. 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 Upadhyay¹, LiQin Xie¹, Lily Huang¹, Nanditha Das¹, Rachel Stewart², Morgan Lyon², Keryn Palmer², Saathyaki Rajamani¹, Chris Graul², Merryl Lobo², Tyler Wellman², Edward Soares², Matt Silva², Jacob Hesterman², Kalyan Nannuru¹, Vincent Idone¹, Andrew Murphy¹, Aris Economides¹. ¹Regeneron Pharmaceuticals, Inc., United States, ²INVICRO, 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 Chatterjee¹, Uday Baliga¹, Shikhar Mehrotra¹, Meenal Mehrotra¹. ¹Medical 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 Nakajima², Ichiro Kawamura³, Yuhei Yahiro¹, Hiroyuki Tominaga³, Yasuhiro Ishidou¹, Eiji Taketomi⁴, Shiro Ikegawa², Setsuro Komiya³. ¹Department of Medical Joint Materials, Graduate School of Medical and Dental Sciences, Kagoshima University, Japan, ²Laboratory for Bone and Joint Diseases, Center for Integrative Medical Sciences, RIKEN, Japan, ³Department of Orthopaedic Surgery, Graduate School of Medical and Dental Sciences, Kagoshima University, Japan, ⁴Japanese Red Cross Kagoshima Hospital, Japan
Disclosures: Shingo Maeda, None
- SU0345 PLC γ 2 differentially modulates pro-inflammatory macrophages through DAG and Calcium pathways in arthritic complications**
 Sahil Mahajan*¹, Corinne Decker², Elizabeth Mellins³, Roberta Faccio². ¹Department of Orthopedics, Washington University, School of Medicine, United States, ²Department of Orthopaedics, Washington University, School of Medicine, United States, ³Department 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 BAE¹, Bong-su KIM², Rabia Islam¹, Young-dan CHO¹, Won-joon YOON¹, Kyung-mi WOO², Jeong-Hwa Baek¹, Hyun-mo RYOO¹. ¹Seoul National University, Korea, Republic of, ²Seoul 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 Wang¹, Raymond Poon², Benjamin Alman³, Peter Kannu², Irina Voronov¹. ¹Faculty of Dentistry, University of Toronto, Canada, ²The Hospital for Sick Children, Canada, ³Duke University, United States
Disclosures: Ralph Zirngibl, None

Sunday

- SU0348 Pathogenesis of the Inherited Skeletal Overgrowth Disorder Caused by Activating Mutations in Natriuretic Peptide Receptor B**
Keiko Yamamoto^{*1}, Masanobu Kawai¹, Miwa Yamazaki¹, Kanako Tachikawa¹, Takuo Kubota², Keiichi Ozono², Toshimi Michigami¹. ¹Department of Bone and Mineral Research, Research Institute, Osaka Women's and Children's Hospital, Osaka Prefectural Hospital Organization, Japan, ²Department 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 McGuigan², Patrik Bartosch², Kristina Akesson². ¹Hallands Hospital, Department of Internal Medicine, Sweden, ²Lund 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 Byun², Yong-Chan Ha¹, Young-Kyun Lee³, Hana Choi⁴, Moon-Jib Yoo⁴, Kyung-Hoi Koo³. ¹Chung-Ang University College of Medicine, Korea, Republic of, ²SoonChunHyang University Hospital, Korea, Republic of, ³Seoul National University Bundang Hospital, Korea, Republic of, ⁴Dankook 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. Lane², Omar Halawa¹, Eric Marty¹, Rehan Sayied¹, Yi Liu¹, Jackie Szymonifka¹, Kirsten Grueter¹, Ridhi Sachdev¹, Lisa A. Mandl². ¹Hospital for Special Surgery, United States, ²Hospital 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 Ioannidis¹, Larkin Lamarche¹, Doug Oliver¹, Lisa Dolovich¹, Sarah Radcliffe¹, Aidan Giangregorio¹, Alexandra Papaioannou¹. ¹McMaster 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 Kudo¹, Michio Hongo¹, Yuji Kasukawa¹, Yoshinori Ishikawa¹, Yoichi Shimada¹. ¹Department 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 Lim², Yunie Rhee³, Han Seok Choi⁴, Sung-Kil Lim¹. ¹Division of Endocrinology and Metabolism, Department of Internal Medicine, Yonsei University College of Medicine, Korea, Republic of, ²Division of Endocrinology and Metabolism, Department of Internal Medicine, Yonsei University Wonju College of Medicine, Korea, Republic of, ³Department of Internal Medicine, Endocrine Research Institute, Severance Hospital, Yonsei University College of Medicine, Korea, Republic of, ⁴Division 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 Mikhail¹, Melissa Fazzari¹, Ruban Dhaliwal², Subhashini Katumuluwa¹, John Aloia¹. ¹NYU Winthrop Hospital , United States, ²SUNY 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 Brown², Reju Korah², Timothy Murtha², Justin Bellizzi¹, Kourosh Parham³, Tobias Carling², Jessica Costa¹, Andrew Arnold¹. ¹Center for Molecular Medicine, University of Connecticut School of Medicine, United States, ²Yale Endocrine Neoplasia Laboratory, Yale School of Medicine, United States, ³University 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 Hinojosa¹, Edu Cortés¹, Josep Pota Gines², Luis Del Rio³, Renaud Winzenrieth¹. ¹Galgo Medical SL, Spain, ²Laboratorio de Anatomía, Hospital Clinic, Spain, ³Cetir 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 Suominen¹, Jussi M Halleen¹, Azusa Tanaka², Michael Seiler², Jenni Bernoulli¹, Jukka Morko³. ¹Pharmatest Services Ltd, Finland, ²Taconic Biosciences, United States, ³Pharmatest 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. Kliethermes², Tamara A. Scerpella². ¹SUNY Upstate Medical University, United States, ²University 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 Gibbs¹, Chang Yang¹, Jennifer Davis¹, Anna Ballard¹, Linda Cox¹, Deborah V. Novack¹. ¹Washington 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 Vilayphiou², Elsa S Strotmeyer³, Paolo Caserotti⁴, Deborah Kado⁵, Iva Miljkovic³, Peggy M Cawthon¹, Dennis M Black¹, Sharmila Majumdar¹, Jane A Cauley³, Eric S Ornwell⁶. ¹University of California, San Francisco, United States, ²Scanco Medical AG, Switzerland, ³University of Pittsburgh, United States, ⁴University of Southern Denmark, Denmark, ⁵University of California, San Diego, United States, ⁶Oregon Health & Science University, United States
Disclosures: Andrew Burghardt, None
- LB-SU0363 Loss of sex steroids attenuates traumatic heterotopic ossification**
Semahat Serra Ucer^{*1}, Charles Hwang¹, Anita Vaishampayan¹, Michael T. Chung¹, John Li¹, Chase Pagani¹, Joe Habbouche¹, Shuli Li¹, Benjamin Levi¹. ¹University of Michigan, United States
Disclosures: Semahat Serra Ucer, None

Sunday

- 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 Buchanan¹, Debra Bemben¹, Michael Bemben¹, Allen Kneehans², Jason Campbell¹. ¹The University of Oklahoma, United States, ²The 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 Sumner¹, Abraham Palmer², Maleeha Mashiatulla¹. ¹Rush University Medical Center, United States, ²UC San Diego, United States
Disclosures: Meghan Moran, None
- LB-SU0366 BMP2 Regulates Enthesal Bone Formation in Antigen-Induced Arthritis**
 Yukiko Maeda^{*1}, Catherine Manning¹, Ellen Gravallese¹. ¹University 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 Chung², Yu-ren Chen¹, Yuan-ye Kuo¹, Dar-ming Lai².
¹Graduate Institute of Oncology, National Taiwan University, Taiwan, Province of China,
²Department 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 Villareal¹, María J Rico², Viviana R Rozados², O. Graciela Scharovsky², Verónica E Di Loreto¹. ¹Laboratorio de Biología Ósea. Facultad de Ciencias Médicas UNR, Argentina, ²Instituto 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 Tokuhara¹, José Carlos Guareschi Filho¹, Adriana Arruda Matos¹, João Paulo Domezi¹, Tania Mary Cestari¹, Vimal Veeriah², Camila Peres-Buzalaf³, Rodrigo Cardoso de Oliveira¹. ¹University of São Paulo, Brazil,
²The Kennedy Institute of Rheumatology- University of Oxford, United Kingdom,
³University 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 Kimura¹, Joy Wu¹. ¹Stanford 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 yang¹, baorong he¹, dingjun hao¹. ¹xi'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 Chan², Rogely Boyce³, Hossein Salimi-Moosavi⁴, Helen J. McBride³, Viviana Gradiñaru¹. ¹Division of Biology and Biological Engineering, California Institute of Technology, Pasadena, CA 91125, USA, United States, ²Division of Biology and Biological Engineering, California Institute of Technology, Pasadena, CA 91125, USA., United States, ³Comparative Biology and Safety Sciences, Amgen, Thousand Oaks, CA 91320, USA, United States, ⁴Pharmacokinetics 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 Pieper¹, Kenneth Lyles¹, Courtney VanHoutven¹, Joanne LaFleur², Robert Adler³. ¹Duke University, United States, ²University of Utah, United States, ³Richmond 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 Humbert², Miguel Angel Gonzalez Ballester³, Luis Del Rio⁴, Renaud Winzenrieth¹, Silvana Di Gregorio⁵. ¹Galgo Medical, Spain, ²Galgo Medical SL, Spain, ³SIMBioSys, Universitat Pompeu Fabra, Spain, ⁴CETIR Grup Mèdic, Spain, ⁵CETIR 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 Josse¹, Erin Norris¹, Shabbir Mewa¹, Karl Bruckmueller², Angela Cheung³. ¹St. Michael's Hospital and the University of Toronto, Canada, ²St. Michael's Hospital, Canada, ³UHN 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 (CaMos)**
Sandra Cooke-Hubley^{*1}, Gao Zhiwei¹, Gerald Mugford¹, Stephanie M. Kaiser², David Goltzman³, William D. Leslie⁴, K. Shawn Davison⁵, Jerilynn C. Prior⁶, Christopher S. Kovacs¹. ¹Memorial University of Newfoundland, Canada, ²Dalhousie University, Canada, ³McGill University, Canada, ⁴University of Manitoba, Canada, ⁵A Priori Medical Sciences, Canada, ⁶University 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 Beaupre¹, Brian Rowe¹, Finlay McAlister¹, Debbie Bellerose¹, Jeffrey Johnson¹, Sumit Majumdar¹. ¹University 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 Ma¹, Rene Chun¹, Brandon Rafison¹, Carter Gottlieb¹, Martin Hewison², John Adams¹. ¹UCLA, United States, ²University 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 Qiu², Elizabeth Warner², Donald Cibula³, Sudhaker D. Rao². ¹Division of Endocrinology, Diabetes and Metabolism, State University of New York Upstate Medical University, United States, ²Bone and Mineral Research Laboratory, Henry Ford Hospital, United States, ³Department 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 Gossiel¹, Margaret Paggiosi¹, Richard Eastell¹, Jennifer Walsh¹. ¹Academic Unit of Bone Metabolism, University of Sheffield, United Kingdom
Disclosures: Amy Evans, None

Sunday

- 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 Duong², Kenneth Kozloff¹, James Henderson³, Mark Banaszak Holl¹. ¹University of Michigan, United States, ²Merck & Co. (retired), United States, ³Center 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 Buffat¹, Bita Yousefi¹, Christoph Senn¹, Sandra Grifone¹, Kurt Lippuner¹. ¹Department 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 Duckworth¹, Christopher Tuck¹, Aryally Rodriguez¹, Gordon Murray¹, Margaret McQueen¹. ¹University 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 Kim², Maria Almeida², Shengyu Mu², Christy Simecka².
¹Georgia State University, United States, ²University 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 Evans², Ha-Neui Kim³, Monique O'leary¹⁴, Li Han³, Ryan Murphy¹⁴, Kristin Koenig¹⁴, Michael Presley¹⁴, Emmeline Academia¹⁴, Brittany Garrett¹⁴, Matt Laye¹⁴, Daniel Edgar¹⁴, Chris Zambatoro¹⁴, Tracey Barhydt¹⁴, Colleen Dewey¹⁴, Jarrot Mayfield¹⁴, Joy Wilson¹⁴, Silvestre Alavez¹⁴, Brian Kennedy¹⁴, Julie Andersen¹⁴, Pankaj Kapahi¹⁴, Maria Schuller Almeida³, Gordon Lithgow¹⁴. ¹Buck Institute for Research on Aging, United States, ²CPMC, United States, ³University of Arkansas for Medical Sciences, United States, ⁴Buck 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 Liese¹, Paul Harmatz², Jerry Vockley³, Wolfgang Höglar⁴, Shanggen Zhou⁵, Andrew Denker⁶, Anna Petryk⁶, Cheryl Rockman-Greenberg⁷. ¹University Children's Hospital, University of Würzburg, Germany, ²UCSF Benioff Children's Hospital Oakland, United States, ³University of Pittsburgh School of Medicine and Graduate School of Public Health, United States, ⁴Birmingham Children's Hospital and Institute of Metabolism and Systems Research, University of Birmingham, United Kingdom, ⁵Chiltern International Inc., United States, ⁶Alexion Pharmaceuticals, Inc., United States, ⁷Children'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 Lim², Gary S. Gottesman¹, Lien Trinh², William H. McAlister³, Deborah V. Novack⁴, Vinieth N. Bijanki⁵, Angela Nenninger¹, Steven Mumm⁴, David Buchbinder². ¹Shriners Hospital for Children, St. Louis, United States, ²Children's Hospital of Orange County, United States, ³St. Louis Children's Hospital, United States, ⁴Washington University School of Medicine, United States, ⁵Shriners 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 Yang¹, Andrew Goertzen¹, Lisa Lix¹, Yunhua Luo¹. ¹University 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 Majumdar², Suzanne Morin³, Lisa Lix⁴, Helena Johannsson⁵, Anders Oden⁵, Eugene McCloskey⁵, John Kanis⁵. ¹University of Manitoba, Canada, ²University of Alberta, Canada, ³McGill University, Canada, ⁴Lisa.Lix@umanitoba.ca, Canada, ⁵University of Sheffield Medical School, United Kingdom

Disclosures: William Leslie, None

3:00 pm 1083 The ROSE study: Risk-stratified Osteoporosis Strategy EvaluationEffectiveness of a two-step population based osteoporosis screening programme using FRAX® : A randomised prospective population-based study.

katrine Hass Rubin^{*1}, Teresa Holmberg²⁴, Mette Juel Rothmann²⁴, Kim Brixen³, Mikkel Hoejberg²⁴, Jeppe Gram²⁴, Michael Bech²⁴, Claus Glüer⁵, Reinhard Barkmann⁵, Anne Pernille Hermann²⁴. ¹OPEN - Odense Patient Data Explorative Network, Denmark, ²University of Southern Denmark, Denmark, ³Odense University Hospital, Denmark, ⁴University of southern Denmark, Denmark, ⁵University 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 Merle², Emmanuelle Vignot¹, Jean-Baptiste Pialat³, Anne-Marie Schott⁴, Pawel Szulc⁴, Eric Lespessailles⁵, Roland Chapurlat⁴. ¹Hôpital Edouard Herriot, France, ²INSERM, France, ³Centre Hospitalier Lyon Sud, France, ⁴INSERM U1033, France, ⁵CHR d'Orléans, France

Disclosures: Mathilde Proriol, None

Sunday

- 3:30 pm** **Measures of physical performance or function, but not appendicular lean mass, predict new fractures independently of FRAX probability: Findings from MrOS**
1085 Nicholas Harvey^{*1}, Anders Odén², Eric Orwoll³, Jodi Lapidus⁴, Timothy Kwok⁵, Magnus Karlsson⁶, Björn Rosengren⁶, sten Ljunggren⁷, Cyrus Cooper¹, Peggy Cawthon⁸, John Kanis⁹, Claes Ohlsson², Dan Mellström², Helena Johansson¹⁰, Eugene McCloskey⁹.
¹MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, ²Centre for Bone and Arthritis Research (CBAR), Sahlgrenska Academy, University of Gothenburg, Sweden, ³Oregon Health & Science University, United States, ⁴Department of Public Health and Preventive Medicine, Division of Biostatistics, Oregon Health and Science University, United States, ⁵Department of Medicine & Therapeutics and School of Public Health, The Chinese University of Hong Kong, Hong Kong, ⁶Clinical and Molecular Osteoporosis Research Unit, Department of Clinical Sciences Malmö, Lund University and Department of Orthopedics, Skane University Hospital, Sweden, ⁷Department of Medical Sciences, University of Uppsala, Sweden, ⁸Department of Epidemiology and Biostatistics, University of California, United States, ⁹Centre for Metabolic Bone Diseases, University of Sheffield, United Kingdom, ¹⁰Institute for Health and Aging, Catholic University of Australia, Australia
Disclosures: Nicholas Harvey, None
- 3:45 pm** **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**
1086 Eugene McCloskey^{*1}, Nicholas Harvey², Helena Johansson¹, Lee Shepstone³, Elizabeth Lenaghan³, Cyrus Cooper⁴, John Kanis¹, and the SCOOP Study Investigators⁵.
¹Centre for Metabolic Bone Diseases, University of Sheffield, United Kingdom, ²MRC Lifecourse Epidemiology Unit, University of Southampton, United Kingdom, ³University of East Anglia, United Kingdom, ⁴MRC Lifecourse Epidemiology Unit, United Kingdom, ⁵The 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** **Osteoblasts are a major source of circulating Dickkopf-1 which is responsible for bone loss due to glucocorticoids in female mice**
1087 Juliane Colditz^{*1}, Sylvia Thiele², Ulrike Baschant², Christof Niehrs³, Lynda Bonewald⁴, Lorenz Hofbauer², Martina Rauner². ¹TU Dresden, Germany, ²TU Dresden, Germany, ³Uni Heidelberg, Germany, ⁴Indiana University School of Medicine, United States
Disclosures: Juliane Colditz, None

- 2:45 pm** **BMPs and Activins regulate bone mass through the competition of shared type 2 receptors**
1088 Shek Man Chim^{*1}, Laura Gamer¹, Vicki Rosen¹. ¹Department of Developmental Biology, Harvard School of Dental Medicine, United States
Disclosures: Shek Man Chim, None

- | | |
|-----------------|---|
| 3:00 pm
1089 | Increased Ca2+ signaling through altered CaV1.2 L-type Ca2+ channel activity promotes bone 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
<i>Disclosures:</i> Chike Cao, None |
| 3:15 pm
1090 | ASBMR 2017 Annual Meeting Young Investigator Award
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
<i>Disclosures:</i> Yukihiro Kohara, None |
| 3:30 pm
1091 | Deletion of Menin Early in the Osteoblast Lineage Leads to Increased Bone Resorption, and 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
<i>Disclosures:</i> Jad Abi-Rafeh, None |
| 3:45 pm
1092 | ASBMR 2017 Annual Meeting Young Investigator Award
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
<i>Disclosures:</i> Aysha Khalid, None |

CONCURRENT ORALS: RARE BONE DISEASES (TRANSLATIONAL)

2:30 pm - 4:00 pm

Colorado Convention Center

Four Seasons Ballroom I

Sunday

Co-Chairs

Co-Chairs

Eva S. Liu, M.D.
Brigham and Women's Hospital, USA

Brigham and Women's Hospital
Disclosures: Eva S. Liu, None

Wim Van Hul, PhD

University of Antwerp

Disclosures: Wim Van Hul, None

- 1093** **Twice Daily Injection of Inverse Agonist for Constitutively Active Parathyroid Hormone Receptor Ameliorates the Bone Phenotype in Col1-Jansen's Mice**
Hiroshi Noda^{*1}, Hiroshi Saito¹, Monica Reyes¹, Braden A Corbin¹, Jun Guo¹, Michael Armanini¹, Daniel Brooks², Janaina S Martins¹, Mary L Bouxsein², Marie B Demay³, Harald Jueppner³, Thomas J Gardella³. ¹Endocrine Unit, Massachusetts General Hospital, United States, ²Endocrine Unit, Massachusetts General Hospital and Beth Israel Deaconess Medical Center, United States, ³Endocrine 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 BMPs**
1094 Takenobu Katagiri^{*1}, Shinnosuke Tsuji², Sho Tsukamoto¹, Satoshi Ohte¹, Kengo Kumagai¹, Kenji Osawa¹, Kiyosumi Takaishi², Kensuke Nakamura³, Yoshiro Kawaguchi⁴, Jun Hasegawa⁴. ¹Division of Pathophysiology, Research Center for Genomic Medicine, Saitama Medical University, Japan, ²Rare Disease & LCM Laboratories, R&D Division, Daiichi-Sankyo Co., Ltd., Japan, ³Modality Research Laboratories, Biologics Division, Daiichi-Sankyo Co., Ltd., Japan, ⁴Modality 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 Fsp1-Ext1CKO Mouse Model of Multiple Osteochondromas**
1095 Toshihiro Inubushi^{*1}, Isabelle Lemire², Michael Harvey², Yu Yamaguchi¹. ¹Sanford Burnham Prebys Medical Discovery Institute, United States, ²Clementia 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 Daghlas¹, Marybeth Brown², Ferris Pfeiffer³, Yixia Xie⁴, Mark Dallas⁵, R. Scott Pearsall⁶, Sarah Dallas⁴, Charlotte Phillips¹. ¹Department of Biochemistry, University of Missouri, United States, ²Department of Biomedical Sciences and Physical Therapy Program, University of Missouri, United States, ³Department of Bioengineering, University of Missouri, United States, ⁴Department of Oral and Craniofacial Biology, University of Missouri, United States, ⁵Department of Oral and Craniofacial Biology, University of Missouri, United States, ⁶Acceleron 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 Rauch¹. ¹Shriners 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 mouse model of Jansen's Metaphyseal Chondrodysplasia**
1098 Jun Guo^{*1}, Hiroshi Noda¹, Monica Reyes¹, Michael Armanini¹, Janaina Martins¹, Dan Brooks¹, Mary Bouxsein¹, Marie Demay¹, Harald Jueppner¹, Thomas, J Gardella¹. ¹Massachusetts 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 1099 Daily PTH (1-34) Administration Preserves Bone Structure and Enhances Bone Turnover after Severe Immobilization-induced Bone Loss**
Lauren Harlow^{*1}, Karim Sahbani¹, Jeffry Nyman², Christopher Cardozo¹, William Bauman¹, Hesham Tawfeek¹. ¹James J. Peters VA Medical Center, United States, ²Vanderbilt University School of Medicine, United States
Disclosures: Lauren Harlow, None
- 2:45 pm 1100 ASBMR 2017 Annual Meeting Young Investigator Award**
The GABA_{B1}R Is A Critical Promoter of PTH Secretion in Ca2+-deficient and Hyperparathyroidism States
Amanda Herberger^{*1}, Jenna Hwong¹, Hanson Ho¹, Alfred Li¹, Zhiqiang Cheng¹, Frederic Jean-Alphonse², Chia-Ling Tu¹, Jean-Pierre Vilardaga², Wenhan Chang¹. ¹University of California, San Francisco, United States, ²University of Pittsburgh School of Medicine, United States
Disclosures: Amanda Herberger, None
- 3:00 pm 1101 Osteocalcin Has Anti-Geronic Functions in the Brain**
Lori Khrimian^{*1}, Arnaud Obri¹, Gerard Karsenty¹. ¹Columbia University Medical Center, United States
Disclosures: Lori Khrimian, None
- 3:15 pm 1102 The Effects of Systemic Hedgehog Pathway Activation on Aged Fracture Healing**
Jennifer McKenzie^{*1}, Clayton Maschhoff¹, Xiaochen Liu¹, Nicole Migotsky¹, Matthew Silva¹, Michael Gardner². ¹Washington University in St. Louis, United States, ²Stanford University, United States
Disclosures: Jennifer McKenzie, None
- 3:30 pm 1103 Loss of deoxyribonuclease 1 impairs renal phosphate reabsorption and increases serum fibroblast growth factor 23 in mice**
Daniela Egli-Spichtig^{*1}, Martin Zhang¹, Carsten A Wagner², Farzana Perwad¹. ¹University of California San Francisco, United States, ²University of Zurich, Switzerland
Disclosures: Daniela Egli-Spichtig, None
- 3:45 pm 1104 1, 25-dihydroxyvitamin D treatment impairs renal FGF23 signaling in the Hyp mouse model of XLH.**
Janaina Da Silva Martins^{*1}, Eva S. Liu¹, Marie B. Demay¹. ¹Endocrine Unit Massachusetts General Hospital, Harvard Medical School, United States
Disclosures: Janaina Da Silva Martins, None

Sunday

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 Zou¹, Tim Chen¹, Tim Chen¹, Yousef Abu-Amer¹, Steven Teitelbaum¹.
¹Washington 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 Iwaniec², Russell T Turner², Yi-Wei Lin¹, Bart L Clarke³, Li-Na Wei¹, Anne Gingery⁴. ¹Department of Pharmacology, University of Minnesota Medical School, United States, ²Skeletal Biology Laboratory, College of Public Health and Human Sciences, Oregon State University, United States, ³Division of Endocrinology, Diabetes, Metabolism, and Nutrition, United States, ⁴Department of Orthopedics Mayo Clinic, United States
Disclosures: Bomi Lee, None

- 5:00 pm ASBMR 2017 Annual Meeting Young Investigator Award**
1107 PGC1 β Stimulates Osteoclast Function But not Formation via Mitochondrial Biogenesis and Activation
Yan Zhang^{*1}, Nidhi Rohatgi², Deborah V. Novack³, Joel Schilling⁴, Steven L. Teitelbaum³, Wei Zou². ¹Department 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, ²Department of Pathology and Immunology, Washington University School of Medicine, St. Louis, MO 63110, USA, United States, ³Department 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, ⁴Cardiovascular 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 Pagnotti², Jolene J. Windle³, G. David Roodman⁴, Noriyoshi Kurihara¹. ¹Indiana University, Medicine/Hematology-Oncology, United States, ²Indiana University, Medicine/Endocrinology, United States, ³Human and Molecular Genetics, Virginia Commonwealth University, United States, ⁴Indiana 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 Ng², Danyal Butt¹, Karrnan Pathmanandavel¹, Mate Biro³, Rachael Terry¹, Weng Hua Khoo¹, Sindhu Mohanty¹, Marija Simic¹, Ryan Chai¹, Julian Quinn¹, Jessica Pettitt¹, David Abi-Hanna³, Rohit Jain⁴, Wolfgang Weninger⁴, Paul Baldock¹, Michael Rogers¹, Robert Brink¹, Nathan Pavlos², Peter Croucher¹, Tri Phan¹.
¹The Garvan Institute, Australia, ²University of Western Australia, Australia, ³University of New South Wales, Australia, ⁴Centenary 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 Leads to Continued Lower Fracture Risk After Transition to Denosumab**
1110 Felicia Cosman^{*1}, Daria B Crittenden², Serge Ferrari³, Aliya Khan⁴, Nancy Lane⁵, Kurt Lippuner⁶, Toshio Matsumoto⁷, Cassandra E Milmont², Cesar Libanati⁸, Andreas Grauer², ¹Helen Hayes Hospital, West Haverstraw, and Columbia University, United States, ²Amgen Inc., United States, ³Geneva University Hospital, Switzerland, ⁴Oakville Medical Centre, Canada, ⁵UC Davis Medical Center, United States, ⁶Osteoporosis Poliklinik, Inselspital, Bern University Hospital and University of Bern, Switzerland, ⁷University of Tokushima, Japan, ⁸UCB 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 Iliac Crest Biopsies From Postmenopausal Women in the FREEDOM Trial**
1111 Roland Chapurlat^{*1}, Nathalie Portero-Muzy¹, Jean-Paul Roux¹, Stephane Horlait², David Dempster³, Andrea Wang², Rachel Wagman², Pascale Chavassieux¹, ¹INSERM UMR 1033, Université de Lyon, France, ²Amgen Inc., United States, ³Columbia 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 zoledronic acid for the treatment of bone marrow lesions - ZoMARS**
1112 Lothar Seefried^{*1}, Jasmin Baumann¹, Franca Genest¹, Anke Heidemeier¹, Rainer Meffert², Franz Jakob³, ¹Clinical Trial Unit, Orthopedic Institute, University Wuerzburg, Germany, ²Department of Trauma, Plastic, Reconstructive, and Hand Surgery, University Hospital Wuerzburg, Germany, ³Orthopedic 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 Santonati², Gaia Tabacco¹, Daria Maggi¹, Claudio Pedone³, Daniela Bosco², Spada Antonio², Bruno Raggiunti⁴, Doris Tina⁴, Silvia Manfrini⁵, Fabio Vescini⁶, ¹Department of Endocrinology and Diabetes, University Campus Bio-Medico, Italy, ²Department of Endocrinology, San Giovanni Addolorato Hospital, Italy, ³Unit of Geriatrics, University Campus Bio-Medico, Italy, ⁴Department of Endocrinology, Hospital San Liberatore Atri, Italy, ⁵Department of Endocrinology and Diabetes, University Campus Bio-Medico, Italy, ⁶Department of Endocrinology and Diabetes, Santa Maria della Misericordia Hospital, Italy
Disclosures: Andrea Palermo, None

Sunday

5:30 pm 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. ¹Eli Lilly and Company , United States, ²STATinMED Research , United States, ³Eli Lilly and Company, United States, ⁴The CORE Institute , United States, ⁵Columbia 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 The Fracture Panorama in Children and Adolescents - A Register-based Study of 3.5 Million Person-years in Sweden 1999-2010

1115 Daniel Jerrhag^{*1}, Magnus Karlsson¹, Martin Englund², Bjorn Rosengren¹. ¹Clinical and Molecular Osteoporosis Research Unit, Department of Orthopedics and Clinical Sciences, Lund University, Skane University Hospital Malmoe, Sweden, Sweden, ²Clinical 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 ASBMR 2017 Annual Meeting Young Investigator Award

1116 Femoral Stress Index Is Prominently Associated With Risk Of Fracture In Children Of School Age

Olja Grgic^{*1}, Carolina Medina-Gomez², Katerina Trajanoska³, Thomas J Beck⁴, Carola M Zillikens⁵, Vincent W V Jaddoo⁶, Eppo B Wolvius⁷, Fernando Rivadeneira⁸.

¹EMC, Generation R, EMC, Internal Medicine, EMC, Maxillofacial Surgery, Rotterdam/ NL, Netherlands, ²EMC, The Generation R Study Group, EMC, Internal Medicine, EMC, Department of Epidemiology, Netherlands, ³EMC, Internal Medicine, EMC, Department of Epidemiology, Netherlands, ⁴Department of Radiology, The Johns Hopkins University School of Medicine, Baltimore, USA, United States, ⁵EMC, Internal Medicine, Netherlands, ⁶EMC, The Generation R Study Group, Netherlands, ⁷EMC, The Generation R Study Group, 3EMC, Oral & maxillofacial surgery, special dental care and orthodontics, Netherlands, ⁸EMC, The Generation R Study Group, EMC, Internal Medicine , Netherlands

Disclosures: Olja Grgic, None

5:00 pm Fractures Prospectively Recorded in Healthy Children and Adolescents Are Predictive of Radial Peak Bone Mass and Strength Fragility in Females but not in Males

1117 Thierry Chevalley^{*1}, Jean-Philippe Bonjour¹, Marie-Claude Audet¹, Fanny Merminod¹, Bert van Rietbergen², Rene Rizzoli¹, Serge Ferrari¹. ¹Division of Bone Diseases, Geneva University Hospitals and Faculty of Medicine, Switzerland, ²Department 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 skeletal maturation**

Alessandra Chesi^{*1}, Olja Grgić², Carolina Medina-Gomez², Shana E. McCormack¹, Diana L. Cousminer¹, Jonathan A. Mitchell¹, Heidi J. Kalkwarf³, Joan M. Lappe⁴, Vicente Gilsanz⁵, Sharon E. Oberfield⁶, John A. Shepherd⁷, Andrea Kelly¹, Soroosh Mahboubi¹, Katerina Trajanoska², Vincent Jaddoe², Andre G. Uitterlinden², Eppo B. Wolvius², Babette S. Zemel¹, Struan F.A. Grant¹, Fernando Rivadeneira². ¹The Children's Hospital of Philadelphia, United States, ²Erasmus MC, Netherlands, ³Cincinnati Children's Hospital Medical Center, United States, ⁴Creighton University School of Medicine, United States, ⁵University of Southern California Los Angeles, United States, ⁶Columbia University Medical Center, United States, ⁷University 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 HRpQCT Compared to Oral Ethinyl Estradiol-Progesterone Combination Pills in Oligo-menorrhagic Athletes: a Randomized Controlled Trial**

Kathryn Ackerman^{*1}, Meghan Slattery¹, Vibha Singhal¹, Charumathi Baskaran¹, Karen Campoverde Reyes¹, Alexander Toth¹, Hang Lee¹, Mary Bouxsein¹, Anne Klibanski¹, Madhusmita Misra¹. ¹Massachusetts 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 Probiotics Induce Bone Anabolism Via A Regulatory T Cells-Wnt10b Mediated Pathway**

Abdul Malik Tyagi^{*1}, Mingcan Yu¹, Trevor Derby¹, Jau-Yi Li¹, Jonathan Adams¹, Rheinallt M. Jones¹, Roberto Pacifici¹. ¹Emory University, United States

Disclosures: Abdul Malik Tyagi, None

- 4:45 pm Prebiotic Alteration of the Gut Microbiome Rescues Impaired Fracture Healing in Obesity**

Christopher Farnsworth^{*1}, Ashlee MacDonald², Eric Schott¹, Jun Zhang³, Alex Grier⁴, Cheryl Ackert-Bicknell⁵, Steven Gill⁶, Hani Awad⁷, Michael Zuscik⁷, John Ketz⁸, Robert Mooney⁹. ¹Department of Pathology and Center for Musculoskeletal Research, University of Rochester Medical Center, United States, ²Department of Orthopedic Surgery, University of Rochester Medical Center, United States, ³Center for Musculoskeletal Research, University of Rochester Medical Center, United States, ⁴Department of Microbiology and Immunology, University of Rochester Medical Center, United States, ⁵Department of Orthopaedic Surgery and Center for Musculoskeletal Research, United States, ⁶Department of Microbiology and Immunology, United States, ⁷Department of Orthopedic Surgery and Center for Musculoskeletal Research, United States, ⁸Department of Orthopedic Surgery, United States, ⁹Department of Pathology and Center for Musculoskeletal Research, United States

Disclosures: Christopher Farnsworth, None

Sunday

- | | |
|-----------------|--|
| 5:00 pm
1122 | ASBMR 2017 Annual Meeting Young Investigator Award
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
<i>Disclosures:</i> Weiqing Liu, None |
| 5:15 pm
1123 | ASBMR 2017 Annual Meeting Young Investigator Award
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
<i>Disclosures:</i> Renlei Yang, None |
| 5:30 pm
1124 | A comparison of the efficacy and side effects of an active site and ectosteric inhibitor of Cathepsin K in mouse
Preety Panwar ^{*1} , Kamini Srivastava ¹ , Dieter Bromme ¹ . ¹ University of British Columbia, Canada
<i>Disclosures:</i> 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 Econis, M.D.

Indiana University School of Medicine

Disclosures: Michael Econis, 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**

Sunday

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 Hypophosphatemic 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

Sunday

Monday, September 11, 2017

MONDAY, SEPTEMBER 11, 2017

DAY-AT-A-GLANCE

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8:00 am - 9:30 am	196
Concurrent Orals: Bone Tumors and Metastasis II <i>Four Seasons Ballroom II-III</i>	
8:00 am - 9:30 am	197
Concurrent Orals: Osteocytes <i>Four Seasons Ballroom I</i>	
8:00 am - 9:30 am	198
Concurrent Orals: Repair and Regeneration <i>Four Seasons Ballroom IV</i>	
9:30 am - 2:00 pm	199
Posters Open <i>ASBMR Discovery Hall - Exhibit Hall A & B1</i>	
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Discovery Hall Open <i>ASBMR Discovery Hall - Exhibit Hall A & B1</i>	
9:30 am - 9:45 am	199
Networking Break <i>Mile High Ballroom Foyer and Four Seasons Ballroom Foyer</i>	
9:45 am - 11:00 am	199
Plenary Orals: Basic II <i>Four Seasons Ballroom II-III</i>	
9:45 am - 11:00 am	200
Plenary Orals: Clinical Highlights <i>Mile High Ballroom</i>	
11:00 am - 11:15 am	201
Networking Break <i>Mile High Ballroom Foyer and Four Seasons Ballroom Foyer</i>	
11:15 am - 12:00 pm	202
Late-breaking Abstract Presentations: Clinical <i>Mile High Ballroom</i>	
11:15 am - 12:00 pm	203
Late-breaking Abstract Presentations: Basic and Translational <i>Four Seasons Ballroom I</i>	
12:00 pm - 2:00 pm	203
Poster Session III <i>ASBMR Discovery Hall - Exhibit Hall A & B1</i>	
12:00 pm - 2:00 pm	251
Late-breaking Posters III <i>ASBMR Discovery Hall - Exhibit Hall A & B1</i>	
2:00 pm - 3:15 pm	256
Plenary Symposium: Bone-Muscle Interactions <i>Mile High Ballroom</i>	
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Closing Reception <i>Mile High Ballroom Foyer</i>	

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 Longitudinal 5-year changes in bone density and microarchitecture after Roux-En-Y Gastric

1125 Bypass

Logan Greenblatt^{*1}, Katherine Lindeman¹, Caroline Rourke¹, Mary Bouxsein¹,
Joel Finkelstein¹, Elaine Yu¹. ¹Massachusetts General Hospital, United States

Disclosures: Logan Greenblatt, None

**8:15 am Adverse Effects of Weight Loss on Bone Microarchitecture in Obese and Non-Obese Older
1126 Adults: The Framingham Study**

Elizabeth Samelson^{*1}, Douglas Kiel², Kerry Broe³, Hanfei Xu⁴, Laiji Yang³,
Robert McLean², Shivani Sahni², Marian Hannan², Mary Bouxsein⁵, Ching-Ti Liu⁴.

¹Harvard Med School, Institute for Aging Research, Hebrew SeniorLife, United States,

²Harvard Med Sch, Inst for Aging Research, Hebrew SeniorLife, United States, ³Inst for

Aging Research, Hebrew SeniorLife, United States, ⁴Boston University, United States,

⁵Harvard Med Sch, BIDMC, South Sudan

Disclosures: Elizabeth Samelson, None

8:30 am Predictors of Incident Fractures in Obese Subjects With Type 2 Diabetes Mellitus

1127

Anna Nilsson^{*1}, Kristian Axelsson², Dan Lundh³, Ann-Marie Svensson⁴, Björn Eliasson⁵,
Mattias Lorentzon⁶. ¹Institute of Medicine, Sahlgrenska Academy, Gothenburg University,
Sweden, ²Department of Orthopaedic Surgery, Skaraborg Hospital, Sweden, ³School of
Health and Education, University of Skövde, Sweden, ⁴The Swedish National Diabetes
Register, Center of Registers in Region Västra Götaland, Sweden, ⁵Department of Medicine,
University of Gothenburg, Sweden, ⁶Geriatric Medicine, Center for Bone and Arthritis
Research, Institute of Medicine, Sahlgrenska Academy, Gothenburg University, Sweden

Disclosures: Anna Nilsson, None

8:45 am HIV and Vertebral Fractures: a Systematic Review and Metanalysis

1128

Melissa Premaor^{*1}, Thales Ilha¹, Rafaela Copes¹, Fabio Comim¹, Juliet Compston². ¹Federal
University of Santa Maria, Brazil, ²University of Cambridge, United Kingdom

Disclosures: Melissa Premaor, None

9:00 am ASBMR 2017 Annual Meeting Young Investigator Award

1129

**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 Leslie², Qing Wu¹. ¹University of Las Vegas, Nevada, United
States, ²University of Manitoba, Canada

Disclosures: Yingke Xu, None

Monday

- 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 Hsu¹, Allison Kuipers², Ryan Price³, Aude Nicolas³, Salman Tajuddin³, Samuel Handelman⁴, Liubov Arbeeva⁵, Alessandra Chesi⁶, Ching-Ti Liu⁷, Fredrick Kinyua¹, Wen-Chi Chou¹, David Karasik¹, Roby Joehanes¹, Serkalem Demissie⁷, L. Adrienne Cupples⁷, Babette Zemel⁶, Struan Grant⁶, Joanne M. Jordan⁵, Rebecca Jackson⁴, Michele Evans³, Tamara Harris³, Joseph M. Zmuda², Douglas P. Kiel¹. ¹Hebrew SeniorLife, Harvard Medical School, United States, ²University of Pittsburgh, United States, ³National Institute on Aging, United States, ⁴The Ohio State University, United States, ⁵Thurston Arthritis Research Center, UNC, United States, ⁶Children's Hospital of Philadelphia, United States, ⁷Boston 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 neoplastic potential due to the increase in myeloid derived suppressor cells**
- 1131 Jungeun Yu^{*1}, Laura Doherty², Evan Jellison¹, Ernesto Canalis¹, Archana Sanjay¹. ¹U Conn Health, United States, ²U Conn Health , United States
- Disclosures:* Jungeun Yu, None
- 8:15 am A Novel Osteolineage-derived Cancer-Associated Fibroblast Population In Primary Tumors Expresses DKK1 And Enhances Tumor Growth**
- 1132 Biancamaria Ricci^{*1}, Francesca Fontana², Sahil Mahajan¹, Danielle Ketterer¹, Roberto Civitelli³, Roberta Faccio⁴. ¹Washington University-School of Medicine, Department of Orthopaedic Surgery, United States, ²Washington University-School of Medicine, Department of Medicine-Bone and Mineral Division, United States, ³Washington University-School of Medicine, Department of Medicine-Bone and Mineral Division , United States, ⁴Washington 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 Progression**
- 1133 Mitchell McDonald^{*1}, Cassandra Diegel¹, Galen Hostetter¹, Roderick Bronson², Bart Williams¹. ¹Van Andel Research Institute, United States, ²Harvard 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 Hristova¹, Zoe Valbret¹, Ronak Arjan¹, Antonio Maurizi¹, Alfredo Cappariello¹, Nadia Rucci¹, Anna Teti¹. ¹University of L'Aquila, Italy
- Disclosures:* Mattia Capulli, None
- 9:00 am Metabolic reprogramming in breast cancer bone metastases via PKC-ζ regulated crosstalk of serine biosynthesis and autophagy regulation**
- 1135 Manish Tandon^{*1}, Ahmad Othman¹, Jitesh Pratap¹. ¹Rush 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-Meza¹, Florian Drescher¹, Felipe Olvera-Rodriguez², Patricia Juarez¹, Pierrick Fournier¹. ¹Biomedical Innovation Dept., CICESE, Mexico, ²Instituto 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 Bone Resorption and Facilitate Bone Gain**
1137

Jesus Delgado-Calle^{*1}, Jessica H. Nelson¹, Matthew E. Olson¹, Kevin McAndrews¹, Emily G. Atkinson¹, Xiaolin Tu¹, Teresita Bellido¹. ¹Anatomy 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 (XL α s) mediates FGF23 production by maintaining FGFR1 expression and MAPK signaling in bone**

Qing He^{*1}, Cumhur Aydin², Marc Wein¹, Jordan Spatz¹, Regina Goetz³, Moosa Mohammadi³, Antonius Plagge⁴, Paola Pajevic Divieti Pajevic⁵, Murat Bastep¹. ¹Endocrine Unit, Department of Medicine, Massachusetts General Hospital and Harvard Medical School, United States, ²Department of Endodontics, Gülhane Military Medical Academy, Turkey, ³Department of Biochemistry & Molecular Pharmacology, New York University School of Medicine, United States, ⁴Department of Cellular and Molecular Physiology, Institute of Translational Medicine University of Liverpool, United Kingdom, ⁵Department 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-induced Expression of FGF23**
1139

Melda Onal^{*1}, Alex Carlson¹, Mark Meyer¹, Benkusky Nancy¹, Seong Min Lee¹, Hillary St. John¹, John Wesley Pike¹. ¹University 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-Lewis¹, Eleanor C. Ray¹, Youngho Lu², Sarah L. Dallas¹. ¹University of Missouri, Kansas City, United States, ²Texas A&M University College of Dentistry, United States
Disclosures: Lora A. McCormick, None

Monday

- 9:00 am ASBMR 2017 Annual Meeting Young Investigator Award**
1141 Osteocyte intrinsic TGF β signaling in regulates bone quality through perilacunar remodeling
Neha S. Dole *¹, Courtney M. Mazur¹, Claire Acevedo¹, Justin P. Lopez², David A. Monteiro², Tristan W. Fowler¹, Bernd Gludovatz³, Flynn Walsh⁴, Robert O. Ritchie³, Khalid S. Mohammad⁵, Tamara Alliston¹. ¹Department of Orthopaedic Surgery, University of California San Francisco, United States, ²Department of Orthopaedic Surgery, University of California San Francisco , United States, ³Materials Science Division, Lawrence Berkeley National Laboratory, United States, ⁴Department of Materials Science and Engineering, University of California Berkeley, United States, ⁵Department 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 Balani¹, Rogely Boyce², Henry Kronenberg¹. ¹Endocrine Unit, Massachusetts General Hospital and Harvard Medical School, Boston, MA, United States, ²Amgen, 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 1143 HMGB1 accelerates regeneration of multiple tissues by transitioning stem cells to G_{Alert}***
Geoffrey Lee*¹, Ana Isabel Espirito Santo¹, Stefan Zwingenberger², Emilie Venereau³, Lawrence Cai⁴, Thomas Vogl⁵, Marc Feldmann¹, Marco Bianchi⁶, Nicole Horwood¹, James Chan¹, Jagdeep Nanchahal¹. ¹The Kennedy Institute of Rheumatology, University of Oxford, United Kingdom, ²Department of Orthopaedics, University Hospital Carl Gustav Carus at Technische Universität Dresden, Germany, ³Chromatin Dynamics Unit, Division of Genetics and Cell Biology, San Raffaele Scientific Institute, Italy, ⁴Faculty of Medicine, UNSW Australia, Australia, ⁵Institute of Immunology, University of Münster, Germany, ⁶Chromatin Dynamics Unit, Division of Genetics and Cell Biology, San Raffaele University and Scientific Institute, Italy
Disclosures: Geoffrey Lee, None

- 8:15 am 1144 USP34 is required for BMP2 signaling and bone regeneration**
Mengyuan Wang*¹, Shiwen Zhang¹, Yuchen Guo¹, Weiqing Liu¹, Yuan Wang¹, Liang Xie¹, Junjun Jing¹, Xuedong Zhou¹, Quan Yuan¹. ¹State Key Laboratory of Oral diseases, West China Hospital of Stomatology, Sichuan University, Chengdu 610041, China., China
Disclosures: Mengyuan Wang, None

- 8:30 am 1145 The CaSR Is A Critical Mediator of Chondrocyte Trans differentiation into Osteoblastic Lineage and Bone Fracture Repair in Mice.**
Zhiqiang Cheng*¹, Alfred Li¹, Fuqing Song¹, Jiali Wang¹, Xiaodong Liu¹, Amanda Herberger¹, Jenna Hwong¹, Dolores Shoback¹, Chia-Ling Tu¹, Wenhan Chang¹. ¹UCSF, United States
Disclosures: Zhiqiang Cheng, None

- 8:45 am** **Osteoprogenitor directed overexpression of Notch signaling improves bone fracture healing**
1146 Sanja Novak^{*1}, Emilie Roeder¹, Brya G Matthews¹, Liping Wang¹, Douglas J Adams¹, Ivo Kalajzic¹. ¹UConn Health, United States
Disclosures: Sanja Novak, None
- 9:00 am** **Static Preloading: A Previously Unrecognized Inhibitor of Bone Anabolism**
1147 Sundar Srinivasan^{*1}, Danica Balsiger¹, Philippe Huber¹, Brandon Ausk¹, Steven Bain¹, Edith Gardiner¹, Ted Gross¹. ¹University of Washington, United States
Disclosures: Sundar Srinivasan, None
- 9:15 am** **Mx1-labeled Tendon Stem/Progenitor Cells in Paratenon Contribute to Tendon Regeneration and Repair *in vivo***
1148 Yannis Hara^{*1}, Hamilton Wang¹, Brendan Lee¹, Dongsu Park¹. ¹Department 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 Muscle-Bone Crosstalk**
1149 Kun Wang^{*1}, LeAnn Tiede-Lewis¹, Lora McCormick¹, Nuria Lara¹, Andrew Keightley¹, Nicholas Farina², Jian Huang³, Jane Lian², Marco Brotto³, Lynda Bonewald⁴, Sarah Dallas¹. ¹University of Missouri, Kansas City, United States, ²University of Vermont, United States, ³University of Texas at Arlington, United States, ⁴Indiana University, United States
Disclosures: Kun Wang, None

Monday

- 10:00 am Glutaminase is necessary for the maintenance and specification of mesenchymal stem cells.**
1150 Yilin Yu^{*1}, Leyao Shen¹, Fanxin Long², Courtney Karner³. ¹Department of Orthopedic Surgery, Duke University, United States, ²Department of Orthopedic Surgery, Washington University School of Medicine, United States, ³Departments of Orthopedic Surgery and Cell Biology, Duke University, United States
Disclosures: Yilin Yu, None
- 10:15 am The identification of TGF β -induced osteoclast factors that couple bone resorption to bone formation**
1151 Megan Weivoda^{*1}, Ming Ruan¹, Christine Hachfeld¹, Glenda Evans¹, Stephanie Youssef¹, Rachel Davey², Jeffrey Zajac², Brendan Lee³, Jennifer Westendorf⁴, David Monroe¹, Sundeep Khosla¹, Merry Jo Oursler¹. ¹Mayo Clinic, United States, ²University of Melbourne, Australia, ³Baylor, 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 Laurent², Rougin Khalil¹, Nari Kim¹, Vanessa Dubois³, Ludo Deboel¹, Dieter Schollaert¹, Geert Carmeliet¹, Brigitte Becallonne¹, Frank Claessens¹, Dirk Vanderschueren¹. ¹KU Leuven, Belgium, ²UZ Leuven, Belgium, ³inserm, 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 Jiang¹, David Skalnik², Ernesto Canalis³, David Breault¹. ¹Boston Children's Hospital, United States, ²IUPUI School of Science, United States, ³UConn 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 Portale², Erik Imel³, Annemieke Boot⁴, Wolfgang Höglér⁵, Agnès Linglart⁶, Raja Padidela⁷, William van't Hoff⁸, Meng Mao⁹, Alison Skrinar¹⁰, Emil Kakkis¹⁰, Javier San Martin¹⁰, Thomas Carpenter¹¹. ¹Shriner's Hospital for Children, United States, ²UCSF School of Medicine, United States, ³Indiana University School of Medicine, United States, ⁴University of Groningen, Netherlands, ⁵Birmingham Children's Hospital, United Kingdom, ⁶Hôpital Bicêtre, France, ⁷Royal Manchester Children's Hospital, United Kingdom, ⁸Great Ormond Street Hospital, United Kingdom, ⁹Ultragenyx Pharmaceutical Inc., United States, ¹⁰Ultragenyx Pharmaceutical Inc, United States, ¹¹Yale 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 Fischer¹, David Kopperdahl², David Lee², Dennis Black³, Mary Bouxsein⁴, Shireen Fatemi⁵, Sundeep Khosla⁶, Eric Orwoll⁷, Ethel Siris⁸, Tony Keaveny².
¹Department of Research & Evaluation, Kaiser Permanente Southern California, United States, ²O.N. Diagnostics, LLC, United States, ³Department of Epidemiology and Biostatistics, University of California San Francisco, United States, ⁴Center for Advanced Orthopedic Studies, Beth Israel Deaconess Medical Center & Harvard Medical School, Endocrine Unit, Massachusetts General Hospital, United States, ⁵Endocrinology, Southern California Permanente Medical Group, United States, ⁶Mayo Clinic, United States, ⁷Oregon Health & Science University, United States, ⁸New 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 Obesity, and men with neither condition: the MrOS Study**
1156
Rebekah Harris^{*1}, Elsa Strotmeyer¹, Robert Boudreau¹, Jennifer Brach¹, C. Kent Kwoh², Nancy Lane³, Eric Orwoll⁴, Ann Schwartz⁵, Peggy Cawthon⁵, Jane Cauley¹. ¹University of Pittsburgh, United States, ²University of Arizona, United States, ³University of California-Davis, United States, ⁴Oregon Health & Science University, United States, ⁵University 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 PODA trial and bone density loss**
1157
Jeannette Owusu, MD^{*1}, Mageda Mikhail, MD¹, Melissa Fazzari, PhD¹, Ruban Dhaliwal, MD¹, Subhashini Katumuluwa, MD², Albert Shieh, MD¹, Ayesha Ashraf Anwarullah, MD¹, Gianina Usera, M.D.¹, Alexandra Stolberg, MD¹, Louis Ragolia, PhD¹, John Aloia, MD¹.
¹Winthrop University Hospital, United States, ²Winthrop University Hopsital, United States
Disclosures: Jeannette Owusu, MD, None
- 10:45 am Relationship between femoral strength from QCT-based finite element analysis and femoral BMD before and after treatment: An Analysis from the FNIH Bone Quality Project**
1158
Mary L. Bouxsein^{*1}, Tony M. Keaveny², David C. Lee², Sundeep Khosla³, Anne de Papp⁴, Richard Eastell⁵, Li-Yung Lui⁶, Douglas C. Bauer⁷, Dennis M. Black⁷. ¹Harvard Medical School, United States, ²O.N. Diagnostics, LLC, United States, ³Mayo Clinic College of Medicine, United States, ⁴Merck & Co., Inc., United States, ⁵University of Sheffield, United Kingdom, ⁶California Pacific Medical Center, United States, ⁷University 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

Monday

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 Briot², Erik Imel³, Peter Kamenicky⁴, Mary Ruppe⁵, Anthony Portale⁶, Thomas Weber⁷, Pisit Pitukcheewanont⁸, Hae II Cheong⁹, Suzanne Jan De Beur¹⁰, Yasuo Imanishi¹¹, Nobuaki Ito¹², Robin Lachmann¹³, Hiroyuki Tanaka¹⁴, Diana Luca¹⁵, Christina Theodore-Oklota¹⁶, Matt Mealiffe¹⁷, Javier San Martin¹⁶, Thomas O. Carpenter¹. ¹Yale University School of Medicine, United States, ²CHU Paris Centre - Hôpital Cochin, France, ³Indiana University Department of Medicine, United States, ⁴Université Paris-Sud, Service d'Endocrinologie et des Maladies de la Reproduction, Hôpital de Bicêtre, France, ⁵Houston Methodist Hospital, United States, ⁶UCSF Medical Center, United States, ⁷Duke University Medical Center, United States, ⁸Children's Hospital Los Angeles, University of Southern California Keck School of Medicine, United States, ⁹Seoul National University Hospital, Korea, Democratic People's Republic of, ¹⁰Johns Hopkins University, United States, ¹¹Osaka City University Graduate School of Medicine, Japan, ¹²The University of Tokyo Hospital, Japan, ¹³University College of London Hospital, United Kingdom, ¹⁴Okayama Saiseikai General Hospital, Japan, ¹⁵Ultragenyx Pharmaceutical Inc., United States, ¹⁶Ultragenyx Pharmaceutical, Inc., United States, ¹⁷Ultragenyx 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 Janzing⁴, Sjoerd Kaarsemaker⁵, John A Eisman⁶, Joop PW van den Bergh. ¹Maastricht UMC+, NUTRIM, Department of Internal Medicine; VieCuri Medical Center, Department of Internal Medicine, Netherlands, ²Maastricht UMC+, NUTRIM, CAPHRI, Department of Clinical Pharmacy and Toxicology; Utrecht Institute of Pharmaceutical Sciences, Division of Pharmacoepidemiology and Clinical Pharmacology, Netherlands, ³Maastricht UMC+, CAPHRI, Department of Internal Medicine subdivision of Rheumatology; University of Hasselt, Netherlands, ⁴VieCuri Medical Center, Department of Surgery, Netherlands, ⁵VieCuri Medical Center, Department of Orthopedic Surgery, Netherlands, ⁶Garvan Institute of Medical Research, Clinical Translation and Advanced Education; Australia, ⁷Maastricht 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 Zhou¹, Lei Qian¹, Dennis Black², Kristi Reynolds¹. ¹Kaiser Permanente Southern California, United States, ²University 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 Peterse², Maria Luisa Brandi³, Andrew Karaplis⁴,
Mattias Lorentzon⁵, Thierry Thomas⁶, Judy Maddox², Michelle Fan², Paul Meisner⁷, Andreas
Grauer². ¹University of Alabama, United States, ²Amgen Inc., United States, ³University of
Florence, Italy, ⁴McGill University, Canada, ⁵University of Gothenburg and Sahlgrenska
University Hospital, Sweden, ⁶CHU de Saint-Étienne, France, ⁷UCB 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_αR201H Mutation

Sanjoy Khan^{*1}, Prem Yadav¹, Yingzi Yang¹, Gene Elliot². ¹Harvard School of Dental Medicine, United States, ²National 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 Sheldrake¹, Jeremy Glenn¹, Jaydee Foster¹, Laura Cox¹,
Daniel Nicolella², Todd Bredbenner². ¹Texas Biomedical Research Institute, United States, ²Southwest Research Institute, United States

Disclosures: Ellen Quillen, None

LB-1165 Osteocytes express a unique transcriptome that underpins skeletal homeostasis

Scott Youlten^{*1}, Paul Baldoock¹, Victoria Leitch², Julian Quinn¹, Nenad Bartonicek³,
Ryan Chai¹, John Eisman¹, J.H. Duncan Bassett², Graham Williams², Peter Croucher¹.
¹The Division of Bone Biology, Garvan Institute of Medical Research, Australia,
²Molecular Endocrinology Laboratory, Department of Medicine Imperial College London, United Kingdom, ³Centre 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 Chowdhury¹, Gerard Karsenty¹. ¹Columbia 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 Arya¹, Satinath Mukhopadhyay², Rajesh Khadgawat³,
Suja Sukumar¹, Sailesh Lodha⁴, Deependra N Singh⁴, Anjali Sathya¹, Priyanka Singh¹,
Anil Bhansali¹, Sudhaker D Rao⁵. ¹PGIMER, India, ²IPGMER, India, ³AIIMS, India,
⁴Fortis Hospital, India, ⁵Henry Ford Hospital, United States

Disclosures: Sanjay Bhadada, None

- MO0389 Paget's, Kidney Disease, and Denosumab: A Dangerous Combination**
Lila Chertman*¹, Violet Lagari-Libhaber², ¹University of Miami Department of Endocrinology, Jackson Memorial Hospital, United States, ²University 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 Pepe¹, Rizieri Manai¹, Luciano Nieddu², Federica Biamonte¹, Chiara Sonato¹, Piergianni Biondi¹, Luisella Cianferotti³, Maria Luisa Brandi³, Salvatore Minisola¹, ¹Sapienza University of Rome, Italy, ²UNINT University, Italy, ³University 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. Rubin¹, Rebecca Piccolo², Alan Krasner², John P. Bilezikian¹, ¹College of Physicians and Surgeons, Columbia University, United States, ²Shire 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 Sperling², Kirsten Salmeen², Dolores Shoback³, Ingrid Block-Kurbisch², ¹Division of Endocrinology and Metabolism, Department of Medicine and Pediatrics, University of California, San Francisco, United States, ²Department of Obstetrics, Gynecology, and Reproductive Sciences, Division of Maternal Fetal Medicine, University of California, San Francisco, United States, ³Endocrine 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 Cetani², Andrea Repaci³, Valentina Camozzi⁴, Salvatore Minisola⁵, Alfredo Scillitani⁶, Iacopo Chiodini⁷, Francesco Romanelli⁸, Bruno Madeo⁹, Laura Gianotti¹⁰, Anton Giulio Faggiano¹¹, Luisella Cianferotti¹², Sabrina Corbetta¹³, Maria Laura De Feo¹⁴, Andrea Palermo¹⁵, Paolo Pozzilli¹⁵, Claudio Marcocci¹⁶. ¹Departmet of Clinical and Experimental Medicine, University of Pisa, Italy, ²University-Hospital of Pisa, Italy, ³Endocrine Unit, Sant'Orsola Malpighi, Bologna, Italy, ⁴Endocrine Unit, University of Padova, Italy, ⁵Department of Internal Medicine and Medical Disciplines'Sapienza' University, Rome, Italy, ⁶Endocrinology Unit, "Casa Sollievo della Sofferenza," IRCCS, San Giovanni Rotondo, Italy, ⁷Unit of Endocrinology and Metabolic DiseasesFondazione IRCCS Cá Granda-Ospedale Maggiore Policlinico, Milan, Italy, ⁸Department of Experimental Medicine, Sapienza University of Rome, Italy, ⁹Azienda USL of Modena, Unit of Endocrinology, Modena, Italy, ¹⁰Division of Endocrinology, Diabetes and Metabolism, Santa Croce and Carle Hospital, 12100, Cuneo, Italy, ¹¹Endocrinology, Federico II University of Naples, Italy, ¹²Department of Internal Medicine, University of Florence, Italy, ¹³)Area di Endocrinologia e Malattie Metaboliche, IRCCS Policlinico San Donato Milan, Italy, ¹⁴Endocrinology Unit, Careggi Hospital and University of Florence, Italy, ¹⁵Department of Endocrinology and Diabetes, University Campus Bio-Medico, Rome, Italy, ¹⁶Department 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. Madson², Gary S. Gottesman², Karen E. Mack², Amy L. Reeves², Michael P. Whyte¹. ¹Center 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, ²Center 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 Mannstadt², Michael A. Levine³, Bart L. Clarke⁴, Peter Lakatos⁵, Kristina Chen⁶, Rebecca Piccolo⁶, Alan Krasner⁶, Dolores M. Shoback⁷, John P. Bilezikian⁸. ¹University of Chicago Medicine, United States, ²Massachusetts General Hospital and Harvard Medical School, United States, ³Children's Hospital of Philadelphia, United States, ⁴Mayo Clinic Division of Endocrinology, Diabetes, Metabolism, and Nutrition, United States, ⁵Semmelweis University Medical School, Hungary, ⁶Shire Human Genetic Therapies, Inc., United States, ⁷SF Department of Veterans Affairs Medical Center, University of California, United States, ⁸College 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 Lin¹, Yuanyuan Zheng¹, Wei Lin¹, Jixing Liang¹, Huibin Huang¹, Liantao Li¹, Lixiang Lin¹, Gang Chen¹. ¹Fujian 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 Baker¹, Ping Wang¹, Philip Orlander¹, William Ip¹, James Kellam¹, Catherine Ambrose¹, Nahid Rianon¹, Xiaohong Bi¹. ¹University 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 Sturgell¹, Matthew Allen², John Ford¹, Susan Bloomfield¹. ¹Texas A&M University, United States, ²Indiana 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. Ortega¹, Eric W. Livingston², Ted A. Bateman², Louis S. Stodieck¹, Samuel M. Cadena³, Virginia L. Ferguson¹. ¹University of Colorado, United States, ²University of North Carolina at Chapel Hill, United States, ³Novartis 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 Black¹, Jennifer Kosniewski¹, Jessica Brezicha², Scott Lenfest¹, Susan Bloomfield³, Matthew Allen⁴, Harry Hogan⁵. ¹Dept. of Mechanical Engineering, Texas A&M University, United States, ²Dept. of Biomedical Engineering, Texas A&M University, United States, ³Dept. of Health and Kinesiology, Texas A&M University, United States, ⁴Dept. of Anatomy and Cell Biology, Indiana University, United States, ⁵Dept. of Mechanical Engineering and Dept. of Biomedical Engineering, Texas A&M University, United States
Disclosures: Jon Elizondo, None

Monday

- MO0401 Age-related changes in the anabolic response to exercise**
Niloufar Rostami^{*1}, Chunbin Zhang¹, Joseph Gardinier¹. ¹Henry 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 Wallace², Matthew Allen³, Thomas Siegmund¹. ¹Purdue University, United States, ²Indiana University - Purdue University Indianapolis, United States, ³Indiana 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 Foright², Ginger Johnson², Virginia Ferguson³, Paul MacLean², Vanessa Sherk². ¹Department of Mechanical Engineering, University of Colorado, United States, ²Department of Medicine, Division of Endocrinology, Metabolism & Diabetes, University of Colorado Anschutz Medical Campus, United States, ³Department 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 Thomas¹, Tasnim Islam¹, Robert J Majeska¹, Mitchell B Schaffler¹. ¹City 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**
Daniella Patton^{*1}, Erin Bigelow¹, Steve Schlecht¹, Todd Bredbenner², Karl Jepsen¹. ¹University of Michigan, United States, ²Southwest Research Institute, United States
Disclosures: Daniella Patton, None
- MO0406 Effect of Spaceflight-relevant Ionizing Radiation on Mechanical Properties of Mouse Vertebra for Repetitive Loading**
Megan Pendleton^{*1}, Saghi Sadoughi¹, Alfred Li², Jennifer Liu³, Grace O'Connell¹, Joshua Alwood⁴, Tony Keaveny¹. ¹University of California, Berkeley, United States, ²SF VA Medical Center, University of California San Francisco, United States, ³Washington University, St. Louis, United States, ⁴NASA 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 Timur², Sasidhar Uppuganti¹, Ozan Akkus², Jeffry S. Nyman¹. ¹Vanderbilt University Medical Center, United States, ²Case Western Reserve University, United States
Disclosures: Mustafa Unal, None
- MO0408 Lactation-induced changes in mineral and matrix composition are site-specific**
Christina Vrahmas^{*1}, Christine Jun², Ingrid Poulton¹, Keith Bamberg³, Christopher Kovacs⁴, Jack Martin¹, Natalie Sims¹. ¹St. Vincent's Institute of Medical Research, Australia, ²University of Melbourne, Australia, ³Australian Synchrotron, Australia, ⁴Memorial University of Newfoundland, St. John's, Australia
Disclosures: Christina Vrahmas, None

- MO0409 Distinct Roles of Periosteum and Endosteum during Long Bone Growth, Loading and Intermittent PTH Responses**
Ke Wang^{*1}, Yuan Hui¹, Yingshi Ren², Reuel Cornelia³, Harry Kim³, Xianglong Han⁴, Jian Feng¹. ¹Department of Biomedical Science, Texas A&M Health Science Center, College of Dentistry, Dallas, TX, United States, ²Department of Biomedical Science, Texas A&M Health Science Center, College of Dentistry, Dallas, TX;, United States, ³Department of Research, Texas Scottish Rite Hospital for Children, United States, ⁴State 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 Ponrartana¹, Patricia Aggabao¹, Ervin Poorghasamians¹, Vicente Gilsanz¹. ¹Children'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-Tuck¹, Saija Kontulainen¹, Marta Erlandson¹. ¹University of Saskatchewan, Canada
Disclosures: Adam Baxter-Jones, None
- MO0412 Lumbar Spine Trabecular Bone Score: a Potential Screening Tool for the First Year Post-menarche?**
Jodi Dowthwaite^{*1}, Renaud Winzenrieth², Tamara Scerpella³. ¹SUNY Upstate Medical University, United States, ²Med-Imaps, France, ³University of Wisconsin, Madison, United States
Disclosures: Jodi Dowthwaite, None
- MO0413 Accuracy and Precision of estimated %FAT from Hologic Forearm and Lateral Distal Femur DXA Scans in children**
Bo Fan^{*1}, Natasha Din¹, Bennett Ng², Amir Pasha Mahmoudzadeh¹, Babette Zemel³, Heidi Kalkwarf⁴, Andrea Kelly³, James Heubi⁵, Kimberly Yolton⁵, Leila Kazemi¹, John Shepherd¹. ¹UCSF, United States, ²University of California Berkeley, United States, ³CHOP, United States, ⁴Cincinnati Children's Hospital, United States, ⁵Cincinnati Children's Hospital, United States
Disclosures: Bo Fan, None
- 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 Vogel¹, Berdine Martin¹, Linda McCabe¹, Courtney Henry¹, Munro Peacock², Stuart Warden², George McCabe¹, Connie Weaver¹. ¹Purdue University, United States, ²Indiana University, United States
Disclosures: Joseph Kindler, None
- MO0415 Elevated IL-1 Expression in Mesenchymal Stem Cells Derived from Spondyloarthritis Patients Is Associated With an Increase in Their Capacity To Form Mineralizing Osteoblasts**
Gerlinde Layh-Schmitt^{*1}, Breanna Nguyen¹, Robert A. Colbert¹. ¹Pediatric 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 Heilmeier¹, Ann Schwartz¹, Aenor Sawyer¹, Saleh Adi¹, Marie Nader¹, Courtney Pasco¹, Melis Yilmaz¹, Thomas Link¹, Galateia Kazakia¹. ¹University of California, San Francisco, United States
Disclosures: Roger Long, None

Monday

- MO0417 Adolescent use of Combined Hormonal Contraceptives and Peak Areal Bone Mineral Density Accrual in Prospective Studies: a meta-analysis**
 Azita Goshtasebi^{*1}, Tatjana Subotic Brajic², Delia Scholes³, Tamara Beres Lederer Goldberg⁴, Abbey Berenson⁵, Jerilynn Prior⁶. ¹University of British Columbia, Canada, ²Centre for Menstrual Cycle and Ovulation Research, UBC, Canada, ³Kaiser Permanente Washington Health Research Institute, United States, ⁴Botucatu School of Medicine, São Paulo State University, Brazil, ⁵University of Texas Medical Branch, United States, ⁶Centre for Menstrual Cycle and Ovulation Research, Endocrinology and Metabolism, University of British Columbia, Canada
Disclosures: Azita Goshtasebi, None
- MO0418 Relationship of total or calculated free 25-hydroxyvitamin D to metabolic indices in a cohort of healthy children**
 Christine Simpson^{*1}, Jane Zhang², Teresita Pennestri¹, Lei Fu³, Dirk Vanderschueren⁴, Roger Bouillon⁴, David Cole³, Thomas Carpenter¹. ¹Yale University School of Medicine, United States, ²V.A. Connecticut Healthcare System, United States, ³University of Toronto, Canada, ⁴Katholieke 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 Vanstone¹. ¹McGill 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**
 Chuan Zhang^{*1}, Daniel Whitney¹, Benjamin Conner¹, Freeman Miller², Christopher Modlesky¹. ¹University of Delaware, United States, ²A.I duPont hospital for children, United States
Disclosures: Chuan Zhang, None
- MO0421 Bone Marrow Adipose Tissue and Bone Turnover in Postmenopausal Osteoporotic Women and the Effects of Raloxifene**
 Kerensa Beekman^{*1}, Annegreet Veldhuis-Vlug², Martin den Heijer¹, Mario Maas³, Paul Lips¹, Susan Ott⁴, Rob van 't Hof⁵, Peter Bisschop², Nathalie Bravenboer⁶. ¹VU University Medical Center, Department of Endocrinology, Netherlands, ²Academic Medical Center/University of Amsterdam, Department of Endocrinology and Metabolism, Netherlands, ³Academic Medical Center/University of Amsterdam, Department of Radiology , Netherlands, ⁴University of Washington, Department of Metabolism, Endocrinology and Nutrition, United States, ⁵University of Liverpool, Department of Musculoskeletal Biology, United Kingdom, ⁶VU 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 Sun¹, Sang Eun Lee², JoonHo Lee³, Young Joo Park¹, Chan Soo Shin¹. ¹Seoul National University Hospital , Korea, Republic of, ²Asan medical center, Korea, Republic of, ³YONSEI UNIVERSITY, COLLEGE OF MEDICINE, Korea, Republic of
Disclosures: Sun Wook Cho, None

MO0423 MicroRNA-141 regulates SDF-1 α expression and osteogenic differentiation in mouse and human bone marrow derived stromal cells.

Sadanand Fulzele^{*1}, Sudharsan Periyasamy-Thandavan², Galina Kondrikova², John Burke³, Rajnikumar Sangani³, Bharati Mendhe⁴, Khaled Hussein², Monte Hunter⁵, Carlos Isales⁶, Mark Hamrick², William Hill⁷. ¹Department of Orthopedic Surgery, Medical College of Georgia, Augusta University, United States, ²Departement of Cell Biology and Anatomy, Medical College of Georgia, Augusta University, United States, ³Medical College of Georgia, Augusta University, United States, ⁴Depaetment of Cell Biology and Anatomy, Medical College of Georgia, Augusta University, United States, ⁵Departement of Orthopedic Surgery, Medical College of Georgia, Augusta University, United States, ⁶Department of Neuroscience and Regenerative Medicine, Medical College of Georgia, Augusta University, United States, ⁷Department 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-Unger¹, Alina Ostrovsky¹, Sahar Hiram-Bab², Nathalie Ben-Califa¹, Tamar Liron², Howard S Oster³, Moshe Mittelman³, Yankel Gabet², Drorit Neumann¹. ¹Department of Cell and Developmental Biology, Sackler Faculty of Medicine, Tel Aviv University, Israel, ²Department of Anatomy and Anthropology, Sackler Faculty of Medicine, Tel Aviv University, Israel, ³Department 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

Genevieve Mailhot^{*1}, Safiétou Sankhe¹, Genevieve Morin¹, Valérie Orlando¹, Déborah Lénart¹. ¹CHU Sainte-Justine Research Center, Canada

Disclosures: Genevieve Mailhot, None

MO0426 The PEG Associated Solvent System (PEGASOS) Method Enables 3-Dimentional Visualization of Hard Tissue

Shiwen Zhang^{*1}, Wenjing Luo², Dian Jing¹, Yi Men², Quan Yuan³, Zhihe Zhao³, Hu Zhao². ¹Texas A&M University College of Dentistry, USA; Sichuan University, China, United States, ²Texas A&M University College of Dentistry, USA, United States, ³Sichuan 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 Bellido¹, G. David Roodman², Mark R. Kelley³, Jesus Delgado-Calle¹. ¹Anatomy and Cell Biology, Indiana University School of Medicine, United States, ²Department of Medicine, Indiana University School of Medicine, United States, ³Department 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 Frye², Susan Whitman², Andrew Kunihiro³, Madison Egan⁴, Julia Brickey³, Janet Funk². ¹Cancer Biology Graduate Interdisciplinary Program, University of Arizona, United States, ²Department of Medicine, University of Arizona, United States, ³Department of Nutritional Sciences, University of Arizona, United States, ⁴Department of Molecular and Cellular Biology, University of Arizona, United States

Disclosures: Julia Cheng, None

Monday

- MO0429 Conditioned Medium of the Osteosarcoma Cell Line Saos-2 Induces BMSCs to Exhibit Characteristics of Carcinoma-Associated Fibroblasts via TGF β Pathway**
Ze Tang^{*1}, Qiming Fan¹, Tingting Tang¹. 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 Nakamura¹. ¹ Matsumoto Dental University, Japan
Disclosures: Toru Hiraga, None
- MO0431 Rare-earth-doped Luminescent Nanoparticles for Breast Cancer Detection and Potential Bone-targeting Contrast Agents**
Akhil Jain^{*1}, Fournier Pierrick², Gustavo A Hirata¹, Patricia Juarez². ¹ Center of Nanosciences and Nanotechnology-UNAM, Mexico, ²Center for Scientific Research and Higher Education, Mexico
Disclosures: Akhil Jain, None
- MO0432 Effects of estrogen removal by ovariectomy on growth of human MCF-7 breast cancer cells in bone**
Tiina E Kähkönen^{*1}, Mari I Suominen¹, Jukka Morko¹, Jukka Vääräniemi¹, Jussi M Halleen¹, Jenni Bernoulli¹. 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 Merlotti², Simone Bianciardi³, Domenico Rendina⁴, Vito Guarneri⁵, Paolo Graziano⁶, Salvatore Minisola⁷, Alfredo Scillitani⁸, Pasquale Strazzullo⁹, Ranuccio Nuti³, Luigi Gennari³. 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
Disclosures: Materozzi Maria, None
- MO0434 Theranostic bone-targeting upconversion-nanoparticles with responsive plumbagin-release inhibit RANKL expression in osteocytes to attenuate early bone metastasis of breast cancer**
Han Qiao^{*1}, Tingting Tang¹. ¹ Shanghai Ninth Hospital affiliated to Shanghai Jiaotong University School of Medicine, China
Disclosures: Han Qiao, None
- MO0435 Amlexanox inhibition of TBK1/IKK ϵ Signaling Is a Novel Therapeutic Approach for Multiple Myeloma-Induced Bone Disease**
Quanhong Sun^{*1}, Peng Zhang¹, Juraj Adamik¹, Valentina Marchica², Nicola Giuliani², Rebecca Silbermann³, G. David Roodman³, Deborah L. Galson¹. 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
Disclosures: Quanhong Sun, None

- MO0436 Micro-environmental Features of the Bone and Bone Marrow Associated with Metastatic Colonization**
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²Stanford University, United States
Disclosures: Maura Hartzman, None
- MO0437 PARylation-mediated Activation of NF- κ B by NAMPT in Chondrocytes Causes Catabolic Changes**
 Manoj Arra^{*1}, Yousef Abu-Amer², Gabriel Mbalaviele³. ¹Department of Orthopedic Surgery, Washington University School of Medicine, United States, ²Department of Orthopedic Surgery, Cell Biology and Physiology, Washington University School of Medicine, United States, ³Bone and Mineral Disease, Department of Medicine, Washington University School of Medicine, United States
Disclosures: Manoj Arra, None
- MO0438 Anabolic Effects of Novel Small Molecular Weight Fibroblast Growth Factor Receptor (FGFR) 3 Agonists in Articular Chondrocytes**
 Subburaman Mohan^{*1}, Karthikeyan Muthusamy², Nikita Bajwa¹, Chandrasekhar Kesavan¹. ¹Musculoskeletal Disease Center, VA Loma Linda Healthcare System, United States,
²Departments of Medicine and Orthopedic Surgery, Loma Linda University, India
Disclosures: Subburaman Mohan, None
- MO0439 IL36 α enhances chondrocyte differentiation and maturation while promoting osteoarthritis**
 Xin Jin^{*1}, Tieshi Li², Lai Wang², Alessandra Esposito², Arnavaz Hakimian², Joseph Temple², Susan Chubinskaya², Anna Spagnoli². ¹Department of Pediatrics, Rush University Medical Center; Department of Orthopaedics, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, United States, ²Department of Pediatrics, Rush University Medical Center, United States
Disclosures: Xin Jin, None
- MO0440 Aggrecan Gene Expression in Chondrocytes is Controlled by Multiple DNA Regulatory Elements**
 Ian M. H. Li^{*1}, Ke Liu¹, Alice Neal², Peter D. Clegg¹, Sarah De Val², George Bou-Gharios¹. ¹University of Liverpool, United Kingdom, ²University of Oxford, United Kingdom
Disclosures: Ian M. H. Li, None
- MO0441 WNT16 Regulation of Articular Chondrocyte Proliferation and Differentiation**
 Subburaman Mohan^{*1}, Siddhartha Pulli², Chandrasekhar Kesavan¹. ¹Musculoskeletal Disease Center, VA Loma Linda Healthcare System, Loma Linda, United States,
²Departments of Medicine and Orthopedic Surgery, Loma Linda University, United States
Disclosures: Subburaman Mohan, None
- MO0442 Tetrahedral DNA Nanostructure: A Potential Promoter for Cartilage Tissue Regeneration via Regulating Chondrocyte Phenotype and Proliferation**
 Xiaoru Shao^{*1}, Shiyu Lin¹. ¹West China Hospital of Stomatology, Sichuan University, China
Disclosures: Xiaoru Shao, None
- MO0443 Cartilage ECM enhances chondrogenic differentiation of skeletal cells: formulation of a fracture callus mimetic for non-union repair**
 Wollis Vas^{*1}, Mittal Shah¹, Thomas Blacker², Michael Duchen², Paul Sibbons³, Scott Roberts¹. ¹Department of Materials and Tissue, University College London, United Kingdom, ²Department of Cell and Developmental Biology, University College London, United Kingdom, ³Northwick Park Institute for Medical Research, Northwick Park Hospital, United Kingdom
Disclosures: Wollis Vas, None

Monday

- MO0444 Overexpression of human RANKL decreases skeletal muscle function, increases steatosis and engenders insulin resistance**
 Julia Brun^{*1}, Vagelis Rinotis², Eleni Douni³, Serge Ferrari¹, Nicolas Bonnet¹. ¹Service des Maladies Osseuses, Switzerland, ²Biomedical Sciences Research Center “Alexander Fleming”, Greece, ³Biomedical Sciences Research Center “Alexander Fleming” Athens, Greece; 3Department of Biotechnology, Agricultural University of Athens, Greece
Disclosures: Julia Brun, None
- MO0445 PPAR α nuclear receptor regulates osteoblast and osteoclast differentiation, and sclerostin protein levels in osteocytes**
 Amit Chougule^{*1}, Lance Stechschulte¹, Peter Czernik¹, Beata Lecka-Czernik¹. ¹University of Toledo, United States
Disclosures: Amit Chougule, None
- MO0446 Marrow Adipose Tissue, Trabecular Bone Score and Osteocalcin as Parameters of Bone Quality in Type 2 Diabetes Mellitus**
 Iana de Araújo^{*1}, Carlos Salmon¹, Marcello Nogueira-Barbosa¹, Sergio Luchini¹, Francisco de Paula¹, Francisco de Paula¹. ¹Ribeirao Preto Medical School, USP, Brazil
Disclosures: Iana de Araújo, None
- 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 Maridas¹, Elizabeth Rendina-Ruedy¹, Beate Lanske², Clifford Rosen¹. ¹Maine Medical Center Research Institute, United States, ²Harvard School of Dental Medicine, United States
Disclosures: Victoria DeMambro, None
- 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 Robbins¹, Christopher Tom¹, Miranda Cosman¹, Lillian Shipp¹, Katarina Alajbegovic¹. ¹University 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 Shoback¹, Dennis Black², Stanley Rogers², Lygia Stewart¹, Jonathan Carter², Andrew Posselt², Nicole King², Anne Schafer¹. ¹University of California, San Francisco, and the San Francisco VA Health Care System, United States, ²University of California, San Francisco, United States
Disclosures: Tiffany Kim, None
- MO0450 Rapid Marrow Adipogenesis Following Burns: Implications for Onset of Reduced Bone Formation**
 Amina El Ayadi^{*1}, Ron Helderman², David Herndon¹, Celeste Finnerty¹, Clifford Rosen², Gordon Klein¹. ¹University of Texas Medical Branch, United States, ²Maine Medical Center Research Institute, United States
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 Mihalcioiu¹, Lifeng Li¹, Richard Kremer¹. ¹McGill University, Canada
Disclosures: Jiarong Li, None

- MO0452 Long-Term Exercise Restores Key Lipid Mediators in Muscle**
 Chenglin Mo^{*1}, Julian Vallejo², Zhiying Wang¹, Liangqiao Bian³, Thomas O'Connell⁴,
 Lynda Bonewald⁴, Michael Wacker², Marco Brotto¹. ¹College of Nursing & Health
 Innovation, University of Texas-Arlington, United States, ²School of Medicine, University of
 Missouri-Kansas City, United States, ³Shimadzu Center for Advanced Analytical Chemistry,
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 United States
Disclosures: Chenglin Mo, None
- MO0453 Postprandial Regulation of Appetite by Lipocalin 2**
 Ioanna Mosialou^{*1}, Steven Shikkel¹, Elisabeth Sornay-Rendu², Justine Bacchetta³,
 Blandine Laferrere⁴, Mishaela Rubin⁵, Cyrille B. Confavreux⁶, Stavroula Kousteni¹.
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Disclosures: Ioanna Mosialou, None
- MO0454 Specific Micro-RNA changes in healthy vitamin D deficient men before and after vitamin D supplementation**
 Barbara Obermayer-Pietsch^{*1}, Vito Francic¹, Sebastian Sonntagbauer¹, Roswitha
 Gumpold¹, Thomas R Pieber¹, Julia Münzker¹, Elisabeth Lerchbaum¹. ¹Div. Endocrinology
 and Diabetology, Medical University Graz, Austria
Disclosures: Barbara Obermayer-Pietsch, None
- MO0455 The effect of AdipoRon on osteogenesis and osteoclastogenesis *in vitro*.**
 Xingwen Wu^{*1}, Qisheng Tu¹, Wei Qiu¹, Jake Chen¹, Youcheng Yu². ¹Division of oral
 biology, Tufts university school of dental medicine, United States, ²department 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 Fentene¹, Nelli Mnatsakanyan², Meiling Zhu³, Karl Insogna³,
 Clemens Bergwitz¹. ¹Section of Endocrinology and Metabolism, Yale University School of
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 of Medicine, New Haven, USA, United States
Disclosures: Sampada Chande, None
- MO0457 CRISPR/Cas9-Mediated Creation of Novel Mouse Strains Lacking the LRP5 LDLR Class A Repeats**
 Bart Williams^{*1}, Cassandra Diegel¹, Nicole Ethen¹, Jon Lensing¹. ¹Van Andel Research
 Institute, United States
Disclosures: Bart Williams, Surrozen, Consultant
- MO0458 Phenomic analysis of zebrafish type I collagen mutants reveals a spectrum of skeletal phenotypes mimicking the clinical variability in human brittle bone disease**
 Charlotte Gistelinck^{*1}, Ronald Y. Kwon¹, Fransiska Malfait², Sofie Symoens²,
 Petra Vermassen², Hanna De Saffel², Katrin Henke³, Matthew P. Harris³, Anne De Paepe²,
 MaryAnn Weis¹, David R. Eyre¹, Andy Willaert², Paul J. Coucke². ¹Department of
 Orthopaedics and Sports Medicine, University of Washington, United States, ²Center for
 Medical Genetics Ghent, Ghent University, Belgium, ³Department of Genetics, Harvard
 Medical School, United States
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MO0459 Low Frequency Coding Variation in *CYP2R1* has Large Effects on Vitamin D Level and Risk of Multiple Sclerosis.

Despoina Manousaki^{*1}, Tom Dudding², Simon Haworth², Yi-Hsiang Hsu³, Ching-Ti Liu⁴, Carolina Medina-Gomez⁵, Trudy Voortman⁶, Nathalie van der Velde⁵, Hakan Melhus⁷, Cassiane Robinson-Cohen⁸, Diana Cousminer⁹, Maria Nethander¹⁰, Liesbeth Vanderput¹⁰, Raymond Noordam¹¹, Vincenzo Forgetta¹, Celia Greenwood¹, Mary Lou Biggs¹², Bruce Psaty¹³, Jerome Rotter¹⁴, Babette Zemel¹⁵, Jonathan Mitchell¹⁵, Bruce Taylor¹⁶, Matthias Lorentzon¹⁰, Magnus Karlsson¹⁷, Vincent Jaddoe¹⁸, Henning Tiemeier¹⁸, Natalia Campos-Obando⁵, Oscar Franco⁶, Andre Uitterlinden⁵, Linda Broer⁵, Natasja van Schoor¹⁹, Annelies Ham⁵, M.Arfaan Ikram⁶, David Karasik³, Renee de Mutsert²⁰, Fritz Rosendaal²⁰, Martin den Heijer²¹, Thomas Wang²², Lars Lind⁷, Eric Orwoll²³, Dennis O Mook-Kanamori²⁰, Karl Michaëllsson²⁴, Bryan Kestenbaum⁸, Claes Ohlsson¹⁰, Dan Mellstrom¹⁰, Lisette de Groot²⁵, Struan Grant⁹, Douglas Kiel³, Carola Zillikens⁵, Fernando Rivadeneira⁵, Stephen Sawcer²⁶, Nicholas Timpson², Brent Richards¹. ¹Department of Human Genetics, McGill University, Montreal, Canada, Canada, ²Medical Research Council Integrative Epidemiology Unit (IEU) at the University of Bristol, Bristol, UK, United Kingdom, ³Institute for Aging Research, Hebrew SeniorLife, Boston, USA, United States, ⁴Department of Biostatistics, Boston University School of Public Health, Boston, USA, United States, ⁵Department of Internal Medicine, Erasmus Medical Center, Rotterdam, The Netherlands, Netherlands, ⁶Department of Epidemiology, Erasmus Medical Center, Rotterdam, The Netherlands, Netherlands, ⁷Department of medical sciences, Uppsala university, Uppsala, Sweden, Sweden, ⁸Kidney Research Institute, Division of Nephrology, University of Washington, Seattle, WA, United States, ⁹Division of Human Genetics, Children's Hospital of Philadelphia, Philadelphia, PA 19104, USA, United States, ¹⁰Centre for Bone and Arthritis Research, Department of Internal Medicine and Clinical Nutrition, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden, Sweden, ¹¹Department of Internal Medicine, Section of Gerontology and Geriatrics, Leiden University Medical Center, Leiden, the Netherlands, Netherlands, ¹²Cardiovascular Health Research Unit, Departments of Medicine and Biostatistics, University of Washington, Seattle, WA, United States, ¹³Cardiovascular Health Research Unit, Departments of Medicine, Epidemiology and Health Services, University of Washington, Seattle, WA, United States, ¹⁴Institute for Translational Genomics and Population Sciences, Los Angeles Biomedical Research Institute and Department of Pediatrics at Harbor-UCLA Medical Center, Torrance, CA, USA, United States, ¹⁵Department of Pediatrics, Perelman School of Medicine, University of Pennsylvania, Philadelphia, United States, ¹⁶Menzies Research Institute Tasmania, University of Tasmania, Locked Bag 23, Hobart, Tasmania 7000, Australia, Australia, ¹⁷Clinical and Molecular Osteoporosis Research Unit, Department of Clinical Sciences, Lund University, and Department of Orthopaedics, Skåne University Hospital, Malmö, Sweden, Sweden, ¹⁸The Generation R Study Group, Erasmus Medical Center, Rotterdam, The Netherlands, Netherlands, ¹⁹Department of Epidemiology and Biostatistics and the EMGO Institute of Health and Care Research, VU University Medical Center, Amsterdam, The Netherlands, Netherlands, ²⁰Department of Clinical Epidemiology, Leiden University Medical Center, Leiden, the Netherlands, Netherlands, ²¹Department of Endocrinology, VU University Medical Center, Amsterdam, the Netherlands, Netherlands, ²²Division of Cardiovascular Medicine, Vanderbilt University Medical Center, Nashville, TN, USA, United States, ²³Bone & Mineral Unit, Oregon Health & Science University, Portland, USA, United States, ²⁴Department of surgical sciences, Uppsala university, Uppsala, Sweden, Sweden, ²⁵Department of Human Nutrition, Wageningen University, Wageningen, The Netherlands, Netherlands, ²⁶University of Cambridge, Department of Clinical Neurosciences, Box 165, Cambridge Biomedical Campus, Hills Road, Cambridge, CB2 0QQ, UK, United Kingdom

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- MO0460 Alterations in NFkB Signaling Contribute to the Bone Fragility in Osteogenesis Imperfecta type V**
 Ronit Marom^{*1}, Caressa D. Lietman¹, Abhirami Rajagopal¹, Mahim Jain¹, Ming-Ming Jiang¹, Yuqing Chen¹, Elda M. Munivez¹, Terry K. Bertin¹, Brendan Lee¹.
¹Baylor College of Medicine , United States
Disclosures: Ronit Marom, None
- MO0461 Complete absence of calcitriol in Cyp27b1 null fetal mice does not disturb mineral metabolism or skeletal development**
 Brittany A. Ryan^{*1}, K. Berit Sellars¹, Kamal Alhani¹, Beth J. Kirby¹, René St-Arnaud², Christopher S. Kovacs¹. ¹Memorial University of Newfoundland, Canada, ²McGill University, Canada
Disclosures: Brittany A. Ryan, None
- MO0462 Reduction of Gαs expression in mice with maternal ablation of exon Nespm (Nespm-) provides evidence for a potent Gαs silencing mechanism**
 OLTA TAFAJ^{*1}, HARALD JUPPNER¹, LEE S. WEINSTEIN². ¹Massachusetts General Hospital, United States, ²Metabolic Diseases Branch, NIDDK, United States
Disclosures: OLTA TAFAJ, None
- MO0463 ADAMTS 18 plays an important role in murine endochondral ossification and fracture healing**
 Sardar Uddin^{*1}, Chuanju Liu², David Komatsu¹, Zong Dong Li³. ¹Department of Orthopaedics, Stony Brook University, United States, ²Department of Orthopedic Surgery, New York University Medical Center, United States, ³Dept. of Medicine, Stony Brook University, United States
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- MO0464 Histomorphometrical Analysis in Murine Hypophosphatasia.**
 Seiko Yamamoto-Nemoto^{*1}, Eri Yokoi¹, Kei Ogawa²⁴, Chika Endo³, Nao Ogawa¹, Kunihiko Shimizu²⁴, Takehiko Shimizu³. ¹Nihon Univ. School of Dentistry at Matsudo, Japan, ²Nihon Univ.school of Dentistry at Matsudo, Japan, ³Nihon Univ. School of Dentistry at Mastudo, Japan, ⁴Nihon Univ.School of Dentistry at Matsudo, Japan
Disclosures: Seiko Yamamoto-Nemoto, None
- MO0465 A Statistical Approach to the Identification of Potential Causal Variants Related to Bone Mineral Density**
 Jonathan Greenbaum^{*1}, Hong-Wen Deng¹. ¹Tulane University, United States
Disclosures: Jonathan Greenbaum, None
- MO0466 A Case-Control Study of the Genetic Determinants of Atypical Femoral Fracture**
 Roby Joehanes^{*1}, Emmanuel Biver², Fredrick Kinyua¹, Yi-Hsiang Hsu³, David Karasik³, Michelle Yau³, Serkalem Demissie⁴, Ching-Ti Liu⁴, Douglas Kiel³, Serge Ferrari². ¹Hebrew SeniorLife, United States, ²Geneva University Hospitals, Switzerland, ³Hebrew SeniorLife / Harvard Medical School, United States, ⁴Boston University, United States
Disclosures: Roby Joehanes, None
- 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. Dunford², PeiYing Ng³, Natalia Garcia-Giralt⁴, Monica Cozar¹, Jose M Quesada-Gomez⁵, Xavier Nogués⁴, Daniel Prieto-Alhambra⁶, R Graham Russell², Daniel Grinberg¹, Adolfo Diez-Perez⁴, Roland Baron³, Susana Balcells¹. ¹Dep of Genetics, University of Barcelona and CIBERER, Spain, ²University of Oxford, United Kingdom, ³Division of Bone and Mineral Research, Dept of Oral Medicine, Harvard School of Dental Medicine, United States, ⁴Hospital del Mar Institute of Medical Investigation and CIBERFES, Spain, ⁵Instituto Maimónides de Investigación, Cordoba, and CIBERFES, Spain, ⁶Universitu of Oxford and GREMPAL CIBERFES, Spain
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- MO0468 Metabolomics of sarcopenia in Hong Kong Chinese**
 Victoria Ho-Yee Wong^{*1}, Grace Koon-Yee Lee¹, Ching-Lung Cheung¹. ¹The University of Hong Kong, Hong Kong
Disclosures: Victoria Ho-Yee Wong, None
- MO0469 Aldosterone regulates FGF23 expression through WNK signaling in bone**
 Olena Andrukova^{*1}, Sibel Ada¹, Jessica Bayer¹, Kristopher Ford¹, Nejla Katica¹, Dario Alessi², Reinhold G Erben¹. ¹Department of Biomedical Sciences University of Veterinary Medicine, Austria, ²College of Life Sciences, University of Dundee, United Kingdom
Disclosures: Olena Andrukova, None
- MO0470 CKD-MBD in a model of targeted FGF23 deletion**
 Erica L. Clinkenbeard^{*1}, Pu Ni¹, Joseph C. Thomas¹, Megan L. Noonan¹, Julia M. Hum¹, Mohammad Aref¹, Matthew R. Allen¹, Kenneth E. White¹. ¹Indiana University School of Medicine, United States
Disclosures: Erica L. Clinkenbeard, None
- 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 Shaar¹, Ravinder Singh², Asma Arabi³, Rafic Baddoura³, Georges Halabi³, Robert Habib³, Rose Daher³, Darina Bassil¹, Karim El Ferekh⁴, Maha Hoteit¹, Ghada El-Hajj Fuleihan³. ¹Mrs, Lebanon, ²Professor, United States, ³Professor, Lebanon, ⁴Mr, Lebanon
Disclosures: Maya Rahme, None
- MO0472 Quantification of soluble human Neuropilin-1 by sandwich ELISA**
 Manfred Tesarz^{*1}, Elisabeth Gadermaier¹, Thi Thuy Oanh Ho², Gabriela Berg¹, Gottfried Himmler¹. ¹The Antibody Lab GmbH, Austria, ²Biomedica Medizinprodukte GmbH & Co KG, Austria
Disclosures: Manfred Tesarz, None
- MO0473 Measurement of (Free) 25OH Vitamin D in Saliva.**
 Christy Van Veenendaal^{*1}, Marsha Mersch¹, Mike Martens¹, Nicolas Heureux², Ernst Lindhout¹. ¹Future Diagnostics Solutions, Netherlands, ²DiaSource Immunoassays, Belgium
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 Buse¹², Roman Skoblo¹², Berthold Hocher³. ¹IFLb, Germany, ²IFLB, Germany, ³University of Potsdam, Germany
Disclosures: Oleg Tsuprykov, None
- MO0475 The Primary Trabecular Bone Becomes Lamellar by Continuous Parathyroid Hormone Infusion**
 Nobuhito Nango^{*1}, Shogo Kubota¹, Yusuke Horiguchi¹, Hidekazu Takano², Wataru Yashiro², Atsushi Momose², Shizuko Ichinose³, Koichi Matsuo⁴. ¹Ratoc System Engineering Co., Ltd., Japan, ²Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, Japan, ³Center for Stem Cell and Regenerative Medicine, Tokyo Medical and Dental University, Japan, ⁴Laboratory 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.**
 Maureen Newman^{*1}, Tzong-jen Sheu², Edward Puzas². ¹Department of Biomedical Engineering, University of Rochester, United States, ²University of Rochester, United States
Disclosures: Maureen Newman, None

- MO0477 Development of Long-Acting Antagonists for the PTH Receptor**
 Hiroshi Noda^{*1}, Tomoyuki Watanabe¹, Ashok Khatri², Thomas J Gardella². ¹Endocrine Unit, Massachusetts General Hospital, United States, ²Endocrine Unit, Massachusetts General Hospital and Harvard Medical School, United States
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 Clapham¹. ¹Boston Children's Hospital, United States
Disclosures: Nora Renthal, None
- MO0479 Bidirectional Modulation of Adiponectin Signaling via APPL Proteins Interaction in Bone Cells**
 Qisheng Tu^{*1}, Liming Yu¹, Yuwei Wu¹, Tong Chen¹, wei Qiu¹, Dana Murray¹, Jake Chen¹. ¹Tufts University School of Dental Medicine, United States
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- MO0480 Gene Expression Profiles of Selective Transcriptome Responses in the Intestine Reveal Novel 1, 25(OH)₂D₃ Targets and Suggest an Essential Role for the Vitamin D Receptor in Distal as well as Proximal Intestinal Segments**
 Vaishali Veldurthy^{*1}, Puneet Dhawan¹, Nishant Patel¹, Angela Porta¹, Shanshan Li¹, Alketa Stefa¹, Patricia Soteropoulos¹, Saleena Ghanny¹, Sylvia Christakos¹. ¹Rutgers, New Jersey Medical School, United States
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- MO0481 Enpp1 regulates Klotho expression under phosphate overload conditions**
 Ryuichi Watanabe^{*1}, Takeshi Miyamoto¹, Toshimi Michigami², Seiji Fukumoto³, Masaya Nakamura¹, Morio Matsumoto¹. ¹Department of Orthopaedic Surgery, Keio University School of Medicine, Japan, ²Department of Bone and Mineral Research, Osaka Medical Center and Research Institute for Maternal and Child Health, Japan, ³Fujii Memorial Institute of Medical Sciences, Tokushima University, Japan
Disclosures: Ryuichi Watanabe, None
- MO0482 Fluoxetine use during pregnancy and lactation stimulates mammary-derived hormonal stimulation of bone turnover**
 Samantha Weaver^{*1}, Chad Vezina¹, Julia Charles², Laura Hernandez¹. ¹University of Wisconsin-Madison, United States, ²Brigham and Women's Hospital, United States
Disclosures: Samantha Weaver, None
- MO0483 Modulation of osteocyte membrane repair activity via Vitamin E alters the response of bone to mechanical loading**
 Anoosh Bahraini^{*1}, Kanglun Yu¹, Mackenzie Hagan¹, Peyton Marshall¹, Mark Hamrick¹, Mohammed Elsalanty², Anna McNeil¹, Paul McNeil¹, Meghan McGee-Lawrence¹. ¹Medical College of Georgia, Augusta University, United States, ²Dental College of Georgia, Augusta University, United States
Disclosures: Anoosh Bahraini, None
- MO0484 Calcium Efflux from Diffuse Microdamaged Bone Matrix Enhances Osteoblastic Activity**
 Hyungjin Jung^{*1}, Ozan Akkus¹. ¹Case Western Reserve University, United States
Disclosures: Hyungjin Jung, None
- MO0485 Effect of IG9402 (Osteocyte Apoptosis Inhibitor) on Tooth Movement and Alveolar Bone**
 Michelle Kaplan^{*1}, Sunil Wadhwa¹, imad maleeh¹, jing chen¹, Zana Kalajzic². ¹Columbia University, United States, ²University of Connecticut, United States
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Monday

- 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**
Maximilian Rummel^{*1}, Fani Ziouti², Anne Seliger³, Maureen Lynch⁴, Jundt Franziska², Bettina Willie¹. ¹Research Centre, Shriners Hospital for Children-Canada, Department of Pediatric Surgery, McGill University, Canada, ²Medizinische Klinik und Poliklinik II-Hämatologie/Onkologie, Universitätsklinikum Würzburg, Germany, ³Julius Wolff Institut, Charite- Universitätsmedizin Berlin, Germany, ⁴University of Massachusetts, United States
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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 Dallas¹, Mark Begonia², JoAnna Scott¹, Mark Johnson¹, Ganesh Thiagarajan¹. ¹University of Missouri Kansas City, United States, ²Medical College of Wisconsin, United States
Disclosures: Hammad Mumtaz, None
- MO0489 Osteoblast-Derived Nerve Growth Factor is Required for Skeletal Adaptation to Mechanical Loads**
Jino Park^{*1}, Liliana Minichiello², Thomas Clemens³, Ryan Tomlinson¹. ¹Thomas Jefferson University, United States, ²Oxford University, United Kingdom, ³Johns Hopkins University, United States
Disclosures: Jino Park, None
- MO0490 Evolutional Separation of Epiphyseal and Articular Cartilage is a Bone Adaptation to Terrestrial Growth**
Meng Xie^{*1}, Pavel Gol'din², Jordi Estsfa³, Lei Li⁴, Irene Linares Arregui⁵, Christian Gasser⁵, Ekaterina Medvedeva⁶, Kotova Svetlana⁶, Peter Timashev⁶, Igor Adameyko⁴, Anders Eriksson⁷, Sophie Sanchez⁸, Andrei Chagin⁴. ¹Department of Physiology and Pharmacology, Karolinska Institute, Sweden, ²Stockholm University, Sweden, ³Department of Organismal Biology, Uppsala Universitet, Sweden, ⁴Department of Physiology and Pharmacology, Karolinska Institutet, Sweden, ⁵Department of Solid Mechanics, KTH, Sweden, ⁶Sechenov Medical University, Russian Federation, ⁷Department of Mechanics, KTH, Sweden, ⁸Department of Organismal Biology, Uppsala University, Sweden
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- MO0491 The Mechanism and an Alternative Method of Accelerated Bone Remodeling in Orthodontics after Maxillary Osteotomy**
Zoe (Xiaofang) Zhu^{*1}, Jake (Jinkun) Chen², Qisheng Tu², Guofang Shen³. ¹Tufts University, United States, ²Division of Oral Biology, Tufts University, United States, ³Ninth People's Hospital, Shanghai Jiao Tong University, China
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- MO0492 Effects of 2g hypergravity on osteoarthritis-induced bone and muscle changes**
Benoit Dechaumet^{*1}, Damien Cleret¹, Norbert Laroche¹, Arnaud Vanden-Bossche¹, Marie-Hélène Lafage-Proust¹, Laurence Vico¹. ¹University of Lyon, INSERM, U1059, France
Disclosures: Benoit Dechaumet, None

- MO0493 Delayed Bone Defect Healing In Dystrophin/Utrophin Double Knockout Mice Is Associated with Muscle Force and Decrease in Osteoblasts and Osteoclasts**
 Xueqin Gao^{*12}, Xuying Sun¹², Sarah Amra¹², Charles Huard³, Hazi Cheng¹², David Mora-Boellstorff¹², Bing Wang⁴, Johnny Huard¹². ¹University of Texas Health Science Center at Houston, United States, ²University of Texas Health Science Center at Houston, United States, ³University of Texas Health Science Center at Houston, United States, ⁴University of Pittsburgh, United States
Disclosures: Xueqin Gao, None
- MO0494 Estrogen Modulates Musculoskeletal Physiology in Female Mice**
 Saki Nagai^{*1}, Kazuhiro Ikeda¹, Kuniko Horie-Inoue¹, Saya Nagasawa¹, Satoru Takeda², Satoshi Inoue³. ¹Division of Gene Regulation and Signal Transduction, Research Center for Genomic Medicine, Saitama Medical University, Japan, ²Department of Obstetrics and Gynecology, Juntendo University School of Medicine, Tokyo, Japan, Japan, ³Department of Functional Biogerontology, Tokyo Metropolitan Institute of Gerontology, Tokyo 173-0015, Japan, Japan
Disclosures: Saki Nagai, None
- 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 Peng¹, Wei Zhao¹, Paola Divieti Pajevic², Lynda F. Bonewald³, William A Bauman¹. ¹James J. Peters VA Medical Center, United States, ²Boston University, United States, ³Indiana University School of Medicine, United States
Disclosures: Weiping Qin, None
- MO0496 Lack of a direct effect of FGF23 on skeletal muscle contractility, Ca2+ handling and development**
 Julian A. Vallejo^{*1}, Keith G. Avin², Neal X. Chen³, Kun Wang⁴, Chad D. Touchberry⁵, Marco Brotto⁶, Sarah L. Dallas⁴, Sharon M. Moe³, Michael J. Wacker⁵. ¹Department 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, ²Department of Physical Therapy, School of Health & Rehabilitation Sciences, Indiana University; Division of Nephrology, School of Medicine, Indiana University, United States, ³Division of Nephrology, School of Medicine, Indiana University, United States, ⁴Department of Oral & Craniofacial Sciences, School of Dentistry, University of Missouri-Kansas City, United States, ⁵Department of Biomedical Science, School of Medicine, University of Missouri-Kansas City, United States, ⁶College of Nursing and Health Innovation, University of Texas-Arlington, United States
Disclosures: Julian A. Vallejo, None
- 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 Palmieri¹, Li Han¹, Stuart B Berryhill¹, Xuchu Que², Sotirios Tsimikas², Stavros C Manolagas¹, Joseph L Witztum², Robert L Jilka³. ¹Center for Osteoporosis and Metabolic Bone Diseases, University of Arkansas for Medical Sciences and the Central Arkansas Veterans Healthcare System, United States, ²Department of Medicine, University of California San Diego, United States, ³Center for Osteoporosis and Metabolic Bone Diseases, University of Arkansas for Medical Sciences, United States
Disclosures: Elena Ambrogini, None
- MO0498 Kynurenone, 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 Fulzele¹, Bharati Mendhe¹, William Hill¹, Carlos Isales¹, Meghan McGee-Lawrence¹, Xingming Shi¹, Mark Hamrick¹. ¹Medical College of Georgia, United States
Disclosures: Andrea Lambert, None

- MO0499 Kynurenone and SDF-1 α Derived Bone Marrow Mesenchymal Stem Cells in Age-Related Bone Loss: Potential Role of Aryl Hydrocarbon Receptor**
Khaled Hussein*¹, Xue Jiang², Ke-Hong Ding³, Sadanand Fulzele⁴, Wendy Bollag⁵, Mohammed Elsalanty⁶, Qing Zhong³, Xing-ming Shi⁷, Maribeth Johnson⁸, Monte Hunter⁹, Mark Hamrick¹, Carlos Isales¹⁰, William Hill¹¹. ¹Department of Cell Biology and Anatomy Medical College of Georgia, Augusta University, United States, ²Department of Cell Biology and Anatomy Medical College of Georgia, Augusta University. Rehabilitation Center, Sheng Jing Hospital, China Medical University., United States, ³Department of Neuroscience and Regenerative Medicine, Medical College of Georgia, Augusta University, United States, ⁴Department of Orthopedic Surgery, Medical College of Georgia, Augusta University, United States, ⁵Department of Physiology, Medical College of Georgia, Augusta University, United States, ⁶Department of Oral Biology Dental College of Georgia, Augusta University, United States, ⁷Department of Neuroscience and Regenerative Medicine, Department of Orthopedic Surgery, Medical College of Georgia, Augusta University, United States, ⁸Department of Biostatistics and Epidemiology, Medical College of Georgia, Augusta University, United States, ⁹Department of Orthopedic Surgery, Medical College of Georgia, Augusta University, United States, ¹⁰Department of Neuroscience and Regenerative Medicine, Department of Orthopedic Surgery, Medicine and Cellular Biology and Anatomy, Medical College of Georgia, Augusta University, United States, ¹¹Department of Cell Biology and Anatomy Medical College of Georgia, Augusta University. Charlie Norwood VA Medical Center, United States
Disclosures: Khaled Hussein, None
- MO0500 Kynurenone, a Tryptophan Oxidation Product That Accumulates With Age, Interferes With Fracture Healing**
Kehong Ding*¹, Ariana Reyes¹, Jianrui Xu¹, Qing Zhong¹, Wendy Bollag¹, Meghan McGee-Lawrence¹, William Hill¹, Xingming Shi¹, Monte Hunter¹, Sadanand Fulzele¹, Eileen Kennedy², Ranya Elsayed¹, Mohammed Elsalanty¹, Maribeth Johnson¹, Mark Hamrick¹, Carlos Isales¹. ¹Medical College of Georgia, United States, ²University of Georgia, United States
Disclosures: Kehong Ding, None
- MO0501 Mutation of the glycan binding domain of galectin-3 in mice enhances cortical bone mass in males, but trabecular bone mass in females**
Kevin Maupin*¹, Daniel Dick², Tristan Kempston², Audra Guikema², Tina Meringa², Bryn Eagleson², Bart Williams². ¹Indiana University School of Medicine, United States, ²Van Andel Research Institute, United States
Disclosures: Kevin Maupin, None
- MO0502 Ephrin Ligand and Receptor Expression during Bone Fracture Repair Indicates Ephrin Regulation of Chondrogenesis and Bone Formation**
Amandeep Kaur*¹, Weirong Xing¹, Subburaman Mohan², Charles H Rundle². ¹Loma Linda VA Medical Center , United States, ²Loma Linda VA Medical Center, United States
Disclosures: Amandeep Kaur, None
- MO0503 Prenatal Exposure to Acetaminophen Affects Tissue Mineral Density and Microarchitecture of Young Adult Murine Bone**
Jessica Lavery*¹, Katelyn Langford¹, Patricia Hoffman¹, Tyler Milewski¹, Patrick T. Orr¹, Maria E. Squire¹. ¹The University of Scranton, United States
Disclosures: Jessica Lavery, None
- MO0504 Molecular changes triggered in local osteoprogenitors at the onset of bone remodeling**
Pia Rosgaard Jensen*¹, Thomas Levin Andersen¹, Tanja Tvistholm Sikjaer², Lars Rejnmark³, Charlotte Ejersted⁴, Jean-Marie Delaisse¹. ¹Clinical Cell Biology, Lillebaelt/Vejle Hospital, Institute of Regional Health Research, University of Southern Denmark, Denmark, ²Institute of Clinical Medicine, Aarhus University Hospital, Denmark, ³Institute of Clinical Medicine, Aarhus University Hospital, Denmark, ⁴Department of Endocrinology, Odense University Hospital, Denmark
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. Bakker¹, Jolanda M.A. Hogervorst¹, Cees J. Kleverlaan², Tim Forouzanfar³, Jenneke Klein-Nulend¹. ¹Department of Oral Cell Biology, Academic Centre for Dentistry Amsterdam (ACTA), University of Amsterdam and Vrije Universiteit Amsterdam, Amsterdam Movement Sciences, Amsterdam, The Netherlands, Netherlands, ²Department of Dental Materials Science, Academic Centre for Dentistry Amsterdam (ACTA), University of Amsterdam and Vrije Universiteit Amsterdam, Amsterdam, The Netherlands, Netherlands, ³Department 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**
Evan Buettmann^{*1}, Nicole Migotsky¹, Jennifer McKenzie¹, Matt Silva¹. ¹Washington University in St. Louis, United States
Disclosures: Evan Buettmann, None
- MO0507 Status of the Blood-Nerve Barrier is Critical for Both Neuroma Formation and Heterotopic Ossification**
Eleanor Davis^{*1}, Austin Dickerson¹, Dustin Neubauer¹, Zbigniew Gugala², Elizabeth Salisbury², Elizabeth Olmsted-Davis¹, Alan Davis¹. ¹Baylor College of Medicine, United States, ²University of Texas Medical Branch, United States
Disclosures: Eleanor Davis, None
- MO0508 Nerve Injury is a Prerequisite for Neurogenic Heterotopic Ossification**
Austin Dickerson^{*1}, Dustin Neubauer¹, Eleanor Davis¹, Corinne Sonnet¹, Zbigniew Gugala², Alan Davis¹, Elizabeth Olmsted-Davis¹. ¹Baylor College of Medicine, United States, ²University 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 Wiedemann¹, Susanna Skalicky¹, Elisabeth Geiger¹, Moustapha Kassem², Jamie Soul³, Jean-Marc Schwartz³, Tina Schleicher⁴, Yadhu Kumar⁴, Johannes Grillari⁵. ¹TAmiRNA GmbH, 1190 Vienna, Austria, Austria, ²Department of Endocrinology, University Hospital of Odense and University of Southern Denmark, DK-5000, Denmark, ³University of Manchester, Manchester, UK, United Kingdom, ⁴GATC Biotech, Konstanz, Germany, Germany, ⁵Department 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 Kamiunten², Akemi Shimada¹, Tatsuo Terashima³, Kazuhisa Nakashima¹, Yasuhiro Tomooka⁴, Yoshiki Nakamura², Hiroshi Kimura⁵, Makoto Tachibana⁶, Akira Nifuji¹. ¹Department of Pharmacology, Tsurumi University School of Dental Medicine, Japan, ²Department of Orthodontics, Tsurumi University School of Dental Medicine, Japan, ³Department of Biochemistry and Molecular Biology, Tsurumi University School of Dental Medicine, Japan, ⁴Biological Science & Technology, The Tokyo University of Science, Japan, ⁵School of Life Science and Technology, Tokyo Institute of Technology, Japan, ⁶Institute for Enzyme Research, The University of Tokushima, Japan
Disclosures: Hisashi Ideno, None

Monday

- MO0511 Whole transcriptome analysis of MSCs derived from different types of tissue reveals unique profiles**
Satoru Onizuka^{*1}, Yasuharu Yamazaki², Takayuki Sugimoto², Yumiko Sone², Akira Takeda², Sung-Joon Park³, Kenta Nakai³, Takanori Iwata¹, Masayuki Yamato³, Teruo Okano³. ¹Institute of Advanced Biomedical Engineering and Science, Tokyo Women's Medical University, Japan, ²Department of Plastic and Aesthetic Surgery, Kitasato University School of Medicine, Japan, ³Human 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}, Semahter Ucer², Michael Chung², David Cholok², John Li², Greg Asatrian³, Catherine Ding³, Paulina Giacomelli³, Edward McCarthy¹, Benjamin Levi², Aaron James¹. ¹Johns Hopkins University, United States, ²University of Michigan, United States, ³University 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 Nuzzo¹, Yunpeng Yang¹, Xinping Zhang¹. ¹University of Rochester Medical Center, United States
Disclosures: Tao Wang, None
- MO0514 Fibromodulin Reprogrammed Cells: A Safe Source for Musculoskeletal Regeneration**
Pin Ha^{*1}, Chenshuang Li², Wenlu Jiang³, Emily Berthiaume⁴, Zane Mills⁵, Jony Kil Kim², Joyce Wang⁶, Eric Chen², Xinli Zhang², Kang Ting², Chia Soo⁷, Zhong Zheng². ¹Department of Cleft Lip and Palate Surgery, West China Stomatology Hospital, Sichuan University, China, ²Division of Growth and Development, School of Dentistry, University of California, Los Angeles, United States, ³State Key Laboratory of Oral Diseases, Department of Orthodontics, West China Hospital of Stomatology, Sichuan University, China, ⁴David Geffen School of Medicine, University of California, Los Angeles, United States, ⁵Department of Ecology and Evolutionary Biology, University of California, Los Angeles, United States, ⁶Department of Emergency Medicine, Highland General Hospital, United States, ⁷Department 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 Finnnilä¹, Niko Moritz¹, Hannu Aro¹. ¹Orthopaedic 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 Schmidt¹, Nicola Oehler¹, Andreas Niemeier¹. ¹Department 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 Senyan³, Lu Cheng⁴, Wang Gui¹, Liu Meijie¹, Guo Baosheng⁵, Tan Yong⁶, Xiao Cheng⁷. ¹Experimental research center, China Academy of Chinese Medical Science, China, ²Institute of Clinical Medicine, China-Japan Friendship Hospital, Beijing University of Chinese Medicine, China, ³Department of Pathology, the Third People's Hospital of Zhengzhou, China, ⁴Institute of Basic Research in Clinical Medicine, China Academy of Chinese Medical Science, China, ⁵Institute for Advancing Translational Medicine in Bone & Joint Diseases, School of Chinese Medicine, Hong Kong Baptist University, China, ⁶Institute of Basic Research in Clinical Medicine, China Academy of Chinese Medical Science, China, ⁷Institute 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 Xu¹, Elena Kozhemyakina², yefu Li¹, Andrew Lassar², Klaus Kaestner³, Malcolm Whitman¹, Steven Pregizer¹, Shek Man Chim¹, Laura Gamer¹, Vicki Rosen¹, Andreia Ionescu¹. ¹HSDM, United States, ²HMS, United States, ³Upenn, 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 Yu¹, Xingjian Zhang¹, William Macaulay², X. Edward Guo¹. ¹Bone Bioengineering Laboratory, Department of Biomedical Engineering, Columbia University, United States, ²Department 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 Miyamoto¹, Hiroya Kanagawa¹, Yasuo Niki¹, Morio Matsumoto¹, Masaya Nakamura¹. ¹Department 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 Liu¹, Jie Li¹, Zhaonan Wang¹, Hiroki Yokota², Ping Zhang¹. ¹Department of Anatomy and Histology, School of Basic Medical Sciences, Tianjin Medical University, China, ²Department 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 Logan², David Tino-Lafont³, Laure Merametdjian¹, Nina Bon¹, Sophie Source¹, Jérôme Guicheux¹, Laurent Beck¹, Graham Williams², Chris Lelliott³, J. H. Duncan Bassett². ¹Inserm U1229-RMeS, Université de Nantes, France, France, ²Molecular Endocrinology Laboratory, Department of Medicine, Imperial College London, United Kingdom, ³Wellcome 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 Ding¹, Jianrui Xu¹, Vivek Choudhary¹, Qing Zhong¹, Ranya Elsayed¹, Kanglun Yu¹, Mohammed El-Salanty¹, Meghan McGee-Lawrence¹, Carlos Isales¹. ¹Augusta University, United States
Disclosures: Wendy Bollag, None

Monday

- MO0525 PDGFR β -Expressing Osteoprogenitors and PDGFR β Signaling Contribute to Fracture Healing by Promoting Callus Formation and Vascularization**
 Naomi Dirckx^{*1}, Robert J. Tower², Matthias Van Hul¹, Christa Maes¹. ¹Laboratory of Skeletal Cell Biology and Physiology (SCEBP), Skeletal Biology and Engineering Research Center (SBE), Department of Development and Regeneration, KU Leuven, Leuven, Belgium, Belgium, ²Laboratory 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**
 Madison Doolittle^{*1}, Robert Maynard¹, Gina Calabrese², Charles Farber², Cheryl Ackert-Bicknell¹. ¹Center for Musculoskeletal Research, University of Rochester, United States, ²Center for Public Health Genomics, University of Virginia, United States
Disclosures: Madison Doolittle, None
- MO0527 Vitamin E-stabilized UHMWPE: evaluation of biological response on human osteoblasts to wear debris**
 Emanuela Galliera^{*1}, Vincenza Ragone², Francesca Selmin³, Massimiliano Corsi Romanelli⁴. ¹Department of Biomedical Sciences for Health, Università degli Studi di Milano, Milan, Italy, ²IRCCS Galeazzi Orthopaedic Institute, Milan, Italy, Italy, ³Research and Development Department, Permedica S.p.A. via como, 38 Merate (LC), Italy, Italy, ⁴Department of Pharmaceutical Science, Università degli Studi di Milano, Milan, Italy, Italy,
⁴Department of Biomedical Sciences for Health, Università degli Studi di Milano, Milan, Italy and U.O.C SMEL-1 Patologia Clinica IRCCS Policlinico San Donato, San Donato, Milan, Italy., Italy
Disclosures: Emanuela Galliera, None
- MO0528 Overexpression of MitoNEET in osteoblasts leads to impaired bone mass and energy metabolism in mice**
 Phuong Le^{*1}, Sheila Bornstein¹, Victoria Demambro¹, Clifford Rosen¹, Anyonya Guntur¹. ¹MMCRI, United States
Disclosures: Phuong Le, None
- MO0529 *Usp53*, a novel target gene of the PTH-activated α NAC transcriptional coregulator**
 Hadla Hariri^{*1}, William Addison², Martin Pellicelli¹, René St-Arnaud¹. ¹Shriners Hospitals for Children - Canada, Canada, ²Shriners Hospitals for Children, Canada
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 Vyas¹, Annick Deloose¹, Michela Palmieri¹, Ha-neui Kim¹, Marilina Piemontese¹, Maria Almeida¹, Charles O'Brien¹, Stavros Manolagas¹, Robert Jilka¹. ¹Center 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**
 Sydney Kauffman^{*1}, Candace Morales-Wilde¹, David Cifelli¹, Samuel Sanchez¹, Alyssa Rosa¹, Joseph Tarr², Nicole Rodstrom¹, Steven Popoff², Thomas Owen¹. ¹Ramapo College of New Jersey, United States, ²Temple University School of Medicine, United States
Disclosures: Sydney Kauffman, None

- MO0532 Analysis of the miR-101/Ezh2 axis during osteoblast differentiation by Crispr/Cas9 and scalable over-expression technology**
 Farzaneh Khani^{*1}, Roman Thaler¹, Janet Denbeigh¹, Christopher Paradise¹, Endre Soreide¹, Gary S. Stein², Amel Dudakovic¹, Andre J van Wijnen¹. ¹Departments of Orthopedic Surgery & Biochemistry and Molecular Biology, Mayo Clinic, United States, ²Departments of Biochemistry & Surgery, University of Vermont Cancer Center, Burlington, VT, United States
Disclosures: Farzaneh Khani, None
- MO0533 Interleukin-6 Inhibits Osteoblastic Differentiation of Bone Marrow Stromal Cells and Decreases Bone Formation Following Ischemic Osteonecrosis**
 Gen Kuroyanagi^{*1}, Naga Suresh Adapala¹, Ryosuke Yamaguchi¹, Harry K.W. Kim¹. ¹Texas 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**
 Song Yi Roh^{*1}, Dong-Seol Lee¹, Joo-Cheol Park¹. ¹School of Dentistry, Seoul National University, Korea, Republic of
Disclosures: Song Yi Roh, None
- MO0535 The Critical Role of Peroxiredoxin-1 for the Estrogen Protects Osteoblast from Oxidative Stress**
 Di Liu^{*1}, Juan Du¹, Minqi Li¹. ¹Shandong Provincial Key Laboratory of Oral Biomedicine, Shandong University, China
Disclosures: Di Liu, None
- MO0536 Comparative Study of the Effect of Different Tea Types on Mineral Deposition in an Osteoblast Cell Model**
 Michael McAlpine^{*1}, Wendy Ward¹, Adam MacNeil¹, William Gittings¹. ¹Faculty of Applied Health Sciences, Brock University, Canada
Disclosures: Michael McAlpine, None
- MO0537 Regulation of Bone Mass by FGF Signaling Pathways**
 Jennifer McKenzie^{*1}, Kannan Karuppaiah¹, Craig Smith¹, Matthew Silva¹, David Ornitz¹. ¹Washington University in St. Louis, United States
Disclosures: Jennifer McKenzie, None
- MO0538 Runx2 mediated autophagy promotes osteoblast and chondrocyte differentiation**
 Ahmad Othman^{*1}, Manish Tandon¹, Ryan Ross¹, Lifan Liao¹, Rick Sumner¹, Amjad Javed², Di Chen¹, Jitesh Pratap¹. ¹Rush University Medical Center, United States, ²University 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 Capulli¹, Marco Ponzetti¹, Antonio Maurizi¹, Sara Gemini-Piperni¹, Anna Teti¹. ¹Department of Biotechnological and Applied Clinical Sciences, Italy
Disclosures: Nadia Rucci, None
- MO0540 Systems Genetics Identifies Novel Genes and Gene Networks Influencing Osteoblast Activity**
 Olivia L Sabik^{*1}, Gina M Calabrese², Cheryl L Ackert-Bicknell³, Charles R Farber⁴. ¹Department of Biochemistry and Molecular Genetics and Center for Public Health Genomics, School of Medicine, University of Virginia, United States, ²Center for Public Health Genomics, School of Medicine, University of Virginia, United States, ³Center for Musculoskeletal Research, University of Rochester Medical Center, University of Rochester, United States, ⁴Department of Public Health Sciences and Center for Public Health Genomics, School of Medicine, University of Virginia, United States
Disclosures: Olivia L Sabik, None

Monday

- MO0541 A footstep to figuring out the difference between alveolar bone and long bone**
 Chul Son^{*1}, Yeoung Hyun Park¹, Joo Cheol Park¹. ¹Department of Oral Histology-Developmental Biology, School of Dentistry, Seoul National University, Korea, Republic of
Disclosures: Chul Son, None
- MO0542 The role of Tet1 and Tet2 and active DNA demethylation for osteoblastic differentiation**
 Roman Thaler^{*1}, Farzaneh Khani¹, Janet Denbeigh¹, Markus Schreiner¹, Amel Dudakovic¹, Xianhu Zhou¹, David Deyle², Andre J van Wijnen¹. ¹Departments of Orthopedic Surgery & Biochemistry and Molecular Biology, Mayo Clinic, United States, ²Departments of Medical Genetics, Mayo Clinic, United States
Disclosures: Roman Thaler, None
- MO0543 MiR-23a Cluster – RUNX2 – EZH2 Axis Controls Bone Formation *In-Vivo***
 Benjamin Wildman^{*1}, Mohammad Hassan¹, Tanner Godfrey¹, Harunur Rashid¹, Chris Lengner², Amjad Javed¹. ¹UAB, United States, ²UPenn, United States
Disclosures: Benjamin Wildman, None
- MO0544 Inhibition of CaMKK2 accelerates bone fracture healing**
 Justin Williams^{*1}, Anu Valiya Kambrath¹, Roshni Patel¹, Yinghua Chen¹, Alexander Robling¹, Uma Sankar¹, Melissa Kacena¹. ¹Indiana University School of Medicine, United States
Disclosures: Justin Williams, None
- MO0545 Cbfβ Governs Osteoblast-Adipocyte Lineage Commitment through Enhancing β-Catenin Signaling and Suppressing Adipogenesis Gene Expression**
 Mengrui Wu^{*1}, Wei Chen¹, Jue Wang², Yi-Ping Li². ¹Department of Pathology, University of Alabama at Birmingham, United States, ²University of Alabama at Birmingham, United States
Disclosures: Mengrui Wu, None
- MO0546 AFF1 and AFF4 differentially regulate the osteogenic differentiation of human MSCs**
 Chenchen Zhou^{*1}, QiuChan Xiong¹. ¹NO.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 Zhang¹, Quanhong Sun¹, Jolene J Windle², Philip E Auron³, Deborah L Galson¹. ¹Department of Medicine, Hematology-Oncology Division, University of Pittsburgh Cancer Institute, McGowan Institute for Regenerative Medicine, University of Pittsburgh, United States, ²Department of Human and Molecular Genetics, Virginia Commonwealth University, United States, ³Department of Biological Sciences Duquesne University, United States
Disclosures: Juraj Adamik, None
- 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 Bruzzaniti¹, Melissa Kacena¹, Edward Srour¹, Safa Mohamad¹, Joydeep Ghosh¹, Marta Alvarez¹, Paul Jeffrey Childress¹, Korbin Davis¹, Lin Lin Xu¹, Hao Wu¹. ¹Indiana University, United States
Disclosures: Alexandra Aguilar-Perez, None
- MO0549 Rapid Effects of Low Extracellular Sodium on Osteoclasts: Molecular Mechanisms**
 Julia Barsony^{*1}, Qin Xu¹, Joseph Verbalis¹. ¹Georgetown 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 Pirapaharan¹, Anais MJ Moeller¹, Jean-Marie Delaissé¹, Kent Soe¹. ¹Vejle 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 Shin¹, Anne Delany¹, Sun-Kyeong Lee¹. ¹UConn Health, United States
Disclosures: Henry Hrdlicka, None
- MO0552 The nuclear receptor AhR controls bone homeostasis by regulating osteoclast differentiation via the RANK/c-Fos signaling axis**
 Takashi Izawa^{*1}, Eiji Tanaka¹, Naozumi Ishimaru². ¹Tokushima University Grad School, dept of Orthod, Japan, ²Tokushima University Grad School, dept of Oral Pathol, Japan
Disclosures: Takashi Izawa, None
- MO0553 C/EBP α 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 Chen¹, Yi-Ping Li¹. ¹University 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 Kim¹, Yong Deok Lee¹, Hyung Joon Kim², Zang Hee Lee¹. ¹Seoul National University School of Dentistry, Korea, Republic of, ²Pusan National University, Korea, Republic of
Disclosures: Haemin Kim, None
- MO0555 TNF Induction of Deubiquitinases Polarize Inflammatory Macrophages via NF- κ B RelB**
 Wei Lei^{*1}, Xiaoxiang Yin², Zhijun Zhao², Xiaodong Hou², Rong Duan¹, Brendan Boyce¹, Zhenqiang Yao¹. ¹University of Rochester Medical Center, United States, ²Henan University First Affiliated Hospital, China
Disclosures: Wei Lei, None
- MO0556 Effects of Retinoids on Physiological and Inflammatory Osteoclastogenesis *in vitro***
 Vikte Lionikaite^{*1}, Anna Westerlund¹, Howard H Conaway², Ulf H Lerner¹, Petra Henning¹. ¹University of Gothenburg, Sweden, ²University 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 Falck¹, Sofia Lopez Gelston¹, Chris Litwin¹, Larry Suva¹, Dana Gaddy¹. ¹Texas 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 Miller², Masaki Yoshida², Kazuki Inoue², Shinichi Nakano², Xiaoyu Hu², Lionel B. Ivasgkiv², Georg Schett³, Alessandra Pernis², Stevev R. Goldring², F. Patrick Ross², Baohong Zhao². ¹Hospital for Supecial Surgery, United States, ²Hospital for Special Surgery, United States, ³Erlangen university, Germany
Disclosures: Nikolaus Binder, None
- MO0559 Elucidation of the role of DC-STAMP heterogeneity and calcium signaling in osteoclastogenesis**
 Ananta Paine^{*1}, Maria De La Luz Garcia-Hernandez¹, Nelson Huertas¹, Dongge Li¹, Minsoo Kim², Larry E. Wagner³, David Yule³, Christopher Ritchlin⁴. ¹Division of Allergy/ Immunology and Rheumatology, School of Medicine and Dentistry, University of Rochester Medical School, United States, ²Microbiology and Immunology, University of Rochester, United States, ³Department of Pharmacology and Physiology, University of Rochester, United States, ⁴Division of Allergy/Immunology and Rheumatology, School of Medicine and Dentistry, United States
Disclosures: Ananta Paine, None

Monday

- MO0560 Blockade of Osteoclast-Mediated Bone Resorption with a RANKL Inhibitor Enhances Spinal Fusion in a Rat Model**
 Karin Payne^{*1}, Christopher Erickson¹, Nichole Shaw¹, Peter Yarger¹, Todd Baldini¹, Christopher Kleck¹, Vikas Patel¹, Evalina Burger¹. ¹University 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 Xu², Asana Kamohara², Juan Iovanna³, Yasushi Kubota⁴, Masaaki Mawatari⁵, Akiko Kukita². ¹Department of Orthopaedic Surgery, Faculty of Medicine, Saga University, Japan, ²Department of Pathology and Microbiology, Faculty of Medicine, Saga University, Japan, ³Center de Recherche en Cancerologie de Marseille, INSERM U1068, France, France, ⁴Division of Hematology, Respiratory Medicine and Oncology, Department of Internal Medicine, Faculty of Medicine, Saga University, Japan, ⁵Department of Orthopaedic 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 Uehara¹, Masanori Koide², Atsushi Arai², Toshihide Mizoguchi², Midori Nakamura¹, Yasuhiro Kobayashi², Naoyuki Takahashi², Chie Fukuda³, Eisuke Tsuda³. ¹Department of Biochemistry, Institute for Oral Science, Matsumoto Dental University, Japan, ²Institute for Oral Science, Matsumoto Dental University, Japan, ³Rare 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 Lingheld², Le Duong³, Archana Sanjay⁴, Hicham Drissi⁵. ¹Department of Genetics and Genome Sciences, UConn Health, United States, ²Department of Orthopaedic Surgery, UConn Health, United States, ³Bone Biology Group, Merck Research Laboratories, United States, ⁴Department of Orthopaedic Surgery, United States, ⁵Department 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 Ruan¹, Christine Hachfeld¹, Glenda Evans¹, Stephanie Youssef¹, Joshua Farr¹, David Monroe¹, Sundeep Khosla¹, Jennifer Westendorf¹, Merry Jo Oursler¹. ¹Mayo 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 Faccio¹. ¹Department 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**
 Graeme Murray^{*1}, Fanchi Meng², Lukasz Kurgan³, Henry Donahue¹. ¹Biomedical Engineering, Virginia Commonwealth University, United States, ²Electrical and Computer Engineering, University of Alberta, Canada, ³Computer Science, Virginia Commonwealth University, United States
Disclosures: Graeme Murray, None
- MO0567 Deletion of CaMKK2 in Osteocytes Elicits Gender-Specific Effects on Bone Mass**
 Mavis Irwin^{*1}, Uma Sankar¹. ¹Indiana University Purdue University of Indianapolis, United States
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.**
 Chris Kegelman^{*1}, Devon Mason¹, Teresita Bellido², Alexander Robling², Joel Boerckel¹.
¹University of Notre Dame, United States, ²Indiana University, United States
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 Zordo², Sandra Kemmerling³, Christian Kremser²,
 Christoph Ammann⁴, Volker Kuhn⁵. ¹Medical University Innsbruck, Internal Medicine II,
 Austria, ²Medical University Innsbruck, Radiology, Austria, ³Medical University Hospital
 Innsbruck, Austria, ⁴Medical University Innsbruck, Austria, ⁵Medical University Innsbruck,
 Trauma Surgery, Austria
Disclosures: Michael Schirmer, None
- MO0570 miR-145 overexpression impairs osteocytes structure and function in Adolescent Idiopathic Scoliosis**
 Wayne Yuk-wai Lee^{*1}, Jiajun Zhang¹, Yujia Wang¹, Ross KK Leung², Tsz-ping Lam¹, Yong Qiu³, Jack Chun-yiu Cheng¹. ¹Department of Orthopaedics and Traumatology, SH Ho Scoliosis Research Laboratory, The Chinese University of Hong Kong, Shatin, NT, Hong Kong SAR, China, Hong Kong, ²School of Public Health, The University of Hong Kong, Hong Kong SAR, China, Hong Kong, ³Spine Surgery, Nanjing Drum Tower Hospital, Nanjing University, Nanjing, China, China
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 Harbin¹, Eric Nauman¹, Teresita Bellido², Fredrick Pavalko²,
 Russell Main¹. ¹Purdue University, United States, ²Indiana 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 Martinez¹, Shubo Wang¹, Shongshan Fan¹,
 Catherine Kirn-Safran¹, X.Lucas Lu¹, Liyun Wang¹. ¹University 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 Riedel¹, Petar Milovanovic¹, Anke Jeschke¹, Sebastian Butscheidt¹, Klaus Püschel², Michael Amling¹, Björn Busse¹. ¹Department of Osteology and Biomechanics, University Medical Center Hamburg-Eppendorf, Germany, ²Department 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. Omeara¹, Nia Campbell¹, Henry M. Kronenberg¹,
 Ted S. Gross², Marc Wein¹. ¹Massachusetts General Hospital Endocrine unit, Harvard Medical School, United States, ²University of Washington, Department of Orthopaedics and Sports Medicine, United States
Disclosures: Tadatoshi Sato, None

Monday

- MO0575 Second-generation HR-pQCT: Reproducibility of in vivo Bone Microarchitecture and Strength Measurements**
 Sanchita Agarwal^{*1}, Kyle Nishiyama¹, Fernando Rosete¹, Mariana Bucovsky¹, Ivelisse Colon¹, X. Edward Guo², Elizabeth Shane¹. ¹Division of Endocrinology, Department of Medicine, Columbia University, United States, ²Department of Biomedical Engineering, Columbia University, United States
Disclosures: Sanchita Agarwal, None
- MO0576 Volumetric Hip DXA Indicates Rapid Deterioration Of Both Cortical And Trabecular Bone Compartments After Allogeneic Hematologic Stem Cell Transplant**
 Mohammed Almohaya^{*1}, Naveen Sami²⁵, David Kendler³, Renaud Winzenrieth⁴, Ni Bai²⁵, Stephen Robertson²⁵, Raewyn Broady³. ¹King Fahad Medical City, Saudi Arabia, ²Prohealth clinical research, Canada, ³University of British Columbia, Canada, ⁴Galgo Medical, Spain, ⁵Prohealth 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-Izart¹, Thierry Chevalley¹, Bert van Rietbergen², René Rizzoli¹, Serge Ferrari¹. ¹Division of Bone Diseases, Geneva University Hospitals and Faculty of Medicine, Switzerland, ²Department 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**
 Andrew Burghardt^{*1}, Sundeep Khosla², Julio Carballido-Gamio³. ¹University of California, San Francisco, United States, ²Mayo Clinic, United States, ³University of Colorado Denver, United States
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 Pino², Luis Del Rio³, Silvana Di Gregorio⁴, Jesus Garcia-Vadillo⁵, Carlos Gomez⁶, Jesus Gonzalez-Macias⁷, Nuria Guañabens⁸, Federico Hawkins⁹, Jorge Malouf¹⁰, Eduardo Kanterewicz¹¹, Esteban Martínez⁸, Ana Monegal¹², Maria Jose Montoya¹³, Manuel Muñoz¹⁴, Xavier Nogues¹⁵, Joan Miquel Nolla¹⁶, Jose Maria Olmos¹⁷, Ramon Perez-Cano¹⁸, Jose Luis Perez-Castrillon¹⁹, Pilar Peris¹², Manuel Rodriguez²⁰, Daniel Roig²¹, Manuel Sosa²², Elena Valassi¹⁰. ¹Hospital Clínico Universitario, Spain, ²Hospital Univ. De Salamanca, Spain, ³CETIR Centre Medic, Spain, ⁴ERESA Centro Médico Quirúrgico el Campanar, Spain, ⁵Hospital de la Princesa, Spain, ⁶Hospital Central de Asturias, Spain, ⁷Hospital Univ. Marques de Valdecilla, Spain, ⁸Hospital Clínic, Spain, ⁹Hospital Universitario 12 Octubre, Spain, ¹⁰Hospital de Santa Creu i Sant Pau, Spain, ¹¹Hospital general de Vic, Spain, ¹²Hospital Clinic, Spain, ¹³Departamento de Medicina. Universidad de Sevilla, Spain, ¹⁴Hospital Universitario San Cecilio, Spain, ¹⁵Hospital del Mar, Spain, ¹⁶Hospital Universitari de Bellvitge, Spain, ¹⁷Hospital Univ. Marques de Valdecilla, Spain, ¹⁸Hospital Univ. Virgen Macarena, Spain, ¹⁹Hospital Universitario Rio Hortega, Spain, ²⁰Hospital Regional Univ. de Málaga, Spain, ²¹Hospital Sant Joan Despi Moises Broggi, Spain, ²²Hospital Univ. Insular, Spain
Disclosures: Antonio Cano, None

- 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 Ljuhar², Davul Ljuhar³, Benjamin Norman³, Tobias Haftner³, Stefan Nehrer⁴, Astrid Fahrleitner-Pammer¹. ¹Medical University of Graz, Department of Internal Medicine, Division of Endocrinology & Diabetology, Austria, ²Image Biopsy Lab, R & D, Austria, ³Braincon Technologies, Austria, ⁴Danube 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**
 Franck Michelet^{*1}, Didier Hans². ¹Medimaps, France, ²Center of Bone diseases, Bone and Joint Department, Lausanne University Hospital, Switzerland
Disclosures: Franck Michelet, Medimaps, Other Financial or Material Support
- MO0582 Commercial Laboratory Reproducibility of Serum CTX in Clinical Practice**
 Sahar M. Hindi^{*1}, Eric Vittinghoff², Anne L. Schafer¹, Stuart Silverman³, Douglas C. Bauer⁴. ¹Division of Endocrinology and Metabolism, Department of Medicine, University of California, San Francisco, United States, ²Department of Epidemiology and Biostatistics, University of California, San Francisco, United States, ³Cedars Sinai Medical Center, UCLA School of Medicine, United States, ⁴Department of Epidemiology and Biostatistics and Division of General Internal Medicine, Department of Medicine, University of California, San Francisco, United States
Disclosures: Sahar M. Hindi, None
- MO0583 Quantification of Age-Related Changes in Whole-Skeleton Bone Metabolism using¹⁸F-NaF PET/CT**
 Alyssa Johncola^{*1}, Jonathan Guntin¹, Christian McHugh¹, Austin Alecxih¹, Sun Kim¹, Rishika Sharma¹, Shivali Patel¹, Sheenali Patel¹, Thomas Werner¹, Poul Flemming¹, Abass Alavi¹, Chamith Rajapakse¹. ¹University of Pennsylvania, United States
Disclosures: Alyssa Johncola, None
- MO0584 Shift in narrow neck centre-of mass influences neck of femur fracture prediction**
 Ben Khoo^{*1}, Matthew Miller², Keenan Brown³, Joshua Lewis², Kathy Zhu¹, Richard Prince². ¹Sir Charles Gairdner Hospital, Australia, ²University of Western Australia, Australia, ³Mindways Software, United States
Disclosures: Ben Khoo, None
- MO0585 Plasma MicroRNAs Might Be Related to Trabecular Bone Score in Postmenopausal Women**
 Tilen Kranjc^{*1}, Barbara Ostanek¹, Tomaz Kocjan², Janez Prezelj², Janja Marc¹. ¹University of Ljubljana, Faculty of Pharmacy, Slovenia, ²Dept. of Endocrinology, Diabetes and Metabolic Diseases, University Medical Centre Ljubljana, Slovenia
Disclosures: Tilen Kranjc, None
- MO0586 Bone Mineral Density Measurement Intervals for Rheumatoid Arthritis Patients Not Treated for Osteoporosis**
 Seung Yun Lee^{*1}, Min-jae Jo¹, Kyong-Hee Jung¹, Seong-Ryul Kwon¹, Won Park¹. ¹Division 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 Jr¹, Srishti Manocha¹, Data Don-Pedro¹, Gabriela Rondon², Cheuk Hong Leung¹, Liu Suyu¹, Richard E Champlin¹, Xerxes Pundole¹. ¹The University of Texas MD Anderson Cancer Center, United States, ² The University of Texas MD Anderson Cancer Center, United States
Disclosures: Huifang Lu, None

Monday

- MO0588 Multi-Centre Cross-Calibration for First and Second Generation HR-pQCT**
Sarah L Manske^{*1}, Lauren A Burt¹, Kyle K Nishiyama², Sanchita Agarwal², Elizabeth Shane², Steven K Boyd¹. ¹McCaig Institute for Bone and Joint Health, Department of Radiology, Cumming School of Medicine, University of Calgary, Canada, ²Division of Endocrinology, Department of Medicine, Columbia University, United States
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 Jantzi², George Ioannidis¹, Jenn Bucek², Jonathan Adachi¹, Lora Giangregorio², Laura Pickard¹, John Hirdes², Alexandra Papaioannou¹. ¹McMaster University, Canada, ²University 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 Humbert², Africa Muxi³, Luis del Rio⁴, Joan Vidal⁵, Enric Portell⁵, Ana Monegal¹, Nuria Guañabens¹, Pilar Peris¹. ¹Rheumatology Department, Hospital Clinic of Barcelona, University of Barcelona, Spain, ²Galgo Medical, Spain, ³Nuclear Medicine Department, Hospital Clínic of Barcelona, Spain, ⁴CETIR, Spain, ⁵Guttmann 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 Warner², Mahalakshmi Honasoge², Loren Safta³, Shiri Levy², Sudhaker Rao², Saroj Palnitkar², Pooja Kulkarni². ¹Wayne State University School of Medicine, United States, ²Henry Ford Hospital, United States, ³High School Student, United States
Disclosures: Christopher Little, None
- 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 Ishii², Gail Greendale¹, Jane Cauley³, Arun Karlamangla¹. ¹UCLA, United States, ²University of Tokyo, United States, ³University 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 Scheidt¹, Eric Flavio Grisolia Seifert¹, Klaus Püschel², Michael Amling¹, Björn Busse¹. ¹University Medical Center Hamburg-Eppendorf, Department of Osteology and Biomechanics, Germany, ²University 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 Cheuk², Tsz Ping Lam², Ali Ghasem-Zadeh¹, Roger Zebaze¹, X. Edward Guo³, Jack Chun-Yiu Cheng⁴, Ego Seeman¹. ¹Departments of Endocrinology and Medicine, Austin Health, University of Melbourne, Australia, ²Department of Orthopaedics and Traumatology, The Chinese University of Hong Kong, China, ³Bone Bioengineering Laboratory, Department of Biomedical Engineering, Columbia University, United States, ⁴Department of Orthopaedics and Traumatology, The Chinese University of Hong Kong, China
Disclosures: Xiao-Fang Wang, None

- 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 Schousboe², Robert Y van der Velde, Irma J de Bruin, Heinrich M Janzing³, Sjoerd Kaarsemaker⁴, Piet P Geusens, Joop P van den Bergh. ¹Maastricht UMC+, NUTRIM, Department of Internal Medicine; VieCuri Medical Center, Department of Internal Medicine, Netherlands, ²Park Nicollet Clinic, St. Louis Park, MN. Division of Health Policy & Management, University of Minnesota, Minneapolis, MN, United States, ³Department of Surgery and Trauma Surgery, VieCuri Medical Centre, Netherlands, ⁴Department of Orthopedic Surgery and Trauma Surgery, VieCuri Medical Centre, Netherlands, ⁵Maastricht UMC+, CAPHRI, Department of Internal Medicine subdivision of Rheumatology; University of Hasselt, Netherlands, ⁶Maastricht UMC+, NUTRIM, Department of Internal Medicine; VieCuri Medical Center, Department of Internal Medicine; University of Hasselt, Netherlands
Disclosures: Caroline E Wyers, None
- MO0596 Bone turnover in postmenopausal women with hyponatremia**
 Caroline Chiu^{*1}, Philip Orlander¹, Kelly Wirlfel¹, Jeena Varghese², Catherine G Ambrose¹, Nahid Rianon¹. ¹UTHealth McGovern Medical School, United States, ²University 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 Han¹, Moo-Il Kang¹. ¹Division 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 Frisoli², Jairo Borges¹, Angela Paes¹, Antonio Carvalho¹. ¹Federal University of Sao Paulo, Brazil, ²Federal University of Sao Paulo, Brazil
Disclosures: Sheila Ingham, None
- MO0599 Bone Turnover Markers in Men with Dysglycemia**
 Kara Holloway^{*1}, Lelia de Abreu¹, Mark Kotowicz¹, M. Amber Sajjad¹, Julie Pasco¹. ¹Deakin 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-Yamand², Xiaodong Mu³, Johnny Huard³. ¹UT Health Science Center at Houston, United States, ²MD Anderson Cancer Center, United States, ³UT Health Science Center at Houston, United States
Disclosures: Krishna Sinha, None
- MO0601 Is hyperkyphosis associated with incident falls in older men?**
 Corinne McDaniels-Davidson^{*1}, Lynn Marshall², Jeanne Nichols¹, Florin Vaida¹, John Schousboe³, Jane Cauley⁴, Peggy Cawthon⁵, Deborah Kado¹. ¹University of California, San Diego, United States, ²Oregon Health Sciences University, United States, ³Health Partners Institute for Education and Research, U. Minnesota, United States, ⁴University of Pittsburgh, United States, ⁵California Pacific Medical Center, United States
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 Oei¹, Biljana Atanasovska², Carolina Medina-Gomez¹, Enisa Shevroja³, Josje Schoufour¹, Berengere Aubry-Rozier³, Carola Zillikens¹, Andre Uitterlinden¹, Edwin Oei¹, Didier Hans³, Fernando Rivadeneira¹. ¹Erasmus MC, Netherlands, ²Groningen University, Netherlands, ³University of Lausanne, Switzerland
Disclosures: Fjorda Koromani, None

- MO0603 Machine Learning Principles Can Improve Hip Fracture Prediction**
Christian Kruse^{*1}, Eiken Pia², Peter Vestergaard¹. ¹Aalborg University Hospital, Denmark,
²University of Copenhagen, Denmark
Disclosures: Christian Kruse, None
- MO0604 Sleep disorders are associated with trabecular bone score and osteoporotic fractures, not with bone mineral density**
Nadege Lambert^{*1}, Didier Hans¹, Raphael Heinzer², José Haba-Rubio²,
Pedro Marques-Vidal³, Olivier Lamy¹. ¹Bone Unit, Switzerland, ²Sleep Disorder Center, Switzerland, ³internal medicine department, Switzerland
Disclosures: Nadege Lambert, None
- MO0605 The bone-vascular hypothesis: relationship between abdominal aortic calcification, bone mineral density and fractures in elderly women**
Joshua Lewis^{*1}, Celeste Eggemont², John Schousboe³, Wai Lim², Germaine Wong¹, Ben Khoo⁴, MingXiang Yu⁵, Kun Zhu², Kevin Wilson⁶, Douglas Kiel⁷, Richard Prince². ¹School of Public Health, University of Sydney, Australia, ²School of Medicine and Pharmacology, University of Western Australia, Australia, ³Park Nicollet Osteoporosis Center and Institute for Research and Education, United States, ⁴Medical Technology and Physics, Sir Charles Gairdner Hospital, Australia, ⁵Department of Endocrinology & Metabolism, Shanghai Zhongshan Hospital, Fudan University, China, ⁶Skeletal Health, Hologic, Inc, United States, ⁷Institute for Aging Research, Hebrew SeniorLife, Beth Israel Deaconess Medical Center, Harvard Medical School, United States
Disclosures: Joshua Lewis, None
- MO0606 Is microangiopathy an independent risk factor of vertebral fracture? A prospective study from Chinese population**
Jixing Liang^{*1}, Junping Wen¹, Kaka Tang¹, Huibin Huang¹, Liantao Li¹, Wei Lin¹, Lixiang Lin¹, Gang Chen¹. ¹Fujian Provincial Hospital, China
Disclosures: Jixing Liang, None
- MO0607 Burden of fractures attributable to low bone mineral density**
Thao Ho-Le^{*1}, Thach Tran², Jacqueline Center², Jacqueline Center², John Eisman², Tuan Nguyen². ¹University of Technology Sydney, Australia, ²Garvan Institute of Medical Research, Australia
Disclosures: Thao Ho-Le, None
- MO0608 Multi-Modal Intervention for Improving Osteoporosis Treatment Initiation and Adherence**
Ryan Outman^{*1}, Paul Muntner¹, Andrew Bradlyn², Jeffrey Curtis¹, Lee Cromwell², Douglas Wilmet Roblin³, Dennis Tolsma², Doraina Walker-Williams², Kenneth Saag¹. ¹University of Alabama at Birmingham, United States, ²Kaiser Permanente, United States, ³Georgia State University, United States
Disclosures: Ryan Outman, None
- MO0609 Low peak bone mineral density of lumbar spine in Korean women of Korea National Health and Nutrition Examination Survey (2008-2010)**
Ye Soo Park^{*1}, Sangmo Hong², Woong Hwan Choi³. ¹Department of Orthopaedic Surgery, Guri Hospital, Hanyang University College of Medicine, Korea, Republic of, ²Division of Endocrinology, Department of Internal Medicine Hallym University Dongtan Sacred Heart Hospital, Korea, Republic of, ³Division of Endocrinology, Department of Internal Medicine, College of Medicine, Hanyang University, Korea, Republic of
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 Judge², Samuel Hawley¹, Antonella Delmestri¹, Daniel Prieto-Alhambra¹, Cyrus Cooper³, Michael Pazianas¹. ¹NIHR Musculoskeletal Biomedical Research Unit, Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences, Nuffield Orthopaedic Centre, University of Oxford, United Kingdom, ²NIHR 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, ³NIHR 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 Turkiewicz², Björn Rosengren³, Martin Englund². ¹Centre for Statistics in Medicine and Nuffield Department of Orthopaedics, Rheumatology, and Musculoskeletal Sciences (NDORMS), University of Oxford, United Kingdom, ²Clinical Epidemiology Unit, Orthopaedics, Department of Clinical Sciences Lund, Lund University, Sweden, ³Clinical 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 Boutin², Stephen Kritchevsky¹, Haiying Chen¹, Caroline Chiles¹, Barton Wise², Cyrus Bateni², Ahmed Bayoumi², Leon Lenchik¹. ¹Wake Forest School of Medicine, United States, ²University of California, Davis, United States
Disclosures: Thomas Register, None
- MO0613 Low femur neck BMD is associated with CAD in elderly women not on statins**
Olasimbo Chiadika^{*1}, Fisayomi Shobayo¹, Syed Naqvi¹, Catherine G Ambrose¹, Nahid Rianon¹. ¹UTHealth McGovern Medical School, United States
Disclosures: Olasimbo Chiadika, None
- MO0614 Evaluation of Current Screening and Treatment Patterns in Males at the Veteran Affairs Healthcare System**
David Smith^{*1}, Nicola Berman², Craig Tenner³, Virginia Pike⁴, Michael Pillinger⁴, Stephen Honig⁴. ¹NYU School of Medicine, United States, ²NYU Rheumatology, United States, ³NYU Department of Medicine, United States, ⁴NYU Department of Rheumatology, United States
Disclosures: David Smith, None
- MO0615 A Retrospective Study on the Relationship between Spinal Fragility Fracture and Bone Mineral Density**
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Disclosures: Kwang-Sup Song, None
- MO0616 Relationship between bilateral muscle strength and lumbar spine bone mineral density in post-menopausal women- a cross sectional study**
Jing Wang^{*1}, Chenguang Li¹, Yan Zhang¹, Xiaofeng Qi¹, Liang Qiao¹, Jinlong Li¹, Lin Chen¹, Qiang Wang¹, Hao Zhang¹, Yongjian Zhao¹, Yongjun Wang¹, Bing Shu¹. ¹Longhua Hospital, Shanghai University of Traditional Chinese Medicine, China
Disclosures: Jing Wang, None

Monday

- MO0617 Trends in Self-Reported and Measured Osteoporosis Among US Adults, 2005-2014**
 Qing Wu^{*1}, Yingke Xu¹, William Leslie². ¹University of Nevada, Las Vegas, United States,
²University of Manitoba, Canada
Disclosures: Qing Wu, None
- MO0618 Impact of Primary Osteoporosis Screening in a National Sample of Older Men**
 Cathleen Colon-Emeric^{*1}, Carl Pieper¹, Courtney VanHoutven², Kenneth Lyles¹,
 Joanne LaFleur³, Janet Grubber², Robert Adler⁴. ¹Duke University, United States, ²Durham
 VA Medical Center, United States, ³Salt Lake City VA, United States, ⁴Hunter 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 Roe², Sara Merwin², Vafa Tabatabaie², Stephanie Kim², Yungtai Lo²,
 Wanda Horn². ¹Albert Einstein College of Medicine, United States, ²Montefiore Medical
 Center, United States
Disclosures: Jamie Confino, None
- MO0620 Training the Next Generation of Musculoskeletal Investigators: A Report on the Activity of the USBJI's Young Investigator Initiative**
 Edward Puzas^{*1}, Toby King², Nancy Lane³. ¹University of Rochester School of Medicine and
 Dentistry, United States, ²United States Bone and Joint Initiative, United States, ³University
 of California Davis Health System, United States
Disclosures: Edward Puzas, None
- MO0621 Evaluating Racial Differences in Medical Experiences Among Women with Osteoporosis**
 Nicole Wright^{*1}, Mary Melton², Ivan Herbey³, Susan Davies⁴, Emily Levitan¹,
 Kenneth Saag², Nataliya Ivankova⁵. ¹Department of Epidemiology, University of Alabama
 at Birmingham, United States, ²Division of Clinical Immunology & Rheumatology,
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 United States
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- MO0622 Dancing on Broadway with Irregular Periods and a Femoral Neck Stress Fracture**
 Dorothy Fink^{*1}, David Weiss², Ryan Turner³, Marijeanne Liederbach². ¹Hospital for Special
 Surgery, United States, ²Harkness Center for Dance Injuries, NYU Hospital for Joint
 Diseases, United States, ³Top Balance Nutrition, United States
Disclosures: Dorothy Fink, None
- MO0623 Participation in Varsity Sports is Associated with Tibial Bone Health as Assessed by Peripheral QCT**
 Katelyn Guerriere^{*1}, Caitlin Dillon¹, Kathryn Taylor¹, Julie Hughes¹, Anna Nakayama¹,
 Erin Gaffney-Stomberg¹. ¹USARIEM, United States
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**
 Tsang-Hai Huang^{*1}, Rong-Sen Yang², Ming-Shi Chang¹. ¹National Cheng Kung University,
 Taiwan, Province of China, ²National Taiwan University Hospital, Taiwan, Province of
 China
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 Lee², Jin-Hwan Kim³, Dong Gyu Hwang². ¹Dongguk University, Korea, Republic of, ²Ewha womans University, Korea, Republic of, ³Inje 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 Lutz¹, Adela Hruby¹, J. Philip Karl¹, James McClung¹, Erin Gaffney-Stomberg¹. ¹USARIEM, 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 Weiler¹, Shubhabrata Das¹, Michelle Wall², Stella Daskalopoulou², David Goltzman², Suzanne Morin². ¹McGill University, Canada, ²Research 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 Swanson¹, Pamela Wolfe¹, Toby Wellington¹, Andrew Overstreet¹, Jane Quick¹, Rebecca Boxer¹, Robert Schwartz¹, Wendy Kohrt¹. ¹University 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 Oakes¹, Shahed Sbeta¹, Caylin Billingsley¹, Dena Acton¹, Austin Reilly¹, Rita Gerard-O'Riley¹, Michael Econis¹. ¹Indiana 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 Xue¹, Yongjian Zhao¹, Yan Zhang¹, Yongjun Wang¹, Bing Shu¹. ¹Spine 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 Sidibe¹, Roth-Visal Ung¹, Michaël Munger¹, Catherine Fortier¹, Yue-Pei Wang¹, Mohsen Agharazii¹, Karine Marquis¹, Fabrice Mac-Way¹. ¹CHU 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-Antolin¹, Fernando López-Casillas², Pierrick Fournier¹, Patricia Juárez¹. ¹Center for Scientific Research and Higher Education, Mexico, ²Cellular Physiology Institute, Mexico
Disclosures: Fernando M Guerra-Olvera, None

Monday

- MO0633 High serum Erythropoietin Predicts Incident Fractures in Men.MrOS Sweden.**
 Hallgerdur Lind Kristjansdottir^{*1}, sten Ljunggren², Magnus Karlsson³, Mattias Lorentzon⁴, Ulf Lerner⁵, Claes Ohlsson⁵, Catharina Lewerin¹, Dan Mellström⁴. ¹Section of Hematology and Coagulation, Department of Internal Medicine, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden, Sweden, ²Department of Medical Sciences, University of Uppsala, Uppsala, Sweden, Sweden, ³Department of Clinical Sciences and orthopaedics, Lund University, Lund, Sweden, Sweden, ⁴Department of Geriatric Medicine, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden, Sweden, ⁵Centre 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 Borgen¹, Marko Lukic¹, Guri Grimnes², Ragnar Joakimsen², Erik F Eriksen², Åshild Bjørnerem². ¹MD, Norway, ²MD, PhD, Norway
Disclosures: Marit Osima, None
- MO0635 New bone biopsy sectioning approach for histomorphometry and molecular biology**
 Sylvain Picard^{*1}, Roth-Visal Ung¹, Sarah-Kim Bisson¹, Fabrice Mac-Way¹. ¹Research 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 França², Adriana Fernandes¹, Regina Martin², Antonio Lerario², Berenice Mendonça², Bruno Ferraz-de-Souza¹. ¹Endocrinology/LIM-25, Hospital das Clínicas, University of São Paulo School of Medicine, Brazil, Brazil, ²SELA/LIM-42, Hospital das Clínicas, University of São 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 Borregan¹, Mayte García Unzueta¹, José Antonio Riancho¹, Carmen Valero¹. ¹Department 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 Shen¹, Hongwen Deng¹. ¹Tulane University, United States
Disclosures: Chuan Qiu, None
- MO0640 Cortical Porosity is not Synonymous with Microstructural Deterioration**
 Roger Zebaze^{*1}, Roland Charpulat², Elizabeth Sornay- Rendu², ego Seeman³. ¹Department of Medicine Austin Health, Australia, ²Inserm Lyon, France, ³Department 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 Boyle², Mona Al Mukaddam³, Ruth Weinstock¹, Michael Rickels⁴, Viral Shah⁵, Linda DiMeglio⁶. ¹SUNY Upstate Medical University, United States, ²Jaeb Center for Health Research, United States, ³University of Pennsylvania School of Medicine, United States, ⁴University of Pennsylvania Perelman School of Medicine, United States, ⁵Barbara Davis Center for Diabetes, United States, ⁶Indiana 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 Hattori¹, Takayasu Ito². ¹Department of Rheumatology, Toyohashi Municipal Hospital, Japan, ²Ito 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 Kwak¹, Seong Hee Ahn², Hyeonmok Kim³, Seung Hun Lee¹, Kee-Ho Song⁴, Sunghwan Suh⁵, Jae Hyeon Kim⁶, Jung-Min Koh¹. ¹Division of Endocrinology and Metabolism, Asan Medical Center, University of Ulsan College of Medicine, Korea, Republic of, ²Department of Endocrinology, Inha University School of Medicine, Korea, Republic of, ³Department of Internal Medicine and Institute of Health Sciences, Gyeongsang National University Hospital, Gyeongsang National University School of Medicine, Korea, Republic of, ⁴Division of Endocrinology and Metabolism, Konkuk University Medical Center, Konkuk University School of Medicine, Korea, Republic of, ⁵Division of Endocrinology and Metabolism, Department of Internal Medicine, Dong-A University Medical Center, Dong-A University College of Medicine, Korea, Republic of, ⁶Division 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 Rhee², Jung Wha Hong³, Soojung Hong³, Kyoung Hye Park¹, Sun Ok Song¹, Ju Young Nam¹, Kyoungmin Kim¹, Eun Young Lee⁴, Ho Hur¹, Namki Hong². ¹Department of Internal Medicine, National Health Insurance Service Ilsan Hospital, Korea, Republic of, ²Yonsei University College of Medicine, Endocrine Research Institute, Yonsei University College of Medicine, Korea, Republic of, ³Research Institute, National Health Insurance Service Ilsan Hospital, Korea, Republic of, ⁴Seoul 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 Hodgkins¹, Nir Ben-Shlomo², Brian Hodgkins¹. ¹Desert Oasis Healthcare, United States, ²Ben-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 Librizzi¹, Mercedes Aramendi Ramos², Carlos Jiménez³, Federico Hawkins⁴, Guillermo Martínez Díaz-Guerra¹. ¹Endocrinology Service, 12 de Octubre University Hospital, Spain, ²Laboratory Service, 12 de Octubre University Hospital, Spain, ³Surgery Service, 12 de Octubre University Hospital, Spain, ⁴Endocrinology Service, 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 Tuyl¹, Martijn Kremer¹, Irene Bultink¹, Maarten Boers², Willem Lems¹. ¹Amsterdam Rheumatology and Immunology Center | VU University Medical Center, Netherlands, ²Epidemiology and Biostatistics, VU University Medical Center, Netherlands

Disclosures: Linda Rasch, None

Monday

- 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 Haddock², Milliette Alvarado³, Margarita Ramirez⁴, Loida Gonzalez⁵, Francisco Nieves⁶, Anette Garces⁷. ¹University of Puerto Rico Recinto de Ciencias Medicas, Endocrinology section, Puerto Rico, ²University of Puerto Rico, Recinto de Ciencias Medicas. Endocrinology section, Puerto Rico, ³University of Puerto Rico, Recinto de Ciencias Medicas. Endocrinology department, Puerto Rico, ⁴University of PR. Recinto de Ciencias Medicas. Endocrinology department., Puerto Rico, ⁵Universidad de Puerto Rico. Recinto de Ciencias Medicas, Endocrinology department, Puerto Rico, ⁶University of Puerto Rico, Pediatric Endocrinology department, Puerto Rico, ⁷University 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 Walsh¹, Richard Eastell². ¹Academic Unit of Bone Metabolism Department of Oncology and Metabolism University of Sheffield, United Kingdom, ²Academic 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 Tai¹, Junko Hirano¹, Yoshiyuki Ban¹, Daisuke Inoue¹, Ryo Okazaki¹. ¹Third 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 Tsuchiya², David Burr¹, Kosaku Nitta³. ¹Indiana University, School of Medicine, Anatomy and Cell Biology, United States, ²Tokyo Women's Medical University, Blood Purification, Kidney Center, Japan, ³Tokyo 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 Rubin², Søren Möller², Anup Choudhury³, Erik F Eriksen⁴, Morten Andersen⁵. ¹University of Southern Denmark and Holbæk Hospital, Denmark, ²OPEN, University of Southern Denmark, Denmark, ³Global Drug Development, Novartis, India, ⁴Department of Health, University of Oslo, Norway, ⁵Karolinska 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 Radmer², Mathias Wollny³, Julian Ramin Andresen⁴, Urs Nissen⁵, Hans-Christof Schober⁶. ¹Institute of Diagnostic and Interventional Radiology/ Neuroradiology, Westküstenklinikum Heide, Academic Teaching Hospital of the Universities of Kiel, Luebeck and Hamburg, Heide, Germany, ²Centre for Orthopaedics, Berlin, Germany , Germany, ³Medimbursement, Tarmstedt, Germany, Germany, ⁴Medical School Sigmund Freud University, Vienna, Austria, Austria, ⁵Department of Neurosurgery and Spine Surgery, Westküstenklinikum Heide, Academic Teaching Hospital of the Universities of Kiel, Luebeck and Hamburg, Heide, Germany, Germany, ⁶Department 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 Zullo², Tingting Zhang², Yoojin Lee², Geetanjoli Banerjee², Lori Daiello², Kevin McConeghy², David Dosa², Vincent Mor², Douglas Kiel¹. ¹Hebrew SeniorLife, Institute for Aging Research, United States, ²Brown 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 Fitzpatrick², Gregory C Williams², Ming-yi Hu², Gary Hattersley², Rene Rizzoli³. ¹Columbia University Medical Center, United States, ²Radius Health, Inc., United States, ³Geneva 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 Mitlak², Yamei Wang², Ming-yi Hu², Lorraine A Fitzpatrick², Richard Eastell³. ¹University of California San Francisco, United States, ²Radius Health, Inc., United States, ³University 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 Mitlak², Yamei Wang², Ming-yi Hu², Lorraine A Fitzpatrick², Dennis M Black³. ¹University of Sheffield, United Kingdom, ²Radius Health, Inc., United States, ³University of California San Francisco, United States
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- 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 Favell², Ronald Hill², Thomas Fuerst³, Bryan Huber⁴, James Howe², Harry Genant⁵. ¹Bioclinica Germany, Germany, ²AgNovos Healthcare, United States, ³Bioclinica, United States, ⁴Copley Hospital, United States, ⁵Bioclinica; 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 Flintham¹, Kim Naylor¹, Jennifer Walsh¹, Nicola Peel², Eugene McCloskey¹, Richard Eastell¹. ¹University of Sheffield, United Kingdom, ²Sheffield Teaching Hospital, United Kingdom
Disclosures: Fatma Gossiel, None
- MO0660 Bone density, microarchitecture and tissue quality after 1 year of treatment with Tenovofir Disoproxil Fumarate**
Robert Güerri-Fernández^{*1}, Xavier Nogués², Alicia Gonzalez-Mena³, Ana Guelar², Leonardo Mellibovsky⁴, Natalia García-Giralt⁵, Hernando Knobel², Adolfo Díez-Pérez⁵. ¹Infectious Diseases. Hospital del Mar., Spain, ²Infectious Diseases, Spain, ³Infectious Diseases. Hospital del Mar Research Institute, Spain, ⁴Infectious Diseases. Hospital del Mar Research Institute., Spain, ⁵IMIM., Spain
Disclosures: Robert Güerri-Fernández, None

Monday

- 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 Hirano², Nobunori Takahashi³, Shuji Asai³, Naoki Ishiguro³, Toshihisa Kojima³. ¹Toyota Kosei Hospital, Japan, ²Toyohashi Municipal Hospital, Japan, ³Nagoya University Graduate school of Medicine, Japan
Disclosures: Yasuhide Kanayama, None
- MO0662 The Change of Injected Cement after Percutaneous Vertebroplasty(PVP) and Percutaneous Balloon Kyphoplasty(KP) on Osteoporotic Vertebral Fractures**
Jin Hwan Kim^{*1}, Tae Yong Lee², Ji Woong Yeom¹. ¹Department of Orthopedic Surgery, Inje University, Ilsan Paik Hospital, Korea, Republic of, ²Ewha 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}. ¹M.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 Chavassieux¹, Roland Chapurlat¹, Nathalie Portero-Muzy¹, Pedro Garcia², Jacques P Brown³, Cesar Libanati⁴, Rogely Boyce⁵, Andrea Wang⁵, Andreas Grauer⁵. ¹INSERM UMR 1033, Université de Lyon, France, ²Hospital Universitario de Monterrey, Mexico, ³CHU de Quebec Research Centre and Laval University, Canada, ⁴UCB BioPharma, Belgium, ⁵Amgen 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 Shiraki². ¹IDD Inc. Clinical Development Dept, Japan, ²Department 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 Song¹, Sung-Hoon Kim¹, Chung-Hoon Kim¹, Byung-Moon Kang¹. ¹Asan 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 Wang², Vera Ehrenstein³, Henrik T Sørensen³, Susan Yue⁴, Xiang Yin⁵, J Michael Sprafka⁶, Shawna Smith⁷, Jeffrey R Curtis⁸. ¹Center for Observational Research, Amgen Inc, United States, ²Optum Epidemiology, United States, ³Department of Clinical Epidemiology, Aarhus University, Denmark, ⁴Global Development, Amgen Inc., United States, ⁵Global Biostatistics, Amgen Inc., United States, ⁶Center for Observational Research, Amgen Inc., United States, ⁷Global Safety, Amgen Inc., United States, ⁸Division of Clinical Immunology and Rheumatology, University of Alabama at Birmingham, United States
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- 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 Hashimoto², Chiemi Yamagiwa³, Takashi Tamura³, Ryousuke Harada³, Yosuke Nishida³, Akihide Atsumi³. ¹Endocrine Center, Toranomon Hospital, Japan, ²Project & Lifecycle Management Unit, Chugai Pharmaceutical Co. Ltd, Japan, ³Drug 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 Hashimoto¹, Chihiro Hasegawa¹, Steve Deacon², Richard Eastell³. ¹Ono Pharmaceutical Co., Ltd., Japan, ²Ono Pharma UK Ltd., United Kingdom, ³University 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 Haard¹, Eveline Van der Veer², Piet Geusens³, Joop Van den Bergh³, Dave Schweitzer¹. ¹Reinier de Graaf Gasthuis, Netherlands, ²University Medical Center Groningen, Netherlands, ³Maastricht 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 Konno². ¹National Center for Geriatrics and Gerontology, Japan, ²Minami 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 Baraf¹, Vitaly Medvedovsky¹, Tamar Eshkoli¹, Dayana Cohen¹, Victor Novack², Poliana Shamgar³, Michal Lamberger³, Avital Blum⁴, Vera Polischuk⁵, Dvora Lieberman⁶, Viktoria Makarov⁷, Ethel Siris⁸, Merav Fraenkel⁹. ¹Endocrinology, Soroka University Medical Center, Faculty of Health Sciences, Ben-Gurion University of the Negev, Israel, ²Clinical Research Center, Soroka University Medical Center, Faculty of Health Sciences, Ben-Gurion University of the Negev, Israel, ³Clinical Research Center, Soroka University Medical Center, Israel, ⁴Clinical Research Center, Faculty of Health Sciences, Ben-Gurion University of the Negev, Israel, ⁵Internal medicine, Soroka University Medical Center, Faculty of Health Sciences, Ben-Gurion University of the Negev, Israel, ⁶Geriatrics, Soroka University Medical Center, Faculty of Health Sciences, Ben-Gurion University of the Negev, Israel, ⁷Clinical Imagine Institution, Soroka University Medical Center, Faculty of Health Sciences, Ben-Gurion University of the Negev, Israel, ⁸Division of Endocrinology, Columbia University Medical Center, New York, USA, United States, ⁹Endocrinology, 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 Yamaguchi¹, Naga Suresh Adapala¹, Matthew Phipps¹, Olumide Aruwajoye¹. ¹Texas 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**
Tong Chen^{*1}, Qisheng Tu², Jake Chen². ¹Division of Oral Biology, Tufts University School of Dental Medicine, United States, ²Division of Oral Biology, Tufts University School of Dental Medicine, United States
Disclosures: Tong Chen, None

Monday

- MO0675 Identification of commercially available antibodies that block ligand binding by BMPR2**
 Laura Schoerning^{*1}, Ruthann Gorrell¹, Jordan Newby¹, Julia Hum¹, Jonathan Lowery¹.
¹Marian 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 Weiss¹, Theresa Whiteside², Phil Campbell¹. ¹Carnegie Mellon University, United States, ²University 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 Messer¹, Jessica Jiron¹, Evelyn Castillo¹, Jorge Mendieta¹, Jorge Mendieta¹, Indraneel Bhattacharyya², Catherine van Poznak³, Donald Kimmel¹.
¹Department of Physiological Sciences, University of Florida, United States, ²Department of Oral & Maxillofacial Diagnostic Sciences, College of Dentistry, University of Florida, United States, ³Oncology 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}. ¹Division 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 Berryman¹, Kristin Edwards¹, David Zakur¹, Chang-Ning Liu¹. ¹Pfizer, Inc, United States
Disclosures: Cedo Bagi, None
- MO0680 Abaloparatide Increased Bone Mass in a Rabbit Glucocorticoid-Induced Osteopenia Model**
 Heidi Chandler^{*1}, Allen Pierce¹, Jeffery Brown¹, Michael Ominsky¹, Gary Hattersley¹.
¹Radius Health Inc, United States
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 Piao², Zulipiya Aibibula², alkebaier aobulikasimu², Daisuke Koga², Hiroki Ochi³, Kunikazu Tsuji⁴, Toshio Miyata⁵, Atsushi Okawa², Yoshinori Asou².
¹Department of Orthopaedics Surgery, Tokyo Medical and Dental University, Japan,
²Department of Orthopedics Surgery, Tokyo Medical and Dental University, Japan,
³Department of Physiology and Cell Biology, Tokyo Medical and Dental University, Japan,
⁴Department of Cartilage Regeneration, Tokyo Medical and Dental University, Japan,
⁵Department 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 Guillot², Felix Cleemann³, Melanie Felix², Susanne Pihl¹, Kennett Sprogoe¹, David Karpt⁴, Aurore Valera², Vibeke Miller Breinholt¹. ¹Ascendis Pharma A/S, Denmark, ²Charles River Laboratories, Canada, ³Ascendis Pharma GmbH, Germany, ⁴Ascendis 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 Martins¹, Nathanael Gray², Henry Kronenberg¹, Marc Wein¹. ¹MGH Endocrine Unit, United States, ²Dana 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 Restrepo², Javad Parvizi², Ryan Tomlinson¹. ¹Thomas Jefferson University, United States, ²Rothman 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 Soniwala², Christopher Farnsworth¹, Alex Grier¹, Sarah Catheline¹, Qurratul-Ain Dar², John Ketz¹, Cheryl Ackert-Bicknell¹, Jennifer Jonason¹, Steven Gill¹, Robert Mooney¹, Janne Prawitt³, Michael Zuscik¹. ¹University of Rochester Medical Center, United States, ²University of Rochester, United States, ³Rousselot 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. Ryan¹, Beth J. Kirby¹, Christopher S. Kovacs¹. ¹Memorial 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 Do¹, Amy Koh¹, Megan Michalski¹, Jose Aguirre², Hernan Roca¹, Laurie McCauley¹. ¹University of Michigan, United States, ²University 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 Delale², Tiina E Kähkönen¹, Jussi M Halleen¹, Thierry Abribat², Jukka Morko¹. ¹Pharmatest Services Ltd, Finland, ²Alizé 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 Mohan¹, Yu-An Lay¹, Alexander Kot¹, MieJin Lim¹, Donald Kimmel², Nancy Lane¹. ¹UC Davis Medical Center, United States, ²University of Florida, United States
Disclosures: Wei Yao, None
- MO0690 Bodyweight Supported Treadmill Training and Testosterone Produce Additive Bone Anabolic and Antiresorptive Benefit after Spinal Cord Injury**
 Joshua Yarrow^{*1}, Ean Phillips¹, Hui Jean Kok², Christine Conover¹, Taylor Bassett¹, Hannah Prock¹, Andrea Catter¹, Carol Buydos¹, Jessica Jiron², J. Ignacio Aguirre², Stephen Borst², Fan Ye¹. ¹VA Medical Center, United States, ²University 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 Wakefield², Sandra M. Sacco², Philip J. Sullivan², Elena M. Comelli³, Wendy E. Ward⁴. ¹Health Sciences, Brock University, Canada, ²Kinesiology, Brock University, Canada, ³Nutritional Sciences, University of Toronto; Kinesiology, Brock University, Canada, ⁴Health Sciences, Brock University; Kinesiology, Brock University; Nutritional Sciences, University of Toronto, Canada
Disclosures: Jenalyn L. Yumol, None

Monday

- MO0692 Serum Inflammatory Biomarkers and Monocyte Responses in Fibrodysplasia Ossificans Progressiva**
Emilie Barruet^{*12}, Blanca M Morales¹², Tea Chan¹², Katherine Bigay¹², Jennifer Ho¹², Mary Nakamura³, Edward C Hsiao¹². ¹University of California, San Francisco, United States, ²University of California, San Francisco, United States, ³UCSF/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 Gensburger², Johanna Benhamou², Roland Chapurlat². ¹Bordeaux University Hospital, FHU ACRONIM, France, ²Lyon 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 Quiroga², Claudio Silva², Paula Rozenfeld³, Beatriz Oliveri⁴. ¹Mautalen, Salud e Investigación, Argentina, ²Diagnóstico Maipú, Argentina, ³LISIN Departamento de Ciencias Biológicas Facultad de Ciencias Exactas Universidad Nacional de La Plata, Argentina, ⁴Laboratorio de Osteoporosis 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 Burosomab (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 Carpenter², Gary S Gottesman³, Javier San Martin⁴, Meng Mao⁴, Alison Skrinar⁴, Michael P Whyte³. ¹Indiana University School of Medicine, United States, ²Yale University School of Medicine, United States, ³Shriners Hospitals for Children, United States, ⁴Ultragenyx 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 TNFRSF1A Leading to Constitutively Active RANK**
Sean J. Iwamoto^{*1}, Micol S. Rothman¹, Shenghui Duan², Steven Mumm², Kelsey Burr¹, Michael P. Whyte³. ¹Division of Endocrinology, Metabolism & Diabetes, University of Colorado School of Medicine, United States, ²Division of Bone and Mineral Diseases, Washington University School of Medicine at Barnes-Jewish Hospital, United States, ³Center 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 rickets^{1/2}?Analysis of 6 Chinese pedigrees and review of the literature**
Zhen Zhao^{*1}, Chang Liu¹, Ou Wang¹, Mei Li¹, Xiaoping Xing¹, Yue Sun¹, Yan Jiang¹, Weibo Xia¹. ¹Department 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. Levine², Amna N. Khan¹. ¹Department of Endocrinology, Hospital of the University of Pennsylvania, United States, ²Division 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. Hsiao², Genevieve Baujat³, Maja Di Rocco⁴, Matthew A. Brown⁵, Carmen De Cunto⁶, Richard Keen⁷, Mona Al Mukaddam⁸, Donna R. Grogan⁹, Robert J. Pignolo¹⁰. ¹The University of Pennsylvania, Perelman School of Medicine, United States, ²Institute of Human Genetics and the Division of Endocrinology & Metabolism, University of California, San Francisco, United States, ³Departement de Genetique, Institut IMAGINE and Hôpital Necker-Enfants Malades, France, ⁴Unit of Rare Diseases, Department of Pediatrics, Gaslini Institute, Italy, ⁵Queensland University of Technology, Faculty of Health, School - Biomedical Sciences, Australia, ⁶Department of Pediatrics/Hospital Italiano de Buenos Aires, Argentina, ⁷The Royal National Orthopaedic Hospital (Stanmore), United Kingdom, ⁸The University of Pennsylvania, United States, ⁹Clementia Pharmaceuticals Inc., United States, ¹⁰Geriatric 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. Econ², Linda A. DiMeglio², Karl L. Insogna³, Michael A. Levine⁴, Paul J. Orchard⁵, Weston P. Miller⁵, Anna Petryk⁶, Eric T. Rush⁷, Dolores M. Shoback⁸, Leanne M. Ward⁹, Lynda E. Polgreen¹. ¹Los Angeles Biomedical Research Institute at Harbor-UCLA Medical Center, United States, ²Indiana University School of Medicine, United States, ³Yale School of Medicine, United States, ⁴University of Pennsylvania Perelman School of Medicine, United States, ⁵University of Minnesota, United States, ⁶Alexion Pharmaceuticals, Inc., United States, ⁷University of Nebraska Medical Center, United States, ⁸University of California, San Francisco, United States, ⁹University 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 Andela¹, Bas Majoor¹, Ad Kaptein¹, Sander Dijkstra¹, Neveen Hamdy¹, Neveen Hamdy¹, Natasha Appelman-Dijkstra¹. ¹Leiden University Medical Center, Netherlands

Disclosures: Marlous Rotman, None

MO0702 PTH treatment activates intracortical bone remodeling in patients with hypoparathyroidism

Tanja Sikjaer^{*1}, Lars Rejnmark¹, Jesper Skovhus Thomsen², Annemarie Brüel², Ellen Margrethe Hauge³, Jean-Marie Delaisse⁴, Thomas Levin Andersen⁴. ¹Department of Internal Medicine and Endocrinology, Aarhus University Hospital, Denmark, ²Department of Biomedicine, Aarhus University, Denmark, ³Department of Rheumatology, Aarhus University hospital, Denmark, ⁴Department of Clinical Cell Biology, Vejle Hospital – Lillebaelt Hospital, Institute of Regional Health Research, University of Southern Denmark, Denmark

Disclosures: Tanja Sikjaer, Shire Pharmaceuticals, 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 Tomazos², Lauren C Stewart¹, Sanjesh C Roop¹, Bonnie MK Donato², Anna Petryk², Yuri A Zarate³, Anatoly Tiulpakov⁴, Gabriel ngel Martos-Moreno⁵. ¹Broadstreet HEOR, Canada, ²Alexion Pharmaceuticals, Inc., United States, ³University of Arkansas for Medical Sciences, United States, ⁴Endocrinology Scientific Center, Russian Federation, ⁵Hospital Infantil Universitario Niño Jesús, Universidad Autónoma de Madrid, CIBEROBN, ISCIII, Spain

Disclosures: Shelagh M Szabo, Alexion Pharmaceuticals, Inc., Grant/Research Support

Monday

- MO0704 Bone Indices in Patients with Non-Surgical Hypoparathyroidism and Pseudohypoparathyroidism**
 Line Underbjerg^{*1}, Tanja Sikjaer², Lars Rejnmark³. ¹MD/Ph.D.-student, Denmark, ²MD, Ph.D., Denmark, ³Clinical 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 Zhang², Stephen P. Coburn³, Karen L. Ericson³. ¹Center 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, ²Center for Metabolic Bone Disease and Molecular Research, Shriners Hospital for Children, United States, ³Indiana 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. Perosky², Basma Khoury², Stephane Blouin³, M. Helen Rajpar¹, MaryAnn Weis⁴, Klaus Klaushofer³, Paul Roschger³, David Eyre⁵, Nadja Fratzl-Zelman³, Kenneth M. Kozloff², Joan C. Marini¹. ¹NICHD/NIH, United States, ²University of Michigan, United States, ³Ludwig Boltzmann Institute of Osteology, Austria, ⁴University of Washington, United States, ⁵University 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 Cornille², Nabil Kaci³, Kennett Sprogoe¹, Laurence Legeai-Mallet². ¹Ascendis Pharma A/S, Denmark, ²Imagine Institute, France, ³Imagine Institute, France
Disclosures: Vibeke Miller Breinholt, None
- MO0708 NF1-Related Pseudarthrosis: Beyond the Pseudarthrosis Site**
 Carlijn Brekelmans^{*1}, Silke Hollants², Caroline De Groot², Marijke Spaepen², Natalie Sohier², Marina Marechal¹, Frank Luyten², Johan Lammens², Eric Legius¹, Hilde Brems¹. ¹KU Leuven, Belgium, ²UZ 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 Schmidt², Andreas Roschger², Francis H. Glorieux³, Wolfgang Wagermaier², Klaus Klaushofer¹, Frank Rauch³, Peter Fratzl², Paul Roschger¹, Joan C. Marini⁴. ¹Ludwig Boltzmann Institute of Osteology at Hanusch Hospital of WGKK and AUVA Trauma Centre Meidling, 1st Med. Dept. Hanusch Hospital, Austria, ²Max Planck Institute of Colloids and Interfaces, Department of Biomaterials, Germany, ³Genetics Unit, Shriners Hospital for Children and McGill University, Canada, ⁴Bone 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 Tencerova², Charlotte Ejersted¹, Dea Svaneby³, Thomas Levin Andersen⁴, Moustapha Kassem², William H McAlister⁵, Deborah V Novack⁶, Michael P Whyte⁷, Anja L Frederiksen⁸. ¹Endocrine Research Unit, Odense University Hospital, Denmark, ²Molecular Endocrinology Laboratory (KMEB), Department of Endocrinology, Odense University Hospital & University of Southern Denmark, Denmark, ³Department of Clinical Genetics, Vejle Hospital, Denmark, ⁴Clinical Cell Biology (KCB), Institute of Regional Health Research, University of Southern Denmark, Denmark, ⁵Department of Pediatric Radiology, Mallinckrodt Institute of Radiology, Washington University School of Medicine at St.Louis Children's Hospital, United States, ⁶Division of Bone and Mineral Diseases. Department of Internal Medicine, Washington University School of Medicine at Barnes-Jewish Hospital, United States, ⁷Center for Metabolic Bone Disease and Molecular Research, Shriners Hospital for Children, United States, ⁸Department 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 Thoonen², Elizabeth Petit², Binglan Yu², Marielle Scherrer-Crosbie³, Emmanuel Buys², Marie Demay⁴. ¹Brigham and Women's Hospital and MGH, United States, ²Massachusetts General Hospital, United States, ³University of Pennsylvania, United States, ⁴Massachusetts 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 Capulli¹, Rajvi Patel¹, Juliana Cortes², Nadia Rucci¹, Anna Teti¹. ¹University of L'Aquila, Italy, ²University 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-Braz¹, Monica M França², Regina M Martin¹, Antonio M Lerario³, Berenice B Mendonça³, Bruno Ferraz-de-Souza¹. ¹Endocrinology/LIM-25, Hospital das Clínicas, University of São Paulo School of Medicine, Brazil, ²SELA/LIM-42, Hospital das Clínicas, University of São Paulo School of Medicine, Brazil, ³SELA/LIM-42, Hospital das Clínicas, University of São 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 Fujiwara¹, Ohata Yasuhisa¹, Takuo Kubota¹, Yuki Taga², Kazunori Mizuno², Keiichi Ozono¹. ¹Department of Pediatrics, Osaka University Graduate School of Medicine, Japan, ²Nippi 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 Samadi². ¹Université de Montréal; Shriners Hospital for Children-Canada, Canada, ²École Polytechnique de Montréal; Sainte-Justine University Hospital Research Center, Canada
Disclosures: Louis-Nicolas Veilleux, None

Monday

- MO0716 Genetic engineering a sheep model of Hypophosphatasia**
 Diarra K. Williams^{*1}, Jane H. Pryor¹, Shannon Huggins¹, Hannah M. Georges¹, Carlos A. Pinzon¹, Forrest Hermann¹, James Oldeschulte¹, Mark E. Westhusin¹, Charles R. Long¹, Dana Gaddy¹, Larry J. Suva¹. ¹Texas 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 Upadhyay¹, Lily Huang¹, Nanditha Das¹, Lauren Singletary¹, Xialing Wen¹, Rachel Stewart², Morgan Lyon², Keryn Palmer², Saathyaki Rajamani¹, Chris Graul², Merry Lobo², Tyler Wellman², Ed Soares², Matt Silva², Jacob Hesterman², Kalyan Nannuru¹, Vincent Idone¹, Andrew Murphy¹, Sarah Hatsell¹, Aris Economides¹.
¹Regeneron, United States, ²InviCRO, United States
Disclosures: Liqin Xie, None
- MO0718 Balance Assessment in Older Adults Using Novel Methodologies**
 Bjoern Buehring^{*1}, Ellen Sigmansky¹, Diane Krueger¹, Neil Binkley¹. ¹UW-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 Lucas¹, Maria Gabriela Torres¹, Claudia Martinez¹, Felipe Silva Pavon¹, Reynaldo Gomez¹, Beatriz Oliveri². ¹Division Endocrinologia, Hospital de Clinicas-UBA, Argentina, ²Laboratorio 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 Lindström², Nicole Luksche², Franz Jakob³, Lothar Seefried².
¹Clinical trial Unit department of orthopedic surgery University of Wuerzburg, Germany,
²Clinical trial Unit department of orthopedic surgery University of Wuerzburg, Germany,
³Musculoskeletal 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 Miljkovic¹, Robert M Boudreau¹, Tushar Singh¹, Pawan Kumar Sharma², Kristine E Ensrud³, Joseph M Zmuda¹, P S Reddy², Anne B Newman¹, Jane A Cauley¹. ¹Department of Epidemiology, University of Pittsburgh, United States, ²SHARE INDIA - Mediciti Institute of Medical Sciences, India, ³Division 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 Holloway¹, Pamela Rufus¹, Natalie Hyde¹, Monica Tembo¹, Sophia Sui¹, Lana Williams¹, Mark Kotowicz¹. ¹Deakin University, Australia
Disclosures: Julie Pasco, None
- MO0723 Sarcopenia is Associated with Low Bone Mineral Density in Japanese Elderly Women**
 Shinjiro Takata^{*1}. ¹Department 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 Prentice², Landing Jarjou³, Peter Ebeling¹, Kate Ward⁴. ¹Monash University, Australia, ²MRC Elsie Widdowson Laboratory, United Kingdom, ³MRC The Gambia Unit, Gambia, ⁴MRC 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 Muraki¹, Hiroyuki Oka², Toshiko Iidaka¹, Rie Kodama³, Hiroshi Kawaguchi⁴, Kozo Nakamura⁵, Toru Akune⁵, Sakae Tanaka³. ¹Department of Prevention Medicine for Locomotive Organ Disorders, 22nd Century Medical and Research Center, The University of Tokyo, Japan, ²Department of Medical Research and Management for Musculoskeletal Pain, 22nd Century Medical and Research Center, The University of Tokyo, Japan, ³Department of Orthopaedic Surgery, Sensory and Motor System Medicine, Graduate School of Medicine, The University of Tokyo, Japan, ⁴JCHO 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 Child¹, Todd Bredbenner², Roberto Fajardo¹. ¹UT Health San Antonio, United States, ²Southwest 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 Eastell², Douglas Bauer¹, Li-Yung Lui³, Charles McCulloch¹, Anne de Papp⁴, Sundeep Khosla⁵, Steven Hoffmann⁶, Mary Bouxsein⁷. ¹University of California, San Francisco, United States, ²University of Sheffield, United Kingdom, ³California Pacific Medical Center, United States, ⁴Merck and Co., Inc. Kenilworth, NJ, USA, United States, ⁵Mayo Clinic College of Medicine, United States, ⁶Foundation for National Institute of Health, United States, ⁷Harvard 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 Prisby¹, Sophie Guderian². ¹University of Texas at Arlington, United States, ²University 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 Presby¹, Janine Higgins¹, Matthew Jackman², Julie Houck¹, Paul MacLean¹. ¹University of Colorado Anschutz Medical Campus, United States, ²University of Colorado Anschutz Medical Campus, United States

Disclosures: Vanessa Sherk, None

Monday

- 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 Raygorodskaya², Yankel Gabet³, Sahar Hiram Bab³, Chen Shochat¹, David Karasik¹. ¹The Musculoskeletal Genetics Laboratory, Faculty of Medicine in the Galilee, Bar Ilan University, Safed, Israel, Israel, ²1The Musculoskeletal Genetics Laboratory, Faculty of Medicine in the Galilee, Bar Ilan University, Safed, Israel; ² SRC BioClinicum, Moscow, Russia, Israel, ³Department 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 Veldurthy², Geert Carmeliet¹, Sylvia Christakos². ¹KU Leuven, Belgium, ²Rutgers, 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 Wang², Qingyu Wu², Elizabeth Loba³. ¹North Carolina State University, United States, ²Cleveland Clinic, United States, ³University 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 Tong², Chider Chen¹, Motomi Enomoto-Iwamoto¹, Songtao Shi³, Ling Qin¹. ¹University of Pennsylvania, United States, ²Huazhong University of Science and Technology, China, ³University of Pennsylvania, 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 Liu¹. ¹Departments 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 Doolittle¹, Michael-John Beltejar¹, Kwangbom Choi², Cheryl Ackert-Bicknell¹. ¹Center for Musculoskeletal Research, University of Rochester, United States, ²The Jackson Laboratory, United States
Disclosures: Robert Maynard, None
- LB-MO0736 Leukotriene B₄ Is Related to Lower Osteogenic Profile**
Flávia Oliveira^{*1}, Cintia Tokuhara¹, José Guareschi Filho¹, João Domezi¹, Vimal Veeriah², Camila Peres-Buzalaf³, Rodrigo Oliveira¹. ¹Bauru School of Dentistry, University of São Paulo, Brazil, ²Kennedy Institute of Rheumatology, University of Oxford, United Kingdom, ³Pró-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 Huang¹, Andrew Gladden¹, Yuji Mishina², Klaus von der mark³, Benoit de Crombrugge¹. ¹UT MD Anderson Cancer Center, United States, ²University of Michigan, United States, ³University of Erlangen-Nuremberg, Germany
Disclosures: Xin Zhou, None

- LB-MO0738 AdipoRon Inhibits Inflammation-Induced Osteoclastogenesis**
Wei Qiu^{*1}, Qisheng Tu¹, Xingwen Wu¹, Jake Chen¹, Xuedong Zhou². ¹Tufts Univ.School of Dental Medicine, United States, ²West 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 Eaton², Stephen Shively², Jonathan Lowery¹. ¹Marian University College of Osteopathic Medicine- Division of Biomedical Science, United States, ²Marian 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 Atkins², Lynda Bonewald¹. ¹Indiana University, United States, ²The 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 Won², Jun Han². ¹Department of Orthopaedics, Cheil General Hospital and Women's Healthcare Center, Dankook University College of Medicine, Korea, Republic of, ²Department of Orthopaedics, Ajou University school of Medicine, 1, Korea, Republic of
Disclosures: Myung Hoon Hahn, None

Monday

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 Demissie², Jonathan Adachi³, Shreyasee Amin⁴, Elizabeth Atkinson⁴, Claudie Berger⁵, Emmanuel Biver⁶, Steven Boyd⁷, Kerry Broe⁸, Lauren Burt⁷, Roland Chapurlat⁹, Thierry Chevalley⁶, Serge Ferrari⁶, David Goltzman¹⁰, David Hanley¹¹, Marian Hannan¹, David Karasik¹, Sundeep Khosla⁴, Ching-Ti Liu², Mattias Lorentzon¹², Robert McLean¹, Dan Mellstrom¹³, Blandine Merle¹⁴, Maria Nethander¹⁵, Claes Ohlsson¹⁶, René Rizzoli⁶, Elisabeth Sornay-Rendu¹⁷, Daniel Sundh¹², Pawel Szulc¹⁸, Bert Van Rietbergen¹⁹, Andy Wong²⁰, Hanfei Xu², Laiji Yang⁸, Mary Bouxsein²¹, Douglas Kiel¹. ¹Institute for Aging Research, Hebrew SeniorLife, Harvard Medical School, United States, ²Department of Biostatistics, Boston University School of Public Health, United States, ³Department of Medicine, Michael G. DeGroote School of Medicine, St Joseph's Healthcare - McMaster University, Canada, ⁴Mayo Clinic College of Medicine, United States, ⁵Research Institute of the McGill University Health Centre, Canada, ⁶Division of Bone Diseases, Geneva University Hospitals and Faculty of Medicine, Switzerland, ⁷McCaig Institute for Bone and Joint Health, Canada, ⁸Institute for Aging Research, Hebrew SeniorLife, United States, ⁹INSERM UMR 1033, Université de Lyon, Hospices Civils de Lyon, Lyon, France, France, ¹⁰Departments of Medicine, McGill University and McGill University Health Centre, Canada, ¹¹McCaig Institute for Bone & Joint Health, Canada, ¹²Geriatric Medicine, Centre for Bone and Arthritis Research, Institute of Medicine, University of Gothenburg, Sweden, ¹³Geriatric Medicine, Centre for Bone and Arthritis Research, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Sweden, ¹⁴INSERM UMR 1033, Pavillon F, Hôpital E Herriot, France, ¹⁵Bioinformatics 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, ¹⁶Centre for Bone and Arthritis Research, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden, Sweden, ¹⁷INSERM UMR 1033, Pavillon F, Hôpital E Herriot, France, ¹⁸INSERM UMR1033, University of Lyon, Hôpital Edouard Herriot Place d'Arsonval, France, ¹⁹Department of Biomedical Engineering, Eindhoven University of Technology, Netherlands, ²⁰Toronto General Hospital, Canada, ²¹Dept 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 Harrison², Suzanne Judd³, Eric Orwoll⁴, Lynn Marshall⁴, Jackilen Shannon⁴, Lisa Langsetmo⁵, Nancy Lane¹, James Shikany³. ¹Center for Musculoskeletal Health and Department of Internal Medicine, University of California at Davis, United States, ²California Pacific Medical Center Research Institute, United States, ³University of Alabama at Birmingham, United States, ⁴Oregon Health & Science University, United States, ⁵University 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'Brien¹. ¹University 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 Krueger¹. ¹University 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 Dempster², Susan Yue³, Sebastien Rizzo⁴, Delphine Farlay⁴, Rachel Wagman³, Xiang Yin³, Georges Boivin⁴. ¹Laval University and CHU de Quebec-CHUL Research Centre, Canada, ²Columbia University, United States, ³Amgen Inc., United States, ⁴INSERM, 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 Allipe¹, Jianqiu Xiao¹, Susan Hockerman², Jon Jacobsen², Heidi Hope², Jeff Hirsch², Steve Mnich², Matt Saabye², Sheri Bonar², Hal Hoffman³, Joseph Monahan², Gabriel Mbalaviele¹. ¹Washington University School of Medicine, United States, ²Confluence Life Sciences, Inc, United States, ³University 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 Brooks², Anyonya R Guntur¹, Katherine J Motyl¹. ¹Maine Medical Center Research Institute, United States, ²Beth 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 Martins¹, Michael Armanini¹, Daniel Brooks¹, Jinhua Wang², Nathanael Gray², Mary Bouxsein¹, Henry Kronenberg¹, Marc Wein¹. ¹MGH Endocrine Unit, United States, ²Dana 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. Tang², Ariel Rothner¹, Hillel Galitzer¹, Phillip Schwartz¹, William D. Fraser², Yoseph Caraco³. ¹Entera Bio Ltd., Israel, ²University of East Anglia, United Kingdom, ³Hadassah 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 Liese¹, Paul Harmatz², Jerry Vockley³, Wolfgang Höglér⁴, Shanggen Zhou⁵, Andrew Denker⁶, Anna Petryk⁶, Cheryl Rockman-Greenberg⁷. ¹University Children's Hospital, University of Würzburg, Germany, ²UCSF Benioff Children's Hospital Oakland, United States, ³University of Pittsburgh School of Medicine and Graduate School of Public Health, United States, ⁴Birmingham Children's Hospital and Institute of Metabolism and Systems Research, University of Birmingham, United Kingdom, ⁵Chiltern International Inc., United States, ⁶Alexion Pharmaceuticals, Inc., United States, ⁷Children's Hospital Research Institute of Manitoba and University of Manitoba, Canada
Disclosures: Christine Hofmann, Alexion Pharmaceuticals, Inc., Grant/Research Support

Monday

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.

Exhibits

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 (RAR γ), 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 in science 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 Government 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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Yang, R.-S.	FR0136, SA0136, SU0118, MO0624	Yotani, K.	SA0021
Yang, S.	1081, FR0250, SA0250, LB-SA0374	Youlten, S.	FR0087, SA0087, SU0086, LB-1165
Yang, T. J.	SU0105	Youm, Y.	FR0356, SA0356
Yang, W.	1040	Young, J.	SU0006
Yang, X.	LB-SA0377, SU0161, SU0168, LB-SU0371	Young, M.	FR0191, SA0191, SU0135
Yang, Y. - Suk	1061	Yousefi, B.	LB-SU0382
Yang, Y.	1037, MO0513, LB-1163	Youssef, S.	1151, MO0564
Yang, Y.-S.	SU0156	Yu, A.	SU0206
Yang, Z.	SU0059, MO0565	Yu, B.	MO0711
Yao, Q.	1001	Yu, E.	1125
Yao, W.	SA0329, MO0689	Yu, J.	1012, 1131, FR0140, SA0140
Yao, X.	SU0023	Yu, K.	1007, MO0483, MO0524
		Yu, L.	FR0058, FR0222, SA0058, SA0222, MO0479

Yu, M.	1046, 1120, MO0605	Zhang, K.	SU0059
Yu, Y.	1150, MO0455	Zhang, L.	1018
Yu, Y. E.	SU0018, MO0519	Zhang, M.	1103
Yu, Z.	FR0325, SA0152, SA0325	Zhang, P.	FR0194, SA0194, SU0172, MO0435, MO0522, MO0547
Yuan, A.	FR0033, SA0033	Zhang, Q.	FR0076, SA0076
Yuan, H.	FR0133, SA0133, SU0033	Zhang, R.	FR0054, SA0054
Yuan, Q.	1060, 1122, 1144, MO0426	Zhang, S.	1060, 1122, 1144, MO0426
Yuan, X.	1123, SA0086, LB-SA0374	Zhang, T.	1061, MO0654
Yuasa, Y.	SA0118, SA0322	Zhang, W.	1045
Yue, S.	1070, SU0058, MO0667, LB-MO0746	Zhang, X.	1046, FR0358, SA0221, SA0358, SU0018, SU0057, SU0114, SU0133, MO0513, MO0514, MO0519
Yule, D.	MO0559	Zhang, Y.	1005, 1046, 1107, SU0236, SU0241, SU0320, MO0616, MO0630
Yumol, J. L.	SA0327, MO0691	Zhang, Z.	FR0197, SA0197, SU0193
Yun, C.	SU0141	Zhang, Z. lin	SU0010
Yun, C.-H.	LB-SA0380	Zhang, Z.-L.	FR0337, SA0337
Yun, H.-suk	SU0155	Zhao, B.	FR0185, SA0185, SU0044, MO0558
Yun, S.-T.	SU0300	Zhao, C.	SU0167
Yusup, A.	SA0148	Zhao, G.	SA0274
Yuzawa, Y.	SA0279, SA0285	Zhao, H.	1043, FR0017, FR0122, FR0197, FR0326, SA0017, SA0122, SA0197, SA0326, SU0094, SU0193, MO0426
Z		Zhao, K.	SU0161
Zaccardi, J.	SU0252	Zhao, L.	FR0080, FR0185, SA0080, SA0185, SU0044
Zajac, J.	1151	Zhao, W.	SU0093, MO0495
Zakai, N. A.	FR0248, SA0248	Zhao, Y.	FR0061, SA0061, SA0086, SU0241, MO0616, MO0630
Zakur, D.	MO0679	Zhao, Z.	MO0426, MO0555, MO0697
Zamarioli, A.	FR0023, SA0023, LB-SA0367	Zheng, X. L.	SU0335
Zambatoro, C.	LB-SU0385	Zheng, Y.	MO0396
Zambrowicz, B.	SU0309	Zheng, Z.	SU0057, MO0514
Zan, P.	SU0162	Zhiwei, G.	LB-SU0376
Zanchetta, M.	1013	Zhong, Q.	SA0127, MO0499, MO0500, MO0524
Zangari, M.	FR0055, SA0055, SU0203	Zhong, Z. A.	MO0175, SA0175
Zanotti, S.	FR0355, SA0355, SU0169	Zhou, B.	1033, SA0107
Zarain, A. J.	SA0291	Zhou, C.	1060, 1122, MO0546
Zarate, Y. A.	MO0703	Zhou, D.	1027
Zarei, A.	LB-SU0361	Zhou, G.	1076, FR0166, SA0166, SU0048
Zavala, K.	SA0311	Zhou, G.-qian	FR0080, SA0080
Zbozinkova, Z.	SA0307	Zhou, H.	FR0194, SA0194, SU0265, SU0269,
Zeana, C.	SU0282		SU0289, SU0290, LB-1161
zebaze, R.	1013, MO0594, MO0640	Zhou, J.	FR0197, SA0197, SU0193
Žebrowski, P.	SU0007	Zhou, L.	1122, SA0164, SU0068
Zeitz, U.	FR0095, SA0095	Zhou, Q.	SU0164
Zejlon, R.	SU0111	Zhou, S.	SA0154, SU0137, LB-SU0386, LB-MO0751
Zemel, B.	1130, LB-SA0372, SU0031, MO0413, MO0459	Zhou, X.	1144, SA0043, MO0542, LB-MO0737, LB-MO0738
Zemel, B. S.	1118	Zhu, G.	1051, SA0195, SU0175
Zeng, P.	SU0161	Zhu, H.	SU0289, LB-SU0370
Zeng, Q.	SU0064	Zhu, K.	SU0217, MO0584, MO0605
Zeng, R.	LB-SA0379	Zhu, M.	SU0166, MO0456
Zengin, A.	MO0724	Zhu, X.	SU0083
Zeni, S.	SU0022	Zhu, Y.	SU0236
Zerbini, C. A.	1066	Zhu, Z. (Xiaofang)	MO0491
Zettler, J.	FR0324, SA0324	Zieba, J.	1009
Zhang, C.	SA0028, SA0082, SU0034, MO0401, MO0420	Ziegler, M.	SU0034
Zhang, D.	LB-SA0381, SU0074		
Zhang, F.	MO0705		
Zhang, G.	FR0080, SA0080		
Zhang, H.	1018, SA0043, SU0236, SU0241, MO0616		
Zhang, J.	1121, SU0075, SU0088, SU0180, MO0418, MO0570		
Zhang, J. H.	FR0014, SA0014		

Zillikens, C.	FR0233, SA0233, MO0459, MO0602	Zong, X. Zontone, F.	SU0072 SA0024
Zillikens, M. C.	1014, SA0309	Zou, W.	1005, 1105, 1107, FR0077, FR0177, SA0077, SA0177
Zimmerman, S.	SU0202		
Zimmermann, E.	SA0024		
Zingman, B.	SU0282	Zujur, D. C.	SU0170
Zinonos, I.	SU0165	Zullo, A.	MO0654
Ziouti, F.	MO0487	Zuscik, M.	1004, 1017, 1121, FR0060, SA0060, MO0685
Zirngibl, R.	SA0196, SU0347	Zwingenberger, S.	1143
Zmierzczak, H.-G.	SA0269, SU0270	Zylberberg, H. M.	FR0286, SA0286
Zmuda, J. M.	1130, MO0721		