Final Programme

ECTS 2017
44th European Calcified Tissue Society Congress
Salzburg, Austria
13 – 16 May 2017
ECTS CHARITY RELAY RACE

Sunday 14 May 2017 starting at 19:00hrs
Park between Salzburg Congress Center and Mirabell Garden, Salzburg, Austria

With your friends and colleagues form a team, join the ECTS Charity Run and help us fundraising for Hypophosphatasie Deutschland!

For more details and registrations: www.ectsoc.org

Supported by
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Welcome

ECTS CORPORATE MEMBERS

ECTS thanks the following organisations for their continued support of the society.

AMGEN®  KYOWA KIRIN  Lilly  UCB

CONFERENCE SPONSORS

ECTS thanks the following organisations for their support of the 44th Calcified Tissue Society Congress 2017 in Salzburg.

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Welcome

Dear Friends and Colleagues, Sponsors, Supporters and Exhibitors,

It is a great pleasure to welcome you to the 44th European Calcified Tissue Society Congress (ECTS 2017) and the beautiful city of Salzburg.

The scientific programme has been designed to bring you the latest in pre-clinical, translational and clinical research with a wide range of invited symposia and workshops complemented by oral and poster presentations from submitted abstracts. A special thank you is due to all who submitted their work to the meeting.

Some of the many highlights in the scientific programme will include:

• Pre-meeting course on clinical use of Bone Biomarkers (in English and German language) and a FishBone Workshop
• An ECTS/ASBMR Joint Symposium on Bone Fragility and Fracture Risk after Treatment for Osteoporosis
• Clinical Update and a parallel Basic Science and Technology Update
• Special sessions dedicated to Allied Health Professionals
• A special session where the ECTS Academy meets the EU Consortia and Asian Partner Societies to review What is Next in Musculoskeletal Research
• Dedicated events for New Investigators organised by the ECTS Academy, including a Mentor Session
• Insights from Outside during a plenary lecture on Big Data and Bone
• A series of interactive Meet-the-Experts and Working Groups
• Well-attended poster sessions with dedicated poster viewing time

Finally, ECTS 2017 will also be a platform to discover the latest innovations of the industry during sponsored satellite symposia and at the exhibition.

Please note that you can download the NEW mobile app to have direct access to the abstracts and programme (see page 26 for details).
We encourage you to participate in the discussions and hope ECTS 2017 will help you in the exchange of information and development of new collaborations.

We welcome you to an inspiring, educational and enjoyable programme.

**Claus-C. Glüer**  
ECTS President and Scientific Programme Committee Chair

**Barbara Obermayer-Pietsch**  
Local Organising Committee Chair
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**Welcome**

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- M Doppler
- PA Rooms
- M T Rooms
- Papageno General Networking
- E Clinical
- M Basic
- P PA
- E Papageno Network Opening
- M M
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About ECTS

ECTS Mission & Vision
The mission of ECTS, a not-for-profit scientific organisation, is to promote excellence in research into the field of calcified tissues within Europe, and to ensure the findings are disseminated to enable benefit to patients with metabolic bone disease.

To fulfill its mission ECTS will

- advance scientific knowledge of the structure and function of calcified tissues and related subjects
- promote basic and clinical research in this field and publish and disseminate the results of such research
- foster a multidisciplinary approach and stimulate, through meetings, symposia, study groups, lectures, seminars and other means, exchange of information and collaboration
- act as an authoritative body for the purpose of consultation in matters of public and professional interest concerning research in calcified tissues and related subjects in Europe.
Membership is open to any and all healthcare professionals eager to participate in the ECTS community and all it offers:

**Engage with peers:**
- Access the ECTS membership Directory

**Access to the latest science, best practices, education and networking to advance research and patient outcomes**
- ECTS Newsletter
- Education Resource Center
- PhD and Clinical Trainings
- Webinars
- Funding opportunities through our Grants, Awards and Fellowships

**Discounts and Services**
- Discount to ECTS Congress
- Discount and access to IFMRS Activities

Visit us at the ECTS Booth No. 1-3 in the Exhibition Area to learn more about the society and its activities!

**ANNUAL GENERAL MEETING**

The Annual General Meeting of the European Calcified Tissue Society will take place on Saturday 13 May 2017 at 15:15-15:45 during the afternoon coffee break. The meeting will be held in Hall Papageno and all ECTS members are encouraged to attend and participate.
The European Calcified Tissue Society (ECTS) is the major organisation in Europe for researchers and clinicians working in the musculoskeletal field.

With an Annual Congress, PhD Training Courses and many research funding instruments, ECTS acts as a forum for the dissemination of scientific excellence and education. ECTS represents more than 600 members, including basic researchers, clinicians, students and health allied professionals working in the musculoskeletal field. It has a network of over 30 national and international societies.

**membership**
Since 1963 the Society has acted as a forum for broad-ranging high quality research through its annual congresses and workshops. The Society’s strength lies in its members and we invite you to join them.

**education**
ECTS aims to provide training courses and practical sessions throughout Europe to enable its members to benefit from an exchange of information and develop practical techniques. Further details on the upcoming training programmes are available on our website.

**funding**
ECTS Grants & Awards are open to ECTS Members. Applications are reviewed by an independent review panel and on the basis of their potential to foster research in the area of bone diseases, in Europe.

**new investigators**
New Investigators, the clinicians, researchers, scientists and bone and mineral specialists of the future

The ECTS Academy represents the most talented PostDoc researchers in the musculoskeletal field in Europe and is aimed at strengthening the future of musculoskeletal research by attracting top scientists and assisting them in setting up their research network. Scientific excellence and cooperative engagement for advancing musculoskeletal research are key requirements for being elected to the membership.

Full details of all our activities are available from the ECTS website

www.ectsoc.org
THE ECTS ACADEMY: ADVANCING BONE RESEARCH – TOGETHER

The ECTS Academy’s mission is to form a scientific network on musculoskeletal diseases to promote scientific excellence and the training of young scientists and doctors in Europe.

During the first strategy meeting, which was held in Madrid on 6-7 October 2016, the ECTS Academy members shaped their activities for the future. Education, mentoring and dissemination are to be the key objectives of the Academy and their activities programme includes a number of interesting initiatives:

- Webinar Series with ERC Grant Winners
- Set up of a Mentoring Programme for New Investigators
- Specific New Investigator Programme during ECTS Congress
- Public Engagement
- Clinical Dissemination
- Grant finding guidance
- External outreach

The ECTS Academy has also put together a New Investigator Programme during ECTS 2017. In the Scientific Programme section, look out for this icon: 🌟

ECTS BOARD OF DIRECTORS

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President Elect       Anna Teti
Secretary             Gudrun Stenbeck
Treasurer             Erik Fink Eriksen
Members               Martine Cohen-Solal
                      Nuria Guañabens
                      Lorenz Hofbauer
                      Barbara Obermayer-Pietsch
                      Martina Rauner
                      Hanna Taipaleenmaeki
                      Carola Zillikens
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Executive Director  Roberta Mugnai
Finance & Membership Manager  Marian Churchill
Grants & Awards Administrator  Lucy Boswell

Contact information
European Calcified Tissue Society (ECTS)
c/o Maison des Associations Internationales
Rue Washington 40, 1050 Brussels, Belgium
Tel: +32 476 520 716
Email: ects@ectsoc.org
Web: www.ectsoc.org

ECTS GRANTS & AWARDS

ECTS/Amgen Bone Biology Fellowship
This 3-year fellowship programme is open to any ECTS member, clinician or scientist working in the field of bone biology. The award will be used exclusively to support translational or clinical research in the area of bone disease, in particular projects which concern the RANK/RANKL/OPG pathway or Wnt pathway translated into clinical relevance of bone disease.

This Fellowship is supported by Amgen Europe.

- Saturday 13 May, 19:00 – 20:00, Europa Hall

Steven Boonen Clinical Research Award
In memory of Professor Steven Boonen, who sadly passed away during the ECTS 50th Anniversary Congress in Lisbon on 20 May 2013. Steven was an internationally recognised expert in the field of osteoporosis and metabolic bone disease, who was actively involved in bone disease research, education and patient care. His translational and clinical research activities focused on determinants of age-related skeletal fragility and on strategies to reduce fracture risk. Specific areas of expertise included musculoskeletal frailty, osteoporosis in old age and innovative trial design. He was an active and regular contributor to the ECTS congress for many years, and was also a member of the ECTS Board of Directors.
This award is open, by nomination only, to medical doctors who have made significant progress and contribution to the field of clinical bone disease research.

The 2017 Steven Boonen Award is supported by Amgen Europe.

- *Saturday 13 May, 19:00–20:00, Europa Hall*

**Excellence in Research Award**

With the ECTS Excellence in Research Award ECTS recognizes scientists who substantially advanced the field of musculoskeletal research. The recipient of the award is selected by the ECTS Board of Directors from the group of invited speakers of the ECTS Annual Congress.

- *Sunday 14 May, 08:10–08:15, Europa Hall*

**Mike Horton Basic Science Award**

Professor Mike Horton (1948-2010) was a hematologist-turned-basic scientist who made significant contributions in the bone field and beyond. He performed pioneering work in osteoclast biology which resulted, among other things, in the recognition of the alpha v beta 3 integrin as a therapeutic target for inhibiting bone resorption. His warm personality and wide-ranging interests inspired many young researchers.

The ECTS Mike Horton Award is open, by nominations only, to individuals who have made a significant basic or translational contribution to the field of bone and calcified tissue.

- *Sunday 14 May, 14:15–14:30, Europa Hall*

**Iain T Boyle Award**

In memory of Professor Iain T Boyle (1935–2001) who contributed greatly to the field of mineral metabolism and whose work on osteoporosis was known and acclaimed nationally and internationally.

The award is open, by nomination only, to young scientists who have made significant progress and contribution to the field of bone and calcified tissue.

- *Sunday 14 May, 14:15–14:30, Europa Hall*
Philippe Bordier Clinical Award
Doctor Philippe Bordier (1927-1977) contributed significantly to the bone field by developing bone histomorphometry, which he applied to the analysis of several bone diseases. His work and dynamism in science has been recognised in Europe and the United States.

This award, by nomination only, is open to individuals who have made a significant clinical contribution to the field of bone and calcified tissue.

- Monday 15 May, 14:30 – 14:45, Europa Hall

East-Meets-West Presidential Research Awards
As part of the East-Meets-West Programme, ECTS will award the top-three highest ranking abstracts submitted from China, Japan and Korea. For the second year, ECTS holds a special East-Meets-West programme as part of its Annual Congress. The East-Meets-West programme is aimed at promoting scientific exchange with colleagues from Asia and is a partnership initiative with The Chinese Society of Osteoporosis and Bone Mineral Research (CSOBMR), The Japanese Society for Bone and Mineral Research (JSBMR), the Korean Society of Bone and Mineral Research (KSBMR) and the Korean Society of Osteoporosis (KSO).

The 2017 Award is supported by AgNovos Healthcare.

- Monday 15 May, 14:30 – 14:45, Europa Hall

New Investigator, Allied Health and Travel Awards
These awards are available to ECTS members who submit an abstract to the congress and who satisfy the specific award criteria. The award winners were selected by the abstract review panel based on abstract scores.

The 2017 NI Awards are supported by AgNovos Healthcare and the Travel Award by Elsevier.

- Tuesday 16 May, 11:30 – 12:00, Europa Hall
This prestigious PhD Training Course, aimed at promoting general knowledge of bone research to young investigators, is now in its eleventh year and has been hailed as one of the most innovative and successful courses in the bone field.

**Programme highlights**

- Rare diseases
- Clinical and cellular aspects of vascular calcification
- Integrating clinical aspects of osteoporosis
- Exosomes in health and disease
- Imaging of bone fragility
- CRISPR/CAS9 Technology

Workshops on grant writing and methodology development as well as a session on the industry perspective of developing a molecule from discovery to the patient provide networking and career development opportunities.

For more details of our training courses please contact:

**Myriam Cremer**
Email: myriam.cremer@ectsoc.org
Tel: +32 494 85 0047
www.ectsoc.org

ECTS, Av Washington 40
B-1050 Brussels, Belgium
Email: ects@ectsoc.org
General Information

OPENING HOURS

Registration Opening Hours
The registration desks are located in the entrance hall on the ground floor and open at the following times:

Friday 12 May 2017: 16:00 – 19:00
Saturday 13 May 2017: 07:30 – 20:00
Sunday 14 May 2017: 07:30 – 20:00
Monday 15 May 2017: 07:30 – 20:00
Tuesday 16 May 2017: 07:30 – 12:00

Exhibition Opening Hours
The Exhibition Area is located on the 1st floor and open at the following times:

Saturday 13 May 2017: 8:30 – 21:30
Sunday 14 May 2017: 8:00 – 19:30
Monday 15 May 2017: 8:00 – 19:30

Prayer Room
A Prayer Room is located in Office 5 on the 5th floor.

Speakers’ Preview Center
The Speakers’ Preview Center is located on the 1st floor, to the left of the escalator.

Opening Hours:
Friday 12 May 2017: 16:00 – 19:00
Saturday 13 May 2017: 07:30 – 20:00
Sunday 14 May 2017: 07:30 – 20:00
Monday 15 May 2017: 07:30 – 20:00
Tuesday 16 May 2017: 07:30 – 11:00
REGISTRATION FEES

You can register at the registration counter located on the ground floor of Salzburg Congress by filling in an on-site registration form. Payments are possible via debit or credit card or in cash.

The following registration fees apply on site:

<table>
<thead>
<tr>
<th>Category</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECTS Member</td>
<td>€ 810,00</td>
</tr>
<tr>
<td>Non-Member</td>
<td>€ 980,00</td>
</tr>
<tr>
<td>ECTS Member Trainee/Allied Health Professional</td>
<td>€ 380,00</td>
</tr>
<tr>
<td>Non-Member Trainee/Allied Health Professional</td>
<td>€ 435,00</td>
</tr>
<tr>
<td>Pre-Congress only (12 May 2017) - ECTS Member</td>
<td>€ 150,00</td>
</tr>
<tr>
<td>Pre-Congress only (12 May 2017) - Non-Member</td>
<td>€ 200,00</td>
</tr>
<tr>
<td>Friday &amp; Saturday Combination Ticket (12 &amp; 13 May 2017)</td>
<td>€ 350,00</td>
</tr>
<tr>
<td>Pre-Congress in combination with full congress registration</td>
<td>€ 100,00</td>
</tr>
<tr>
<td>Official Congress Evening, delegate fee</td>
<td>€ 40,00</td>
</tr>
<tr>
<td>Official Congress Evening, accompanying person’s fee</td>
<td>€ 65,00</td>
</tr>
</tbody>
</table>

Registration fees include 20% VAT and are cashed in Euro (€) only.

Delegate registration fee includes:
- access to the scientific sessions and exhibition area, coffee breaks
- conference documentation (congress bag, final programme, abstract publication, name badge)
- attendance at the Opening Ceremony & Welcome Reception on Saturday 13 May 2017*

*not included in the Day Ticket fee for Friday, 12 May 2017

Registration to ECTS 2017 does not give access to the Pre-Congress Programme of Friday 12 May 2017. For this, separate registration is required.
**Member Fees:**
Member fees apply to individual members of ECTS only. Member registrations will be checked on a regular basis. Incorrect registrations will be filtered and changed to non-member fees.

**Trainee/Allied Health Professionals:**
Trainees = PhD students, Undergraduates, Residents, Fellows, Junior Post docs (within 3 years of PhD)
Allied Health Professionals = nurses, physiotherapists, radiologists, nutritionists and dieticians

To verify your Trainee/Allied Health Professional status, a written confirmation from your chairperson, head of department or programme director is required. Otherwise, the full congress registration fee will apply depending on your membership status.

**BADGES AND TICKETS**
All congress documents and tickets should be collected on site at the registration desk.
A name badge will be provided on site with your registration documents. Name badges must be worn at all times to allow access into the venue Salzburg Congress.
A barcode is printed on each name badge. These may be scanned by exhibitors to access the name, affiliation, country, email address and professional interests provided by you when registering for the congress.
By permitting an exhibitor to scan your badge, you agree that these details may be used by the exhibiting company to send you further relevant product information.

**Badges will be colour-coded as follows:**

<table>
<thead>
<tr>
<th>INVITED SPEAKER</th>
<th>ORGANIZER</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXHIBITOR</td>
<td>ECTS BOARD</td>
</tr>
<tr>
<td>COMPANY SYMPOSIUM ONLY</td>
<td>STAFF</td>
</tr>
<tr>
<td>DELEGATE</td>
<td></td>
</tr>
</tbody>
</table>
CONGRESS SECRETARIAT

Mondial Congress & Events
Mondial GmbH & Co KG
Operngasse 20B, 1040 Vienna, Austria
Tel.: +43 (0)1 58804 0
Fax: +43 (0)1 58804 185
E-Mail: ects2017@mondial-congress.com
www.mondial-congress.com

CONGRESS VENUE

Venue Address
Salzburg Congress
Auerspergstraße 6
5020 Salzburg, Austria
www.salzburgcongress.at
OVERVIEW

5TH FLOOR
- Trapp Room, Offices, Prayer Room

4TH FLOOR
- Doppler Hall
  - Trakl Hall

3RD FLOOR
- Poster Area, Europa Hall, Paracelsus Hall

2ND FLOOR
- Exhibition Area, Poster Area, Quiet Area
- New Investigators Hub, Speakers’ Preview Center

1ST FLOOR
- Mozart Hall, Papageno Hall
  - Registration Area

GROUND FLOOR
- Entrance

1ST BASEMENT
- Cloakroom

Elevator
Catering
Toilets
Download the free **ECTS 2017** Congress App

Available from the Apple App Store, Google Play Store, BlackBerry World and the Windows Phone Store.

- Up-to-date programme, speaker and session information
- Your own personalized schedule
- All abstracts
- Exhibition listing and venue floor plan
- Social media conversations
- Live chats with your peers
- Venue and city information
- …and much more!

#ECTS2017
www.eventmobi.com/ects2017
Internet Access
Wireless internet access at Salzburg Congress is available to all participants of ECTS 2017. To connect, please open your device’s WIFI settings and select:

WIFI name: ects_salzburg
Password: ects2017

Congress App
The ECTS 2017 Congress App is available for free download from the Apple App Store, Google Play Store, BlackBerry World, the Windows Phone Store or under www.eventmobi.com/ects2017. It allows you to

- access the most up-to-date programme, speaker and session information
- create your own personalised schedule
- view the abstracts, with links to the programme and poster lists
- see the exhibition listing and floor plan
- connect with ECTS on Social Media
- chat with your peers
- find venue and city information
- …and much more!

Lost & Found
A Lost & Found service is available at the registration counter.

Cloakroom
A cloakroom and luggage storage facilities are available on the basement level of Salzburg Congress free of charge.

First Aid
In case of need, please contact the staff at the registration counter.

Food & Drinks
Lunch, coffee and tea during official breaks are included in the registration fee and will be served in the exhibition area. A list of restaurants in the vicinity is available upon request at the registration counter.

Smoking
Thank you for respecting the smoking ban inside the congress venue.
ABOUT SALZBURG, TRAVEL & ACCOMMODATION

Salzburg is one of the most-visited cities in Austria. Rich in history and culture, Mozart's birthplace draws visitors year-round, which is reflected in excellent infrastructure and state-of-the-art hospitality services.

Weather Conditions in Salzburg
In May, the weather is usually very stable, mild and pleasant with flowers in bloom and often snow-covered mountain tops to supplement the scenery. The maximum temperature average reaches 19 degrees, the minimum average some 7 degrees Celsius. Salzburg in May enjoys six hours of sunshine per average day and a total of 13 days with rainfall.

Electricity & Time
The main voltage in Austria is 220V. Salzburg is in the Central European Time Zone, Greenwich Mean Time (GMT) +1hour.

Shopping
Shops are usually open from 10:00 – 19:00 from Monday to Friday and from 10:00 – 17:00 on Saturday. On Sunday shops are usually closed, with the exception of souvenir shops. Grocery stores already open around 8:00 during weekdays.

Tipping
Service is usually included in the prices in bars and restaurants. Tips are always welcome and usually 10%.

Banks & Local Currency
Banking hours in general are Monday, Tuesday, Wednesday, Friday 08:00 –12:30 and 13:30 –15:00, Thursday 08:00 –12:30 and 13:30 –17:30. ATMs are located outside most banks, cash can be withdrawn there 24/7. National and foreign Maestro cards (cash cards) as well as Mastercard, AMEX, Visa and Diners are accepted.
ATMs in the vicinity of the venue:

<table>
<thead>
<tr>
<th>ATM</th>
<th>ADDRESS</th>
<th>WALKING DISTANCE TO VENUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAWAG PSK</td>
<td>Max-Ott-Platz 5 5020 Salzburg</td>
<td>1 min</td>
</tr>
<tr>
<td>Salzburger Sparkasse</td>
<td>Rainerstraße 2 5020 Salzburg</td>
<td>1 min</td>
</tr>
<tr>
<td>UniCredit Bank Austria AG</td>
<td>Rainerstraße 4 5020 Salzburg</td>
<td>2 min</td>
</tr>
</tbody>
</table>

**Public Transportation**

Salzburg’s W.A. Mozart Airport is 15 minutes from Salzburg Main Station by bus. The congress centre is located within walking distance of the station, as are most of the inner city hotels, networking venues and sights.

Should you wish to travel further, Salzburg offers an extensive environmentally-friendly bus network that includes electric trolleybuses running on overhead powerlines. The trolleybuses run during the daytime every 10 minutes, while most of the regular buses run at 15-minute intervals. You can find the current timetable online at [www.obus.at](http://www.obus.at).

**Tickets** for the Salzburg public transportation system (“SVV”) - both single-trip as well as 24-hour - within the so-called “core-zone”, are cheaper when you buy them in advance. Practically all kiosks (labeled “Trafik”) carry tickets for public transportation. The 24-hour ticket (€ 3,70-5,70) is a very inexpensive option, allowing you to use the city’s entire public transportation network. If you expect to spend more than four days in the city, then it is worth purchasing a weekly pass (€ 15,50). Regardless of what ticket you buy in advance, you will need to stamp it the first time you board.

Children ages six through fourteen ride on the SVV at the minimum rate.
**Taxis**
The following taxi companies operate within Salzburg's city boundaries. All Austrian taxis are equipped with a meter.

<table>
<thead>
<tr>
<th>TAXI</th>
<th>PHONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salzburg Funktaxi-Vereinigung 81-11</td>
<td>+43 662 81 11</td>
</tr>
<tr>
<td>Taxi 2220 – Queen’s Taxi GmbH</td>
<td>+43 662 22 20</td>
</tr>
<tr>
<td>Taxi 2284</td>
<td>+43 662 22 84</td>
</tr>
</tbody>
</table>

**Accommodation**
Mondial Congress & Events is the official housing partner of ECTS 2017. Pre-booking of hotel rooms in selected hotels all over Salzburg is available via the congress website: [http://ects2017.org/accommodation/](http://ects2017.org/accommodation/)

Should you have any questions about your booking, please talk to the Mondial staff at the registration counter.

**Insurance & Liability**
The organisers cannot be held responsible for any personal injury, loss, damage or accident to private property, or for additional expenses incurred as a result of delays or changes in air, rail, road or other services, strikes, sickness, weather and other causes. All participants are encouraged to make their own arrangements for health and travel insurance.
Scientific Programme Information

SCIENTIFIC PROGRAMME COMMITTEE

Chair:
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Co-Chairs:
Richard Eastell (Sheffield, United Kingdom)
Clinical Co-Chair
Hans van Leeuwen (Rotterdam, Netherlands)
Basic Science Co-Chair
Martina Rauner (Dresden, Germany)
New Investigator Co-Chair
Barbara Obermayer-Pietsch (Graz, Austria)
Local Organising Committee Chair
Anna Teti (L’Aquila, Italy)
Incoming SPC Chair

Members:
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Lorenz Hofbauer (Dresden, Germany)
Franz Jakob (Würzburg, Germany)
Bente Langdahl (Aarhus, Denmark)
Willem Lems (Amsterdam, Netherlands)
Stuart Ralston (Edinburgh, United Kingdom)
Gudrun Stenbeck (London, United Kingdom)

LOCAL ORGANISING COMMITTEE

Chair:
Barbara Obermayer-Pietsch (Graz, Austria)

Members:
Hermann Agis (Vienna, Austria)
Felix Eckstein (Salzburg, Austria)
Christian Muschitz (Vienna, Austria)
Martina Rauner (Dresden, Germany)
ABSTRACT REVIEWERS

The ECTS thanks the 143 abstract reviewers who marked all the abstract submissions for ECTS 2017 in their own time.

A full list of these reviewers can be found in the Abstract Book.

CME ACCREDITATION

The scientific programme of the 44th European Calcified Tissue Society Congress 2017 in Salzburg was granted 21 European CME credits (ECMEC) by the European Accreditation Council for Continuing Medical Education (EACCME).

Event code: 15561

Each medical specialist should claim only those hours of credit that he/she actually spent in the educational activity. The EACCME is an institution of the European Union of Medical Specialists (UEMS, www.eums.eu).

EACCME credits are recognised by the American Medical Association towards the Physician’s Recognition Award (PRA). To convert EACCME credits to AMA PRA category 1 credits, please contact the AMA.

CERTIFICATE OF ATTENDANCE

To obtain CME accreditation, please complete the CME Evaluation Form which will be sent to you via email after the conference. The CME certificate will be available for download after completion of the form.

INFORMATION FOR INVITED SPEAKERS AND ABSTRACT PRESENTERS

Opening Hours Speakers’ Preview Center

- Friday 12 May 2017: 16:00 – 19:00
- Saturday 13 May 2017: 07:30 – 20:00
- Sunday 14 May 2017: 07:30 – 20:00
- Monday 15 May 2017: 07:30 – 20:00
- Tuesday 16 May 2017: 07:30 – 11:00
If you are a Chairperson

1. Please locate your session room in due time. Please be at your session room at least 15 minutes prior to the start of the session.

2. We may remind you that speakers need to strictly observe the time schedule. Discussants should not speak before they are recognised by the chair and must first clearly state their name, institution and country of origin.

If you are a Speaker in a Session

1. Please locate your session room in due time. Please be at your session room at least 15 minutes prior to the start of the session.

2. Speakers should deliver and view/check their PowerPoint presentations at the Speakers’ Preview Center (located on the 1st floor) at least 2 hours prior to the start of the respective session. For sessions starting at 08:00, the PowerPoint presentations should be delivered the previous day.

In order to avoid any delays, speakers are kindly requested to hand in their PowerPoint presentations on USB sticks. If you are bringing your own laptop, the presentation will be transferred onsite in the Speakers’ Preview Center.

Please note that your speaking time as indicated in the email-correspondences has to be strictly followed. If you are not certain about the assigned speaking time, please contact your session coordinator or Ms. Liesa Wessely at the registration desk. Your remaining speaking time will be displayed during your presentation.

Rest assured that your files will be deleted from the congress server after your presentation.

Speaking Times for Oral Presentations

**Plenary Oral Presentation:** 7 minutes + 3 minutes discussion  
**Oral Communication:** 7 minutes + 3 minutes discussion  
**Oral Poster:** 3 minutes presentation + 3 minutes discussion after every three presentations. Please prepare no more than 3-5 slides  
**SNAP:** 1 minute presentation. Please prepare a single slide  
**Ask your peers:** 3 minutes poster presentation + 3 minutes discussion. The presentation will take place directly at your poster.
If you are Presenting a Poster
All presenters of oral posters, SNAP Posters and posters are asked to prepare a physical poster which will be displayed onsite. The poster area is located in the Exhibition Area on level 1 and 2.

Posters will be on display from Saturday, 13 May to Tuesday, 16 May (11:00).

Posters can be mounted on Saturday, 13 May from 09:00 to 16:00 and removed on Tuesday, 16 May before 11:00. Presenters are kindly asked to be present at their poster during the morning and afternoon coffee breaks as well as during the lunch break for personal discussion about their results.

If you have sent your poster to Learner’s Digest International for printing, you will be able to pick it up onsite during the exhibition opening hours. The poster helpdesk will be located on the first floor within the exhibition area.

Presenters need to be present at their poster during the following times:

• 11:45 to 12:30 on Sunday, 14 May for the odd numbered posters
• 12:00 to 12:45 on Monday, 15 May for the even numbered posters

If you have any questions regarding your poster(s) or presentation(s), please do not hesitate to contact the staff at the registration desk.

POLICIES AND DISCLOSURES

Phones, photography and recording of sessions
Delegates are respectfully reminded that mobile phones should be switched off or put into silent mode inside the session rooms. Photography, audio recording and videotaping inside the lecture rooms is strictly prohibited. Taking photos of posters presented at ECTS 2017 is only allowed with written permission by ECTS and the respective author. Delegates found to be contravening this request will be asked to leave the session room.

Copyright
All abstracts are copyright of the ECTS.

Disclaimer
The European Calcified Tissue Society (ECTS) hereby provides notice to
Congress attendees and anyone else, that the ECTS makes no warranty of any kind whatsoever, expressed or implied, that any information, materials, techniques or products or anything else presented at this congress is accurate, valid, adequate or fit for any purpose whatsoever.

Congress attendees are solely responsible for determining the validity, adequacy and fitness of any information, materials or products or anything else presented at this Congress for any and all uses. Statements and descriptions made by the ECTS at this Congress and included in Congress literature are informational only and are not made or given as a warranty. The views, opinions and statements made at the Congress are solely those of the speakers and may not reflect the views of the ECTS. Furthermore, speakers may have vested interests in the concepts and products they discuss.

It is further understood and agreed that the ECTS shall not be liable whether in contract, in tort, under any warranty, in negligence or otherwise for any kind of claim for loss, damage or expense of any kind arising out of or resulting from the use of any information, materials, products or anything else presented at this Congress, and under no circumstances shall the ECTS be liable for special, indirect or consequential damages.

ECTS and/or its agents have the right to alter or cancel the Congress or any of the arrangements, timetables, plans or other items relating directly or indirectly to the Congress without prior notice for any reason beyond their control. The Congress and/or its agents shall not be liable for any loss, damage, expenditure or inconvenience caused as a result of such alteration or cancellation.
Scientific Programme

PROGRAMME AT A GLANCE
MELLANBY CENTRE TRAINING COURSE: CLINICAL USE OF BONE TURNOVER MARKERS

Course overview: Bone Turnover Markers (BTM) have long been used as diagnostic tests for metabolic bone diseases. In the past 20 years, markers that are more specific to bone have been introduced and have been found to be useful in osteoporosis, particularly for monitoring treatment. This course aims to provide a background to the clinical use of bone turnover markers.

Target audience: This day-long course is open to clinicians (e.g. endocrinology, rheumatology, care of the elderly and clinical chemistry), laboratory scientists and nurses involved in the clinical management of patients at risk of osteoporotic fractures.

Objectives: At the end of the course, participants should:

- understand the process of bone remodelling and how this can be studied using BTM
- appreciate the methods used for measuring BTM and their sources of variability
- be able to identify the role of BTM in the diagnosis and monitoring of bone diseases in a number of clinical settings including; osteoporosis, chronic kidney disease, Paget’s disease, osteomalacia, GIOP and PHPT.
- be familiar with best practice in the clinical use of BTM

Chair: Richard Eastell (United Kingdom)

09:30 – 09:35 Bone turnover markers: An introduction
Richard Eastell, United Kingdom

09:35 – 10:05 Bone remodelling and the interpretation of bone turnover marker (BTM) results
Nuria Guañabens, Spain
10:05 – 10:35 Practical aspects of measurement and selection of marker
Christian Meier, Switzerland

10:35 – 11:05 Sources of variability in BTM
Jennifer Walsh, United Kingdom

11:05 – 11:30 Coffee Break

— Use of BTM in osteoporosis: Shared care protocols in primary care
Richard Eastell, United Kingdom

12:00 – 13:00 Interactive Workshops

Group A: Protocols and case examples for the use of BTM in osteoporosis practice
Jennifer Walsh, United Kingdom
Eugene McCloskey, United Kingdom

Group B: Using BTM for osteoporosis treatment: Research application
Richard Eastell, United Kingdom
Nuria Guañabens, Spain

13:00 – 13:40 Lunch

13:40 – 14:30 Metabolic bone diseases in adults (Pagets, Osteomalacia, GIOP & PHPT)
Eugene McCloskey, United Kingdom

14:30 – 15:00 Metabolic bone disease of chronic kidney disorder
Barbara Obermayer-Pietsch, Austria

15:00 – 15:30 When and how to use bone histomorphometry
Erik Fink Erisken, Norway

15:30-15:50 Coffee Break
15:50 – 16:50 Interactive Workshops

**Group A: Protocols for the use of BTM in osteoporosis practice**

*Mozart*

*Jennifer Walsh, United Kingdom*
*Erik Eriksen, Norway*

**Group B: Using BTM in metabolic bone disease**

*Trakl*

*Eugene McCloskey, United Kingdom*
*Nuria Guañabens, Spain*

17:10 – 17:30 Expert panel: Questions and answers

— All speakers

09:15 – 15:00 Mozart 5

**SPEZIALKURS BIOMARKER DVO**

**09:15 – 10:45 Block I**

1. Knochenbiologie und Remodelling
2. Praktische Aspekte der Messung und Selektion von Biomarkern
3. Ursachen der Variabilität von Knochenbiomarkern

*Christian Meier, Switzerland*
*Barbara Obermayer-Pietsch, Austria*
*Heide Siggelkow, Germany*
*Christian Wüster, Germany*

11:05 – 11:30 Coffee Break

**11:15 – 12:45 Block II**

4. Verwendung von Biomarkern bei Osteoporose
5. Metabolische Knochenerkrankungen
6. Knochenstoffwechsel bei Niereninsuffizienz
Pre-Congress, Friday 12 May 2017

Christian Meier, Switzerland
Barbara Obermayer-Pietsch, Austria
Heide Siggelkow, Germany
Christian Wüster, Germany

13:00 – 13:40 Lunch

13:40 – 14:30 Block III

7. Fallbeispiele und Anwendungen
anschließend Testat

Seminarende ca. 15:00 Uhr

17.00 – 19.00 Mozart 5

Symposium of the CEE Osteoporosis Summit Working Group

Chairs: Heinrich Resch (Austria), Mihail Boyanov (Bulgaria)

— Welcome Address
  Barbara Obermayer-Pietsch, Austria/ Claus-C. Glüer, Germany

— Introduction – History of the CEE Osteoporosis Summit
  Heinrich Resch, Austria

— Cortical Bone and Bone Strength
  Gerold Holzer, Austria

— Epidemiology of Osteoporotic Fractures in the CEE Countries
  Olga Lesnyak, Russia

— Challenges and Limitations of BTM Use in Personalised Therapy
  Roman Lorenc, Poland

Chairs: Gerold Holzer, Olga Lesnyak

— MiRNAs as Biomarkers in Osteoporosis
  Barbara Ostanek, Slovenia

— Male Osteoporosis
  Mihail Boyanov, Bulgaria
## Pre-Congress, Friday 12 May 2017

### Fishbone Workshop

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>08:00</td>
<td>Registration Open</td>
</tr>
<tr>
<td>08:45</td>
<td>Welcome</td>
</tr>
<tr>
<td>08:50</td>
<td>Plenary Talk</td>
</tr>
<tr>
<td>08:50</td>
<td>Fish Bone: more than models of human muscle-skeletal disease</td>
</tr>
<tr>
<td>08:50</td>
<td><em>Ron Shahar</em></td>
</tr>
<tr>
<td>09:30</td>
<td>Session I: Development, Skeletogenesis, and Regeneration</td>
</tr>
<tr>
<td>11:05</td>
<td>Coffee Break I</td>
</tr>
<tr>
<td>11:30</td>
<td>Session II: Mechanics, Mineralization, and Mechanobiology</td>
</tr>
<tr>
<td>13:00</td>
<td>Lunch</td>
</tr>
<tr>
<td>13:40</td>
<td>Session III: Genetics of Musculoskeletal Disease I: Collagens and OI</td>
</tr>
<tr>
<td>15:10</td>
<td>Science Slam: Oral Poster Session</td>
</tr>
<tr>
<td>15:30</td>
<td>Coffee Break II</td>
</tr>
<tr>
<td>15:50</td>
<td>Session IV: Genetics of Musculoskeletal Disease II: Osteoporosis, Osteoarthritis, and Beyond</td>
</tr>
<tr>
<td>17:05</td>
<td>Panel Discussion</td>
</tr>
<tr>
<td>17:35</td>
<td>Student Awards</td>
</tr>
<tr>
<td>17:45</td>
<td>Poster Session</td>
</tr>
</tbody>
</table>

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— Sarcopenia and Age  
*Vladislav Povoroznyuk, Ukraine*

— Future of CEE Summits  
*Heinrich Resch, Austria*
**SATURDAY, 13 MAY 2017**

**09:00 – 10:00**  
**Europa**

**Clinical Update: Osteoporosis Diagnosis**  
*Chairs: Carola Zillikens (Netherlands), Christian Meier (Switzerland)*

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
</table>
| 09:00 – 09:30 | Osteoporosis – diagnostic workup  
*Carola Zillikens, Netherlands* |
| 09:30 - 10:00 | Fracture risk assessment and intervention thresholds  
*Eugene McCloskey, United Kingdom* |

**09:00 – 10:00**  
**Mozart**

**Basic Science Update: Bone Biology**  
*Chairs: Pierre Marie (France), Peter Pietschmann (Austria)*

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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</thead>
</table>
| 09:00 – 09:05 | Introduction  
*Pierre Marie, France* |
| 09:05 – 09:30 | Bone cell function in bone and beyond  
*Bram van der Eerden, Netherlands* |
| 09:30 – 09:55 | Bone and the haematopoetic niche  
*Laura Calvi, USA* |
| 09:55 – 10:00 | Final Discussion |

**10:15 – 11:55**  
**Europa**

**Clinical Update: Osteoporosis Treatment**  
*Chairs: Bente L. Langdahl (Denmark), Franz Jakob (Germany)*

<table>
<thead>
<tr>
<th>Time</th>
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</table>
| 10:15 – 10:45 | Calcium and vitamin D  
*Barbara Obermayer-Pietsch, Austria* |
| 10:45 – 11:15 | Choice of treatment  
*Adolfo Diez-Perez, Spain* |
*Östen Ljunggren, Sweden  
Erik Fink Eriksen, Norway* |
10:15 – 11:45  

**Basic Science Update: Technology**  
*Chairs: Miep Helfrich (United Kingdom), Reinhold Erben (Austria)*

- **10:15 – 10:45**  The imposter in your incubator: the importance of cell line authentication and good cell culture practice  
  *Sharon Bahia, United Kingdom*

- **10:45 – 11:15**  Quantitative PCR results remain questionable: the need for the MIQE guidelines  
  *Stephen Bustin, United Kingdom*

- **11:15 – 11:45**  Max that FACS: optimising and validating Flow Cytometry assays  
  *Raif Yuecel, United Kingdom*

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12:15 – 15:00  

**What is next in Musculoskeletal Research**  
The ECTS Academy meets EU Consortia and Asian Partner Societies  
*Chairs: Claus-C. Glüer (Germany), Martina Rauner (Germany), Weibo Xia (China), Yoshiya Tanaka (Japan), Ye-Soo Park (Korea)*

- **12:15 – 12:20**  Welcome  
  *Claus-C. Glüer, Germany*

- **12:20 – 13:00**  Keynote lecture: Bone interactions with the hematopoietic system  
  *Laura Calvi, Italy*

- **13:00 – 13:45**  East-meets-West: where will the future go?  
  *Country representatives*

- **13:00 – 13:45**  What’s Next in Musculoskeletal Research?  
The Eastern Perspectives  
  The Chinese Perspective: Mei Li, China  
  The Japanese Perspective: Takeshi Miyamoto, Japan  
  The Korean Perspective: Tae Yong Lee, South Korea
### 13:45 – 14:15 Overview EU programmes
_Astrid Flandorfer, Austria_

### 14:15 – 15:00 Consortia introductions – pitch-talks

<table>
<thead>
<tr>
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<tr>
<td>DIMEOs</td>
<td>Uwe Kornak</td>
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<td>RUBICON</td>
<td>Bram van der Erden</td>
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<td>SYBIL</td>
<td>Nadia Rucci/Mattia Capulli</td>
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<td>SKELETON</td>
<td>Silvia Pozzi/Anna Teti</td>
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<td>SFB/TRR 79</td>
<td>Christian Heiss</td>
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<td>iBONE</td>
<td>Eric Hesse</td>
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<td>SKELMET</td>
<td>Lorenz Hofbauer/Martina Rauner</td>
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<tr>
<td>GEFOS/GENOMOS</td>
<td>Fernando Rivadeneira</td>
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<tr>
<td>EUROCLAST</td>
<td>Miep Helfrich</td>
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### 12:25 – 13:45 Europa

**Clinical Update: Endocrinological Disorders and Bone**
*Chairs: Nuria Guañabens (Spain), Slobodan Vukicevic (Croatia)*

- **12:25 – 12:45** Sodium and bone health  
  *Jens-Erik Beck Jensen, Denmark*
- **12:45 – 13:05** Diabetes and bone health  
  *Lorenz Hofbauer, Germany*
- **13:05 – 13:25** Thyroid diseases and bone health  
  *Graham Williams, United Kingdom*
- **13:25 – 13:45** Parathyroid diseases and bone health  
  *Richard Eastell, United Kingdom*

### 12:25 – 13:45 Papageno

**Allied Health Professional Session – Osteoporosis**
*Chairs: Mette Juel Rothmann (Denmark), Daniel Grigorie (Romania)*

- **12:25 – 12:55** The SCOOP study  
  *Eugene McCloskey, United Kingdom*
12:55 – 13:20  Gait, balance and falls in people with osteoporosis
   *Terence Aspray, United Kingdom*

P-OPPE-14  Fraility, falls and fractures – A 10 year longitudinal study in 75 year old community dwelling women
   *Kristina Akesson, Sweden*

P-NUTR-6  Systematic screening for environmental and behavioral determinants identifies factors detrimental to skeletal health
   *Ling Oei, Netherlands*

14:00 – 15:00  Europa

**Educational Symposium on Biomarkers**
   *Chairs: Barbara Obermayer-Pietsch (Austria), Richard Eastell (United Kingdom)*

14:00 – 14:30  Periostin: potential as marker of bone cell regulation
   *Nicolas Bonnet, Switzerland*

14:30 – 15:00  Bone Turnover Markers: an update
   *Nuria Guañabens, Spain*

15:15 – 15:45  Papageno

**Annual General Meeting**

15:15 – 15:45  Poster area

**“Ask your peers” Session: Clinical 1**

**The diverse effects of different diseases on bone destruction**
   *Chairs: Julien Paccou (France), Hermann Agis (Austria)*

P-OTHD-15  Increased risk of fracture in premenopausal women with polycystic ovary syndrome: A propensity-score matched cohort study
   *Yueh-Han Hsu, Taiwan*

P-OTHD-10  Diagnostic accuracy of biomarkers and imaging in predicting bone turnover in advanced chronic kidney disease
   *Syazrah Salam, United Kingdom*
P-OTHD-22 Simultaneous application of bone morphogenic protein 2 and platelet-rich fibrin improves healing in medication-related osteonecrosis of the jaw
Angenine Marie Alfafara, Republic of Korea

P-ARTH-5 Increased expression of angiogenesis markers and Interleukin-6 in bone marrow lesions in osteoarthritis
Erik F. Eriksen, Norway

15:15 – 15:45 Poster area

“Ask your peers” Session: Basic 1
Intricate signals leading to bone disease
Chairs: Nerea Alonso Lopez (United Kingdom), Milena Pesic (Israel)

P-OTHD-19 Is there a role for Sphingosine-1-Phosphate pathway in cystic fibrosis bone disease?
Frédéric Velard, France

P-OTHD-20 Treatment with zoledronic acid ameliorates bone mass and strength but mitigates improved glucose tolerance in mice with exogenous hyperthyroidism
Elena Tsourdi, Germany

P-MUSC-19 The transformation of mature osteoblasts into bone lining cells during bone loss by mechanical unloading
Sang Wan Kim, Republic of Korea

P-CANC-10 Effects of ALKIFC treatment on prostate cancer cells interacting with bone and bone cells in bone metastasis models
Letizia Astrologo, Switzerland

17:45 – 18:45 Europa

Chairs: Stuart Ralston (United Kingdom), Klaus Klaushofer (Austria)

17:45 – 18:15 What is new in preclinical research?
Duncan Bassett, United Kingdom

18:15 – 18:45 What is new in clinical research?
Salvatore Minisola, Italy
19:00 – 20:15  Europa

**Awards and Opening Ceremony**

- Welcome to the Meeting from ECTS President
  *Claus-C. Glüer, Germany*

- Welcome to Salzburg from Chair of the Local Organising Committee
  *Barbara Obermayer-Pietsch, Austria*

- Presentation of Amgen Bone Biology Fellowship 2017
  Simone Bianciardi: Prospective Metagenomic Analysis on the Effects of Gut Microbiome on Bone Homeostasis in Postmenopausal Women.

- Presentation of the newly elected members of the ECTS Academy

**Steven Boonen Lecture**

Rare bone diseases – signposts to the future
*Nick Bishop, United Kingdom*

20:15 – 21:15  Europa

**ECTS/ASBMR Clinical Debate**

*This house believes that anabolic therapy should be first line therapy for all patients with established osteoporosis*

*Chairs: Jane Cauley (USA), Claus-C. Glüer (Germany)*

Introduction by the Chairs

Vote

- For the motion
  *Bente L. Langdahl, Denmark*

- Against the motion
  *Steven Harris, USA*

Rebuttal

Discussion

Vote

Presentation of the Golden Femur Award

Debate Closed
### SUNDAY, 14 MAY 2017

<table>
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<tr>
<th>Time</th>
<th>Event</th>
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<tr>
<td>08:10 – 08:15</td>
<td>Excellence in Research Award Ceremony</td>
</tr>
</tbody>
</table>
| 08:15 – 09:15 | Symposium 2: ECTS/ASBMR Joint Symposium on Bone Fragility and Fracture Risk after Treatment for Osteoporosis  
  *Chairs: Jane Cauley (USA), Claus-C. Glüer (Germany)*  
  - 08:15 – 08:45  
    Bone quality and mechanical properties: What happens when treatment is stopped  
    *Matthew Allen, USA*  
  - 08:45 – 09:15  
    BMD revisited: Can BMD be used as a surrogate for fracture risk reduction  
    *Dennis Black, USA* |
| 09:30 – 10:30 | Oral presentations 1 clinical: Osteoporosis Treatment  
  *Chairs: TBC, Christian Muschitz (Austria)*  
  - 09:30 – 09:40  
    RCT of monthly high-dose vitamin d on bone density in community-dwelling older adults: trial-based evidence for defining vitamin d deficiency  
    *Ian R. Reid, New Zealand*  
  - 09:40 – 09:50  
    Change in bone mineral density (BMD) or bone turnover markers (BTM) did not predict risk of vertebral fracture after discontinuation of alendronate in the flex study  
    *Stephen H. Chang, USA*  
  - 09:50 – 10:00  
    Screening for atypical femur fractures using extended femur scans by DXA  
    *Denise van de Laarschot, Netherlands* |
10:00 – 10:10 Genome-wide association analysis identifies CXCR4 gene as predictor of therapeutic response to teriparatide in severe osteoporosis

*Nerea Alonso, Scotland*

10:10 – 10:20 The pro-remodeling effect of teriparatide therapy is associated with loss of cortical mass at the hip in the structure study

*Bente L. Langdahl, Denmark*

10:20 – 10:30 Hip and other fracture risk in patients receiving teriparatide in real-world clinical practice: pooled data from four prospective observational studies

*Bente L. Langdahl, Denmark*

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09:30 – 10:30  

**Oral presentations 1 basic science: Rare bone diseases**

*Chairs: Hanna Taipaleenmaeki (Germany), Peter Pietschmann (Austria)*

09:30 – 09:40 New insights into the CLCN7-dependent autosomal dominant osteopetrosis type 2 (ADO2): a systemic disease

*Antonio Maurizi, Italy*

09:40 – 09:50 Towards preclinical development of SIRNA-based therapy of CLCN7-dependent autosomal dominant osteopetrosis type 2 (ADO2)

*Antonio Maurizi, Italy*

09:50 – 10:00 Genetic modulation of autophagy alters osteogenesis imperfecta severity in mice with GLY610 to CYS substitution in the triple helical region of the α2(I)collagen chain

*Elena Makareeva, USA*

10:00 – 10:10 Quantitative 3D-morphometry of vertebra reveals severe pathological changes in an osteogenesis imperfecta zebrafish model carrying a collagen type I glycine substitution

*Imke A.K. Fiedler, Germany*
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, Germany

High Bone Turnover In Mice Carrying A Pathogenic NOTCH2-Mutation Causing Hajdu-Cheney Syndrome

Timur A. Yorgan, Germany

Clinical research – oral posters and SNAPs 1

Chairs: TBC, Christian Muschitz (Austria)

Oral Posters

P-GENE-14 Pleiotropic effects of genetic variants associated with different phenotypes on osteoporosis risk
Maria Christou, Greece

P-MUSC-10 Participation in a 8-week repeated sprint training protocol affect the circulating profile of a panel of fracture-risk associated miRNAs in young males
Giovanni Lombardi, Italy

P-OPPE-15 Infection by CagA positive Helicobacter Pylori strains impairs bone fragility: a prospective cohort study
Daniela Merlotti, Italy

P-OPPE-14 Frailty, falls and fractures – a 10 year longitudinal study in 75 year old community dwelling women
Kristina Akesson, Sweden

P-BDEV-15 Changes in bone mass and size in men after completion of growth are characterized by loss of trabecular and cortical bone mineral density but increases in cortical bone size.
Charlotte Verroken, Belgium

P-OPEV-19 Differences in femoral neck structure between elderly Caucasian and Chinese populations: a Perth-Beijing cohort study
Ling Wang, China
P-OPEV-10  The Impact of Contrast Agent to Bone Mineral Density in the Context of Incidental Screening Using Existing CT Scans  
*Wolfram Timm, Germany*

P-OPTX-5  Effect of daily or cyclical teriparatide treatment on bone matrix mineralization in postmenopausal osteoporotic women on prior and ongoing therapy with alendronate  
*Barbara Misof, Austria*

P-OPTX-3  Bisphosphonate drug holidays in postmenopausal osteoporosis: effect on clinical fracture risk  
*Julien Paccou, France*

**SNAPs**

P-OCYM-1  Effects of Up to 10 Years of Denosumab Treatment on Bone Matrix Mineralization: Results From the FREEDOM Extension  
*Georges Boivin, France*

P-BCHT-10  Biomarkers for bisphosphonate-related osteonecrosis of the jaw  
*Jin-Woo Kim, Korea*

P-BCHT-9  Detection of the free active site of Sclerostin using a new and well-characterized ELISA  
*Jacqueline Wallwitz, Austria*

P-OPPE-24  Early anti-osteoporosis treatment and risk of cardiovascular mortality after hip fracture: A population based study  
*Ching-Lung Cheung, Hong Kong*

P-OPPE-7  Risk of Subsequent Fracture After Osteoporosis-Related Fracture: Results from a Real-World German Sick Fund Analysis  
*Peyman Hadji, Germany*

P-GENE-16  Integrative microRNA-gene expression network analysis in peripheral leukocytes from malignant and benign primary hyperparathyroidism  
*Jing Kong, China*
P-MEFG-14  Human gut microbiota influences fat and lean mass fractions at school age: The Generation R study  
*Maria Carolina Medina Gomez, Netherlands*

P-MUSC-17  Clinical correlates and prevalence of sarcopenia and osteosarcopenia in a population based cohort  
*Josjie Schoufour, Netherlands*

P-OTHD-9  Evaluation of the Utah Algorithm for Identifying Hypophosphatasia to Estimate Prevalence in the United Kingdom  
*Sara Jenkins-Jones, United Kingdom*

P-ARTH-1  The role of ferritin and adiponectin as a predictors of cartilage damage assessed by arthroscopy in patients with symptomatic knee osteoarthritis  
*M Shargorodsky, Israel*

10:30 – 11:30  
Mozart  

**Basic research – oral posters and SNAPs 1**  
*Chairs: Hanna Taipaleenmaeki (Germany), Peter Pietschmann (Austria)*

**Oral Posters**

**P-CANC-18**  Neuronal HGF regulates breast cancer progression and bone pain induction  
*Tatsuo Okui, Japan*

**P-OCBR-8**  Blocking of OCL activity reverses systemic inflammation and reduces myeloid skewing in inflammatory bowel disease  
*Claudine Blin-Wakkach, France*

**P-ARTH-2**  Pathogenic Roles of CXCL10 Signaling through CXCR3 and TLR4 in collagen antibody-induced arthritis  
*Zang Hee Lee, Korea*

**P-OBBF-18**  Skin-derived IL-17A induces bone loss in the absence of adaptive immunity  
*Özge Uluckan, Spain*
P-CHON-4  N-acetylcysteine treatment ameliorates the skeletal phenotype of a mouse model of Diastrophic Dysplasia
   Antonio Rossi, Italy

P-BDEV-17  TransCon CNP, a Long-Acting C-Type Natriuretic Peptide Analogue, for the Treatment of Achondroplasia
   Vibeke Miller, Denmark

P-OTHD-34  Use of chemical chaperones to target cellular stress in Chihuahua, a zebrafish model of dominant osteogenesis imperfecta.
   Francesca Tonelli, Italy

P-MUSC-11  Treatment with r-Irisin protects from bone loss and muscle atrophy during unloading
   Graziana Colaianni, Italy

P-ARTH-11  Early arthritis induces disturbances at bone nanostructural level reflected in decreased tissue hardness
   Bruno Vidal, Portugal

SNAPs

P-CANC-8  Maternal Embryonic Leucine zipper Kinase (MELK) inhibition has direct effects on bone cells and prevents the development of osteolytic bone disease in multiple myeloma
   Roy Heusschen, Belgium

P-CHON-5  Sphingosine 1 Phosphate blockage by Sphingomab prevents from Osteoarthritis in mice
   Chahrazad Cherifi, France

P-OCBR-14  Role of dipeptidyl peptidase 3 in bone and immune system: a new osteoimmunological player
   Ciro Menale, Italy

P-NUTR-1  Alteration of cartilage and subchondral bone (osteoarthritis like) induced by Protein Malnutrition is treated by nutritional essential amino acids supplements
   Patrick Ammann, Switzerland
P-OBBF-8 Identification of a novel secreted factor (KIAA1199) that enhances skeletal stem cell motility and migration and is up-regulated during fracture healing: Role of Wnt signaling
*Kaikai Shi, Denmark*

P-GENE-7 Expanding the Skeletome with Bone Mineral Density and Radiography Data from the International Mouse Phenotyping Consortium
*Robert Brommage, Sweden*

P-OBBF-10 Protease-activated Receptor-2 (PAR2) Promotes Osteoblastic Differentiation at the Expense of Adipogenesis
*Reza Sanaei, Australia*

P-HORM-2 The metabolic side effects of glucocorticoids are potentiated by androgens
*Markus Seibel, Australia*

P-OBBF-5 Osteal macrophages are abundant along the osteoblastic canopies and bone surface cells in mouse and human cancellous bone
*Thomas Levin Andersen, Denmark*

P-BDEV-12 The Effect of Early-Onset Type 2 Diabetes Mellitus on the Development of Bone Shape in Rats
*Graeme Michael Campbell, Germany*

14:15 – 14:30 Europa

**Awards Ceremony**

*Chairs: Barbara Obermayer-Pietsch (Austria), André Uitterlinden (Netherlands)*

— 2017 ECTS Mike Horton Basic/Translational Award: Claes Ohlsson
  *Presented by Ulf Lerner*

— 2017 ECTS Iain T Boyle Award
  *Presented by Anna Teti*
14:30 – 15:00  Europa

**Plenary Lecture: Insights from Outside Big Data and clinical medicine**

*Chairs: Barbara Obermayer-Pietsch (Austria), André Uitterlinden (Netherlands)*

— Using biobanks to study the genetic basis for common diseases

*Ian Hall, United Kingdom*

15:00 – 15:30  Europa

**Plenary Oral Presentations**

*Chairs: Barbara Obermayer-Pietsch (Austria), André Uitterlinden (Netherlands)*

15:00 – 15:10  PLO1

Overexpression of human RANKL decreases skeletal muscle function and engenders insulin resistance

*Nicolas Bonnet, Switzerland*

15:10 – 15:20  PLO2

Effect of denosumab compared with risedronate in glucocorticoid-treated individuals: results from the 12-month primary analysis of a randomized, double-blind, double-dummy, active-controlled study

*Kenneth Saag, USA*

15:20 – 15:30  PLO3

Regulation of breast cancer tumorigenesis, metastasis and osteolysis by IKKε

*Ryan T. Bishop, United Kingdom*

15:45 – 16:45  Europa

**Clinical Workshop: Bone in rheumatic diseases**

*Chairs: Willem Lems (Netherlands), Peter Pietschmann (Austria)*

15:45 – 16:15  Bone Involvement in Ankylosing Spondylitis: how to prevent bone loss and new bone formation (syndesmophytes)

*Dominique L.P. Baeten, The Netherlands*

16:15 – 16:45  Pathogenesis and treatment of erosions in RA: prevention and healing

*Ellen Gravallese, USA*
15:45 – 16:45  

**Preclinical Workshop: Ribosomal proteins in health and disease**  
*Chairs: Martina Rauner (Germany), Christian Muschitz (Austria)*

15:45 – 16:15  
Role of Ribosomal proteins in the pathophysiology of myelodysplastic syndrome  
*Rebekka Schneider-Kramann, Germany*

16:15 – 16:45  
A novel ribosomopathy links translational fidelity to intellectual disability, autism, and dysmorphism  
*Alyson MacInnes, Amsterdam*

17:00 – 17:45  

**Meet the Experts**

- Optimal replacement with vitamin D  
  *Terry Aspray, United Kingdom*

- How to manage the young person with osteoporosis  
  *Jennifer Walsh, United Kingdom*

- What is the mechanism for glucocorticoid-induced osteoporosis?  
  *Lorenz Hofbauer, Germany*

- Thought you knew everything about PCR? Variability of results depend on reserve transcription of PCR  
  *Stephen Bustin, United Kingdom*

- Bone vasculature  
  *Anjali Kusumbe, United Kingdom*

- Pain and cancer in bone  
  *Toshiyuki Yoneda, Japan*

- Patients at High Fracture Risk: Beyond BMD and FRAX  
  *Steven R. Cummings, United States*
### 18:00 – 20:00  Papageno

**New Investigator Seminar & Gathering**

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<th>Session Code</th>
<th>Title</th>
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<tr>
<td>P-CANC-13</td>
<td>MIR-221 modulates tumor growth in vivo and regulates TGFβ signaling in human prostate cancer and bone metastasis-associated stroma</td>
<td>Mirjam Kiener, Switzerland</td>
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<tr>
<td>P-OPPE-17</td>
<td>Potential pathomechanisms for bone- and vessel-associated microRNA-changes in chronic kidney disease</td>
<td>Ines Foessl, Austria</td>
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<td>P-OBBF-21</td>
<td>Evidence for resistance of endothelial cells to blockade of mature osteoblast-derived vascular endothelial growth factor</td>
<td>Alice Goring, United Kingdom</td>
</tr>
<tr>
<td>P-BDEV-3</td>
<td>Estrogen status in mice influences the early inflammatory phase of fracture healing</td>
<td>Verena Fischer, Germany</td>
</tr>
<tr>
<td>P-BDEV-16</td>
<td>Higher serum levels of bone turnover markers in men are associated with a more rapid decline in bone mineral density during adulthood</td>
<td>Charlotte Verroken, Belgium</td>
</tr>
<tr>
<td>P-OTHD-45</td>
<td>Bone indices in patients with non-surgical hypoparathyroidism and pseudohypoparathyroidism</td>
<td>Line Underbjerg, Denmark</td>
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### 18:00 – 19:00  Paracelsus

**Allied Health Professionals Gathering**

### 18:00 – 19:00  Trakl

**Working Group Sessions**

**Imaging of Bone Strength**

*Chairs: Klaus Engelke, Philippe Zysset (Switzerland)*
Topic 2017 Bone Microcracks

- Imaging
  Françoise Peyrin, France

- Biomechanics
  Philipp Thurner, Austria

- Clinical Relevance
  Adolfo Diez-Perez, Spain

**Rare Bone Diseases**

*Doppler*  
*Chair: Uwe Kornak (Germany)*

- Rare and common forms of Paget’s disease  
  Omar Albagha, United Kingdom

- Role of mechanisms and pathways found in rare bone mass disorders for common osteoporosis  
  Wim Van Hul, Belgium

- Treatment of rare bone disorders + how often are they found among common osteoporosis  
  Lothar Seefried, Germany

**Transgenic Animal Models of Musculoskeletal Diseases**

*Trapp*  
*Chairs: Anjali Kusumbe (United Kingdom), Özge Uluckan (Spain)*

- Cre lines used in bone research  
  Charles O’Brien, USA

- Models for inflammatory bone diseases  
  Özge Uluckan, Spain

- Round Table Discussion
## MONDAY, 15 MAY 2017

### 08:00 – 09:00  Europa

**Clinical Workshop: Nutrition and Bone**  
*Chairs: Bente L. Langdahl (Denmark), Elisabeth Zwettler (Austria)*

- 08:00 – 08:30  Macronutrients and bone health – the impact of fruits, vegetables and acid load  
  *Bess Dawson-Hughes, United Kingdom*

- 08:30 – 09:00  Trace elements and bone strength  
  *Jennifer Walsh, United Kingdom*

### 08:00 – 09:00  Mozart

**Preclinical Workshop: Liquid Biopsies**  
*Chairs: Bram van der Eerden (Netherlands), Hermann Agis (Austria)*

- 08:00 – 08:30  Recent advancements in the field of liquid biopsies  
  *Catherine Alix-Panabières, France*

- 08:30 – 09:00  RNA species  
  *Aija Line, Latvia*

### 09:05 – 10:15  Europa

**Oral presentations 2 clinical: Rare bone disease and genetics of osteoporosis**  
*Chairs: Franz Jakob (Germany), Astrid Fahrleitner-Pammer (Austria)*

- 09:05 – 09:15  Gene mutation spectrum and genotype-phenotype correlation in Chinese Osteogenesis Imperfecta patients revealed by targeted next generation sequencing  
  *Fang Lv, China*

- 09:15 – 09:25  Peculiar osteoprototic patients: new insights on bone biology from exome sequencing  
  *Eleonora Palagano, Italy*

- 09:25 – 09:35  Genome-wide association study identifies SREBF1 and IRX5 as genetic determinants of dental maturation  
  *Olja Grgic, The Netherlands*
09:35 – 09:45 Leveraging genetic associations to evaluate clinical risk factors for osteoporotic fractures  
*Katerina, Netherlands*

09:45 – 09:55 Establishing race- and gender-specific reference intervals for pyridoxal 5-phosphate to better identify adult hypophosphatasia using data from the NHANES programme  
*Philip Nicklin, United Kingdom*

09:55 – 10:05 Dissecting the mechanisms of progressive osteolysis in Gorham-Stout disease  
*Michela Rossi, Italy*

10:05 – 10:15 Bone volumetric density and microarchitecture in adult patients with x-linked hypophosphatemic rickets  
*Thomas Funck-Brentano, France*

**Oral presentations 2 basic science: cancer and bone**  
*Chairs: Lorenz Hofbauer (Germany), Reinhold Erben (Austria)*

09:15 – 09:25 Bidirectional regulation of osteosarcoma associated bone formation by exogenous and tumour-derived SEMA3A  
*Daniëlle De Ridder, United Kingdom*

09:25 – 09:35 The control of osteosarcoma by RSK2 inhibition-induced polyploidy  
*Jean-Pierre David, Germany*

09:35 – 09:45 Osteosarcoma development by non-canonical wnt signalling  
*Kazuhiko Matsuoka, Spain*

09:45 – 09:55 Knock-down of the vitamin D receptor in human breast cancer cells increases metastatic potential to bone through enhanced epithelial to mesenchymal transition  
*Konstantin Horas, Germany*

09:55 – 10:05 The key role of NOTCH2 in breast cancer cell dormancy in bone marrow  
*Mattia Capulli, Italy*
<table>
<thead>
<tr>
<th>Time</th>
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| 10:05 - 10:15| Longitudinal evaluation of DASATANIB treatment efficacy in inhibiting skeletal lesions in mice using time-lapse micro-computed tomography  
*Timo Damm, Germany* |

**10:15 – 11:15**   

**Europa**  

**Clinical research – oral posters and SNAPs 2**  
*Chairs: Franz Jakob (Germany), Astrid Fahrleitner-Pammer (Austria)*

**Oral Posters**

P-PEDI-3  
A Randomized, Open-label Phase 2 Study of KRN23, an Investigational Fully Human Anti-FGF23 Monoclonal Antibody, in Children with X-linked Hypophosphatemia (XLH): 64-Week Results  
*Wolfgang Högler, United Kingdom*

P-PEDI-8  
Etiology identification using targeted next-generation sequencing and serum FGF-23 levels in patients with Fanconi syndrome  
*Juan Du, China*

P-OTHD-40  
Periostin as a novel bone biomarker for renal osteodystrophy in advanced chronic kidney disease  
*Syazrah Salam, United Kingdom*

P-BMEC-8  
Cortical Bone Reorganization in Femurs Associated with Type 2 Diabetes Mellitus  
*Eva Maria Wölfel, Germany*

P-MEFG-10  
T2D participants have lower prevalence of moderate and severe vertebral fractures: A meta-analysis of population based studies  
*Fjorda Koromani, Netherlands*

P-GENE-6  
Prevalence of low alkaline phosphatase and ALPL mutations in patients with osteoporosis  
*Beatriz Larraz-Prieto, United Kingdom*

P-OTHD-8  
Biochemical and Physical Function Outcomes in
Adolescents and Adults With Hypophosphatasia Treated With Asfotase Alfa for 5 Years: Results From a Phase 2 Study
Scott Moseley, USA

P-PEDI-4 Bone matrix hypermineralization and increased osteocyte lacunae density in patients with Osteogenesis imperfecta type V
Stéphane Blouin, Austria

P-OTHD-11 Gorham-Stout disease: radiological, histological, and clinical features of one single centre
Shuzhong Liu, China

SNAPs

P-OPEV-3 Does DXA-image based hip geometry improve hip fracture prediction by bone mineral density? The Japanese Population-based Osteoporosis (JPOS) Cohort Study
Masayuki Iki, Japan

P-OPEV-14 Analysis of the evolution of cortical and trabecular bone compartments in the proximal femur after spinal cord injury by 3D-DXA
Pilar Peris, Spain

P-OPEV-18 The prediction of incident atraumatic fracture risk by trabecular bone score (TBS) in the elderly women of the OsteoLaus Study
Enisa Shevroja, Netherlands, Switzerland

P-GENE-13 Integrated Functional -Omics Framework of Genome-Wide Association Study (GWAS) Of Osteoporosis Traits Postulate FUBP3 And ETS2 As Critical Factors Of Bone Metabolism
Masa Zrimek, Slovenia

P-GENE-15 Genome-wide association meta-analysis identifies eight novel loci influencing the second to fourth digit (2D:4D) ratio, a presumptive marker of prenatal androgen exposure
Enisa Shevroja, Netherlands
<table>
<thead>
<tr>
<th>Abstract ID</th>
<th>Title</th>
<th>Author Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-MEFG-1</td>
<td>Diabetes mellitus is a state of low bone turnover – a meta-analysis</td>
<td>Katrine Hygum, Denmark</td>
</tr>
<tr>
<td>P-NUTR-6</td>
<td>Systematic screening for environmental and behavioral determinants identifies factors detrimental to skeletal health</td>
<td>Ling Oei, Netherlands</td>
</tr>
<tr>
<td>P-PEDI-2</td>
<td>A randomized controlled pilot trial assessing the effect of whole body vibration training on bone and muscle function in children with osteogenesis imperfecta and limited mobility</td>
<td>Wolfgang Högler, United Kingdom</td>
</tr>
<tr>
<td>P-ARTH-10</td>
<td>This abstract has been withdrawn</td>
<td></td>
</tr>
<tr>
<td>P-CANC-5</td>
<td>Role of the Wnt receptors RYK and FZD5 in prostate cancer</td>
<td>Stefanie Thiele, Germany</td>
</tr>
</tbody>
</table>

**10:15 – 11:15**

**Mozart**

**Basic research – oral posters and SNAPs 2**

*Chairs: Lorenz Hofbauer (Germany), Reinhold Erben (Austria)*

**Oral Posters**

<table>
<thead>
<tr>
<th>Abstract ID</th>
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<tbody>
<tr>
<td>P-BDEV-6</td>
<td>HMGB1 accelerates regeneration of multiple tissues by transitioning stem cells to G(Alert)</td>
<td>Geoffrey Lee, United Kingdom</td>
</tr>
<tr>
<td>P-OPTX-25</td>
<td>Apolipoprotein A-I Prevents Osteoporosis and Promotes Osteogenesis of Mesenchymal Stem Cells via STAT3, CXCL6, and CXCL8</td>
<td>Yu-Chuan Liu, Taiwan</td>
</tr>
<tr>
<td>P-OBBF-25</td>
<td>TAFA2 is a novel factor regulated during fracture healing and recruits skeletal (mesenchymal) stem cells to the site of fracture</td>
<td>Abbas Jafari, Denmark</td>
</tr>
<tr>
<td>P-OCYM-3</td>
<td>Micropetrosis of osteocyte lacunae originates from</td>
<td></td>
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</tbody>
</table>
accumulation of calcified nano-spherites and varies between healthy, osteoporotic and bisphosphonate-treated bone

Petar Milovanovic, Germany

P-OBBF-29 GPATCH1 and AKAP11 identified by GWAS and targeted resequencing regulate osteogenic mineralization

Ka Fai Cheng, Hong Kong

P-HORM-8 The WNK-SPAK pathway regulates FGF23 secretion in osteoblasts

Olena Andrukhova, Austria

P-HORM-14 Enpp1 plays a role in regulating vascular calcification under phosphate overload condition

Ryuichi Watanabe, Japan

P-GENE-5 Loss of p53 compensates osteopenia in murine Mysm1-deficiency

Anna Kovtun, Germany

P-MUSC-6 Feeding after overnight fast potentiates bone’s response to mechanical loading in mice

Hasmik Jasmine Samvelyan, United Kingdom

SNAPs

P-GENE-11 Phenotypic study of a novel mouse model for Crouzon syndrome with acanthosis nigricans

Maxence Cornille, France

P-OTHD-21 A new mouse model of Autosomal Dominant Osteopetrosis type 2

Joana Lopes, USA

P-OTHD-12 Collagen C-propeptide Cleavage Deficiency Increases Bone Mineralization and Alters Bone Cell Differentiation

Joan C. Marini, USA

P-GENE-3 Expression of miR-203a in bone tissue and serum responds to bone loss and osteoanabolic treatment in ovariectomized rats

Matthias Hackl, Austria
<table>
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<tr>
<th>Session</th>
<th>Title</th>
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<tbody>
<tr>
<td>P-OPTX-15</td>
<td>Engineering Dual-Specific M-CSF Antagonists That Inhibit c-FMS And αβ3 Integrin for Osteoporosis Therapy Yuval Zur, Israel</td>
</tr>
<tr>
<td>P-HORM-12</td>
<td>Pharmacokinetics of TransCon PTH, a Sustained-Release PTH Prodrug for Hypoparathyroidism, in Rat and Cynomolgus Monkey Vibeke Miller Breinholt, Denmark</td>
</tr>
<tr>
<td>P-OPTX-12</td>
<td>Zoledronic Acid Protects Against Cortical Bone Loss in Mice Following Withdrawal of NOTUM Inhibitor Treatment Robert Brommage, USA</td>
</tr>
<tr>
<td>P-OPTX-24</td>
<td>Skeletal restoration by Liraglutide in ovariectomized rats by an osteoanabolic mode: a comparative study with PTH and Alendronate Subhashis Pal, India</td>
</tr>
<tr>
<td>P-IMAG-2</td>
<td>Simultaneous visualisation of calcified bone ultrastructure and intracortical vasculature using synchrotron X-ray phase-contrast tomography Juan A Nunez, United Kingdom</td>
</tr>
<tr>
<td>P-BMEC-1</td>
<td>Vascular endothelial growth factor (VEGF) and Lipocalin 2 (LCN2) orchestrate the pro-angiogenic effects of unloaded osteoblasts Vimal Veeriah, Italy</td>
</tr>
</tbody>
</table>

11:30 – 12:00 Poster area

"Ask your peers" Session: Clinical 2
From epidemiology to precision medicine

*Chairs: Athanasios Anastasilakis (Greece), Michael Edelmayer (Austria)*

<table>
<thead>
<tr>
<th>Session</th>
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<tbody>
<tr>
<td>P-OPPE-12</td>
<td>Preceding and subsequent high- and low-trauma fracture patterns – a 13-year epidemiological study in females and males in Austria Christian Muschitz, Austria</td>
</tr>
<tr>
<td>P-OPPE-8</td>
<td>This abstract has been withdrawn.</td>
</tr>
<tr>
<td>P-HORM-3</td>
<td>Intra-operative FGF23 assay during surgery for tumor</td>
</tr>
</tbody>
</table>
induced osteomalacia: Towards a precision medicine.
Jessica Pepe, Italy

P-BMEC-4 TBS association with biomechanical properties of human vertebrae, ex-vivo
Didier Hans, Switzerland

11:30 – 12:00  Poster area

“Ask your peers” Session: Basic 2
From pediatric bone disease to cancer
Chairs: Mattia Capulli (Italy), Roy Heusschen (Belgium)

P-PEDI-6 A study on bone remodeling defects in cystinosis
Giulia Battafarano, Italy

P-OBBF-19 Perturbed bone composition and integrity with disorganized osteoblast functions in ZINC receptor/GPR39 deficient mice
Milena Pesic, Israel

P-OCBR-1 Estrogen-related receptor gamma negatively regulates RANKL-induced osteoclast differentiation by suppressing NF-κb signaling pathway
Hyun-Ju Kim, Republic of Korea

P-CANC-2 Extracellular vesicles mediate the crosstalk between osteoblasts and bone tumours
Alexander Loftus, Italy

14:30 – 14:45  Europa

Awards Ceremony

— 2017 ECTS Philippe Bordier Clinical Award: Bente Langdahl
Presented by Richard Eastell

— 2017 East-Meets-West Presidential Research Award
Presented by Claus C-Glüer (Germany), Chinese, Japanese, and Korean Presidents
14:45 – 15:45  

**Symposium 3: Osteoporosis – a chronic disease needs long term treatment**  
**Chairs: Richard Eastell (United Kingdom), Roland Chapurlat (France)**

14:45 – 15:15  
Long-term management of osteoporosis  
*Astrid Fahrleitner-Pammer, Austria*

15:15 – 15:45  
Balancing risk and benefits of long-term use of antiresorptives  
*Bo Abrahamsen, Denmark*

16:00 – 16:30  

**“Ask your peers” Session: Clinical 3**  
**Exciting perspectives in genetics and treatment of bone diseases**  
**Chairs: Andrea Burden (Netherlands), Daniela Merlotti (Italy)**

**P-OPTX-6**  
Cost effectiveness analysis of parathyroid hormone treatment in osteoporosis, from a healthcare perspective. A Danish national register based cohort study  
*Anne-Luise Thorsteinsson, Denmark*

**P-OPTX-11**  
Alendronate treatment results in a higher number of trabecular Microcalli in human vertebrae  
*Annika Vom Scheidt, Germany*

**P-OPTX-27**  
Assessment of the effects of switching oral bisphosphonates to Denosumab or daily Teriparatide in patients with rheumatoid arthritis  
*Kosuke Ebina, Japan*

**P-GENE-4**  
MicroRNAs and their association to bone microstructure and histomorphometry in idiopathic and postmenopausal osteoporosis  
*Roland Kocijan, Austria*
16:00 – 16:30  
**Poster area**

**“Ask your peers” Session: Basic 3**  
**Signaling: from in vitro to in vivo**

**Chairs: Nicolas Bonnet (Switzerland), Graziana Colaianni (Italy)**

<table>
<thead>
<tr>
<th>Code</th>
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<tbody>
<tr>
<td>P-OCYM-4</td>
<td>IDG-SW3 osteocytes extend processes in micro-3d printed lacunocanalicular network-like structures – a novel in vitro 3d biomimetic osteocyte model</td>
<td>Felicitas R. Flohr, Switzerland</td>
</tr>
<tr>
<td>P-MEFG-5</td>
<td>Cold Stress enhances NGF MRNA level in brown fat and regulates bdnf and osteocalcin MRNA in bone and brain of mice</td>
<td>Claudia Camerino, Italy</td>
</tr>
<tr>
<td>P-MEFG-8</td>
<td>GPRC6A is not directly involved in ERK- and AKT-mediated osteocalcin signaling in human pancreatic β-cells</td>
<td>Giovanni Lombardi, Italy</td>
</tr>
<tr>
<td>P-MEFG-11</td>
<td>CFOS over-expression causes a tumor–independent lipodystrophy</td>
<td>Jean-Pierre David, Germany</td>
</tr>
</tbody>
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16:30 – 17:45  
**Europa**

**Symposium 4: Tendinopathy**

**Chairs: Anna Teti (Italy), Elisabeth Preisinger (Austria)**

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>16:30 – 16:55</td>
<td>Predisposition to tendon injury</td>
<td>Malcolm Collins, South Africa</td>
</tr>
<tr>
<td>16:55 – 17:25</td>
<td>Inflammatory mechanisms in tendinopathy: a translational journey</td>
<td>Neal L. Millar, United Kingdom</td>
</tr>
<tr>
<td>17:25 – 17:45</td>
<td>Tendon injury: how to treat patients</td>
<td>Michael Kjaer, Denmark</td>
</tr>
</tbody>
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ECTS 2017 Final Programme
18:00 – 18:45

**Meet the Experts**

- **Long-Term treatment of osteoporosis**
  *Dennis Black, USA*
  
  **Mozart 1-3**

- **Rare Bone Diseases**
  *Maria Luisa Bianchi, Italy*
  
  **Paracelsus**

- **Difficult cases in Glucocorticoid-Induced Osteoporosis**
  *Kenneth Saag, USA*
  
  **Mozart 4-5**

- **Avoiding Pitfalls in Epidemiological Studies of Osteoporosis**
  *Bo Abrahamsen, Denmark*
  
  **Trakl**

- **Bone phenotyping in mice**
  *Duncan Bassett, United Kingdom*
  
  **Doppler**

- **Impact of inflammation on osteoblasts in inflammatory arthritis**
  *Ellen Gravallese, United Kingdom*
  
  **Trapp**

- **Navigating the Publishing Process at Scientific Journals**
  *Randy Levinson, USA*
  
  **Papageno**

18:45 – 19:45

**New Investigators Mentoring Session**

*Chairs: Özge Uluckan (Spain), Graeme Campbell (Germany)*

- Choosing a post doc: Which lab is right for me?
  *Hanna Taipaleenmaeki (UKE Hamburg), Germany*

- A research career in industry
  *Nick Hoyle (former director of Bone Metabolism R&D, Roche), Germany*

- The Academic Career Path: Transitioning to Faculty/Group Leader
  *Björn Busse (UKE Hamburg), Germany*

- Improving your skills: combining imaging methods to maximise results
  *Ralph Müller (ETH Zürich), Switzerland*

- Maintaining a work-life balance with a career in research
  *Barbara Obermayer-Pietsch (Med Uni Graz), Austria*
— From bench to bedside  
  Robert Stad (European Medical Director Bone at Amgen Europe GmbH), Switzerland

— Editor as an alternative career path  
  Randy Levinson (Nature Medicine), USA

19:00 – 20:00

**Working Group Sessions**

**Rheumatic Diseases and Bone**  
*Chair: Willem Lems (Netherlands), Gerolamo Bianchi (Netherlands)*

— Modern Treatment options in Glucocorticoid Users  
  Kenneth Saag, USA

— Bone quality in RA, new data with pQCT  
  Stephanie Finzel, Germany

— Bone involvement in Psoriatic Arthritis and Osteogenesis Imperfecta  
  Roland Kocijan, Austria

**Epigenetics**  
*Chair: Andre van Wijnen (USA)*

— Epigenetic control of osteoblast maturation  
  Riku Kiviranta, Finland

— Epigenetic control of bone formation by lineage-specific enhancers  
  Zeynab Najafova, Germany

— BET proteins and epigenetic signaling as therapeutic targets for osteoporosis  
  Andre van Wijnen, USA
TUESDAY, 16 MAY 2017

08:00 – 09:00

**Clinical Workshop: Vitamin D – Back to the future**  
*Chairs: Richard Eastell (United Kingdom), Stefan Pilz (Austria)*

08:00 – 08:30  Vitamin D and fall risk  
*Terence Aspray, United Kingdom*

08:30 – 09:00  Total versus free – a new twist in the vitamin D story?  
*Martin Hewison, United Kingdom*

08:00 – 09:00

**Preclinical Workshop: Autophagy**  
*Chairs: Gudrun Stenbeck (United Kingdom), Reinhard Gruber (Austria)*

08:00 – 08:30  Control of Autophagy  
*Sharon Tooze, United Kingdom*

08:30 – 09:00  Autophagy in skeletal homeostasis  
*Charles O’Brien, USA*

09:15 – 10:15

**Oral presentations 3 clinical: Osteoporosis pathophysiology**  
*Chairs: TBC, Roland Kocijan (Austria)*

09:15 – 09:25  Limitations and scope for fracture liaison services (FLS) in prevention of hip fracture  
*Per B. Johansen, Denmark*

09:25 – 09:35  Key intracortical remodeling events generating the increased cortical porosity during aging  
*Thomas L. Andersen, Denmark*

09:35 – 09:45  High cardiovascular risk in older men with low areal and cortical bone density – the prospective strambo study  
*Pawel Szulc, France*
09:45 – 09:55 The relation between radio-graphic vertebral fractures and trabecular bone score: a population based study
*Fjorda Koromani, Netherlands*

09:55 – 10:05 Impaired bone quality, assessed by trabecular bone score and in vivo micro indentation, in men with type 1 diabetes mellitus
*Astrid Kamilla Stunes, Netherlands*

10:05 – 10:15 Treatment with recombinant human parathyroid hormone (1-84) does not enhance clinical resolution and fracture healing of charcot osteoarthropathy - results from a double blind randomised placebo controlled clinical trial
*Nina L. Petrova, United Kingdom*

09:15 – 10:15 Mozart

**Oral presentations 3 basic science: Bone turnover and repair**

*Chairs: Martine Cohel-Solal (France), Reinhard Gruber (Austria)*

09:15 – 09:25 Tracking the progression of osteolytic and osteosclerotic lesions in mice using time-lapse micro-ct: applications to the assessment of bisphosphonate treatment efficacy
*Graeme M. Campbell, Germany*

09:25 – 09:35 Bone pain-modifying actions of osteocytes via connexin43- mediated communications with sensory nerves
*Masahiro Hiasa, Japan*

09:35 – 09:45 Postnatal suppression of platelet-derived growth factor receptor β in osteoblasts increases trabecular bone mass in mice
*Cyril Thouverey, Switzerland*

09:45 – 09:55 THY-1 A-novel positive regulator of bone mass and strength
*Ann-Kristin Picke, Germany*

09:55 – 10:05 Induced global deletion of the glucocorticoid receptor impairs fracture healing
*Anna E. Rapp, Germany*
10:05 - 10:15  Expression of the sclerostin-encoding gene SOST in mesenchymal stem cells (MSCS) from patients with osteoporotic fractures
   Jose A. Riancho, Spain

10:30 – 11:30  Europa

Symposium 5: Nerves and Bone
   Chairs: Erik Fink Eriksen (Norway), Felix Eckstein (Austria)

10:30 – 11:00  Neuronal regulation of bone remodelling
   Paul Baldock, Australia

11:00 – 11:30  Fracture risk in neurological diseases
   Ken Poole, United Kingdom

11:30 – 12:00  Europa

Awards and Closing Ceremony
   Chairs: Claus-C. Glüer (Germany), Barbara Obermayer-Pietsch (Austria)
   ─ New Investigator, Allied Health and Travel Awards

12:55 – 14:30  Hotel IMLAUER & Bräu. Rainerstraße 12-14, Salzburg

RUBICON Symposium

12:55 – 13:00  Welcome remarks
   Anna Teti (Italy), Bram van der Eerden (The Netherlands)

13:00 – 14:30  Scientific session
   Chairs: Mike Briggs (United Kingdom), Malcolm Collins (South Africa)

13:00 – 13:30  Activating the unfolded protein response in osteocytes causes hyperostosis consistent with craniodiaphyseal dysplasia
   Danny Chan, China

13:30 – 14:00  Osteocytes and RANKL
   Charles O’Brien, USA

14:00 – 14:30  Bone and energy metabolism
   Paul Baldock, Australia
POSTERS

Cell biology: osteoblasts and bone formation

P-OBBF-1 EVALUATION OF SPHEROID FORMATION BY DENTAL PULP-DERIVED CELLS UNDER HYPOXIC CONDITIONS AND IN THE PRESENCE OF HYPOXIA MIMETIC AGENTS
Klara Janjic, Bledar Lilaj, Andreas Moritz, Hermann Agis
Department Of Conservative Dentistry And Periodontology, Medical University of Vienna, School of Dentistry, Vienna/AUSTRIA

P-OBBF-2 STANNIOCALCIN 1 ENHANCES OSTEOGENIC DIFFERENTIATION OF HUMAN PERIODONTAL LIGAMENTAL FIBROBLASTS
Hwa Sung Chae1, Hanna Gu1, Kyung Mi Woo1, Hyun-Mo Ryoo1, Hyun Jeong Kim2, Jin Chung4, Jeong-Hwa Baek1
1Dept. Of Molecular Genetics, Seoul National University School of Dentistry, Seoul/ REPUBLIC OF KOREA, 2Dept. Of Dental Anesthesiology, Seoul National University School of Dentistry, Seoul/ REPUBLIC OF KOREA, 3Dept. Of Oral Microbiology, Pusan National University School of Dentistry, Yangsan/REPUBLIC OF KOREA

P-OBBF-3 ICARITIN PROMOTES OSTEOGENIC DIFFERENTIATION OF MC3T3-E1 CELLS
Dan-Bi Park1, Hee Su Lee2, Seong-Hee Ko3
1Department Of Pharmacology, Gangneung-Wonju National University, Gangneung/REPUBLIC OF KOREA, 2Department Of Oral Anatomy, Gangneung-Wonju National University, College of Dentistry and Research Institute of Oral Science, Gangneung/REPUBLIC OF KOREA, 3Department Of Pharmacology, College of Dentistry and Research Institute of Oral Science, Gangneung-Wonju National University, Gangneung/REPUBLIC OF KOREA

P-OBBF-4 This abstract has been withdrawn

P-OBBF-5 OSTEAL MACROPHAGES ARE ABUNDANT ALONG THE OSTEOBLASTIC CANOPIES AND BONE SURFACE CELLS IN MOUSE AND HUMAN CANCELLOUS BONE
Thomas L. Andersen1, Maja Hinge2, Jean-Marie Delaisse2
1Clinical Cell Biology, University Of Southern Denmark, Vejle Hospital - Lillebaelt Hospital, Institute of Regional Health Research,, Vejle/DENMARK, 2Department Of Clinical Cell Biology (kcb), Vejle Hospital - Lillebaelt Hospital, Institute of Regional Health Research, University of Southern Denmark, Vejle/DENMARK
P-OBBF-6  GENE-EXPRESSION OF MC3T3-E1 CELLS ON RESORBABLE BLAST MATERIAL TITANIUM SURFACE
Heesu Lee¹, Jae Wook Lee², Seong-Hee Ko³
¹Dept Of Oral Anatomy, College of Dentistry and Research Institute of Oral Science, Gangneug-Wonju National University, Gangneung city, Gangwondo/REPUBLIC OF KOREA, ²Natural Constituent Research Center And Convergence Research Center For Dementia, Korea Institute of Science and Technology, Gangneung/REPUBLIC OF KOREA, ³Department Of Pharmacology, College of Dentistry and Research Institute of Oral Science, Gangneung-Wonju National University, Gangneung/REPUBLIC OF KOREA

P-OBBF-7  ANALYSIS OF THE BIOCOMPATIBILITY AND INGROWTH BEHAVIOUR OF ADHESIVE BONDING-APPROVED NANOSTRUCTURED TITANIUM SURFACES IN-VITRO AND IN-VIVO
Heidrun Jablonski¹, Amra Mumdzic-Zverotic¹, Christian Wedemeyer², Heike Rekasi¹, Heiko Fietzek³, Max Kolb³, Gero Hilken⁴, Marcus Jäger¹, Max D. Kauther¹
¹Department Of Orthopaedics And Trauma Surgery, University Hospital Essen, Essen/GERMANY, ²Clinic For Orthopaedics And Trauma Surgery, St. Barbara-Hospital, Gladbeck/GERMANY, ³Airbus Defence And Space Gmbh, Airbus Group Innovations, Taufkirchen/GERMANY, ⁴Central Animal Laboratory, University Hospital Essen, Essen/GERMANY

P-OBBF-8  IDENTIFICATION OF A NOVEL SECRETED FACTOR (KIAA1199) THAT ENHANCES SKELETAL STEM CELL MOTILITY AND MIGRATION AND IS UP-REGULATED DURING FRACTURE HEALING: ROLE OF WNT SIGNALING
Kaikai Shi, Li Chen, Moustapha Kassem
Kmeb, The Department Of Endocrinology, University of Southern Denmark, Odense/DENMARK

P-OBBF-9  INVESTIGATION OF ROLE OF MECHANOSENSORY PROTEINS POLYCYSTIN 1 AND 2 IN NON-SYNDROMIC CRANIOSYNOSTOSIS
Foteini Skondra¹, Maria A. Katsianou¹, Christina Piperi¹, Marios S. Themistocleous², Georgios Agrogiannis³, Penelope Korkolopoulou⁴, Athanasios G. Papavassiliou¹, Efthimia K. Basdra¹
¹Medical School, Laboratory Of Biological Chemistry, NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS, ATHENS/GREECE, ²Medical School, Department Of Neurosurgery, Aghia Sophia Hospital, NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS, ATHENS/GREECE, ³Medical School, First Department Of Pathology, NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS, Athens/GREECE, ⁴Medical School, First Department Of Pathology, NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS, ATHENS/GREECE
P-OBBF-10 PROTEASE-ACTIVATED RECEPTOR-2 (PAR2) PROMOTES OSTEOBLASTIC DIFFERENTIATION AT THE EXPENSE OF ADIPOGENESIS
Reza Sanaei1, Pamuditha K. Kularathna2, Charles N. Pagel1, Eleanor J. Mackie1
1Veterinary Biosciences, Faculty of Veterinary and Agricultural Sciences, The University of Melbourne, Parkville/VIC/AUSTRALIA, 2Agriculture And Food, Faculty of Veterinary and Agricultural Sciences, The University of Melbourne, Parkville/VIC/AUSTRALIA

P-OBBF-11 EVIDENCE FOR OSTEOGENIC ACTIVITY OF VITAMIN D3 IN HUMAN BONE-DERIVED CELLS
Ye-Soo Park1, Sungsin Jo2, Il-Hoon Sung3, Tae-Hwan Kim4
1Orthopaedic Surgery, Hanyang University Hospital, Guri/REPUBLIC OF KOREA, 2Hanyang University Hospital For Rheumatic Diseases, Institute of Rheumatology, Seoul/REPUBLIC OF KOREA, 3Orthopaedic Surgery, Hanyang University Hospital, Seoul/REPUBLIC OF KOREA, 4Rheumatology, Hanyang University Hospital, Seoul/REPUBLIC OF KOREA

P-OBBF-12 INFLUENCE OF FLOW ON EXTRACELLULAR MATRIX DEPOSITION AND GENE EXPRESSION OF PREOSTEOBLASTIC MC3T3-E1 CELLS IN A FLOW-THROUGH SYSTEM
Norbert Hassler, Martha Blank, Eleftherios P. Paschalis, Silvia Spitzer, Klaus Klaushofer, Franz Varga
Ludwig Boltzmann Institute Of Osteology At The Hanusch Hospital Of Wgkk And Auva Trauma Centre Meidling, 1st Medical Department of Hanusch Hospital, Vienna/AUSTRIA

P-OBBF-13 EFFECTS OF L-MIMOSINE AND HYPOXIA ON THE PRODUCTION OF ANGIOPOIETIN-LIKE 4 IN DENTAL PULP-DERIVED CELLS
Klara Janjic1, Andreas Moritz2, Umar Alhujazy2, Hermann Agis2
1Department Of Conservative Dentistry And Periodontology, Medical University of Vienna, School of Dentistry, Vienna/AUSTRIA, 2Department Of Conservative Dentistry And Periodontology, School of Dentistry, Medical University of Vienna, Vienna/AUSTRIA

P-OBBF-14 UP-REGULATION OF INHIBITORS OF DNA BINDING/DIFFERENTIATION GENE DURING ALENDRONATE-INDUCED OSTEOBLAST DIFFERENTIATION
Heungyeol Kim
Ob And Gyn, Kosin University, Busan/REPUBLIC OF KOREA

P-OBBF-15 ROLE OF SYNEDECAN-3 (SDC3) IN MAINTAINING BONE MASS
Francesca Brito¹, Adolorata Pisconti², George Bou-Gharios¹, Rob Van 'T Hof¹, Anna Daroszewska¹
¹Institute Of Ageing And Chronic Disease, University of Liverpool, Liverpool/UNITED KINGDOM, ²Institute Of Integrative Biology, University of Liverpool, Liverpool/UNITED KINGDOM

P-OBBF-16 EARLY AND MARKED ENHANCEMENT OF NEW BONE QUALITY BY ALENDRONATE-LOADED COLLAGEN SPONGE COMBINED WITH HIGH-DOSE BONE MORPHOGENETIC PROTEIN-2: A LONG TERM STUDY IN RAT CALVARIAL DEFECT MODEL
Soon Jung Hwang
Department Of Oral And Maxillofacial Surgery, School Of Dentistry, Seoul National University, Seoul/REPUBLIC OF KOREA

P-OBBF-17 LOW ADHESIVE SCAFFOLD COLLAGEN RECOVERS THE OSTEOGENIC DIFFERENTIATION OF FROZEN-THAWED RAT MARROW MESENCHYMAL CELLS
Saori Kunii¹, Yukinori Tamura², Yoshitama Horiuchi², Hiroshi Kaji², Koichi Morimoto¹
¹Kinokawa/JP, ²Osaka-Sayama/JP

P-OBBF-18 SKIN-DERIVED IL-17A INDUCES BONE LOSS IN THE ABSENCE OF ADAPTIVE IMMUNITY
Özge Uluckan¹, Jakob Schnabl¹, Maria Jimenez¹, Anke Jeschke², Thorsten Schinke², Erwin F. Wagner¹
¹Cancer Cell Biology Programme, Spanish National Cancer Research Center (CNIO), Madrid/SPAIN, ²Department Of Osteology And Biomechanics, University Medical Center Hamburg- Eppendorf, Hamburg/GERMANY

P-OBBF-19 PERTURBED BONE COMPOSITION AND INTEGRITY WITH DISORGANIZED OSTEOBLAST FUNCTIONS IN ZINC RECEPTOR/GPR39 DEFICIENT MICE
Milena Pesic¹, Gali Guterman Ram¹, Ayelet Orenbuch¹, Sahar Hiram-Bab², Hanifeh Khayyer³, Hanna Isaksson³, Felix Schmidt³, Björn Busse⁴, Noam Levaot¹
¹Physiology And Cell Biology, Ben-Gurion University of the Negev, Beer Sheva/ISRAEL, ²Department Of Anatomy And Anthropology, Tel Aviv University, Tel Aviv/ISRAEL, ³Department Of Biomedical Engineering, Lund University, Lund/SWEDEN, ⁴Institute Of Osteology And Biomechanics, University Medical Center Hamburg-Eppendorf, Hamburg/GERMANY

P-OBBF-20 PROTEASOME INHIBITORS CAN REDUCE TNF-A DEGRADATION OF SMAD PROTEINS AND STIMULATE OSTEOBLASTIC DIFFERENTIATION OF PERIODONTAL LIGAMENT CELLS
Jeong-Tae Koh¹, Il-Shin Kim², Byung-Chul Jeong¹, Hyun-Ju Chung³
1Pharmacology And Dental Therapeutics, Chonnam National University School of Dentistry, Gwangju/REPUBLIC OF KOREA, 2Dental Hygiene, Honam University, Gwangju/REPUBLIC OF KOREA, 3Department Of Periodontology, Chonnam National University, Gwangju/REPUBLIC OF KOREA

P-OBBF-21 EVIDENCE FOR RESISTANCE OF ENDOTHELIAL CELLS TO BLOCKADE OF MATURE OSTEOBLAST-DERIVED VASCULAR ENDOTHELIAL GROWTH FACTOR
Alice Goring1, Juan A. Nunez2, Napoleone Ferrara3, Bjorn R. Olsen4, Eric Hesse5, Richard O.C. Oreffo6, Philipp Schneider7, Claire E. Clarkin1
1Biological Sciences, UNIVERSITY OF SOUTHAMPTON, SOUTHAMPTON/UNITED KINGDOM, 2Centre For Biological Sciences, UNIVERSITY OF SOUTHAMPTON, SOUTHAMPTON/UNITED KINGDOM, 3San Diego Medical Center, University of California, San Diego/UNITED STATES OF AMERICA, 4Department Of Developmental Biology, Harvard School of Dental Medicine, Boston/UNITED STATES OF AMERICA, 5Department Of Trauma, University Medical Center Hamburg-Eppendorf, Hamburg/GERMANY, 6Institute Of Developmental Sciences, University of Southampton, Southampton/UNITED KINGDOM, 7Faculty Of Engineering And The Environment, University of Southampton, Southampton/UNITED KINGDOM

P-OBBF-22 APOA1 REGULATES OSTEOBLASTIC FUNCTION THROUGH VEGF-RELATED PATHWAYS IN MICE
Nicholaos I. Papachristou1, Ioanna Papadimitriou Olivia1, Afroditi D. Kastrenopoulou1, Ioulia Mastora1, Christos Avdulla1, Spyridon A. Syggelos1, Harry C. Blair2, Kyriakos E. Kyriekos3, Dionisios J. Papachristou1
1Department Of Anatomy-histology-embryology, University of Patras, Rion, Patras/GREECE, 2Department Of Pathology, University of Pittsburgh, Pittsburgh/PA/UNITED STATES OF AMERICA, 3Department Of Pharmacology, University of Patras, Rion, Patras/GREECE

P-OBBF-23 CORRELATION BETWEEN OSTEOBLAST/OSTEOCYTE DIFFERENTIATION MARKERS WITH MATRIX METALLOPROTEINASES AND THEIR INHIBITORS GENE EXPRESSION DURING OSTEOGENESIS INDUCTION IN VITRO FROM HUMAN DENTAL PULP STEM CELLS
Leticia M. Gasparoni, Katiucia B. Paiva
Anatomy, Institute of Biomedical Sciences, University of São Paulo, São Paulo/BRAZIL

P-OBBF-24 CAFFEIC ACID PHENETHYL ESTER PROTECTS PERIODONTAL CELLS FROM OXIDATIVE STRESS AND DAMPER INFLAMMATION VIA HEME OXYGENASE-1
Alexandra Stähli, Ceeneena Ubaidha Maheen, Franz J. Strauss, Reinhard Gruber
P-OBBF-25 **TAFA2 IS A NOVEL FACTOR REGULATED DURING FRACTURE HEALING AND RECRUITS SKELETAL (MESENCHYMAL) STEM CELLS TO THE SITE OF FRACTURE**

Abbas Jafari¹, Adiba Isa², Walid Zaher², Nicholas Ditzel², Linda Harkness², Li Chen², Christian Clausen³, Hans E. Johnsen⁴, Basem M. Abdallah², Moustapha Kassem²

¹Department Of Cellular & Molecular Medicine, University of Copenhagen, Copenhagen/DENMARK, ²Molecular Endocrinology & Stem Cell Research Unit (kmeb), Department Of Endocrinology And Metabolism, Odense University Hospital, Odense/DENMARK, ³R&d, Bioneer A/S, Horshoelm/DENMARK, ⁴Department Of Haematology, Aalborg University Hospital, Aalborg/DENMARK

P-OBBF-26 **REGIONAL CHANGES IN CORTICAL BONE POROSITY IN MICE LACKING VASCULAR ENDOTHELIAL GROWTH FACTOR REVEALED BY SYNCHROTRON X-RAY TOMOGRAPHY**

Juan A. Nunez¹, Alice Goring², Napoleone Ferrara³, Bjorn R. Olsen⁴, Philipp J. Thurner⁵, Philipp Schneider⁶, Claire E. Clarkin¹

¹Centre For Biological Sciences, University of Southampton, Southampton/UNITED KINGDOM, ²Biological Sciences, University of Southampton, Southampton/UNITED KINGDOM, ³San Diego Medical Center, University of California, San Diego/UNITED STATES OF AMERICA, ⁴Department Of Developmental Biology, Harvard School of Dental Medicine, Boston/UNITED STATES OF AMERICA, ⁵Institute Of Lightweight Design And Structural Biomechanics, Vienna University of Technology, 1060 Vienna, Austria, Vienna/AUSTRIA, ⁶Faculty Of Engineering And The Environment, University of Southampton, Southampton/UNITED KINGDOM

P-OBBF-27 **A NON-REDUNDANT ROLE FOR MAP-KINASE ERK2 IN THE SECRETION OF MATRICELLULAR PROTEINS**

Amir Jassim, Gudrun Stenbeck

Institute Of Environment, Health And Societies, Brunel University, Uxbridge/UNITED KINGDOM

P-OBBF-28 **GNB5 AUGMENTS BONE REMODELING THROUGH STIM1 AND TRPC3 DEPENDENT STORE-OPERATED CA2+ ENTRY**

Namju Kang, Soonhong Park, Yu-Mi Yang, Dong Min Shin

Dept. Of Oral Biology, Bk21 Plus Project, Yonsei University College of Dentistry, Seoul/REPUBLIC OF KOREA
P-OBBF-29 GPATCH1 AND AKAP11 IDENTIFIED BY GWAS AND TARGETED RESEQUENCING REGULATE OSTEOGENIC MINERALIZATION
Ka Fai Cheng1, Koon Yee Lee1, Ching-Lung Cheung2
1Department Of Pharmacology And Pharmacy, Ka Shing Faculty of Medicine The University of Hong Kong, Hong Kong/HONG KONG PRC, 2Pharmacology And Pharmacy, The University of Hong Kong, Hong Kong/HONG KONG PRC

P-OBBF-30 A NEW SKELETAL EFFECTOR MOLECULE PROMOTES BONE FORMATION IN VIVO AND IN VITRO
Jianming Hou1, Ying Xue2
1Endocrinology, Fujian Provincial Hospital, Fuzhou/CHINA, 2Endocrinology, Fujian Provincial Hospital South Branch, Fuzhou/CHINA

P-OBBF-31 GEMIGLIPTIN ATTENUATES THE REDUCING SUGAR-INDUCED OXIDATIVE DAMAGE IN MC3T3-E1 OSTEOBLASTS AND IMPROVES THE OSTEOBLASTIC DIFFERENTIATION
Sung Kweon Cho1, Kwang Sik Suh2, Sang Youl Rhee2
1Department Of Clinical Research Design & Evaluation, SAIHST, Sungkyunkwan University, Seoul/REPUBLIC OF KOREA, 2Department Of Endocrinology And Metabolism, Kyung Hee University Medical Center, Seoul/REPUBLIC OF KOREA

P-OBBF-32 TISSUE SOURCE DETERMINES THE DIFFERENTIATION POTENTIALS OF MESENCHYMAL STEM CELLS: A COMPARATIVE STUDY OF HUMAN MESENCHYMAL STEM CELLS FROM BONE MARROW AND ADIPOSE TISSUE
Gang Li1, Liangliang Xu1, Yamei Liu2
1Department Of Orthopaedics And Traumatology, The Chinese University of Hong Kong, Shatin/HONG KONG PRC, 2Department Of Diagnostics Of Traditional Chinese Medicine, Guangzhou University of Traditional Chinese Medicine, Guangzhou/CHINA

Cell biology: osteoclasts and bone resorption

P-OCBR-1 ESTROGEN-RELATED RECEPTOR GAMMA NEGATIVELY REGULATES RANKL-INDUCED OSTEOCLAST DIFFERENTIATION BY SUPPRESSING NF-κB SIGNALING PATHWAY
Hyun-Ju Kim, Hye-Jin Yoon, Woo Youl Kang, Sook Jin Seong, Young-Ran Yoon
Department Of Biomedical Science, Cell And Matrix Research Institute, Clinical Trial Center, Kyungpook National University and Hospital, Daegu/REPUBLIC OF KOREA
P-OCBR-2 RNA DEEP SEQUENCING OF CLCN7G213R/WT OSTEOCLASTS IN AUTOSOMAL DOMINANT OSTEOPETROSIS TYPE2 (ADO2)
Antonio Maurizi, Rajvi Patel, Nadia Rucci, Anna Tetì, Mattia Capulli
Department Of Biotechnological And Applied Clinical Sciences, University of L’Aquila, L’Aquila/ITALY

P-OCBR-3 EFFECTS OF LUTEOLIN ON MMP AND CYTOKINE EXPRESSION AND OSTEOCLASTOGENESIS IN RAW264.7 CELLS UNDER INFLAMMATORY CONDITIONS
Hyo-In Hwang¹, Mee-Eun Kim², Seon-Yle Ko³
¹Department Of Nanobiomedical Science, Dankook University, Cheonan/REPUBLIC OF KOREA, ²Department Of Oral Medicine, Dankook University, Cheonan/REPUBLIC OF KOREA, ³Department Of Oral Biochemistry, Dankook University, Cheonan/REPUBLIC OF KOREA

P-OCBR-4 NEW APPROACH FOR CELL SORTING AND FACS ANALYSIS ON OSTEOCLASTS
Maria-Bernadette Madel, Lidia Ibáñez, Abdelilah Wakkach, Claudine Blin-Wakkach
Lp2m - Laboratoire De Physiomédecine Moléculaire, CNRS UMR 7370, Nice/FRANCE

P-OCBR-5 ROLE OF LYSYL-TRNA SYNTHETASE FOR OSTEOCLAST DIFFERENTIATION
Yong Deok Lee, Haemin Kim, Min Kyung Kim, Hong-Hee Kim
Cell And Developmental Biology, Seoul National University School of Dentistry, Seoul/REPUBLIC OF KOREA

P-OCBR-6 INTERFERING OSTEOCLAST DIFFERENTIATION PATHWAYS USING MONONUCLEAR PROGENITORS FROM PATIENTS WITH NEUROFIBROMATOSIS 1
Paula Pennanen¹, Elnaz Fazeli², Roope Kallionpää¹, Eetu Heervä¹, Sirkku Peltonen³, Juha Peltonen¹
¹Institution Of Biomedicine, University of Turku, Turku/FINLAND, ²Laboratory Of Biophysics, University of Turku, Turku/FINLAND, ³Department Of Dermatology, University of Turku and Turku University Hospital, Turku/FINLAND

P-OCBR-7 THE IRON-SENSING RECEPTOR TFR2 REGULATES OSTEOCLASTOGENESIS
Ulrike Baschant¹, Enrique A. Sastre², Antonella Roetto³, Uwe Platzbecker⁴, Lorenz C. Hofbauer⁵, Martina Rauner²
¹Center For Healthy Aging, University Clinic Dresden, Dresden/GERMANY, ²Department Of Medicine Iii, Medical Faculty, TU Dresden,
P-OCBR-8  BLOCKING OF OCL ACTIVITY REVERSES SYSTEMIC INFLAMMATION AND REDUCES MYELOID SKEWING IN INFLAMMATORY BOWEL DISEASE
Agathe Boucoiran1, Lidia Ibáñez1, Majlinda Topi1, Matthieu Rouleau1, Abdelilah Wakkach1, Claudine Blin-Wakkach2
1Lp2m - Laboratoire De Physiomédecine Moléculaire, CNRS UMR 7370, Nice/FRANCE, 2Lp2m-laboratory Of Molecular Physiomedicine, CNRS UMR7370, Nice/FRANCE

P-OCBR-9  MECHANICAL STIMULATION OF ADHERENT BONE MARROW CELLS LEADS TO A P2RX7-RECEPTOR DRIVEN OSTEOCLAST DIFFERENTIATION IN AN IN-VITRO MODEL FOR MECHANICAL INDUCED BONE IMPLANT LOOSENING
Cornelia Bratengeier1, Teresa H. Jungwirth1, Astrid D. Bakker2, Anna Fahlgren1
1Department Of Clinical And Experimental Medicine, Linköping University, Linköping/SWEDEN, 2Oral Cell Biology, Academic Centre for Dentistry Amsterdam, Amsterdam/NETHERLANDS

P-OCBR-10  DELETION OF P62 HAS A PROTECTIVE EFFECT ON AGE-RELATED BONE LOSS IN MICE
Jacqueline Lim1, Floriana Cremasco2, Massimo Resnati2, Ugo Orfanelli3, Gemma Charlesworth1, Rob Van T Hof4, Simone Cenci2, Anna Daroszewska1
1Institute Of Ageing and Chronic Disease, University of Liverpool, Liverpool/UNITED KINGDOM, 2Age Related Diseases, San Raffaele Scientific Institute, Milano/ITALY, 3Age Related Diseases, SanRaffaele Scientific Institute, Milano/ITALY

P-OCBR-11  DUAL-SPECIFICITY TYROSINE PHOSPHORYLATION-REGULATED KINASE 2 REGULATES OSTEOCLAST FUSION IN A CELL HETEROTYPIC MANNER
Gali Guterman Ram, Milena Pasic, Ayelet Orenbuch, Tal Czeiger, Anastasia Aflalo, Noam Levao
department of Physiology and Cell Biology, Ben-Gurion University of the Negev, Beer-Sheva/ISRAEL
P-OCBR-12 MICE WITH A LOSS OF FUNCTION MUTATION IN SCHLAFEN-2 HAVE SCLEROTIC BONES AS A RESULT OF DECREASED OSTEOCLAST PROGENITOR NUMBERS
Gali Guterman Ram1, Ibrahim Omar2, Michael Berger2, Noam Levaot1
1Department Of Physiology And Cell Biology, Ben-Gurion University of the Negev, Beer-Sheva/ISRAEL, 2The Lautenberg Center For Immunology And Cancer Research, The Biomedical Research Institute Israel-canada Of The Faculty Of Medicine, Hebrew University of Jerusalem, Jerusalem/ISRAEL

P-OCBR-13 PALMITOLEIC ACID INHIBITS RANKL-INDUCED OSTEOCLASTOGENESIS AND BONE RESORPTION BY SUPPRESSING NF-κB AND MAPK SIGNALLING PATHWAYS
Bernadette Van Heerden, Magdalena Coetzee, Abe E. Kasonga
Physiology, University of Pretoria, Pretoria/SOUTH AFRICA

P-OCBR-14 ROLE OF DIPEPTIDYL PEPTIDASE 3 IN BONE AND IMMUNE SYSTEM: A NEW OSTEOIMMUNOLOGICAL PLAYER
Ciro Menale1, Eleonora Palagano2, Harry C. Blair3, Antonella Forlino4, Rosita Rigoni5, Stefano Mantero1, Marta N. Monari6, Paolo M. Vezzoni1, Barbara Cassani5, Anna Villa1, Cristina Sobacchi1
1Human Genome Laboratory, Institute of Genetics and Biomedical research Milan Unit, Milan/ITALY, 2Department Of Medical Biotechnologies And Translational Medicine, University of Milan, Milan/ITALY, 3Veteran’s Affairs Medical Center And Department Of Pathology, University of Pittsburgh, Pittsburgh/PA/UNITED STATES OF AMERICA, 4Department Of Molecular Medicine, Biochemistry Unit, University of Pavia, Pavia/ITALY, 5Human Genome Laboratory, Humanitas Clinical Institute, Rozzano/ITALY, 6Clinical Investigation Laboratory, Humanitas Clinical Institute, Rozzano/ITALY

P-OCBR-15 EFFECT OF NATURAL URANIUM ON OSTEOCLAST
Tatiana Gritsaenko1, Valérie Pierrefite-Carle1, Thomas Lorivel2, Véronique Breuil1, Georges F. Carle3, Sabine Santucci-Darmanin1
1Tiro-matos Umr E4320, Université Nice Sophia-Antipolis, CEA, Nice Cedex/FRANCE, 2Institut De Pharmacologie Moléculaire Et Cellulaire, CNRS, Université Nice Sophia-Antipolis, Valbonne/FRANCE, 3Tiro-matos Umr E4320, Université Nice Sophia-Antipolis, CEA, Nice Cedex / FRANCE

P-OCBR-16 This abstract has been withdrawn

P-OCBR-17 SALIVA AND THE INHIBITORY EFFECT ON THE OSTEOCLASTOGENESIS
Heinz-Dieter Müller¹, Jordi Caballé-Serrano², Adrian Lussi³, Reinhard Gruber¹
¹Department Of Oral Biology, Medical University of Vienna, Vienna/AUSTRIA, ²Department Of Oral And Maxillofacial Surgery, School Of Dental Medicine, Universitat Internacional de Catalunya, Barcelona/SPAIN, ³Department Of Preventive, Restorative And Pediatric Dentistry, School Of Dental Medicine, University of Bern, Bern/SWITZERLAND

P-OCBR-18 VISUALISING OSTEOCLAST RUFFLED BORDER FORMATION USING TRANSMISSION ELECTRON TOMOGRAPHY
Emma Mcdermott¹, Debbie Wilkinson², Kevin Mackenzie³, Miep Helfrich¹
¹Institute Of Medical Sciences, University of Aberdeen, Aberdeen/UNITED KINGDOM, ²Microscopy And Histology Facility, University of Aberdeen, Aberdeen/UNITED KINGDOM, ³University Of Aberdeen, Microscopy and Histology Facility, Aberdeen/UNITED KINGDOM

P-OCBR-19 TRPC6 MODULATE RANKL-INDUCED NFATC1 SIGNALLING AND TLR-MEDIATED NF-KB SIGNALLING IN OSTEOCLAST DIFFERENTIATION
Yu-Mi Yang, Dong Min Shin
Dept. Of Oral Biology, Yonsei University College of Dentistry, Seoul/REPUBLIC OF KOREA

Osteocytes, mechanobiology, and bone matrix

P-OCYM-1 EFFECTS OF UP TO 10 YEARS OF DENOSUMAB TREATMENT ON BONE MATRIX MINERALIZATION: RESULTS FROM THE FREEDOM EXTENSION
David Dempster¹, Jacques Brown², Susan Yue³, Sebastien Rizzo⁴, Delphine Farlay⁴, Rachel B. Wagman⁵, Andrea Wang⁵, Xiang Yin⁵, Georges Boivin⁴
¹Department Of Pathology And Cell Biology, Columbia University, New York/UNITED STATES OF AMERICA, ²Laval University And Chu De Quebec-(chul) Research Centre, Laval University and CHU de Quebec-(CHUL) Research Centre, Quebec City/QC/CANADA, ³Amgen Inc, Amgen Inc, Thousand Oaks/UNITED STATES OF AMERICA, ⁴Inserm, Umr 1033, Univ Lyon, Université Claude Bernard Lyon 1, INSERM, UMR 1033, Univ Lyon, Université Claude Bernard Lyon 1, Lyon/FRANCE, ⁵Amgen Inc., Amgen Inc., Thousand Oaks/UNITED STATES OF AMERICA

P-OCYM-2 COMMUNICATION BETWEEN MLO-Y4 OSTEOCYTES AND C2C12 MYOBLASTS IN A CO-CULTURE SYSTEM
Dorit Naot, David S. Musson, Damien Carey, Maureen Watson, Jillian Cornish
Medicine, University of Auckland, Auckland/NEW ZEALAND
P-OCYM-3 MICROPETROSIS OF OSTEOCYTE LACUNAE ORIGINATES FROM ACCUMULATION OF CALCIFIED NANO-SPHERITES AND VARIES BETWEEN HEALTHY, OSTEOPOROTIC AND BISPHOSPHONATE-TREATED BONE
Petar Milovanovic¹, Elizabeth A. Zimmermann¹, Annika Vom Scheidt¹, Michaela Schweizer², Danijela Djonic³, Marija Djuric³, Michael Amling¹, Björn Busse¹
¹Department Of Osteology And Biomechanics, University Medical Center Hamburg-Eppendorf, Hamburg/GERMANY, ²Center For Molecular Neurobiology Hamburg, University Medical Center Hamburg-Eppendorf, Hamburg/GERMANY, ³Laboratory For Anthropology, Institute Of Anatomy, Faculty of Medicine - University of Belgrade, Belgrade/SERBIA

P-OCYM-4 IDG-SW3 OSTEOCYTES EXTEND PROCESSES IN MICRO-3D PRINTED LACUNOCANALICULAR NETWORK-LIKE STRUCTURES – A NOVEL IN VITRO 3D BIOMIMETIC OSTEOCYTE MODEL
Felicitas R. Flohr, Ralph Müller
Institute For Biomechanics, ETH Zürich, Zürich/SWITZERLAND

P-OCYM-5 DEMINERALIZED BONE MATRIX: THE IN VITRO BIOLOGICAL ACTIVITY OF THE ACID BONE LYSATE
Franz J. Strauss¹, Lirim Ramadani¹, Alexandra Stähli², Reinhard Gruber¹
¹Department Of Oral Biology, Medical University of Vienna, Vienna/AUSTRIA, ²Oral Biology, Medical University of Vienna, Vienna/AUSTRIA

P-OCYM-6 NEW EXTRACTION APPROACH OF NON-COLLAGENOUS PROTEINS FROM BONE TISSUE BY MILD-DEGRADATION OF ENZYME
Saori Kunii, Kohei Nagai, Koichi Morimoto
Biology-oriented Science And Technology, Kindai University, Kinokawa/JAPAN

P-OCYM-7 DECREASED ESTROGEN LEVELS CAUSES STRUCTURAL CHANGES IN BONE MATRIX
Sabine Stoetzel¹, Diaa Eldin S. Daghma¹, Deeksha Malhan¹, Stefanie Kern¹, Fathi Hassan¹, Katrin S. Lips², Thaqif El Khassawna¹, Christian Heiss³
¹Institute For Experimental Trauma Surgery, Justus Liebig University of Giessen, Gießen/GERMANY, ²Justus Liebig University Of Giessen, Institute for experimental Trauma Surgery, Giessen/GERMANY, ³University Hospital Of Giessen-marburg, Department Of Trauma, Hand And Reconstructive Surgery, University Hospital of Giessen-Marburg, Giessen/GERMANY
Bone biomechanics and quality

P-BMEC-1 VASCULAR ENDOTHELIAL GROWTH FACTOR (VEGF) AND LIPOCALIN 2 (LCN2) ORCHESTRATE THE PRO-ANGIOGENIC EFFECTS OF UNLOADED OSTEOBLASTS
Vimal Veeriah¹, Mattia Capulli¹, Suvro Chatterjee², Nadia Rucci¹, Anna Teti³
¹Department Of Biotechnological And Applied Clinical Sciences, University of L'Aquila, L'Aquila/ITALY, ²Department Of Biotechnology, Anna University, Chennai/INDIA, ³Department Of Biotechnological And Applied Clinical Sciences, University of L'Aquila, L'Aquila/ITALY

P-BMEC-2 EXTREME DISCREPANCY BETWEEN BONE DENSITY AND BONE MATERIAL STRENGTH INDEX IN THREE SIBLINGS WITH CAMURATI-ENGELMANN DISEASE
Sabina Herrera¹, Xavier Nogues², Robert Güerri², Daniel Grinberg³, Susana Balcells³, Nuria Martinez-Gil³, Natalia Garcia-Giralt², Adolfo Diez-Perez²
¹Internal Medicine, Institut Hospital del Mar d'Investigacions Mèdiques, Universitat Autònoma de Barcelona, Barcelona/SPAIN, ²Internal Medicine, Institut Hospital del Mar d'Investigacions Mèdiques, CIBERFES ISCIII, Universidad Autònoma de Barcelona, Barcelona/SPAIN, ³Genetics, Departament de Genètica, Universitat de Barcelona, CIBERER ISCIII, Barcelona/SPAIN

P-BMEC-3 RELATIONSHIP BETWEEN OCCLUSAL STRESS AND OSTEONAL MORPHOLOGY IN THE MID-FACIAL SKELETON: FINITE ELEMENT AND HISTOMORPHOMETRIC STUDY
Aleksa Janovic¹, Petar Milovanovic², Igor Saveljic³, Arso Vukicevic⁴, Dalibor Nikolic⁵, Michael Hahn⁶, Zoran Rakocevic⁶, Gordana Jovicic⁴, Nenad Filipovic³, Michael Amling⁵, Björn Busse⁵, Marija Djuric²
¹Department Of Radiology, School of Dental Medicine, Belgrade/SERBIA, ²Institute Of Anatomy, Laboratory For Anthropology, Faculty of Medicine, University of Belgrade, Belgrade/SERBIA, ³Bioengineering Research And Development Center (bioirc), Faculty of Engineering, University of Kragujevac, Kragujevac/SERBIA, ⁴Faculty Of Engineering, University of Kragujevac, Kragujevac/SERBIA, ⁵Department Of Osteology & Biomechanics, University Medical Center Hamburg-Eppendorf, Hamburg/GERMANY, ⁶Department Of Radiology, School of Dental Medicine, University of Belgrade, Belgrade/SERBIA

P-BMEC-4 TBS ASSOCIATION WITH BIOMECHANICAL PROPERTIES OF HUMAN VERTEBRAE, EX-VIVO
Christophe Lelong¹, Doris Tran¹, Franck Michelet¹, Renaud Winzenrieth¹,
P-BMEC-5  ASSESSMENT OF HETEROGENEITY IN BONE QUALITY RELATED VIBRATIONAL SPECTROSCOPIC PARAMETERS
Sonja Gamsjaeger¹, Peter Fratzl², Klaus Klaushofer¹, David Burr³, Eleftherios P. Paschalis¹
¹1st Medical Department, Hanusch Hospital, Ludwig Boltzmann Institute of Osteology at the Hanusch Hospital of the Vienna Health Insurance Fund (WGKK) and Trauma Center Meiding of the Austrian Workers´ Compensation Board (AUVA), Vienna/AUSTRIA, ²Max Planck Institute Of Colloids And Interfaces, Max Planck Institut, Potsdam/GERMANY, ³Department Of Anatomy And Cell Biology, Indiana University School of Medicine, Indianapolis/IN/UNITED STATES OF AMERICA

P-BMEC-6  EFFECTS OF HIGH-FAT DIET ON BONE QUALITY OF OVARIECTOMIZED RATS
Gabriela R. Yanagihara¹, Roberta Carminati Shimano², Ana Paula Macedo³, João Manuel R.D.S. Tavares⁴, Antônio C. Shimano¹
¹Biomechanics, Medicine And Rehabilitation Of Locomotor System, Ribeirão Preto Medical School/University of São Paulo, Ribeirão Preto/BRAZIL, ²Biomechanics, Medicine And Rehabilitation Of Locomotor System, University of São Paulo, Ribeirão Preto/BRAZIL, ³Dental Materials And Prothesis, University of São Paulo, Ribeirão Preto/BRAZIL, ⁴Mechanical Engineering, Institute of Science and Innovation in Mechanical Engineering and Industrial Engineering, Porto/PORTUGAL

P-BMEC-7  DOES SPINAL CORD INJURY INDUCE BONE LOSS IN RATS?
Mariana M. Butezloff, Kelly Astolpho, Ariane Zamarioli, Jose B. Volpon
Biomechanics, Medicine And Rehabilitation Of Locomotor System, Ribeirao Preto Medical school/ University of Sao Paulo, Ribeirao Preto/BRAZIL

P-BMEC-8  CORTICAL BONE REORGANIZATION IN FEMURS ASSOCIATED WITH TYPE 2 DIABETES MELLITUS
Eva M. Wölfel¹, Petar Milovanovic¹, Katharina Jähn¹, Birgit Wulff², Michael Amling¹, Klaus Püschel², Graeme M. Campbell², Björn Busse¹
¹Department Of Osteology And Biomechanics, University Medical Center Hamburg-Eppendorf, Hamburg/GERMANY, ²Department Of Legal Medicine, University Medical Center Hamburg-Eppendorf,
P-BMEC-9 **DAILY DAIRY SERVES AND THERAPY WITH THIAZIDES ARE ASSOCIATED WITH BONE MICROARCHITECTURE IN THE GERIATRIC POPULATION**
Henriette Ejlsmark-Svensson¹, Sandra Iuliano-Burns², Ego Seeman², Lars Rejnmark³
¹Endocrinology And Internal Medicine, Aarhus University Hospital, Aarhus/DENMARK, ²Endocrinology, Heidelberg Repatriation Hospital, Heidelberg West/VIC/AUSTRALIA, ³Endocrinology And Internal Medicine, Aarhus University Hospital, Aarhus C/DENMARK

P-BMEC-10 **A BMD-BASED CALIBRATION APPROACH FOR THE PREDICTION OF LOCAL CORTICAL BONE POROSITY.**
Gianluca Iori¹, Frans Heyer²,³, Vantte Kilappa⁴, Caroline Wyers²,³, Peter Varga⁵, Johannes Schneider¹, Joop van den Bergh²,³, Kay Raum¹
¹Berlin-Brandenburg Center for Regenerative Therapies, Charité – Universitätsmedizin Berlin/GERMANY, ²NUTRIM, Department of Internal Medicine, Subdivision of Rheumatology, Maastricht University Medical Center, Maastricht/THE NETHERLANDS, ³Department of Internal Medicine, VieCuri Medical Center, Venlo/THE NETHERLANDS, ⁴Mango Solutions, Jyväskylä/FINLAND, ⁵AO Research Institute Davos, Davos/SWITZERLAND

P-BMEC-11 **BONE GEOMETRY, VOLUMETRIC DENSITY, MICROARCHITECTURE ASSESSED BY HR-PQCT AND FGF23 TESTING IN TUMOR INDUCED OSTEOMALACIA PATIENTS**
Juan Feng¹, Yan Jiang¹, Ou Wang¹, Mei Li², Xiaoping Xing¹, Weibo Xia²
¹Department Of Endocrinology, Key Laboratory Of Endocrinology, ministry Of Health, Peking Union Medical College Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing/CHINA, ²Department Of Endocrinology, Key Laboratory Of Endocrinology, Ministry Of Health, Peking Union Medical College Hospital, Peking Union Medical College, Chinese Academy of Medical Sciences, Beijing/CHINA

Preclinical and ex-vivo imaging

P-IMAG-1 **SKELETAL HETEROGENEITY IN C57BL/6J MICE**
Ursula Föger-Samwald, Martina Salzmann, Conny Pleyer, Katharina Wahl-Figlash, Peter Pietschmann
Department Of Pathophysiology And Allergy Research, Medical University of Vienna, Vienna/AUSTRIA
P-IMAG-2  SIMULTANEOUS VISUALISATION OF CALCIFIED BONE ULTRASTRUCTURE AND INTRACORTICAL VASCULATURE USING SYNCHROTRON X-RAY PHASE-CONTRAST TOMOGRAPHY
Juan A. Nunez², Alice Goring¹, Philipp J. Thurner², Philipp Schneider³, Claire E. Clarkin¹
¹Centre For Biological Sciences, University of Southampton, Southampton/UNITED KINGDOM, ²Instintute Of Lightweight Design And Structural Biomechanics, Vienna University of Technology, 1060 Vienna, Austria, Vienna/AUSTRIA, ³Faculty Of Engineering And The Environment, University of Southampton, Southampton/UNITED KINGDOM

P-IMAG-3  TRIPHASIC RESORBABLE CALCIUM IMPLANT ENHANCES BONE FORMATION IN HUMORAL CRITICAL Sized DEFECTS IN CANINES INDEPENDENT OF BISPHOSPHONATE TREATMENT
Ronald Hill¹, Deborah Hall², Jonathan Shaul¹, Thomas Turner², Robert Urban²
¹Research & Development, AgNovos Healthcare, Rockville/MD/UNITED STATES OF AMERICA, ²Orthopedics, Rush University Medical Center, Chicago/IL/UNITED STATES OF AMERICA

Biochemical testing

P-BCHT-1  ANALYTICAL VALIDATION OF A HIGHLY SENSITIVE FLUORESCENCE IMMUNOASSAY FOR THE BONE REGULATORY MOLECULE NOGGIN BASED ON PLASMONIC MICROTITER PLATES
Gerhard Hawa¹, Albert Missbichler¹, Martina Laaber-Schwarz¹, Adrian Prinz², Georg Bauer³, Christoph Mauracher⁴
¹R&d, FIANOSTICS GmbH, Wiener Neustadt/AUSTRIA, ²R&d, STRATEC Consumables GmbH, Anif/AUSTRIA, ³Ceo, STRATEC Consumables GmbH, Anif/AUSTRIA, ⁴Ce O, STRATEC Consumables GmbH, Anif/AUSTRIA

P-BCHT-2  EVALUATING SIRT1 CLEAVED VARIANTS AS POTENTIAL BIOMARKERS FOR OSTEOARTHRITIS PREDISPOSITION
Mona Dvir-Ginzberg
Faculty Of Dental Medicine, HEBREW UNIVERSITY OF JERUSALEM, JERUSALEM/ISRAEL

P-BCHT-3  REGIONAL DIFFERENCES IN MICROSTRUCTURAL AND MECHANICAL PROPERTIES OF THE DISTAL FEMUR
Kwangkyoun Kim
Orthopedic Surgery, Konyang University Hospital, Daejeon/REPUBLIC OF KOREA
P-BCHT-4  EFFECT OF AGE AND GENDER ON SERUM PERIOSTIN: RELATIONSHIP TO CORTICAL MEASURES, BONE TURNOVER AND HORMONES
Jennifer S. Walsh, Fatma Gossiel, Jessica Scott, Margaret A. Paggiosi, Richard Eastell
Mellanby Centre For Bone Research, University of Sheffield, Sheffield/UNITED KINGDOM

P-BCHT-5  COMPARISON OF BONE TURNOVER MARKERS IN PERIPHERAL BLOOD AND BONE MARROW ASPIRATE
Marie Juul Ornstrup, Thomas Nordstrøm Kjaer, Torben Harsløf, Steen Bønløkke Pedersen, Bente L. Langdahl
Department Of Endocrinology And Internal Medicine, Aarhus University Hospital, Aarhus/DENMARK

P-BCHT-6  L-CARNITINE PROMOTES INTRACELLULAR CALCIUM RISES AND EXERTS ANTIOXIDANT EFFECT IN PRIMARY CULTURE OF HUMAN OSTEOBLAST-LIKE CELLS
Michela Bottani¹, Anita Ferraretto¹, Michela Signo², Pamela Senesi³, Anna Montesano⁴, Fernanda Vacante¹, Ileana Terruzzi², Livio Luzi², Sandro Rubinacci², Isabella Villa²
¹Department Of Biomedical Sciences For Health, University of Milan, Milan/ITALY, ²Bone Metabolism Unit, San Raffaele Scientific Institute, Milan/ITALY, ³Metabolism Research Center, IRCCS Policlinico San Donato, Milan/ITALY, ⁴department Of Biomedical Sciences For Health, University of Milan, Milan/ITALY, ⁵Diabetes Research Institute, Metabolism, Nutrigenomics And Cellular Differentiation Unit, San Raffaele Scientific Institute, Milan/ITALY

P-BCHT-7  CHARACTERIZATION OF ANTI-HUMAN PERIOSTIN ANTIBODIES FROM A SANDWICH ELISA FOR THE QUANTIFICATION OF ALL HUMAN PERIOSTIN ISOFORMS
Manfred Tesarz, Elisabeth Gadermaier, Gabriela Berg, Gottfried Himmler
R&d Department, The Antibody Lab GmbH, Vienna/AUSTRIA

P-BCHT-8  NOVEL ELISA FOR THE MEASUREMENT OF HUMAN SEMAPHORIN 4D
Anna Laber, Gabriela Berg, Gottfried Himmler
R&d Department, The Antibody Lab GmbH, Vienna/AUSTRIA

P-BCHT-9  DETECTION OF THE FREE ACTIVE SITE OF SCLEROSTIN USING A NEW AND WELL-CHARACTERIZED ELISA
Jacqueline Wallwitz¹, Gabriela Berg², Venugopal Bhaskara³, Emilio Casanova³, Gottfried Himmler²
¹R&d, The Antibody Lab GmbH, Vienna/AUSTRIA, ²R&d Department, The Antibody Lab GmbH, Vienna/AUSTRIA, ³Department Of Physiology &
Pharmacology, Medical University of Vienna, Vienna/AUSTRIA

P-BCHT-10 BIOMARKERS FOR BISPHOSPHONATE-RELATED OSTEONECROSIS OF THE JAW
Jin-Woo Kim, Hye-Yeon Kim, Sun-Jong Kim
Oral And Maxillofacial Surgery, Ewha Womans University, Seoul/REPUBLIC OF KOREA

Osteoporosis: evaluation and imaging

P-OPEV-1 TYPE I DIABETES MELLITUS AND EARLY OSTEOPOROSIS
Sahar Mohsin, Kiran Menon, Suneesh Kaimala, Eric M. Brown
Anatomy, College of Medicine and Health Sciences, United Arab Emirates University, Al Ain/UNITED ARAB EMIRATES

P-OPEV-2 VALIDATION OF CALCANEUS TRABECULAR MICROSTRUCTURE MEASUREMENTS BY HR-PQCT
Louis M. Metcalf1, Enrico Dall’Ara2, Margaret A. Paggiosi3, John R. Rochester4, Nicolas Vilayphiou5, Eugene V. Mccloskey1
1Mrc-arthritis Research Uk Centre For Integrated Research Into Musculoskeletal Ageing, University of Sheffield, Sheffield/UNITED KINGDOM, 2Department Of Oncology And Metabolism And Insigneo Institute For In Silico Medicine, University of Sheffield, Sheffield/UNITED KINGDOM, 3Academic Unit Of Bone Metabolism, University of Sheffield, Sheffield/UNITED KINGDOM, 4Academic Unit Of Medical Education, University of Sheffield, Sheffield/UNITED KINGDOM, 5[no Department], SCANCO Medical AG, Brüttisellen/SWITZERLAND

P-OPEV-3 DOES DXA-IMAGE BASED HIP GEOMETRY IMPROVE HIP FRACTURE PREDICTION BY BONE MINERAL DENSITY? THE JAPANESE POPULATION-BASED OSTEOPOROSIS (JPOS) COHORT STUDY
Masayuki Iki1, Namira Dongmei2, Junko Tamaki3, Yuho Sato4, Takahiro Tachiki1, Katsuyasu Kouda1, Etsuko Kajita5, Sadanobu Kagamimori6
1Department Of Public Health, Kindai University Faculty of Medicine, Osaka-Sayama/JAPAN, 2Department Of Orthopaedics Medicine, The 2nd Affiliated Hospital, Inner Mongolia Medical University, Hohhot/CHINA, 3Department Of Hygiene And Public Health, Osaka Medical College, Takatsuki/JAPAN, 4Department Of Human Life, Jin-ai University, Echizen/JAPAN, 5Department Of Nursing, Nagoya University Graduate School of Medicine, Nagoya/JAPAN, 6University, Toyama, Toyama/JAPAN

P-OPEV-4 EVALUATION OF MMP-9 ON OSTEOPOROSIS USING
ATHEROSCLEROSIS MICE AS ANIMAL EXPERIMENTAL MODEL
João Paulo M. Issa, Aline De Azevedo, Junia Ramos, Lucas De Oliveira Monteiro, Thales Rosolen, Ana Carolina Rivas
Morphology, Physiology And Basic Pathology, University of São Paulo, Ribeirão Preto/BRAZIL

P-OPEV-5 RADIOGRAPHIC AND MORPHOLOGICAL STUDY OF DOXYCYCLINE IN DIFFERENT MODELS FOR OSTEOPENIA
João Paulo M. Issa, Ana Morais Andrade, Roberta Carminati Shimano, Junia Ramos, Fellipe Augusto Tocchini De Figueiredo
Morphology, Physiology And Basic Pathology, University of São Paulo, Ribeirão Preto/BRAZIL

P-OPEV-6 DO SEROLOGICAL BIOMARKERS REFLECT MATRIX MINERALIZATION IN PHYSIOLOGICAL AND OSTEOPOROTIC BONE?
Stefanie Kern¹, Marcus Rohnke², Anja Henß³, Christian Heiss³, Thaqif El Khassawna¹
¹Institute For Experimental Trauma Surgery, Justus-Liebig University of Giessen, Giessen/GERMANY, ²Institute For Physical Chemistry, Justus-Liebig University of Giessen, Giessen/GERMANY, ³University Hospital Of Giessen-marburg, Department Of Trauma, Hand And Reconstructive Surgery, University Hospital of Giessen-Marburg, Giessen/GERMANY

P-OPEV-7 RELATIONSHIP BETWEEN SERUM 25-HYDROXYVITAMIN D AND BONE MINERAL DENSITY IN POST-MENOPAUSAL PATIENTS: WHO NEEDS A DEXA SCAN?
Silvia P. Gonzalez Rodriguez
Menopause And Osteoporosis. Gynecology, HM Gabinete Velázquez, MADRID/SPAIN

P-OPEV-8 LATE PHASE STEROID-INDUCED OSTEOPOROSIS – SLOWER BONE LOSS THROUGH OSTEOCYTES
Thaqif El Khassawna, Deeksha Malhan, Diaa Eldin S. Daghma, Sabine Stoetzel, Stefanie Kern, Fathi Hassan, Christian Heiss
Institute For Experimental Trauma Surgery, Justus Liebig University of Giessen, Gießen/GERMANY

P-OPEV-9 TRABECULAR BONE SCORE IN PATIENTS AGED 50 YEARS AND OLDER WITH A RECENT CLINICAL FRACTURE AT THE FRACTURE LIAISON SERVICE
Lisanne Vranken¹, Caroline Wyers², Robert Van Der Velde², Heinrich Janzing³, Wim Morrenhof¹, Piet Geusens⁵, Joop Van Den Bergh²
¹Internal Medicine, Maastricht University Medical Centre+, Maastricht/NETHERLANDS, ²Internal Medicine, VieCuri Medical Centre,
P-OPEV-10  THE IMPACT OF CONTRAST AGENT TO BONE MINERAL DENSITY IN THE CONTEXT OF INCIDENTAL SCREENING USING EXISTING CT SCANS
Wolfram Timm¹, Claus C. Glüer², J Keenan Brown¹, Reimer Andresen³
¹Bone Densitometry, Mindways Software, Inc., Austin/TX/UNITED STATES OF AMERICA, ²Sektion Biomedizinische Bildgebung, Klinik für Radiologie und Neuroradiologie, Universitätsklinikum Schleswig-Holstein, Campus Kiel, Kiel/GERMANY, ³Westkuestenklinikum Heide, Academic Teaching Hospital Of The Universities Of Kiel, Luebeck, Hamburg, And Heide, Institute of Diagnostic and Interventional Radiology/Neuroradiology, Heide/GERMANY

P-OPEV-11  TRABECULAR BONE SCORE AND PLASMA MICRO RNAs AS MARKERS OF POOR BONE QUALITY
Tilen Kranjc¹, Barbara Ostanek², Tomaz Kocjan³, Janez Preželj⁴, Janja Marc²
¹Department Of Clinical Biochemistry, Faculty Of Pharmacy, University of Ljubljana, Ljubljana/SLOVENIA, ²Department Of Clinical Biochemistry, Faculty of Pharmacy, University of Ljbljana, Ljubljana/SLOVENIA, ³Clinical Department Of Endocrinology, Diabetes And Metabolic Disorders, University Medical Centre, Ljubljana/SLOVENIA, ⁴Department Of Endocrinology, Diabetes And Metabolic Diseases, University Medical Centre, Ljubljana/SLOVENIA

P-OPEV-12  QCT, HR-QCT, AND CTXA BASED DXA FOR VERTEBRAL FRACTURE DISCRIMINATION
Lukas M. Huber¹, Timo Damm¹, Wolfram Timm², Claus C. Glüer¹, Reimer Andresen³
¹Section Biomedical Imaging, Department Of Radiology And Neuroradiology, University Medical Center Schleswig-Holstein (UKSH), Christian-Albrechts-Universität zu Kiel, Kiel/GERMANY, ²Bone Densitometry, Mindways Software, Inc., Austin/TX/UNITED STATES OF AMERICA, ³Institute Of Diagnostic And Interventional Radiology/neuroradiology, Westkuestenklinikum Heide, Academic Teaching Hospital of the Universities of Kiel, Luebeck and Hamburg, Heide/GERMANY

P-OPEV-13  BMD TESTING INTERVAL IN KOREAN POSTMENOPAUSAL OSTEOPENIC WOMEN
P-OPEV-14 ANALYSIS OF THE EVOLUTION OF CORTICAL AND TRABECULAR BONE COMPARTMENTS IN THE PROXIMAL FEMUR AFTER SPINAL CORD INJURY BY 3D-DXA.
Laia Gifre¹, Ludovic Humbert², Africa Muxi³, Luis Del Rio⁴, Joan Vidal⁵, Enric Portell⁶, Ana Monegal¹, Nuria Guañabens¹, Pilar Peris¹
¹Rheumatology, Hospital Clinic of Barcelona, Barcelona/SPAIN, ²Musculoskeletal Unit, Galgo Medical, Barcelona/SPAIN, ³Nuclear Medicine, Hospital Clinic of Barcelona, Barcelona/SPAIN, ⁴Nuclear Medicine, CETIR Grupo Médico, Barcelona/SPAIN, ⁵Spinal Cord Unit, Guttmann Neurorehabilitation Institute, Badalona/SPAIN

P-OPEV-15 INFLUENCE OF IODINATED CONTRAST AGENT ON LUMBAR SPINE BMD
Oleg Museyko¹, Sarah Holz², Peter Danker³, Michael Uder², Klaus Engelke¹
¹Institute Of Medical Physics, University of Erlangen-Nuremberg, Erlangen/GERMANY, ²Institute Of Radiology, University of Erlangen-Nuremberg, Erlangen/GERMANY

P-OPEV-16 LEG ELEVATION DOES NOT SUBSTANTIALLY AFFECT TBS RESULTS
Diane Krueger¹, E Siglinsky¹, Doris Tran², Luis Del Rio³, Christophe Lelong², Didier Hans⁴, Neil Binkley¹
¹Osteoporosis Clinical Research Program, University of Wisconsin - Madison, Madison/WI/UNITED STATES OF AMERICA, ²R&d, Medimaps, MERIGNAC/FRANCE, ³Nuclear Medicine, CETIR Grupo Médico, Barcelona/SPAIN, ⁴Center Of Bone Diseases – Rhu Dal, Lausanne University Hospital – CHUV, Lausanne/SWITZERLAND

P-OPEV-17 BONE MINERAL DENSITY AND TRABECULAR BONE SCORE IN MEN WITH VERTEBRAL FRACTURES
Vladyslav Povoroznyuk, Anna Musienko
D.f. Chebotarev Institute Of Gerontology Nams Ukraine, D.F. Chebotarev Institute of gerontology NAMS Ukraine, Kyiv/UKRAINE

P-OPEV-18 THE PREDICTION OF INCIDENT ATRAUMATIC FRACTURE RISK BY TRABECULAR BONE SCORE (TBS) IN THE ELDERLY WOMEN OF THE OSTEOLAUS STUDY
Enisa Shevroja, Berengere Aubry-Rozier, Delphine Stoll, Marie Metzger, Olivier Lamy, Didier Hans
Center Of Bone Diseases – Rhu Dal, Lausanne University Hospital –
CHUV, Lausanne/SWITZERLAND

**P-OPEV-19** DIFFERENCES IN FEMORAL NECK STRUCTURE BETWEEN ELDERLY CAUCASIAN AND CHINESE POPULATIONS: A PERTH-BEIJING COHORT STUDY

Ling Wang¹, Benjamin Khoo², Xiaoguang Cheng³, Keenan Brown⁴, Richard Prince⁵

¹Department Of Radiology, Beijing Jishuitan Hospital, Peking University, Beijing/CHINA, ²Medical Technology And Physics, Sir Charles Gairdner Hospital, Perth/AUSTRALIA, ³Department Of Radiology, Beijing Jishuitan Hospital, Beijing/CHINA, ⁴Mindways Software, Mindways Software, Austin/UNITED STATES OF AMERICA, ⁵Department Of Endocrinology And Diabetes, Sir Charles Gairdner Hospital, Perth/AUSTRALIA

**P-OPEV-20** This abstract has been withdrawn

**P-OPEV-21** UNDERREPORTING OF VERTEBRAL FRACTURES ON ROUTINE SPINAL COMPUTED TOMOGRAPHY IN ADULT

Guiying Du, Wei Yu

Radiology, Peking Union Medical College Hospital, Beijing/CHINA

**P-OPEV-22** QUANTITATIVE RADIOLOGICAL EVALUATION OF INTERACTION OF LUMBAR VERTEBRAL BONE MARROW FAT, BONE MINERAL DENSITY AND AGE

Yong Zhang, Xiaoguang Cheng, Aihong Yu, Ling Wang, Chenxin Zhang, Wei Zhao, Yangyang Duanmu

Radiology, Beijing Jishuitan hospital, Beijing/CHINA

**P-OPEV-23** This abstract has been withdrawn.

**P-OPEV-24** ASSESSMENT OF FINITE ELEMENT MODELS IN THE DIAGNOSIS OF OSTEOPOROSIS

D Anitha¹, Ye-Soo Park², Taeyong Lee³

¹Mechanical Engineering, Singapore University of Technology and Design, Singapore/SINGAPORE, ²Orthopaedic Surgery, Hanyang University Guri Hospital, Guri city/REPUBLIC OF KOREA, ³Engineering, Ewha Womans University, Seoul/REPUBLIC OF KOREA
Osteoporosis: treatment

**P-OPTX-1**  COMPARATIVE DENSITOMETRIC ANSWER IN PATIENTS WITH TREATMENT WITH INTRAVENOUS BIPHOSPHONATES VERSUS DENOSUMAB IN REAL PRACTICE IN A MEDICAL CONSULTATION
Maria Torre1, Nuria Gabarro2, Jose Santiago Filgueira1
1Internal Medicine, Hospital General Universitario Gregorio Marañon, Madrid/SPAIN, 2Internal Medicine, Hospital General Universitario Gregorio Marañon, Madrid/SPAIN

**P-OPTX-2**  LONG-TERM OUTCOME PREDICTORS FOR VERTEBROPLASTY IN SYMPTOMATIC OSTEOPOROTIC VERTEBRAL FRACTURES
Elsa Denoix1, Flore Viry2, Agnès Ostertag3, Jean-Denis Laredo2, Martine Cohen-Solal1, Valérie Bousson2, Thomas Funck-Brentano4
1Rheumatology-hôpital Lariboisière, Université Paris Diderot, Paris/FRANCE, 2Radiology-hôpital Lariboisière, Université Paris Diderot, Paris/FRANCE, 3Umr-1132, INSERM, Paris/FRANCE, 4Rheumatology-hôpital Lariboisière, Université Paris Diderot-INSERM UMR1132, Paris/FRANCE

**P-OPTX-3**  BISPHOSPHONATE DRUG HOLIDAYS IN POSTMENOPAUSAL OSTEOPOROSIS: EFFECT ON CLINICAL FRACTURE RISK
Marie-Amélie Mignot, Nicolas Taisne, Isabelle Legroux-Gérot, Bernard Cortet, Julien Paccou
Rheumatology, Lille University Hospital, Lille/France

**P-OPTX-4**  IBANDRONATE MAINTAINS BONE MINERAL DENSITY, MICROSTRUCTURE AND BIOMECHANICAL STRENGTH OF TRABECULAR AND CORTICAL BONE AFTER WITHDRAWAL OF PARATHYROID HORMONE TREATMENT IN OVARIECTOMIZED RATS
Satoshi Takeda1, Sadaoki Sakai1, Keisuke Tanaka1, Haruna Tomizawa1, Kenichi Serizawa1, Kenji Yogo1, Koji Urayama2, Junko Hashimoto3, Koichi Endo4, Yoshihiro Matsumoto1

**P-OPTX-5**  EFFECT OF DAILY OR CYCLICAL TERIPARATIDE TREATMENT ON BONE MATRIX MINERALIZATION IN POSTMENOPAUSAL OSTEOPOROTIC WOMEN ON PRIOR AND ONGOING THERAPY WITH ALENDRONATE
Barbara Misof1, Paul Roschger1, Hua Zhou2, Jeri W. Nieves3, Mathias Bostrom4, Felicia Cosman2, Robert Lindsay2, Klaus Klaushofer1, David
P-OPTX-6  COST EFFECTIVENESS ANALYSIS OF PARATHYROID HORMONE TREATMENT IN OSTEOPOROSIS, FROM A HEALTHCARE PERSPECTIVE. A DANISH NATIONAL REGISTER BASED COHORT STUDY
Anne-Luise Thorsteinsson1, Louise Hansen2, Peter Vestergaard3, Pia Eiken1
1Dept. Og Cardiology, Nephrology And Endocrinology, Nordsjællands Hospital – Hillerød, Hillerød/DENMARK, 2Dept. Of Social Science, Aalborg University, Danish Center for Healthcare Improvements, Aalborg/DENMARK, 3) departments Of Clinical Medicine And Endocrinology, Aalborg University Hospital, Aalborg/DENMARK

P-OPTX-7  DENOSUMAB IS EFFECTIVE IN REDUCING BACK PAIN AND IN IMPROVEMENT OF BONE MINERAL DENSITY AND HEALTH RELATED QUALITY OF LIFE IN POST-MENOPAUSAL WOMEN WITH VERTEBRAL FRACTURES. 1-YEAR FOLLOW-UP PROSPECTIVE STUDY
Giovanni Iolascon1, Alessandro De Sire2, Antimo Moretti1, Gioconda Di Pietro1, Claudio Curci1, Anna Mazzola1, Francesca Gimigliano5
1Department Of Medical And Surgical Specialties And Dentistry, University of Campania, Naples/ITALY, 2Department Of Medical And Surgical Specialties And Dentistry, University of Campania, Naples/ITALY, 3Department Of Physical And Mental Health And Preventive Medicine, University of Campania, Naples/ITALY

P-OPTX-8  THE EFFECT OF TERIPARATIDE TREATMENT ON CIRCULATING PERIOSTIN AND OTHER REGULATORS OF BONE FORMATION IN POSTMENOPAUSAL WOMEN WITH OSTEOPOROSIS
Fatma Gossiel1, Jessica R. Scott1, Margaret A. Paggiosi1, Kim E. Naylor1, Eugene V. Mcclsokey1, Nicola Peel2, Jennifer S. Walsh1, Richard Eastell1
1Oncology And Metabolism, University of Sheffield, RX/UNITED KINGDOM, 2Metabolic Bone Centre, Sheffield Teaching Hospitals, Sheffield/UNITED KINGDOM

P-OPTX-9  REASONS FOR EARLY TERMINATION OF THERAPY WITH ONCE-DAILY TERIPARATIDE 20UG IN COMMON POPULATION
P-OPTX-10 Persistence to Denosumab in a Cohort of Osteoporotic Post-Menopausal Women: A Multicenter Observational Real Practice Study
Silvia Migliaccio¹, Davide Francomano², Elisabetta Romagnoli², Chiara Marocco², Rachele Fornari², Giuseppina Resmini², Angela Buffa⁴, Gioconda Di Pietro⁶, Stefania Corvaglia⁶, Francesca Giumigliano⁷, Antimo Moretti⁵, Alessandro De Sire⁶, Nazzarena Malavolta⁶, Andrea Lenzi⁹, Emanuela A. Greco², Giovanni Iolascon¹⁰
¹Department Of Movement, Human And Health Sciences, University “Foro Italico”, Roma/ITALY, ²Department Of Experimental Medicine, Section Of Medical Pathophysiology, Endocrinology And Nutrition, University “Sapienza” of Rome, Rome/ITALY, ³Center Of Osteoporosis And Skeletal Metabolic Diseases, Section Of Orthopaedic And Traumatology, Treviglio-Caravaggio Hospital, Treviglio (BG)/ITALY, ⁴Department Of Medical And Surgical Sciences, Division Of Internal Medicine, St Orsola-Malpighi Hospital, University of Bologna, Bologna/ITALY, ⁵Department Of Medical And Surgical Specialties And Dentistry, University of Campania, Naples/ITALY, ⁶Department Of Medical And Surgical Sciences, Division Of Internal Medicine, St Orsola-Malpighi Hospital, Bologna/ITALY, ⁷Department Of Physical And Mental Health And Preventive Medicine, University of Campania, Naples/ITALY, ⁸Department Of Medical And Surgical Specialties And Dentistry, University of Campania, Naples/ITALY, ⁹Department Of Experimental Medicine, Section Of Medical Pathophysiology, Endocrinology And Nutrition, University “Sapienza” of Rome, Bologna/ITALY, ¹⁰Department Of Medical And Surgical Specialties And Dentistry, University of Campania “Luigi Vanvitelli”, Naples/ITALY

P-OPTX-11 Alendronate Treatment Results in a Higher Number of Trabecular Microcalli in Human Vertebrae
Annika Vom Scheidt¹, Michael Amling², Klaus Püschel³, Björn Busse¹
¹Department Of Osteology And Biomechanics, University Medical Center Hamburg-Eppendorf, Hamburg/GERMANY, ²Osteology And Biomechanics, University Medical Center Hamburg-Eppendorf, Hamburg/GERMANY, ³Department Of Legal Medicine, University Medical Center Hamburg-Eppendorf, Hamburg/GERMANY

P-OPTX-12 Zoledronic Acid Protects Against Cortical Bone Loss In
MICE FOLLOWING WITHDRAWAL OF NOTUM INHIBITOR TREATMENT
Robert Brommage, Andrea Y. Thompson, Melanie K. Shadoan, Jeff Liu, Sabrina Jeter-Jones, Deon Doree, Faika Mseeh, Jie Ciu, Jennifer P. Bardenhagan, Gwenn M. Hansen, James E. Tarver, Brian Zambrowicz, David R. Powell, Qingyun Liu

P-OPTX-13 PERSISTENCE AND COMPLIANCE WITH SUBCUTANEOUS DENOSUMAB IN ROUTINE PRACTICE FROM 2011-2016
Richard Pikner, Frantisek Senk
1Dept. Of Clinical Laboratories And Bone Metabolism, Klatovska Hospital, Klatovy/CZECH REPUBLIC, 2Bone Center, Hospital Havlickuv Brod, Havlickuv Brod/CZECH REPUBLIC

P-OPTX-14 This abstract has been withdrawn.

P-OPTX-15 ENGINEERING DUAL-SPECIFIC M-CSF ANTAGONISTS THAT INHIBIT C-FMS AND αVβ3 INTEGRIN FOR OSTEOPOROSIS THERAPY
Yuval Zur, Lior Rosenfeld, Gali Guterman Ram, Niv Papo, Noam Levaot
1Department Of Biotechnology Engineering And The National Institute Of Biotechnology In The Negev, Ben Gurion University, Beer Sheva/ISRAEL, 2Physiology And Cell Biology, ben gurion university of the negev, beer sheva/israel, 3Department Of Physiology And Cell Biology, Ben Gurion University, Beer Sheva/ISRAEL

P-OPTX-16 OSTEOPOROTIC VERTEBRAL FRACTURE- CASE REPORT
Viorela M. Ciortea, Rodica Ungur, Laszlo Irsay, Alina Popa, Larisa Condurovici, Ioan Onac, Monica I. Borda
1Department Of Medical Science, Medical Rehabilitation, “Iuliu Hatieganu” University of Medicine and Pharmacy Cluj –Napoca, Cluj-Napoca/ROMANIA, 2Department Of Medical Science, Medical Rehabilitation, Iuliu Hatieganu” University of Medicine and Pharmacy Cluj –Napoca, Cluj-Napoca/ROMANIA

P-OPTX-17 BONE UNION RATE OF PLIF USING LOCAL BONE GRAFT IN LONG TERM BISPHOSPHONATES USERS
Si Young Park, Seung Woo Suh, Hyun Min Lee
1Orthopaedic Surgery, Korea University, Seoul/REPUBLIC OF KOREA,
P-OPTX-18  **A MORE PHYSIOLOGICALLY RELEVANT 3D IN VITRO CO-CULTURE MODEL FOR STUDYING THE STRUCTURE-FUNCTION RELATIONSHIPS OF BONE REMODELLING**  
Marina Rubert, Jolanda R. Vetsch, Iina Lehtoviita, Sandra Hofmann, Ralph Müller  
Department Of Health Sciences And Technology, ETH Zurich, Zurich/SWITZERLAND

P-OPTX-19  **NOVEL AFFINITY MOLECULES, NANOFITINS AS POTENTIAL BONE THERAPEUTICS: A PROOF-OF-CONCEPT FOR OSTEOPOROSIS**  
Nathalie Renema¹, Harmony Gorré¹, Ariane Desselle¹, Céline Charrier², Jérôme Amiaud², Frédéric Lézot², Olivier Kitten¹, Dominique Heymann³  
¹Affillogic, Research and Development, Nantes/FRANCE, ²Inserm Umr957, Faculté de Médecine de Nantes, Nantes/FRANCE, ³Oncology And Metabolism, Inserm, Lea Sarcoma Research Unit, University of Sheffield, Medical School, Sheffield/UNITED KINGDOM

P-OPTX-20  **EFFICACY OF THE VARIOUS BISPHOSPHONIC ACIDS IN TREATMENT OF EXPERIMENTAL OSTEOPOROSIS IN FEMALE RATS**  
Vladyslav Povoroznyuk¹, Nataliia Grygorieva¹, V Pekhnyo², O Kozachkova², N Tsaryk²  
¹D.f. Chebotarev Institute Of Gerontology Nams Ukraine, D.F. Chebotarev Institute of gerontology NAMS Ukraine, Kyiv/UKRAINE, ²Vernadsky Institute Of General And Inorganic Chemistry Of The Ukrainian National Academy Of Sciences, Vernadsky Institute of general and inorganic chemistry of the Ukrainian National Academy of Sciences, Kyiv/UKRAINE

P-OPTX-21  **EFFECTS OF HIGH IMPACT EXERCISE (JUMP) ON THE PHYSICAL PROPERTIES OF THE TIBIAS OF OVARIECTOMIZED RATS SUBMITTED TO THE PROTEIN DIET**  
Roberta C. Shimano¹, Gabriela R. Yanagihara², Ana Paula Macedo³, Daniel Luis V. Araujo⁴, João Paulo M. Issa⁵  
¹Department Of Biomechanics, Medicine And Locomotor Apparatus Rehabilitation, Faculty Of Medicine, University Of Sao Paulo, Sao Paulo, Brazil, University of Sao Paulo, Ribeirao Preto/BRAZIL, ²Biomechanics, Medicine And Rehabilitation Of Locomotor System, Ribeirão Preto Medical School/University of São Paulo, Ribeirão Preto/BRAZIL, ³Dental Materials And Prothesis, University of São Paulo, Ribeirão Preto/BRAZIL, ⁴Physiotherapy College, University of Sao Paulo, Ribeirao Preto/BRAZIL, ⁵Morphology, Physiology And Basic Pathology, University of São Paulo, Ribeirão Preto/BRAZIL
P-OPTX-22 METABOLIC AND BONES PARAMETERS IN PATIENTS TREATED WITH TERIPARATIDE FOR SEVERE OSTEOPOROSIS
Mara Carsote¹, Ana Valea²
¹Endocrine, C.I.Parhon National Institute of Endocrinology, Bucharest/ROMANIA, ²Endocrine, UMF I.Hatieganu, Cluj-Napoca/ROMANIA

P-OPTX-23 BONE MINERAL DENSITY CHANGES IN COMPLIANT AND ADHERENT DENOSUMAB TREATED PATIENTS OVER A 24 MONTHS PERIOD IN REAL CLINICAL SETTING. TWO YEARS PRELIMINARY DATA
Jose Francisco Torres Naranjo¹, Pedro García-Hernández², Claudia Flores-Moreno², Pilar De La Peña-Rodriguez³, Hugo Gutierrez-Hermosillo⁴, Roberto González-Mendoza⁵, Alejandro Gaytán-González⁶, Noe González-Gallegos⁶, Juan López Y Taylor⁵, Edgar S. Tejeda-Chávez⁶
¹Centro De Investigación Ósea Y De La Composición Corporal, Instituto de Ciencias Aplicadas a la Actividad Física y al Deporte, Universidad de Guadalajara, Guadalajara/MEXICO, ²Hospital Universitario, Universidad Autonoma de Nuevo León, Monterrey/MEXICO, ³Servicios Médicos De La Peña, Servicios Médicos de la Peña, Guadalajara/MEXICO, ⁴Asociación Mexicana De Metabolismo Óseo Y Mineral, Asociación Mexicana de Metabolismo Óseo y Mineral, Ciudad de México/MEXICO, ⁵Evaluación Morfofuncional Y Nutrición, Instituto de Ciencias Aplicadas a la Actividad Física y al Deporte, Universidad de Guadalajara, Guadalajara/MEXICO, ⁶Departamento De Bienestar Y Desarrollo Sustentable, Centro Universitario del Norte, Universidad de Guadalajara, Colotlán/MEXICO

P-OPTX-24 SKELETAL RESTORATION BY LIRAGLUTIDE IN OVARIECTOMIZED RATS BY AN OSTEOANABOLIC MODE: A COMPARATIVE STUDY WITH PTH AND ALENDRONATE
Subhashis Pal
Endocrinology Division, Central Drug Research Institute, Lucknow/INDIA

P-OPTX-25 APOLIPOPROTEIN A-I PREVENTS OSTEOPOROSIS AND PROMOTES OSTEOGENESIS OF MESENCHYMAL STEM CELLS VIA STAT3, CXCL6, AND CXCL8
Yu-Chuan Liu¹, Wei-Kai Huang², Ching-Fang Chang³, Yu-Ting Kao¹, Michael Snyder³, Shang-Chih Yang¹, Shu-Ching Hsu⁴, Long-Yuan Li⁵, Shiaw-Min Hwang⁶, Kun-Yi Lin⁷, Shinn-Chih Wu⁸, Hsiao-Ning Huang⁹, Chih-Han Chien¹, Frank Leigh Lu⁹, Scott C. Schuyler¹⁰, Nian-Han Ma¹¹, Jean Lu¹
¹Endocrine, C.I.Parhon National Institute of Endocrinology, Bucharest/ROMANIA, ²Endocrine, UMF I.Hatieganu, Cluj-Napoca/ROMANIA
P-OPTX-26 FROM PRECISION MEDICINE TO DRUG DISCOVERY: INHIBITION OF OSTEOBLASTIC SMURF1 PROMOTES BONE FORMATION IN DISTINCTIVE INDIVIDUALS WITH AGE-RELATED OSTEOPOROSIS
Chao Liang1, Songlin Peng2, Bao-Ting Zhang3, Aiping Lu1, Ge Zhang1
1Institute For Advancing Translational Medicine In Bone & Joint Diseases, Hong Kong Baptist University, Kowloon Tong/HONG KONG PRC, 2Department Of Spine Surgery, Shenzhen People’s Hospital, Ji Nan University Second College of Medicine, Shenzhen/CHINA, 3School Of Chinese Medicine, Faculty Of Medicine, Chinese University of Hong Kong, Shatin/HONG KONG PRC

P-OPTX-27 ASSESSMENT OF THE EFFECTS OF SWITCHING ORAL BISPHOSPHONATES TO DENOSUMAB OR DAILY TERIPARATIDE IN PATIENTS WITH RHEUMATOID ARTHRITIS
Kosuke Ebina, Makoto Hirao, Hideki Yoshikawa
Orthopedic Surgery, Osaka University, Graduate School of Medicine, Osaka/JAPAN

P-OPTX-28 THE EARLY EFFECTS OF ANTI-RANKL ANTIBODY ON BONE METABOLISM
Toshinobu Omiya, Jun Hirose, Takeshi Miyamoto, Sakae Tanaka
Orthopaedics, The University of Tokyo, Tokyo/JAPAN

P-OPTX-29 This abstract has been withdrawn.
P-OPTX-30  **OSTEOPOROTIC SPINAL FRACTURES WITH NEUROLOGICAL COMPROMISES**  
Young-Hoon Kim¹, Kee-Yong Ha¹, Ye-Soo Park², Sang-II Kim¹  
¹Orthopedic Surgery, Seoul St. Mary’s Hospital, The Catholic University of Korea, Seoul/REPUBLIC OF KOREA, ²Orthopedic Surgery, Guri Hospital, Hanyang University College of Medicine, Guri/REPUBLIC OF KOREA

P-OPTX-31  **This abstract has been withdrawn.**

P-OPTX-32  **EDUCATION AND EXERCISE PROGRAM IMPROVES OSTEOPOROSIS KNOWLEDGE, AND CHANGE OF CALCIUM AND VITAMIN D DIETARY INTAKE IN COMMUNITY DWELLING ELDERLY**  
Yong-Chan Ha¹, Ha-Young Kim², Hyoung Moo Park³, Young-Kyun Lee⁴, D-Y Kim⁵  
¹Department Of Orthopaedic Surgery, Chung-Ang University College of Medicine, Seoul/REPUBLIC OF KOREA, ²Department Of Internal Medicine, Wonkwang University Sanbon Hospital, Wonkwang University College of Medicine, Gunpo/REPUBLIC OF KOREA, ³Department Of Obstetrics And Gynecology, Chung-Ang University College of Medicine, Seoul/REPUBLIC OF KOREA, ⁴Department Of Orthopedic Surgery, Seoul National University Bundang Hospital, Seongnam/REPUBLIC OF KOREA, ⁵Department Of Nuclear Medicine, Kyung Hee University Hospital, Seoul/REPUBLIC OF KOREA

P-OPTX-33  **FRACTURE PREVENTING EFFECTS OF MAXMARVIL TABLETS (ALENDRONATE 5 MG + CALCITRIOL 0.5µg) IN PATIENTS WITH OSTEOPOROSIS**  
Yong-Chan Ha¹, Ha-Young Kim², Hyoung Moo Park³, Young-Kyun Lee⁴, D-Y Kim⁵  
¹Department Of Orthopaedic Surgery, Chung-Ang University College of Medicine, Seoul/REPUBLIC OF KOREA, ²Department Of Internal Medicine, Wonkwang University Sanbon Hospital, Wonkwang University College of Medicine, Gunpo/REPUBLIC OF KOREA, ³Department Of Obstetrics And Gynecology, Chung-Ang University College of Medicine, Seoul/REPUBLIC OF KOREA, ⁴Department Of Orthopedic Surgery, Seoul National University Bundang Hospital, Seongnam/REPUBLIC OF KOREA, ⁵Department Of Nuclear Medicine, Kyung Hee University Hospital, Seoul/REPUBLIC OF KOREA
P-OPTX-34 DEVELOPMENT OF SMARTPHONE EDUCATIONAL APPLICATION FOR PATIENTS WITH OSTEOPOROSIS AND OSTEOPOROTIC FRACTURE
Young Jun Won¹, Yoo Mee Kim¹, Se Hwa Kim¹, Dong Sik Chae², Byung Ho Lee²
¹Endocrinology And Metabolism, Catholic Kwandong University, Incheon/REPUBLIC OF KOREA, ²Orthopedic Surgery, Catholic Kwandong University, Incheon/REPUBLIC OF KOREA

Osteoporosis: pathophysiology and epidemiology

P-OPPE-1 HIP FRACTURE INCIDENCE IN AUSTRIA AND PROJECTED CASES UNTIL 2050 IN AN AUSTRIAN PROVINCE
Wolfgang Brozek¹, Karl-Peter Benedetto², Hartmut Häfele³, Joachim Kopf³, Thomas Bärenzung⁴, Richard Schnetzer⁵, Christian Schenk⁶, Elmar Stimpfl⁷, Ursula Waheed-Hutter⁷, Hanno Ulmer⁸, Kilian Rapp⁹, Klaus Klaufushef¹, Elisabeth Zwettler¹, Gabriele Nagel⁷, Hans Concin⁷
¹1st Medical Department, Hanusch Hospital, Ludwig Boltzmann Institute of Osteology at the Hanusch Hospital of the Vienna Health Insurance Fund (WGKK) and Trauma Center Meidling of the Austrian Workers’ Compensation Board (AUVA), Vienna/AUSTRIA, ²Department Of Trauma Surgery, Landeskrankenhaus Feldkirch, Feldkirch/AUSTRIA, ³Department Of Trauma Surgery, Landeskrankenhaus Bregenz, Bregenz/AUSTRIA, ⁴Department Of Trauma Surgery, Landeskranekhaus Bludenz, Bludenz/AUSTRIA, ⁵Department Of Trauma Surgery, Krankenhaus Dornbirn, Dornbirn/AUSTRIA, ⁶Sanatorium Schruns, Sanatorium Schruns, Schruns/AUSTRIA, ⁷Agency For Preventive And Social Medicine, Agency for Preventive and Social Medicine, Bregenz/AUSTRIA, ⁸Department Of Medical Statistics, Informatics And Health Economics, Innsbruck Medical University, Innsbruck/AUSTRIA, ⁹Department Of Clinical Gerontology, Robert-Bosch-Hospital, Stuttgart/GERMANY

P-OPPE-2 NOVEL VARIANTS OF LRP5 AND FUNCTIONAL STUDY IN YOUNG ADULTS WITH IDIOPATHIC OSTEOPOROSIS
Corinne Collet¹, Manon Ricquebourg¹, Agnès Ostertag¹, Thomas Funck-Brentano⁴, Marine Delecourt², Giulia Tueur², Martine Lenne², Philippe Orcel³, Jean-Louis Laplanche², Martine Cohen-Solal⁶
P-OPPE-3  GEOGRAPHIC HETEROGENEITY IN HIP FRACTURE INCIDENCE IN DENMARK, A REGISTER-BASED NATIONAL STUDY ON SURGICALLY TREATED HIP FRACTURES
Bo Abrahamsen¹, Katrine H. Rubin¹, Per B. Johansen², Henrik A. Sørensen³
¹Open, University of Southern Denmark, Odense C/DENMARK, ²Dept Of Medicine, Holbæk Hospital, Holbæk/DENMARK, ³Medicine, Holbæk Hospital, Holbæk/DENMARK

P-OPPE-4  CORONARY ARTERY CALCIUM SCORE IS REVERSELY RELATED WITH BONE MINERAL DENSITY AND HAIR CALCIUM: THE RELATIONSHIP AMONG DIFFERENT CALCIUM POOLS IN BODY
Bom Taeck Kim, Sang Hoon Lee, Duk Joo Lee, Kyu Nam Kim
Family Practice And Community Health, AJOU UNIVERSITY SCHOOL OF MEDICINE, SUWON/REPUBLIC OF KOREA

P-OPPE-5  PREVALENCE AND RISK FACTORS OF LOW BONE MINERAL DENSITY IN ANTIRETROVIRAL THERAPY-NAIVE HIV-INFECTED YOUNG MEN
Julien Paccou¹, Nathalie Viget², Elodie Drumez³, Bernard Cortet⁴, Olivier Robineau²
¹Rheumatology, Lille University, Lille/FRANCE, ²Department Of Infectious Diseases, Lille University Hospital, Tourcoing/FRANCE, ³Department Of Biostatistics, Lille University Hospital, Lille/FRANCE, ⁴Rheumatology, Lille University Hospital, Lille/FRANCE

P-OPPE-6  RELATIONSHIP BETWEEN BONE MINERAL DENSITY AND ALCOHOL CONSUMPTION
Daniela Monova¹, Simeon Monov², Maria Ivanova³, Ruska Shumnalieva⁴, Milena Todorova³
¹Department Of Internal Medicine, Medical University - Sofia, Medical Institute, Sofia/BULGARIA, ²Clinic Of Rheumatology, Department Of Internal Medicine, Medical University - Sofia, Sofia/BULGARIA, ³Department Of Internal Medicine, Medical Institute, Sofia/BULGARIA, ⁴Department Of Internal Medicine, Medical University - Sofia, Clinic of Rheumatology, Sofia/BULGARIA

P-OPPE-7  RISK OF SUBSEQUENT FRACTURE AFTER OSTEOPOROSIS-RELATED FRACTURE: RESULTS FROM A REAL-WORLD GERMAN SICK FUND ANALYSIS
Peyman Hadji¹, Bernd Schweikert², Sonja Ansorge³, Jochen Dunkel⁴, Emese Toth⁵
¹Department Of Bone Oncology, Krankenhaus Nordwest, Frankfurt/GERMANY, ²Rwsa, Mapi Group, Munich/GERMANY, ³Data Science, Arvato Health Analytics Gmbh, Munich/GERMANY, ⁴Global Statistical
P-OPPE-8 This abstract has been withdrawn.

P-OPPE-9 EFFECTS OF A SELECTIVE PHOSPHODIESTERASE 5 INHIBITOR (SILDENAFIL) ON THE SKELETAL SYSTEM OF ORCHIDECTOMIZED AND NON-ORCHIDECTOMIZED RATS
Maria Pytlik¹, Leszek Śliwiński², Małgorzata Zbrojkiewicz², Urszula Cegieła¹, Joanna Folwarczna², Aleksandra Janas¹
¹Department Of Pharmacology, School Of Pharmacy With The Division Of Laboratory Medicine In Sosnowiec, Medical University of Silesia, Katowice, Sosnowiec/POLAND, ²Department Of Pharmacology, School Of Pharmacy With The Division Of Laboratory Medicine In Sosnowiec, Medical University of Silesia, Katowice, Poland, Sosnowiec/POLAND

P-OPPE-10 MINERAL BONE DENSITY AND VITAMIN D LEVELS IN PATIENTS WITH CHRONIC PANCREATITIS
Angels Martinez-Ferrer¹, Antonio López Serrano², Cristina Vergara Dangond³, Marta Aguilar Zamora³, Élia Valls Pascual¹, Amparo Ybáñez García¹, Juan Jose Alegre Sancho¹
¹Rheumatology, Hospital Dr Peset, Valencia/SPAIN, ²Gastroenterology, HOSPITAL DR PESET, VALENCIA/SPAIN, ³Rheumatology, HOSPITAL DR PESET, VALENCIA/SPAIN

P-OPPE-11 INCIDENCE OF OSTEOPOROSIS-RELATED FRACTURES IN GERMANY
Hans-Christof Schober¹, Kathrin Baessgen¹, Tim Wilk¹, Thomas Mittmeier², Reimer Andresen³, Guido Schröder², Gabriele Lehmann⁴
¹Internal Medicine, Klinikum Südstadt Rostock, Rostock/GERMANY, ²Traumasurgery, University Rostock, Rostock/GERMANY, ³Radiology, Westküstenklinikum, Heide/GERMANY, ⁴Internal Medicine, University Jena, Jena/GERMANY

P-OPPE-12 PRECEDING AND SUBSEQUENT HIGH- AND LOW-TRAUMA FRACTURE PATTERNS – A 13-YEAR EPIDEMIOLOGICAL STUDY IN FEMALES AND MALES IN AUSTRIA
Christian Muschitz¹, Roland Kocijan¹, Judith Haschka², Heinrich Resch¹, Peter Pietschmann³, Hans Peter Dimai⁴
¹Medical Department II, St. Vincent Hospital, Vienna/AUSTRIA, ²Medical Department II, St. vincent Hospital, Vienna/AUSTRIA, ³Department Of Pathophysiology And Allergy Research, Medical University of Vienna, Vienna/AUSTRIA, ⁴Division Of Endocrinology, Medical University Graz, Graz/AUSTRIA
P-OPPE-13 SEX-DETERMINING REGION Y (SRY) PREVENTS BONE LOSS AND DEVELOPMENT OF OSTEOPOROSIS IN MALES
Vid Mlakar1, Janja Zupan1, Klemen Kodrič1, Radko Komadina2, Nika Lovsin1, Janja Marc1
1The Chair Of Clinical Biochemistry; Faculty Of Pharmacy, University of Ljubljana, Ljubljana/SLOVENIA, 2Department for Research and Education, General and Teaching Hospital Celje, Celje/SLOVENIA

P-OPPE-14 FRAILTY, FALLS AND FRACTURES – A 10 YEAR LONGITUDINAL STUDY IN 75 YEAR OLD COMMUNITY DWELLING WOMEN
Kristina Akesson, Patrik Bartosch, Linnea Malmgren, David Buchebner, Fiona E. Mcguigan
Clinical Science Malmö, Lund University, Malmö/SWEDEN

P-OPPE-15 INFECTION BY CAGA POSITIVE HELICOBACTER PYLORI STRAINS IMPAIRS BONE FRACTILITY: A PROSPECTIVE COHORT STUDY
Daniela Merlotti1, Natale Figura2, Maria Stella Campagna2, Maria Beatrice Franci2, Barbara Lucani2, Konstantinos Stolakis3, Simone Bianciardi2, Maria Materozzi2, Stefano Gonnelli2, Ranuccio Nuti2, Luigi Gennari2
1Division Of Genetics And Cell Biology, San Raffaele Scientific Institute, Milan/ITALY, 2Department Of Medicine, Surgery And Neurosciences, University of Siena, Siena/ITALY

P-OPPE-16 PREDICTIVE AND DISCRIMINATORY CAPACITY OF THE FRAX TOOL IN SPANISH POSTMENOPATHIC WOMEN: A PRELIMINARY STUDY
José M. Olmos1, José L. Hernandez1, José L. González1, Josefina Martínez1, Emilio Pariente2, Isabel Sierra1, Sheila Ruiz1, Jesús González-Macías1
1Internal Medicine, Hospital Universitario Marqués de Valdecilla, Santander/SPAIN, 2Eap, Centro de Salud Camargo, Santander/SPAIN

P-OPPE-17 POTENTIAL PATHOMECHANISMS FOR BONE- AND VESSEL-ASSOCIATED MICRORNA-CHANGES IN CHRONIC KIDNEY DISEASE
Ines Foessl1, Matthias Ulbing1, Alexander Kirsch2, Bettina Leber3, Sandra Lemesch4, Julia Munenzker1, Natascha Schweighofer5, Daniela Hofer1, Olivia Trummer1, Alexander Rosenkranz6, Helmuth Mueller7, Kathrin Eller7, Vanessa Stadlbauer-Koellner8, Barbara Obermayer-Pietsch1
1Division Of Endocrinology And Diabetology, Medical University of Graz, Graz/AUSTRIA, 2Division Of Nephrology, Medical University of Graz, Graz/AUSTRIA, 3Division Of Transplantation Surgery, Medical University of Graz, Graz/AUSTRIA, 4Institute For Physiological Chemistry, Medical University of Graz, Graz/AUSTRIA, 5Department Of Endocrinology And Diabetology, Medical University of Graz, Graz/AUSTRIA, 6Department Of Internal Medicine, Medical University of Graz, Graz/AUSTRIA, 7Division
P-OPPE-18 BONE MINERAL DENSITY INDICES OF WISTAR FEMALE RATS OF DIFFERENT AGES WITH EXPERIMENTAL HYPERTHYROIDISM
Vladyslav Povoroznyuk¹, Iryna Gopkalova², Nataliia Grygorieva¹

P-OPPE-19 MAY P1NP LEVEL BE THE EARLY MARKERS OF THE HETEROTOPIC OSSIFICATION IN PATIENTS WITH SPINAL CORD INJURY?
Vladyslav Povoroznyuk, Maryna Bystrytska, Nataliya Balatska
D.f. Chebotarev Institute Of Gerontology Nams Ukraine, D.F. Chebotarev Institute of gerontology NAMS Ukraine, Kyiv/UKRAINE

P-OPPE-20 RISK FACTORS OF LOWER LIMB FRACTURES IN PATIENT OF DIFFERENT AGE
Nataliia Grygorieva¹, Ostap Zubach², Roman Vlasenko³, Vladyslav Povoroznyuk¹
¹D.f. Chebotarev Institute Of Gerontology Nams Ukraine, D.F. Chebotarev Institute of gerontology NAMS Ukraine, Kyiv/UKRAINE, ²Komunal City Hospital Of Ambulance, Komunal City Hospital of Ambulance, Lviv/UKRAINE, ³Vinnitsa Region Hospital, Vinnitsa Region Hospital, Vinnitsa/UKRAINE

P-OPPE-21 BONE FRAILTY AND PRESSURE VARIABILITY IN ELDERLY SUBJECTS WITH HYPOVITAMINOSIS AND HYPERPARATHYROIDISM
Ferdinando D’Amico
School Of Medicine, University of Messina, Messina/ITALY

P-OPPE-22 BONE MINERAL DENSITY AND TRABECULAR BONE SCORE IN UKRAINIAN POSTMENOPAUSAL WOMEN WITH METABOLIC SYNDROME
Vladyslav Povoroznyuk¹, Larysa Martynyuk², Nataliia Dzerovych¹, Lilya Martynyuk²
¹D.f. Chebotarev Institute Of Gerontology Nams Ukraine, D.F. Chebotarev Institute of gerontology NAMS Ukraine, Kyiv/UKRAINE, ²State Higher Educational Institution „i. Horbachevsky Ternopil State Medical University Of Ministry Of Health Of Ukraine”, State Higher Educational Institution “I. Horbachevsky Ternopil State Medical University of Ministry
of Health of Ukraine”, Ternopil/UKRAINE

**P-OPPE-23**  VASCULAR MARKERS AND BODY COMPOSITION IN END STAGE CHRONIC OBSTRUCTIVE PULMONARY DISEASE  
Evgenia Kochetkova, Ludmila Ugai, Yuliya Maistrovskaia, Vera Nevzorova  
Pulmonology, Pacific State Medical University, Vladivostok/RUSSIAN FEDERATION

**P-OPPE-24**  EARLY ANTI-OSTEOPOROSIS TREATMENT AND RISK OF CARDIOVASCULAR MORTALITY AFTER HIP FRACTURE: A POPULATION BASED STUDY  
Ching-Lung Cheung, Chor-Wing Sing  
Pharmacology And Pharmacy, The University of Hong Kong, Hong Kong/HONG KONG PRC

**P-OPPE-25**  THE RELATIONSHIP BETWEEN PULMONARY FUNCTION AND COMPOSITE INDICES OF FEMORAL NECK STRENGTH IN HEALTHY KOREAN MEN: THE FOURTH KOREA NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY (KNHANES IV)  
Seong Hee Ahn, So Hun Kim, Moonsuck Nam, Seongbin Hong  
Division Of Endocrinology And Metabolism, Department Of Internal Medicine, Inha University Hospital, Inha University School of Medicine, Incheon/REPUBLIC OF KOREA

**P-OPPE-26**  ATYPICAL SUBTROCHANTERIC FRACTURES IN KOREAN HIP FRACTURE STUDY  
Young-Kyun Lee, Ha-Young Kim, D-Y Kim, Hyoung Moo Park, Yong-Chan Ha  
1Department Of Orthopedic Surgery, Seoul National University Bundang Hospital, Seongnam/REPUBLIC OF KOREA, 2Department Of Internal Medicine, Wonkwang University Sanbon Hospital, Wonkwang University College of Medicine, Gunpo/REPUBLIC OF KOREA, 3Department Of Nuclear Medicine, Kyung Hee University Hospital, Seoul/REPUBLIC OF KOREA, 4Department Of Obstetrics And Gynecology, Chung-Ang University College of Medicine, Seoul/REPUBLIC OF KOREA, 5Department Of Orthopaedic Surgery, Chung-Ang University College of Medicine, Seoul/REPUBLIC OF KOREA

**P-OPPE-27**  MALNUTRITION AND CHRONIC INFLAMMATION AS RISK FACTORS FOR SARCOPENIA IN ELDERLY PATIENTS WITH HIP FRACTURE  
Yong-Chan Ha, Ha-Young Kim, Hyoung Moo Park, Young-Kyun Lee, D-Y Kim  
1Department Of Orthopaedic Surgery, Chung-Ang University College of Medicine, Seoul/REPUBLIC OF KOREA, 2Department Of Internal
Posters

P-OPPE-28 RISK FACTORS INCLUDING AGE, GENDER, OSTEOPOROSIS IN SPINE OR HIP, AND LOCAL OSTEOPOROSIS FOR MORE SEVERE PATTERN OF FRACTURE IN PROXIMAL HUMERUS FRACTURE
Jin Hwan Kim¹, Kyoung Hwan Koh¹, Sung-Soo Kim²
¹Orthopedic Dept, Inje University Ilsan Paik Hospital, Goyang/REPUBLIC OF KOREA, ²Orthopedic Dept, Kyoung Hwan Koh, Inje University Haeundae Paik Hospital, Busan/REPUBLIC OF KOREA

Genetics & Epigenetics

P-GENE-1 TRANSCRIPTIONAL PROFILING OF HUMAN FEMORAL MESENCHYMAL STEM CELLS IN OSTEOPOROSIS AND ITS ASSOCIATION WITH ADIPOGENESIS
Yong Jun Choi¹, Insun Song², Yilan Jin¹, Hyun-Seok Jin³, Hyung Min Ji⁴, Seon-Yong Jeong⁵, Ye-Yeon Won⁴, Yoon-Sok Chung¹
¹Endocrinology And Metabolism, Ajou University School of Medicine, Suwon/REPUBLIC OF KOREA, ²School Of Biological Sciences, Seoul National University, Seoul/REPUBLIC OF KOREA, ³Biomedical Laboratory Science, Hoseo University, Asan/REPUBLIC OF KOREA, ⁴Orthopedic Surgery, Ajou University School of Medicine, Suwon/REPUBLIC OF KOREA, ⁵Medical Genetics, Ajou University School of Medicine, Suwon/REPUBLIC OF KOREA

P-GENE-2 HYPERBARIC OXYGEN INTERVENTION REGULATED MICRORNAS RELATED SIGNALING IN HUMAN DEGENERATED INTERVERTEBRAL DISC CELLS
Song-Shu Lin¹, Chi-Chien Niu¹, Li-Jen Yuan², Lih-Huei Chen¹, Chuen-Yung Yang¹, Wenneng Ueng¹
¹Department Of Orthopaedic, Chang Gung Memorial Hospital, Taoyuan/TAIWAN, ²Department Of Orthopaedic Surgery, Chang Gung Memorial Hospital, Taoyuan/TAIWAN

P-GENE-3 EXPRESSION OF MIR-203A IN BONE TISSUE AND SERUM RESPONDS TO BONE LOSS AND OSTEOANABOLIC TREATMENT IN OVARIECTOMIZED RATS
Roland Kocijan¹, Elisabeth Geiger², Susanna Skalicky², Moritz Weigl²,
Patrick Heimel³, James Ferguson³, Gabriele Leinfellner³, Heinz Redl³, Johannes Grillari⁴, Matthias Hackl²
¹Medical Department II, St. Vincent Hospital, Vienna/AUSTRIA,
²Biomarker Development, TAmiRNA GmbH, Vienna/AUSTRIA, ³Tissue Engineering, Ludwig Boltzmann Institute for Experimental and Clinical Traumatology, Vienna/AUSTRIA, ⁴Christian Doppler Laboratory On Biotechnology Of Skin Aging, Department Of Biotechnology, University of Natural Resources and Life Sciences Vienna, Vienna/AUSTRIA

P-GENE-4 MICRONRNAS AND THEIR ASSOCIATION TO BONE MICROSTRUCTURE AND HISTOMORPHOMETRY IN IDIOPATHIC AND POSTMENOPAUSAL OSTEOPOROSIS
Roland Kocijan¹, Xaver Feichtinger¹, Patrick Heimel², Christian Muschitz¹, Elisabeth Geiger⁴, Susanna Skalicky³, Andreas Baierl⁴, Astrid Fahrenheit-Pammer⁵, Heinrich Resch¹, Johannes Grillari⁶, Heinz Redl², Matthias Hackl³
¹Medical Department II, St. Vincent Hospital, Vienna/AUSTRIA, ²Tissue Engineering, Ludwig Boltzmann Institute for Experimental and Clinical Traumatology, Vienna/AUSTRIA, ³Biomarker Development, TAmiRNA GmbH, Vienna/AUSTRIA, ⁴Department Of Statistics And Operations Research, University of Vienna, Vienna/AUSTRIA, ⁵Department Of Internal Medicine, Medical University of Graz, Graz/AUSTRIA, ⁶Christian Doppler Laboratory On Biotechnology Of Skin Aging, Department Of Biotechnology, University of Natural Resources and Life Sciences Vienna, Vienna/AUSTRIA

P-GENE-5 LOSS OF P53 COMPENSATES OSTEOPENIA IN MURINE MYSM1-DEFICIENCY
Anna Kovtun¹, Melanie Haffner-Luntzer², Verena Fischer², Katja Prystaz², Anita Ignatius², Martina Gatzka³
¹Institute Of Orthopaedic Research And Biomechanics, University Medical Center Ulm, Ulm/GERMANY, ²Institute Of Orthopedic Research And Biomechanics, University Medical Center Ulm, Ulm/GERMANY, ³Department Of Dermatology And Allergic Diseases, Ulm Medical Center, Ulm/GERMANY

P-GENE-6 PREVALENCE OF LOW ALKALINE PHOSPHATASE AND ALPL MUTATIONS IN PATIENTS WITH OSTEOPOROSIS
Beatriz Larraz-Prieto¹, Katie Myers², Ricardo Usategui-Martin³, Stuart H. Ralston³, Nerea Alonso⁴
¹Reumathology And Bone Disease Unit, University Of Edinburgh, Edinburgh/UNITED KINGDOM, ²Reumathology And Bone Disease Unit. Cgem-igmm, University of Edinburgh, Edinburgh/UNITED KINGDOM, ³Molecular Medicine Unit. Faculty Of Medicine, University of Salamanca,
Salamanca/SPAIN, 4Rheumatology And Bone Disease Unit, University of Edinburgh, Edinburgh/UNITED KINGDOM

P-GENE-7 EXPANDING THE SKELETOME WITH BONE MINERAL DENSITY AND RADIOGRAPHY DATA FROM THE INTERNATIONAL MOUSE PHENOTYPING CONSORTIUM
Robert Brommage1, Claes Ohlsson2
1Center For Bone And Metabolism Research, Sahlgrenska Academy, University of Gothenburg, Gothenburg/SWEDEN, 2Center For Bone And Arthritis Research, Sahlgrenska Academy, University of Gothenburg, Gothenburg/SWEDEN

P-GENE-8 CYP24A1 MUTATION UNMASKED IN ADULTHOOD BY INTENSIVE SUN EXPOSURE AND VITAMIN D SUPPLEMENT
Louise Tjelum1, Ulrik Pedersen-Bjergaard2, Pia Eiken3
1Dept Af Cardiology, Nefrology And Endocrinology, North Zealand Hospital, Hillerød, Hillerød/DENMARK, 2Dept. Og Cardiology, Nefrology And Endocrinology, North Zealand Hospital, Hillerød, Hillerød/DENMARK, 3Dept. Og Cardiology, Nefrology And Endocrinology, North Zealand Hospital, Hillerød, Hillerød/CROATIA

P-GENE-9 ANALYSIS OF THE MACROPHAGE MIGRATION INHIBITORY FACTOR (MIF) GENE VARIANTS WITH BONE MINERAL DENSITY AND FRACTURE RISK IN MALTESE POSTMENOPAUSAL WOMEN
Daniel Scerri, André J. Slatten, Melissa M. Formosa, Angela Xuereb-Anastasi
Applied Biomedical Science, Faculty Of Health Sciences, University of Malta, Msida/MALTA

P-GENE-10 ANALYSIS OF OSTEOMIRS IN A COHORT OF POSTMENOPAUSAL WOMEN REVEALS HIGH ASSOCIATION TO FRACTURE-RISK BUT NOT BONE MINERAL DENSITY
Matthias Hackl1, Ursula Föger-Samwald2, Susanna Skalicky1, Andreas Baier1, Oliver Nägele4, Ewald Boschitz4, Peter Pietschmann2, Johannes Grillari5
1Biomarker Development, TAMiRNA GmbH, Vienna/AUSTRIA, 2Department Of Pathophysiology And Allergy Research, Medical University of Vienna, Vienna/AUSTRIA, 3Department Of Statistics And Operations Research, University of Vienna, Vienna/AUSTRIA, 4Gyn, Ambulatorium KLIMAX, Vienna/AUSTRIA, 5Christian Doppler Laboratory On Biotechnology Of Skin Aging, Department Of Biotechnology, University of Natural Resources and Life Sciences Vienna, Vienna/AUSTRIA
P-GENE-11 PHENOTYPIC STUDY OF A NOVEL MOUSE MODEL FOR CROUZON SYNDROME WITH ACANTHOSIS NIGRICANS

Maxence Cornille1, Roman H. Khonsari2, Nabil Kaci1, Morad Bensidhoum3, Federico Di Rocco2, Laurence Legeai-Mallet1

P-GENE-12 FUNCTIONAL STUDIES OF DKK1 MISSENSE VARIANTS PRESENT IN THE GENERAL POPULATION

Nuria Martinez-Gil1, Neus Roca-Ayats1, Roser Urreizti1, Natalia Garcia-Giralt2, Mireia Vilardell3, Sergi Civit3, Wim Van Huïl4, Eveline Boudin4, Xavier Nogues2, Leonardo Mellibovsky2, Adolfo Diez-Perez2, Daniel Grinberg1, Susana Balcells1
1Genetics, Microbiology And Statistics, Universitat de Barcelona. CIBERER, IBUB, IRSJD., Barcelona/SPAIN, 2Internal Medicine, Institut Hospital del Mar d’Investigacions Mèdiques. CIBERFES ISCIII. Universidad Autònoma de Barcelona, Barcelona/SPAIN, 3Genetics, Microbiology And Statistics, Universitat de Barcelona, Barcelona/SPAIN, 4Center Of Medical Genetics, University Hospital of Antwerp, Edegem/BELGIUM

P-GENE-13 INTEGRATED FUNCTIONAL -OMICS FRAMEWORK OF GENOME-WIDE ASSOCIATION STUDY (GWAS) OF OSTEOPOROSIS TRAITS POSTULATE FUBP3 AND ETS2 AS CRITICAL FACTORS OF BONE METABOLISM

Maša Zrimšek1, Sjur Reppe2, Maria C. Medina Gomez1, Marijke Schreuders-Koedam1, John Morris1, Joost Verlouw1, Jeroen Van De Peppel1, Katerina Trajanoska1, Ling Oei1, Jeroen Van Rooij1, Cindy G. Boer1, Kaare Gautvik2, Andre G. Uitterlinden1, Brent Richards4, Janja Marc5, Bram C.J. Van Der Eerden6, Fernando Rivadeneira1
1Department Of Internal Medicine, Erasmus Medical Centre, Rotterdam/NETHERLANDS, 2Lovisenberg Diakonale Hospital, Lovisenberg Diakonale Hospital, Oslo/NORWAY, 3Departments Of Human Genetic, McGill University, Montréal/QC/CANADA, 4Department Of Human Genetics, McGill University, Montréal/QC/CANADA, 5Department Of Clinical Biochemistry, Faculty Of Pharmacy, University Of Ljubljana, Ljubljana/SLOVENIA, 6Laboratory For Calcium And Bone Metabolism, Department Of Internal Medicine, Erasmus MC, Rotterdam/NETHERLANDS
P-GENE-14 PLEIOTROPIC EFFECTS OF GENETIC VARIANTS ASSOCIATED WITH DIFFERENT PHENOTYPES ON OSTEOPOROSIS RISK
Maria Christou, George Markozannes, George Ntritsos, Evangelos Evangelou, Spyros N. Nikas, Evangelia E. Ntzani
Department Of Hygiene And Epidemiology, Medical School, University of Ioannina, Ioannina/GREECE

P-GENE-15 GENOME-WIDE ASSOCIATION META-ANALYSIS IDENTIFIES EIGHT NOVEL LOCI INFLUENCING THE SECOND TO FOURTH DIGIT (2D:4D) RATIO, A PRESUMPTIVE MARKER OF PRENATAL ANDROGEN EXPOSURE
Enisa Shevroja1, Nicole M. Warrington2, Gibran Hemani3, Cindy G. Boer4, Pirro G. Hysi5, Massimo Mangino6, George Mcmahon5, Carolina Medina-Gomez6, Martha Hickey7, Katerina Trajanoska5, Dieter Wolke8, Arfan M. Ikram9, Grant W. Montgomery10, Margaret J. Wright10, David A. Mackey11, Nicholas G. Martin12, Vincent Wv. Jaddoe9, George Davey Smith3, Craig E. Pennell13, Tim D. Spector5, Joyce Van Meurs6, Sarah E. Medland13, Fernando Rivadeneira6, David M. Evans14
1Departments Of Internal Medicine And Epidemiology, Erasmus MC, Rotterdam/NETHERLANDS, 2Translational Research Institute, The University of Queensland Diamantina Institute, Brisbane/QLD/ AUSTRALIA, 3Mrc Integrative Epidemiology Unit, University of Bristol, Bristol/UNITED KINGDOM, 4Department Of Internal Medicine, Erasmus Medical Centre, Rotterdam/NETHERLANDS, 5Department Of Twin Research And Genetic Epidemiology, Kings College London, London/UNITED KINGDOM, 6Departments Of Internal Medicine And Epidemiology, Erasmus Mc, Rotterdam/NETHERLANDS, 7Department Of Obstetrics And Gynaecology, University of Melbourne, Melbourne/ AUSTRALIA, 8Department Of Psychology And Health Sciences, University of Warwick, England/UNITED KINGDOM, 9Department Of Epidemiology, Erasmus Mc, Rotterdam/NETHERLANDS, 10Queensland Brain Institute And Centre For Advanced Imaging, University of Queensland, Queensland/AUSTRALIA, 11Lions Eye Institute, University of Western Australia, Western Australia/AUSTRALIA, 12Queensland Institute, Queensland Institute of Medical Research, Queensland/ AUSTRALIA, 13Medical Research, Queensland Institute of Medical Research, Queensland/ AUSTRALIA, 14Translational Research Institute, University of Queensland, Queensland/ AUSTRALIA

P-GENE-16 INTEGRATIVE MICRORNA-GENE EXPRESSION NETWORK ANALYSIS IN PERIPHERAL LEUKOCYTES FROM MALIGNANT AND BENIGN PRIMARY HYPERPARATHYROIDISM
Jing Kong, Ou Wang, Min Nie, Yan Jiang, Mei Li, Weibo Xia, Xunwu Meng, Xiaoping Xing
Hormones and mineral metabolism

P-HORM-1 ABSENCE OF CALCITRIOL CAUSES GREATER CORTICAL BONE LOSS AND LOWER MILK CALCIUM DURING LACTATION, BUT DOES NOT IMPAIR POST-LACTATION RECOVERY OF BONE MASS OR STRENGTH IN CYP27B1 NULL MICE
Brittany R. Gillies¹, Brittany A. Ryan¹, Brett A. Tonkin², Yue Ma¹, Beth J. Kirby¹, René St-Arnaud³, Natalie A. Sims³, Christopher S. Kovacs¹
¹Faculty Of Medicine - Endocrinology, Memorial University of Newfoundland, St. John's/NL/CANADA, ²Faculty Of Medicine, St. Vincent's Institute, Fitzroy/VIC/AUSTRALIA, ³Faculty Of Medicine, McGill University, Montreal/QC/CANADA

P-HORM-2 THE METABOLIC SIDE EFFECTS OF GLUCOCORTICOIDS ARE POTENTIATED BY ANDROGENS
Sylvia Gasparini, Lee J. Thai, Marie C. Weber, Holger Henneicke, Sarah Kim, Hong Zhou, Markus Seibel
Bone Research Program, ANZAC Research Institute, Sydney/NSW/AUSTRALIA

P-HORM-3 INTRA-OPERATIVE FGF23 ASSAY DURING SURGERY FOR TUMOR INDUCED OSTEOMALACIA: TOWARDS A PRECISION MEDICINE
Luciano Colangelo¹, Walter Gianni², Chiara Sonato³, Mirella Cilli³, Jessica Pepe³, Cristiana Cipriani³, Vittoria C. Danese³, Federica Ferrone³, Alessandro Corsi⁴, Oreste Moreschini³, Salvatore Minisola³
¹Internal Medicine, Sapienza University, Rome/ITALY, ²Internal Medicine And Medical Disciplines, Sapienza University of Rome, Rome/ITALY, ³Internal Medicine And Medical Disciplines, Sapienza University, Rome/ITALY, ⁴Molecular Medicine, Sapienza University, Rome/ITALY, ⁵Anatomical Sciences, Histological, Forensic Medicine And Locomotive System, Sapienza University of Rome, Rome/ITALY

P-HORM-4 COMPARISON OF TOTAL, FREE AND BIOAVAILABLE VITAMIN D DETERMINATIONS TO EVALUATE ITS BIOLOGICAL ACTIVITY IN HEALTHY ADULTS: THE LABOSCAT STUDY
Pilar Peris¹, Xavier Filella², Ana Monegal¹, Nuria Guañabens¹, María Bonet³, Dolors Boquet⁴, Enrique Casado⁵, Dacia Cerdà⁶, Alba Erra⁷, Carmen Gómez-Vaquero⁸, Silvia Martínez⁹, Nuria Montalá Nuria Montalá⁰, Concepción Pittarch¹¹, Eduardo Kanterewicz¹², Miquel Sala¹³, Xavier Surís¹⁴, Josep L Carrasco¹⁵
¹Rheumatology, Hospital Clinic, Barcelona/SPAIN, ²Bioquímica Clínica,
Hospital Clinic, Barcelona/SPAIN, 3Rheumatology, Hospital Alt Penedés, Vilafranca del Panadés/SPAIN, 4Rheumatology, Hospital Arnau de Vilanova, Lleida/SPAIN, 5Rheumatology, Instituto Universitario Parc Taulí, Sabadell/SPAIN, 6Rheumatology, Hospital Moisés Broggi, Sant Joan Despí/SPAIN, 7Rheumatology, Hospital San Rafael, Barcelona/SPAIN, 8Rheumatology, Hospital Universitari de Bellvitge, Hospital de Llobregat/Spain, 9Rheumatology, Hospital Mútua de Terrassa, Terrassa/SPAIN, 10Rheumatology, Hospital Sta Maria, Lleida/SPAIN, 11Rheumatology, Hospital Esperit Sant, Santa Coloma de Gramanet/SPAIN, 12Rheumatology, Hospital de Vic, Vic/SPAIN, 13Rheumatology, Hospital de Figueres, Figueras/SPAIN, 14Rheumatology, Hospital de Ganollers, Granollers/SPAIN, 15Departament De Fonaments Clínics, University of Barcelona, Barcelona/SPAIN

P-HORM-5 CLASSES OF VITAMIN D STATUS AND FUNCTIONAL RECOVERY AFTER HIP FRACTURE: A SHORT TERM STUDY OF 1356 INPATIENTS
Marco Di Monaco, Carlotta Castiglioni, Edoardo Milano
Osteoporosis Research Center, Fondazione Opera San Camillo, Presidio Sanitario San Camillo, Torino/ITALY

P-HORM-6 ONSET OF ANGIOGENESIS IN THE ALVEOLAR BONE
Jan Bobek1, Hervé Lesot2, Eva Matalova3
1Institute Of Animal Physiology And Genetics As Cr V.v.i, The Czech Academy of Sciences, Brno /CZECH REPUBLIC, 2Institute Of Animal Physiology And Genetics As Cr V.v.i, The Czech Academy of Sciences, Brno/CZECH REPUBLIC, 3Faculty Of Veterinary Medicine, Department Of Physiology, University of Veterinary and Pharmaceutical Sciences Brno, Brno/CZECH REPUBLIC

P-HORM-7 THE EPIDEMIOLOGY OF HYPOPARATHYROIDISM IN ITALY: AN EIGHT-YEAR REGISTER-BASED STUDY
Cristiana Cipriani1, Jessica Pepe1, Rizieri Manai1, Federica Biamonte1, Antonella D’Angelo1, Piergianni Biondi1, Luciano Nieddu2, Luisella Cianferotti3, Maria Luisa Brandi3, Salvatore Minisola4
1Internal Medicine And Medical Disciplines, Sapienza University of Rome, Rome/ITALY, 2Faculty Of Economics, UNINT University, Rome/ITALY, 3Surgery And Translational Medicine, University of Florence, Florence/ITALY, 4Internal Medicine And Medical Disciplines, Sapienza University, Rome/ITALY

P-HORM-8 THE WNK-SPAK PATHWAY REGULATES FGF23 SECRETION IN OSTEOBLASTS
Olena Andrukhova1, Sibel Ada1, Ute Zeitz1, Dario Alessi2, Reinhold G. Erben1
P-HORM-9  THE VITAMIN D HORMONE IS A POSTTRANSLATIONAL REGULATOR OF FGF23 SECRETION
Jessica Bayer, Sathish K. Murali, Olena Andrukhova, Reinhold G. Erben
Department Of Biomedical Sciences, University of Veterinary Medicine, Vienna/AUSTRIA

P-HORM-10  OXIDATION OF PTH: IN VIVO FEATURE OR EFFECT OF PRE-ANALYTICAL CONDITIONS?
Stan Ursem¹, Marc Vervloet², Jacquelen Hillebrand³, Renate De Jongh⁴, Annemieke C. Heijboer¹
¹Clinical Chemistry, Laboratory Of Endocrinology, VU University Medical Center, Amsterdam/NETHERLANDS, ²Nephrology, VU University Medical Center, Amsterdam/NETHERLANDS, ³Clinical Chemistry, Laboratory Of Endocrinology, Academic Medical Center, Amsterdam/NETHERLANDS, ⁴Internal Medicine, Endocrine Section, VU University Medical Center, Amsterdam/NETHERLANDS

P-HORM-11  EFFECTS OF IN VIVO AXIAL MECHANICAL LOADING IN VITAMIN D DEFICIENT AND ESTROGEN DEFICIENT RATS ON MRNA EXPRESSION OF BONE REGULATORY GENES
Ashwini K. Nepal¹, Huib Van Essen¹, Albert Van Der Veen², Wessel Van Wieringen³, Andrea Stavenuiter⁴, Gerard Pals⁵, Dirk Vanderschueren⁶, Paul Lips⁷, Nathalie Bravenboer¹
¹Clinical Chemistry, VU University Medical Center, Amsterdam/NETHERLANDS, ²Physics And Medical Technology, VU University Medical Center, Amsterdam/NETHERLANDS, ³Department Of Epidemiology And Biostatistics, VU University Medical Center, Amsterdam/NETHERLANDS, ⁴Department Of Molecular Cell Biology, VU University Medical Center, Amsterdam/NETHERLANDS, ⁵Clinical Genetics, VU University Medical Center, Amsterdam/NETHERLANDS, ⁶Department Of Clinical And Experimental Endocrinology, KU Leuven, Leuven/BELGIUM, ⁷Internal Medicine, VU University Medical Center, Amsterdam/NETHERLANDS

P-HORM-12  PHARMACOKINETICS OF TRANSCON PTH, A SUSTAINED-RELEASE PTH PRODRUG FOR HYPOPARATHYROIDISM, IN RAT AND CYNOMOLGUS MONKEY
Vibeke M. Breinholt¹, Susanne Pihl¹, Joachim Zettler², Mathias Krusch³, Caroline Rasmussen¹, Lars Holten-Andersen¹, Felix Cleemann², Kennett Sprogøe⁴
P-HORM-13 INCREASED SYSTOLIC BLOOD PRESSURE IN WOMEN WITH PRIMARY HYPERPARATHYROIDISM: A CROSS SECTIONAL STUDY
Henriette Ejlsmark-Svensson¹, Lars Rolighed², Esben Laugesen³, Lars Rejnmark³
¹Endocrinology And Internal Medicine, Aarhus University Hospital, Aarhus/DENMARK, ²Oto-rhino-laryngologi, Aarhus University Hospital, Aarhus C/DENMARK, ³Endocrinology And Internal Medicine, Aarhus University Hospital, Aarhus C/DENMARK

P-HORM-14 ENPP1 PLAYS A ROLE IN REGULATING VASCULAR CALCIFICATION UNDER PHOSPHATE OVERLOAD CONDITION
Ryuichi Watanabe, Takeshi Miyamoto, Morio Matsumoto, Masaya Nakamura
Orthopedic Surgery, Keio University School of Medicine, Tokyo/JAPAN

Energy metabolism and bone, fat and bone, diabetes

P-MEFG-1 DIABETES MELLITUS IS A STATE OF LOW BONE TURNOVER – A META-ANALYSIS
Katrine Hygum¹, Jakob Starup-Linde¹, Torben Harsløf¹, Peter Vestergaard², Bente L. Langdahl¹
¹Department Of Endocrinology And Internal Medicine, Aarhus University Hospital, Aarhus C/DENMARK, 23) departments Of Clinical Medicine And Endocrinology, Aalborg University Hospital, Aalborg/DENMARK

P-MEFG-2 SARCOPENIA AND SARCOPENIC OBESITY ASSOCIATED WITH METABOLIC SYNDROME
Woong H. Choi¹, Sang M. Hong²
¹Endocrinometabolism, HANYANG UNIVERSITY. COLLEGE OF MEDICINE., SEOUL/REPUBLIC OF KOREA, ²Endocrinometabolism, Hanleem University. College of Medicine, HWASUNG/REPUBLIC OF KOREA

P-MEFG-3 IRISIN STIMULATES AEROBIC GLYCOLYSIS PREFERENTIALLY FOR PROLIFERATION AND ENHANCES BOTH AEROBIC GLYCOLYSIS AND OXPHOS DURING OSTEOBLAST DIFFERENTIATION
Sung-Kil Lim¹, Dong Dong Zhang¹, Hoon Choi²
P-MEFG-4  A META-ANALYSIS OF THE RISK OF ANKLE AND WRIST FRACTURES DIABETES
Tatiane Vilaca¹, Jennifer Walsh², Richard Eastell²
¹Metabolic Bone Centre, Northern General Hospital, Sheffield/UNITED KINGDOM, ²Department Of Oncology And Metabolism, Academic Unit of Bone Metabolism - The University of Sheffield, Sheffield/UNITED KINGDOM

P-MEFG-5  COLD STRESS ENHANCES NGF MRNA LEVEL IN BROWN FAT AND REGULATES BDNF AND OSTEOCALCIN MRNA IN BONE AND BRAIN OF MICE
Claudia Camerino¹, Elena Conte², Adriano Fonzino², Kejla Musaraj², Roberta Caloiero², Domenico Tricarico²
¹Department Of Biomedical Sciences & Human Oncology, University of Bari, Bari/ITALY, ²Department Of Pharmacy-drug Sciences, University of Bari, Bari/ITALY

P-MEFG-6  BONE AND GLUCOSE METABOLISM ARE ASSOCIATED WITH BODY SIZE AND COMPOSITION AS WELL AS HORMONAL PARAMETERS IN A LARGE COHORT OF VOLUNTEERS
Christoph W. Haudum¹, Julia Münzker², Ewald Kolesnik³, Norbert Tripolt², Ines Foessl², Albrecht Schmidt³, Thomas R. Pieber², Barbara Obermayer-Pietsch²
¹Division Of Endocrinology And Diabetology, Medical University Graz, Graz/AUSTRIA, ²Division Of Endocrinology And Diabetology, Medical University of Graz, Graz/AUSTRIA, ³Internal Medicine - Div. Of Cardiology, Medical University of Graz, Graz/AUSTRIA

P-MEFG-7  BONE STATUS IN CORRELATION TO BMP-9, IL-6 AND ADIPONECTIN IN DIABETES MELLITUS TYPE 2
Olga Cvijanovic Peloza¹, Nenad Bicanic², Zeljka Crnecvic Orlic², Diana Mance³, Tanja Čelić¹, Sanja Zoricic Cvek¹, Sanja Klobucar Majanovic², Dragica Bobinac¹
¹Department Of Anatomy, Medical Faculty of the University of Rijeka, Rijeka/CROATIA, ²Department Of Endocrinology, Diabetes And Metabolic Diseases, Clinical Hospital Rijeka, Rijeka/CROATIA, ³Department Of Physics, University of Rijeka, Rijeka/CROATIA

P-MEFG-8  GPRC6A IS NOT DIRECTLY INVOLVED IN ERK- AND AKT-MEDIATED OSTEOCALCIN SIGNALING IN HUMAN PANCREATIC β-CELLS
P-MEFG-9  
**APOA-1 DEFICIENCY RESULTS IN INCREASED WHITE ADIPOSITY AND REDUCED BROWN-LIKE PHENOTYPE IN THE BONE MARROW OF MICE**  
Afroditi D. Kastrenopoulou¹, Nicholaos I. Papachristou¹, Ioanna Papadimitriou Olivgeri¹, Christos Avdulla¹, Spyridon A. Syggelos¹, Harry C. Blair², Kyriakos E. Kypreos³, Dionysios J. Papachristou¹  
¹Department Of Anatomy-histology-embryology, University of Patras, Rion, Patras/GREECE, ²Department Of Pathology, University of Pittsburgh, Pittsburgh/PA/UNITED STATES OF AMERICA, ³Department Of Pharmacology, University of Patras, Rion, Patras/GREECE

P-MEFG-10  
**T2D PARTICIPANTS HAVE LOWER PREVALENCE OF MODERATE AND SEVERE VERTEBRAL FRACTURES: A META-ANALYSIS OF POPULATION BASED STUDIES**  
Fjorda Koromani¹, Taulant Muka², Josie Schoufour², Ling Oei², Carola Zillikens³, Oscar Franco², Andre G. Uitterlinden⁴, Edwin H.G. Oei⁵, Olivier Lamy⁶, Berengere Aubry- Rozier⁷, Didier Hans⁸, Fernando Rivadeneira⁴  
¹Radiology, Erasmus MC, Rotterdam/NETHERLANDS, ²Epidemiology, Erasmus MC, Rotterdam/NETHERLANDS, ³Internal Medicine, Endocrinology, Erasmus Medical Centre, Rotterdam/NETHERLANDS, ⁴Internal Medicine, Erasmus MC, Rotterdam/NETHERLANDS, ⁵Department Of Radiology & Nuclear Medicine, ErasmusMC, Rotterdam/NETHERLANDS, ⁶Center Of Bone Diseases - Rhu Dal, Lausanne University Hospital - CHUV, Lausanne/SWITZERLAND, ⁷Center Of Bone Diseases, Lausanne University Hospital, Lausanne/SWITZERLAND, ⁸Center Of Bone Diseases - Rhu-dal, Lausanne University Hospital - CHUV, Lausanne/SWITZERLAND

P-MEFG-11  
**CFOS OVER-EXPRESSION CAUSES A TUMOR–INDEPENDENT LIPODYSTROPHY**  
Julia Luther¹, Stephanie Peters², Christina Baldauf¹, Michael Amling¹, Thorsten Schinke³, Jean-Pierre David¹  
¹Institute For Osteology And Biomechanics (iobm), University Medical Center Hamburg-Eppendorf, Hamburg/GERMANY, ²Osteology And Biomechanics, University Medical Center Hamburg-Eppendorf, Hamburg/GERMANY

P-MEFG-12  
**THE INTERRELATION BETWEEN FGF23 AND GLUCOSE METABOLISM IN HUMANS**  
Stan Ursem¹, Marc Vervloet², Rahel Büttler¹, Susanne La Fleur², Mariëtte
Ackermans⁴, Mirjam Oosterwerff⁵, Marelise Eekhoff⁵, Paul Lips⁵, Annemieke C. Heijboer¹
¹Clinical Chemistry, Laboratory Of Endocrinology, VU University Medical Center, Amsterdam/NETHERLANDS, ²Nephrology, VU University Medical Center, Amsterdam/NETHERLANDS, ³Endocrinology And Metabolism, Academic Medical Center, Amsterdam/NETHERLANDS, ⁴Clinical Chemistry, Laboratory Of Endocrinology, Academic Medical Center, Amsterdam/NETHERLANDS, ⁵Internal Medicine, Endocrine Section, VU University Medical Center, Amsterdam/NETHERLANDS

P-MEFG-13 ACTIN DEPOLYMERIZATION ENHANCES ADIPOCYTIC DIFFERENTIATION OF HUMAN STROMAL (SKELETAL) STEM CELLS
Li Chen¹, Huimin Hu¹, Weimin Qiu¹, Kaikai Shi¹, Moustapha Kassem²
¹Molecular Endocrinology & Stem Cell Research Unit (kmeb), Department Of Endocrinology And Metabolism, Odense University Hospital, Odense/DENMARK, ²Kmeb, The Department Of Endocrinology, University of Southern Denmark, Odense/DENMARK

P-MEFG-14 HUMAN GUT MICROBIOTA INFLUENCES FAT AND LEAN MASS FRACTIONS AT SCHOOL AGE: THE GENERATION R STUDY
Maria C. Medina Gomez¹, Djawad Radjabzadeh², Cindy G. Boer², Joyce Van Meurs², Robert Kraaij², Fernando Rivadeneira², Andre G. Uitterlinden²
¹Generation R Study, ErasmusMC, ROTTERDAM/NETHERLANDS, ²Internal Medicine, Erasmus MC, Rotterdam/NETHERLANDS

P-MEFG-15 This abstract has been withdrawn.

Nutrition

P-NUTR-1 ALTERATION OF CARTILAGE AND SUBCHONDRAL BONE (OSTEOARTHRITIS LIKE) INDUCED BY PROTEIN MALNUTRITION IS TREATED BY NUTRITIONAL ESSENTIAL AMINO ACIDS SUPPLEMENTS
Cedric Lavet, Patrick Ammann
Bone Diseases Division, Geneva University Hospitals, Geneva/SWITZERLAND

P-NUTR-2 INVOLVEMENT OF LUMINAL ALIPHATIC AMINO ACIDS AND NA+/H+ EXCHANGER 3 IN THE DUODENAL CALCIUM ABSORPTION
Narattaphol Charoenphandhu¹, Nithipak Thammayon¹, Kannikar Wongdee²
¹Department Of Physiology, Faculty of Science, Mahidol University, Bangkok/THAILAND, ²Department Of Biomedical Sciences, Faculty of Allied Health Sciences, Burapha University, Chonburi/THAILAND
P-NUTR-3 MAY CALCIUM ABSORPTION EFFECTIVENESS OF PREBIOTICS BE AFFECTED BY THE NUTRITIONAL STATUS OF VITAMIN D?
Mariana Seijo1, Francisco Duran1, Gabriel Bryk1, Maria Luz De Portela2, Susana N. Zeni3
1Inigem(uba-conicet), Metabolic Osteopaties Lab., CABA/ARGENTINA, 2Nutrition, Biochemistry and Pharmacy School, CABA/ARGENTINA, 3Oral And Biochemical Dept., Dentistry School. UBA, CABA/ARGENTINA

P-NUTR-4 4-HYDROXYDERRICIN INHIBITS OSTEOCLAST FORMATION WITH ATTENUATION OF EXPRESSION OF RANKL MRNA
Hiromi Hagiwara1, Kyoko Nakata1, Rieko Aida1, Kaoru Yoshida1, Hitoshi Miyazaki2
1Biomedical Engineering, Toin University of Yokohama, Yokohama/JAPAN, 2Life And Environmental Sciences, University of Tsukuba, Tsukuba/JAPAN

P-NUTR-5 CURCUMIN DID NOT AFFECT THE SKELETAL SYSTEM IN MALE RATS WITH STREPTOZOTOCIN-INDUCED DIABETES
Patrycja Sołtysiak, Maria Pytlik, Urszula Cegieła, Aleksandra Janas, Joanna Folwarczna
Department Of Pharmacology, School Of Pharmacy With The Division Of Laboratory Medicine In Sosnowiec, Medical University of Silesia, Katowice, Sosnowiec/POLAND

P-NUTR-6 SYSTEMATIC SCREENING FOR ENVIRONMENTAL AND BEHAVIORAL DETERMINANTS IDENTIFIES FACTORS DETRIMENTAL TO SKELETAL HEALTH
Ling Oei1, Joy Y. Wu2, Edwin H.g. Oei3, Fernando Rivadeneira4, Andre G. Uitterlinden4, J. P. Ioannidis5, Michael Snyder1, Chirag J. Patel6
1Department Of Genetics, Stanford University School of Medicine, Stanford/CA/UNITED STATES OF AMERICA, 2Division Of Endocrinology, Stanford University School of Medicine, Stanford/CA/UNITED STATES OF AMERICA, 3Radiology & Nuclear Medicine, Erasmus MC, Rotterdam/NETHERLANDS, 4Internal Medicine, Erasmus MC, Rotterdam/NETHERLANDS, 5Stanford Prevention Research Center, Stanford University School of Medicine, California/CA/UNITED STATES OF AMERICA, 6Department Of Biomedical Informatics, Harvard Medical School, Boston/UNITED STATES OF AMERICA

P-NUTR-7 RELATIONSHIP BETWEEN PHYSICAL ACTIVITY, DIETARY QUALITY AND HEALTH-RELATED QUALITY OF LIFE IN KOREAN ELDERLY WOMEN
Hee-Sook Lim1, Tae-Hee Kim2, Dong Won Byun3, Hae-Hyeog Lee2, Seong-Rae Yeom2, Yesol Kim4
P-NUTR-8  LACTOFERRIN PREVENTS BONE LOSS DURING MODERATE PROTEIN RESTRICTION IN OVARIECTOMIZED MICE
Anne Blais, Patrick C. Even, Daniel Tome
Umr Pnca, Agroparistech, Inra, Université Paris-Saclay, Paris/FRANCE

P-NUTR-9  SODIUM BUTYRATE INDUCES THE EXPRESSION OF A DIFFERENTIATED AND ANTI-INFLAMMATORY PHENOTYPE IN HUMAN OSTEOSARCOMA CELLS, IN VITRO
Silvia Perego, Veronica Sansoni, Giuseppe Banfi, Giovanni Lombardi
Laboratory Of Experimental Biochemistry & Molecular Biology, I.R.C.C.S. Istituto Ortopedico Galeazzi, Milano/ITALY

P-NUTR-10 MICRORNA SIGNATURES IN VITAMIN D METABOLISM
Sebastian Sonntagbauer, Roswitha Gumpold, Elisabeth Lerchbaum, Thomas R. Pieber, Julia Muenzker, Barbara Obermayer-Pietsch
Division Of Endocrinology And Diabetology, Medical University of Graz, Graz/AUSTRIA

P-NUTR-11 THE ASSOCIATION BETWEEN DIETARY PROTEIN INTAKE, DIETARY QUALITY AND PHYSICAL FRAILTY
Josje D. Schoufour¹, Trudy Voortman¹, Jessica C. Kieft-De Jong¹, Bruno Stricker², Guy Brusselle¹, Fernando Rivadeneira², Lies Lahousse¹, Oscar Franco¹
¹Epidemiology, Erasmus MC, Rotterdam/NETHERLANDS, ²Internal Medicine, Erasmus MC, Rotterdam/NETHERLANDS

P-NUTR-12 DIETARY QUALITY AND CHANGES IN BODY COMPOSITION IN AN ELDERLY POPULATION
Josje D. Schoufour¹, Katerina Trajanoska², Trudy Voortman¹, Jessica C. Kieft-De Jong¹, Oscar Franco¹, Fernando Rivadeneira¹
¹Epidemiology, Erasmus MC, Rotterdam/NETHERLANDS, ²Internal Medicine, Erasmus Medical Centar, Rotterdam/NETHERLANDS

Muscle, clinical studies, physical activity and bone

P-MUSC-1  THE ASSOCIATION BETWEEN SARCOPENIA AND OSTEOPENIA OR

OSTEOPOROSIS IN PATIENTS WITH CHRONIC RENAL DISEASE
Daniela Monova¹, Simeon Monov², Maria Ivanova³, Milena Todorova²
¹Department Of Internal Medicine, Medical University - Sofia, Medical Institute, Sofia/BULGARIA, ²Clinic Of Rheumatology, Department Of Internal Medicine, Medical University - Sofia, Sofia/BULGARIA, ³Department Of Internal Medicine, Medical Institute, Sofia/BULGARIA

P-MUSC-2 MUSCLE FORCE HAS GREATER EFFECTS ON TIBIAL BONE STRENGTH IN GAMBIAN WOMEN COMPARED TO MEN
Ayse Zengin¹, Ann Prentice², Landing M. Jargou³, Mustapha Ceesay³, Michael Mendy⁵, Peter R. Ebeling¹, Kate A. Ward⁴
¹Department Of Medicine, School Of Clinical Sciences At Monash Health, Faculty Of Medicine, Nursing And Health Sciences, Monash University, Clayton/VIC/AUSTRAILIA, ²Calcium, Vitamin D And Bone Health, Medical Research Council Unit The Gambia, Keneba/GAMBIA, ³Calcium, Vitamin D And Bone Health, Medical Research Council Unit The Gambia, Keneba/GAMBIA, ⁴University Of Southampton, MRC Lifecourse Epidemiology, Southampton/UNITED KINGDOM

P-MUSC-3 MUSCLE STRENGTH AND LEAN TISSUE MASS ARE POSITIVELY ASSOCIATED WITH BONE MINERAL DENSITY (BMD)
Anne Kristine Amstrup, Niels Frederik B. Jakobsen, Emil Moser, Tanja Sikjaer, Leif Mosekilde, Lars Rejnmark
Mea, Aarhus University Hospital, Aarhus C/DENMARK

P-MUSC-4 LASER MICRO-DISSECTION ON HARD TISSUE: WHAT TO OPTIMIZE AND HOW?
Deeksha Malhan¹, Christian Heiss², Thaqif El Khassawna¹
¹Faculty Of Medicine, Justus-liebig University Of Giessen, Institute for Experimental Trauma Surgery, Giessen/GERMANY, ²University Hospital Of Giessen-Marburg, Department of Trauma, Hand and Reconstructive Surgery, Giessen/GERMANY

P-MUSC-5 VITAMIN D STATUS AND FUNCTIONAL CAPACITY IN NON-EUROPEAN IMMIGRANTS AND ETHNIC SWEDES IN PRIMARY HEALTHCARE
Helena S. Salminen¹, Marina Taloyan², Per Wandell²
¹Department Of Neurobiology, Care Sciences And Society, Karolinska Institutet, Huddinge/SWEDEH, ²Neurobiology, Care Sciences And Society, Karolinska Institutet, Huddinge/SWEDEH

P-MUSC-6 FEEDING AFTER OVERNIGHT FAST POTENTIATES BONE’S RESPONSE TO MECHANICAL LOADING IN MICE
Hasmik J. Samvelyan¹, John C. Mathers², Tim M. Skerry¹
¹Oncology And Metabolism, The University of Sheffield, Sheffield/
SUPPLEMENTATION WITH VITAMIN D – A QUESTION OF STARTING POINT AND DOSE: RESULTS FROM A CONTROLLED CLINICAL TRIAL AMONG IMMIGRANTS

Lena Granlund¹, Margareta Norberg², Anna Ramnemark³, Christer Andersson⁴, Marie Lindkvist⁵, Eva Fhärm⁴
¹Department Of Public Health And Clinical Medicine, Family Medicine, Umeå University, Umeå/SWEDEN, ²Department Of Public Health And Clinical Medicine, Epidemiology And Global Health, Umeå University, Umeå/SWEDEN, ³Department Of Community Medicine And Rehabilitation, Geriatric Medicine., Umeå University, Umeå/SWEDEN, ⁴Department Of Public Health And Clinical Medicine, Family Medicine., Umeå University, Umeå/SWEDEN, ⁵Department Of Public Health And Clinical Medicine, Epidemiology And Global Health., Umeå University, Umeå/SWEDEN

ASSOCIATIONS BETWEEN VITAMIN D DEFICIENCY, LOWER LIMB MUSCLE STRENGTH AND GRIP STRENGTH IN AN IMMIGRANT POPULATION IN NORTHERN SWEDEN

Lena Granlund¹, Margareta Norberg², Anna Ramnemark³, Christer Andersson⁴, Marie Lindkvist⁵, Eva Fhärm⁴
¹Department Of Public Health And Clinical Medicine, Family Medicine, Umeå University, Umeå/SWEDEN, ²Department Of Public Health And Clinical Medicine, Epidemiology And Global Health, Umeå University, Umeå/SWEDEN, ³Department Of Community Medicine And Rehabilitation, Geriatric Medicine., Umeå University, Umeå/SWEDEN, ⁴Department Of Public Health And Clinical Medicine, Family Medicine., Umeå University, Umeå/SWEDEN, ⁵Department Of Public Health And Clinical Medicine, Epidemiology And Global Health., Umeå University, Umeå/SWEDEN

DIFFERENCE IN THE RELATIVE CONTRIBUTION OF BODY COMPOSITION ANALYSIS TO BMD AND LIPID PROFILE WITH GENERATION IN KOREAN WOMEN

Ji Young Lee¹, Dong Ock Lee², Hyojin Lee¹, Young Hee Hong¹
¹Obstetrics And Gynecology, Konkuk University Hospital, Seoul/REPUBLIC OF KOREA, ²Center For Cancer Prevention And Detection, National Cancer Center, Goyang/REPUBLIC OF KOREA

PARTICIPATION IN A 8-WEEK REPEATED SPRINT TRAINING PROTOCOL AFFECT THE CIRCULATING PROFILE OF A PANEL OF FRACTURE-RISK ASSOCIATED MiRNAs IN YOUNG MALES
Giovanni Lombardi1, Veronica Sansoni1, Silvia Pero2, Gianluca Vernillo3, Giampiero Merati4, Andrea Barbuni5, Antonio La Torre6, Giuseppe Banfi1
1Laboratory Of Experimental Biochemistry & Molecular Biology, I.R.C.C.S.
Istituto Ortopedico Galeazzi, Milano/ITALY, 2Human Performance Lab, University of Calgary, Calgary/AB/CANADA, 3Department Of Biomedical Sciences For Health, University of Milano, Milano/ITALY, 4Department Of Biosciences, University of Milano, Milano/ITALY, 5Department Of Biomedical Science For Health, University of Milano, Milano/ITALY

P-MUSC-11 TREATMENT WITH R-IRISIN PROTECTS FROM BONE LOSS AND MUSCLE ATROPHY DURING UNLOADING
Graziana Colaianni1, Teresa Mongelli1, Concetta Cuscito1, Paolo Pignataro1, Luciana Lippo1, Giovanna Spior2, Ilenia Severi3, Giovanni Passeri4, Silvia Colucci1, Janne Reseland5, Roberto Vettor2, Saverio Cinti3, Maria Grano6
1Department Of Basic Medical Science, Neuroscience And Sense Organs, University of Bari, Bari/ITALY, 2Department Of Medicine-dimed, Internal Medicine 3, University of Padova, Padova/ITALY, 3Department Of Experimental And Clinical Medicine, University of Ancona, Ancona/ITALY, 4Department Of Clinical And Experimental Medicine, University of Parma, Parma/ITALY, 5Dept. Of Biomaterials, Faculty of Dentistry, University of Oslo, Oslo/NORWAY, 6Department Of Emergency And Organ Transplantation, University of Bari, Bari/ITALY

P-MUSC-12 CARPAL TUNNEL SYNDROME – ULTRASOUND-GUIDED TREATMENT WITH CORTICOSTEROIDS
Simeon Monov1, Russka Shumnalieva2
1Clinic Of Rheumatology, Department Of Internal Medicine, Medical University - Sofia, Sofia/BULGARIA, 2Department Of Internal Medicine, Medical University-Sofia, Bulgaria, Clinic Of Rheumatology, Sofia/BULGARIA

P-MUSC-13 A NEW SEGMENTATION TECHNIQUE TO OBTAIN MUSCLE FAT FRACTION FROM A COMBINED ANALYSIS OF T1 WEIGHTED AND 2PT DIXON IMAGES OF THE THIGH
Oliver Chaudry1, Andreas Friedberger1, Alexandra Grimm1, Marc Teschler1, Oleg Museyko1, Wolfgang Kemmler1, Klaus Engelke2
1Institute Of Medical Physics, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen/GERMANY, 2Institute Of Medical Physics, University of Erlangen-Nuremberg, Erlangen/GERMANY

P-MUSC-14 DIAGNOSTIC UTILITY OF THE HIGH RESOLUTION ULTRASONOGRAPHY IN CHONDROCALCINOSIS
Simeon Monov1, Rositsa Dacheva2, Russka Shumnalieva3
P-MUSC-15 BONE MINERAL DENSITY AND QUALITY, BODY COMPOSITION OF WOMEN IN POSTMENOPAUSAL PERIOD
Vladyslav Povoroznyuk\textsuperscript{1}, Oksana Ivanyk\textsuperscript{2}
\textsuperscript{1}D.f. Chebotarev Institute Of Gerontology Nams Ukraine, D.F. Chebotarev Institute of gerontology NAMS Ukraine, Kyiv/UKRAINE, \textsuperscript{2}Lviv Regional Clinical Hospital, Lviv Regional Clinical Hospital, Lviv/UKRAINE

P-MUSC-16 RELATIONSHIP BETWEEN KNEE EXTENSOR STRENGTH AND BONE MINERAL DENSITY IN POSTMENOPAUSAL WOMEN
Ileana Monica Borda, Laszlo Irsay, Viorela M. Ciortea, Ioan Onac, Rodica Ungur
Medical Rehabilitation, University of Medicine and Pharmacy, Cluj-Napoca/ROMANIA

P-MUSC-17 CLINICAL CORRELATES AND PREVALENCE OF SARCOPENIA AND OSTEOSARCOPENIA IN A POPULATION BASED COHORT
Katerina Trajanoska\textsuperscript{1}, Josje Schoufour\textsuperscript{2}, Sirwan K. Darweesh\textsuperscript{3}, Oscar Franco\textsuperscript{2}, Carola Zillikens\textsuperscript{4}, Andre G. Uitterlinden\textsuperscript{4}
\textsuperscript{1}Internal Medicine, Erasmus Medical Centar, Rotterdam/NETHERLANDS, \textsuperscript{2}Epidemiology, Erasmus MC, Rotterdam/NETHERLANDS, \textsuperscript{3}Epidemiology, Erasmus Medical Centar, Rotterdam/NETHERLANDS, \textsuperscript{4}Internal Medicine, Erasmus MC, Rotterdam/NETHERLANDS

P-MUSC-18 SIGNIFICANCE OF MUSCLE VOLUME & FATTY DEGENERATION OF LUMBAR PARASPINAL MUSCLE IN SPINAL IMBALANCE
Ye-Soo Park\textsuperscript{1}, Young-Hoon Kim\textsuperscript{2}, Jin-Sung Park\textsuperscript{1}, Jaewon Lee\textsuperscript{1}
\textsuperscript{1}Orthopaedic Surgery, Hanyang University Guri Hospital, Guri City/REPUBLIC OF KOREA, \textsuperscript{2}Orthopedic Surgery, Seoul St. Mary’s Hospital, The Catholic University of Korea, Seoul/REPUBLIC OF KOREA

P-MUSC-19 THE TRANSFORMATION OF MATURE OSTEOBLASTS INTO BONE LINING CELLS DURING BONE LOSS BY MECHANICAL UNLOADING
A Ram Hong\textsuperscript{1}, Jae-Youn Yang\textsuperscript{1}, Ji Hyun Lee\textsuperscript{2}, Jung Hee Kim\textsuperscript{2}, Chan Soo Shin\textsuperscript{2}, Sang Wan Kim\textsuperscript{3}
\textsuperscript{1}Biomedical Research Institute, Seoul National University Hospital, SEOUL/REPUBLIC OF KOREA, \textsuperscript{2}Internal Medicine, Seoul National University Hospital, SEOUL/REPUBLIC OF KOREA, \textsuperscript{3}Internal Medicine, Seoul National University College of Medicine and Boramae Hospital,
SEOUL/REPUBLIC OF KOREA

P-MUSC-20 THYROID FUNCTION IS ASSOCIATED WITH REDUCED HANDGRIP STRENGTH: RESULTS FROM THE FIFTH AND SIXTH KOREA NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY, 2014-2015
Sa Ra Lee1, Ji Hyun Jeon1, Kyung-Ah Jeong2, Hyewon Chung1, Hoon Choi2, Byung Moon Kang3
1Obstetrics And Gynecology, Ewha Womans University Mokdong Hospital, Seoul/REPUBLIC OF KOREA, 2Obstetrics And Gynecology, college of Medicine, InJe University, Seoul/REPUBLIC OF KOREA, 3Obstetrics And Gynecology, Ulsan Asan Medical Center, Seoul/REPUBLIC OF KOREA

P-MUSC-21 THE CLINICAL VALUE OF PERCUTANEOUS KYPHOPLASTY IN TREATING VERTEBRAL COMPRESSION FRACTURE OF BICONCAVE
Zheng Li, Jia Zhang
Department Of Orthopedics, Peking Union Medical College Hospital, Beijing/CHINA

Bone development/growth and fracture repair

P-BDEV-1 EFFECTS OF PROLYL HYDROXYLASE INHIBITOR-LOADED COLLAGEN MEMBRANES ON OSTEOCLASTOGENESIS AND OSTEOBLASTOGENESIS
Michael Edelmayer1, Diana Al-Habal2, Manuela Pensch1, Klara Janjic2, Hermann Agis2
1Department Of Oral Surgery, Medical University of Vienna, School of Dentistry, Vienna/AUSTRIA, 2Department Of Conservative Dentistry And Periodontology, Medical University of Vienna, School of Dentistry, Vienna/AUSTRIA

P-BDEV-2 STABILIN-1 IS DISPENSABLE FOR BONE DEVELOPMENT AND BONE CELL FUNCTION IN MICE
Soon-Young Kim1, Eun-Hye Lee2, Seung-Yoon Park3, Jungeun Kim1
1Molecular Medicine, Kyungpook National University School of Medicine, Daegu/REPUBLIC OF KOREA, 2Molecular Medicine, Cmri, Kyungpook National University School of Medicine, Daegu/REPUBLIC OF KOREA, 3Biochemistry, School of Medicine, Dongguk University, Gyeongju/REPUBLIC OF KOREA

P-BDEV-3 ESTROGEN STATUS IN MICE INFLUENCES THE EARLY INFLAMMATORY PHASE OF FRACTURE HEALING
Verena Fischer, Melanie Haffner-Luntzer, Katja Prystaz, Astrid Liedert,
Anita Ignatius  
Institute Of Orthopedic Research And Biomechanics, University Medical Center Ulm, Ulm/GERMANY  

P-BDEV-4 ACTIVATION OF PRO-APOPTOTIC CASPASES IN TOOTH AND ALVEOLAR BONE  
Barbora Vesela¹, Eva Svandova², Eva Matalova¹  
¹Faculty Of Veterinary Medicine, Department Of Physiology, University of Veterinary and Pharmaceutical Sciences Brno, Brno/CZECH REPUBLIC, ²Institute Of Animal Physiology And Genetics, Academy of Sciences of the Czech Republic, v.v.i., Brno/CZECH REPUBLIC  

P-BDEV-5 CHRONIC PSYCHOSOCIAL STRESS DISTURBS ENDOCHONDRAL OSSIFICATION  
Sandra Förtsch¹, Melanie Haffner-Luntzer², Jochen Kroner², Florian Gross², Stefan O. Reber¹, Anita Ignatius²  
¹Laboratory For Molecular Psychosomatics, University Medical Centre Ulm, Ulm/GERMANY, ²Institute Of Orthopedic Research And Biomechanics, University Medical Centre Ulm, Ulm/GERMANY  

P-BDEV-6 This abstract has been withdrawn.  

P-BDEV-7 THE IMPORTANCE OF MITOCHONDRIAL AND RIBOSOMAL GENES IN BONE HEALING  
Deeksha Malhan¹, Katharina Schmidt-Bleek², Georg N Duda³, Christian Heiss⁴, Thaqif El Khassawna¹  
¹Faculty Of Medicine, Justus-liebig University Of Giessen, Institute for Experimental Trauma Surgery, Giessen/GERMANY, ²Charité - Universitätsmedizin Berlin, Julius Wolff Institute and Center for Musculoskeletal Surgery, Berlin/GERMANY, ³Charité - Universitätsmedizin Berlin, Berlin Brandenburg Center for Regenerative Therapies (BCRT), Berlin/GERMANY, ⁴University Hospital Of Giessen-Marburg, Department of Trauma, Hand and Reconstructive Surgery, Giessen/GERMANY  

P-BDEV-8 BIOCOMPATIBILITY AND OSTEOCONDUCTIVE PROPERTIES OF A NEW BOVINE BONE GRAFT  
Gretel Pellegrini¹, Macarena Gonzalez-Chaves¹, Francisco Duran², Ricardo Orzuza², Susana Zeni²  
¹Bioquimica General Y Bucal, Facultad de Odontologia Universidad de Buenos Aires, CABA/ARGENTINA, ²Instituto De Genetica Y Metabolismo, Laboratorio De Osteopatias (inigem, Uba-conicet), Hospital de Clinicas Universidad de Buenos Aires, CABA/ARGENTINA
P-BDEV-9  CRISPR-CAS9 LRP5 KNOCK-OUT ZEBRAFISH AS A MODEL FOR DEVELOPMENTAL DISEASES OF BONE MASS
Ram Harari, Chen Shochat Carvalho, David Karasik
The Musculoskeletal Genetics Lab, Faculty Of Medicine In The Galilee, Bar-Ilan University, Safed/ISRAEL

P-BDEV-10  STRUCTURAL CHANGES OF BONE MATRIX AND EXTRA-CELLULAR MATRIX IN YOUNG AND OLD RATS
Diaa Eldin S. Daghma, Sabine Stötzel, Stefanie Kern, Deeksha Malhan, Christian Heiss, Thaqif El Khassawna
Institute For Experimental Trauma Surgery, Justus Liebig University of Giessen, Gießen/GERMANY

P-BDEV-11  MILK ACTIVATES TGF-β SIGNALING: POSSIBLE IMPLICATION IN CELLS OF THE ORAL CAVITY
Layla Panahipour¹, Mahnaz Shokr Imashadi¹, Martina Wiederstein¹, Heinz-Dieter Müller¹, Nadja Haiden², Reinhard Gruber¹
¹Department Of Oral Biology, Medical University of Vienna, Vienna/AUSTRIA, ²Department Of Paediatrics And Adolescent Medicine, Medical University of Vienna, Vienna/AUSTRIA

P-BDEV-12  THE EFFECT OF EARLY-ONSET TYPE 2 DIABETES MELLITUS ON THE DEVELOPMENT OF BONE SHAPE IN RATS
Graeme M. Campbell¹, Ann-Kristin Picke², Christine Hofbauer³, Björn Busse⁴, Lorenz C. Hofbauer⁵, Michael M. Morlock¹
¹Institute Of Biomechanics, Hamburg University of Technology, Hamburg/GERMANY, ²Division Of Endocrinology, Diabetes, And Bone Diseases, Department of Medicine III & Center for Healthy Aging, Technische Universität Dresden, Dresden/GERMANY, ³Department Of Orthopedics And Trauma Surgery, Technische Universität Dresden, Dresden/GERMANY, ⁴Department Of Osteology And Biomechanics, University Medical Center Hamburg-Eppendorf, Hamburg/GERMANY, ⁵Department Of Medicine Iii, Technical University, Dresden, Division of Endocrinology, Diabetes, and Bone Diseases, Dresden/GERMANY

P-BDEV-13  OPPOSING ROLE OF BMP-1 IN BONE FRACTURE REPAIR AND FIBROSIS
Lovorka Grgurevic¹, Igor Erjavec¹, Ivo Dumić Cule¹, Tatjana Bordukalo Niksic¹, Martina Pauk¹, Dragan Đurđević², Jelena Brkljacic¹, Vera Kufner¹, Mario Matijasic², Hana Cipcic Paljetak³, Slobodan Vukicevic¹
¹Center For Translational And Clinical Research, Laboratory For Mineralized Tissues, University of Zagreb School of Medicine, Zagreb/CROATIA, ²Trauma Clinic, Clinical Hospital „Sisters of Charity“, Zagreb/CROATIA, ³Center For Translational And Clinical Research, University of
P-BDEV-14  **OSTEOGROW - A BMP6 CONTAINING BONE GRAFT SUBSTITUTE IN DISTAL RADIUS FRACTURE CLINICAL TRIAL**
Lovorka Grisurevic1, Igor Erjavec1, Tatjana Bordukalo Niksic1, Martina Pau1, Mihaela Peric1, Dragan Durdevic2, Tomislav Vlahovic2, Sanja Pehar2, Slobodan Vukicevic1
1Center For Translational And Clinical Research, Laboratory For Mineralized Tissues, University of Zagreb School of Medicine, Zagreb/CROATIA, 2Trauma Clinic, Clinical Hospital „Sisters of Charity“, Zagreb/CROATIA

P-BDEV-15  **CHANGES IN BONE MASS AND SIZE IN MEN AFTER COMPLETION OF GROWTH ARE CHARACTERIZED BY LOSS OF TRABECULAR AND CORTICAL BONE MINERAL DENSITY BUT INCREASES IN CORTICAL BONE SIZE**
Charlotte Verroken1, Hans-Georg Zmierczak2, Stefan Goemaere2, Jean-Marc Kaufman1, Bruno Lapauw1
1Unit For Osteoporosis And Metabolic Bone Diseases, Department Of Endocrinology, Ghent University Hospital, Gent/BELGIUM, 2Unit For Osteoporosis And Metabolic Bone Diseases, Ghent University Hospital, Gent/BELGIUM

P-BDEV-16  **HIGHER SERUM LEVELS OF BONE TURNOVER MARKERS IN MEN ARE ASSOCIATED WITH A MORE RAPID DECLINE IN BONE MINERAL DENSITY DURING ADULTHOOD**
Charlotte Verroken1, Hans-Georg Zmierczak2, Stefan Goemaere2, Jean-Marc Kaufman1, Bruno Lapauw1
1Unit For Osteoporosis And Metabolic Bone Diseases, Department Of Endocrinology, Ghent University Hospital, Gent/BELGIUM, 2Unit For Osteoporosis And Metabolic Bone Diseases, Ghent University Hospital, Gent/BELGIUM

P-BDEV-17  **TRANSCon CNP, A LONG-ACTING C-TYPE NATRIURETIC PEPTIDE ANALOGUE, FOR THE TREATMENT OF ACHONDROPLASIA**
Vibeke M. Breinholt1, Caroline Rasmussen1, Ulrich Hersel2, Thomas Wegge2, Frank Faltinger2, Per H. Mygind1, Kennett Sprogøe3
1Nonclinical Development & Bioanalysis, Ascendis Pharma A/S, Hellerup/DENMARK, 2R&d Department, Ascendis Pharma GmbH, Heidelberg/GERMANY, 3Product Innovation, Ascendis Pharma A/S, Hellerup/DENMARK

P-BDEV-18  **CORRELATION OF FEMUR MICROARCHITECTURE BY QCT AND HISTOMORPHOLOGY IN MICE OF DIFFERENT AGES**
Ahsan Raza¹, Kai Busch¹, Bram C.j. Van Der Eerden², Veit Flockerzi¹
¹Experimentelle Und Klinische Pharmakologie Und Toxikologie, Universität des Saarlandes, Homburg/GERMANY, ²Laboratory For Calcium And Bone Metabolism, Department Of Internal Medicine, Erasmus MC, Rotterdam/NETHERLANDS

**P-BDEV-19** TUMOUR NECROSIS FACTOR-ALPHA EXPRESSION IS ENHANCED BY WHOLE BODY VIBRATION TREATMENT IN OSTEOPOROTIC RAT FRACTURE

Yu Ning Chim, Kwok-Sui Leung, Simon Kwoon-Ho Chow, Wing-Hoi Cheung
Orthopaedics And Traumatology, The Chinese University of Hong Kong, Hong Kong/HONG KONG PRC

**P-BDEV-20** HUMAN FETAL MESENCHYMAL STEM CELL SECRETOME ENHANCES BONE CONSOLIDATION IN DISTRACTION OSTEOGENESIS

Gang Li¹, Jia Xu², Bin Wang¹, Yimin Chai²
¹Department Of Orthopaedics And Traumatology, The Chinese University Of Hong Kong, Shatin/HONG KONG PRC, ²Orthopaedics And Traumatology, Shanghai Jiaotong University People's Hospital, Shanghai/CHINA

**P-BDEV-21** CO-EXISTING SARCOPENIA AND OSTEOPOROTIC FRACTURE HEALING OF SENESCENCE ACCELERATED MOUSE ENHANCED BY LOW-MAGNITUDE HIGH-FREQUENCY VIBRATION

Ning Zhang, Kwok-Sui Leung, Simon Kwoon-Ho Chow, Wing-Hoi Cheung
Department Of Orthopaedics & Traumatology, The Chinese University Of Hong Kong, Hong Kong/HONG KONG PRC

**P-BDEV-22** LOCALLY ADMINISTRATION OF STAPHYLOCOCCAL ENTEROTOXIN C2 (SEC2) INJECTION ACCELERATES FRACTURE HEALING

Gang Li¹, Tianyi Wu², Jia Xu³
¹Department Of Orthopaedics And Traumatology, The Chinese University Of Hong Kong, Shatin/HONG KONG PRC, ²Orthopaedics And Traumatology, Shanghai Jiaotong University 6th People's Hospital, Shanghai/CHINA

**P-BDEV-23** TREATMENT IN ADJACENT VERTEBRAL COMPRESSION FRACTURE AFTER SPINE FUSION: A STUDY INVOLVED 21 PATIENTS AND MORE THAN ONE-YEAR FOLLOW UP

Wei Zhu¹, Bingchuan Liu², Yun Tian³, Jia Zhang³
¹Department Of Orthopaedics, Peking Union Medical College Hospital, Beijing/CHINA, ²Department Of Orthopedics, Peking University Third
Paediatric bone disease

P-PEDI-1 CONSERVATIVE MANAGEMENT OF METABOLIC DERANGEMENTS IN OSSEOUS TISSUE AMONG PATIENTS WITH VITAMIN D-DEPENDENT RICKETS TYPE 2
Stepan Martsyniak, Tamara Kinchaya- Polishchuk
National Academy Of Medical Sciences Of Ukraine, STATE INSTITUTION “INSTITUTE OF TRAUMATOLOGY AND ORTHOPEDICS”, Kyiv/UKRAINE

P-PEDI-2 A RANDOMIZED CONTROLLED PITOL TRIAL ASSESSING THE EFFECT OF WHOLE BODY VIBRATION TRAINING ON BONE AND MUSCLE FUNCTION IN CHILDREN WITH OSTEOGENESIS IMPERFECTA AND LIMITED MOBILITY
Wolfgang Hogler1, Nick Bishop2, Paul Arundel2, Janis Scott1, Zulf M. Mughal3, Raja Padidela4, Peter Nightingale4, Nick J. Shaw1, Nicola J. Crabtree1
1Department Of Endocrinology And Diabetes, Birmingham Children’s Hospital, Birmingham/UNITED KINGDOM, 2Academic Unit Of Child Health, Sheffield Children’s Hospital, Sheffield/UNITED KINGDOM, 3Department Of Endocrinology, Royal Manchester Children’s Hospital, Manchester/UNITED KINGDOM, 4Wellcome Trust Clinical Research Facility, University Hospital Birmingham, Birmingham/UNITED KINGDOM

P-PEDI-3 A RANDOMIZED, OPEN-LABEL PHASE 2 STUDY OF KRN23, AN INVESTIGATIONAL FULLY HUMAN ANTI-FGF23 MONOCLONAL ANTIBODY, IN CHILDREN WITH X-LINKED HYPOPHOSPHATEMIA (XLH): 64-WEEK RESULTS
Wolfgang Hogler1, Anthony Portale2, Erik Imel3, Annemieke Boot4, Agnès Linglart5, Raja Padidela6, William Van’T Hoff7, Michael P. Whyte8, Meng Mao9, Alison Skrinar9, Javier San Martin9, Thomas Carpenter10
1Department Of Endocrinology And Diabetes, Birmingham Children’s Hospital, Birmingham/UNITED KINGDOM, 2Ucsf School Of Medicine, University of California, San Francisco, San Francisco/CA/UNITED STATES OF AMERICA, 3School Of Medicine, Indiana University School of Medicine, Indianapolis/IN/UNITED STATES OF AMERICA, 4Faculty Of Medical Sciences, University of Groningen, Groningen/NETHERLANDS, 5Pediatric Endocrinology, Hôpital Bicêtre, Le Kremlin-Bicêtre/FRANCE, 6Department Of Endocrinology, Royal Manchester Children’s Hospital, Manchester/UNITED KINGDOM, 7Nephrology, Great Ormond Street Hospital, London/UNITED KINGDOM, 8Center For Metabolic Bone Research, Boston Children’s Hospital, Boston/MA/UNITED STATES OF AMERICA, 9Division Of Endocrinology, Department Of Pediatrics, Cincinnati Children’s Hospital Medical Center, Cincinnati/OH/UNITED STATES OF AMERICA, 10Center For Molecular Medicine, University Medical Center, Mainz/GERMANY
Disease And Molecular Research, Shriners Hospital for Children, St. Louis/MO/UNITED STATES OF AMERICA, 9Ultragenyx, Ultragenyx Pharmaceutical Inc., Novato/CA/UNITED STATES OF AMERICA, 10School Of Medicine, Yale University, New Haven/CT/UNITED STATES OF AMERICA

P-PEDI-4 BONE MATRIX HYPERMINERALIZATION AND INCREASED OSTEOCYTE LACUNAE DENSITY IN PATIENTS WITH OSTEOGENESIS IMPERFECTA TYPE V
Stéphane Blouin1, Nadja Fratzl-Zelman2, Francis H. Glorieux3, Paul Roschger4, Klaus Klaushofer6, Joan C. Marini5, Frank Rauch3
11st Medical Department Hanusch Hospital, Ludwig Boltzmann Institute of Osteology at the Hanusch Hospital of WGKK and AUVA Trauma Centre Meidling, Vienna/AUSTRIA, 21st Medical Department Hanusch Hospital, Ludwig Boltzmann Institute of Osteology, Vienna/AUSTRIA, 3Department Of Pediatrics, Shriners Hospital for Children, Montreal/QC/CANADA, 41st Med. Dept. Hanusch Hospital, Ludwig Boltzmann Institute of Osteology at Hanusch Hospital of WGKK and AUVA Trauma Centre Meidling, Vienna/AUSTRIA, 5Section On Heritable Disorders Of Bone And Extracellular Matrix, National Institutes of Health, Bethesda/MD/UNITED STATES OF AMERICA

P-PEDI-5 CONGENITAL INSENSITIVITY TO PAIN SYNDROME (CIPA): TRY TO PREVENT SEVERE COMPLICATIONS OR JUST TREAT THEM?
Olaia Fernandez1, F.Javier Humayor2, M.Luz Garcia1, Eva Galindez1, M. Esther Ruiz1, Íñaki Torre1, Ana Inxtaurbe1, Lidia Estopiñan1, Juan M. Blanco1, Natalia Rivera1, Clara Perez1, Catalina Gomez1, Edurne Guerrero1, Itziar Zorrilla1, Oihane Ibarguengoitia1
1Rheumatology, Basurto University Hospital, Bilbao/SPAIN, 2Paediatric, Basurto University Hospital, Bilbao/SPAIN

P-PEDI-6 A STUDY ON BONE REMODELING DEFECTS IN CYSTINOSIS
Giulia Battafarano1, Michela Rossi1, Gianna Di Giovamberardino2, Anna Pastore3, Anna Taranta4, Andrea Del Fattore5
1Multifactorial Disease And Complex Phenotype Research Area, Bambino Gesù Children’s Hospital, IRCCS, Rome/ITALY, 2Biochemistry Laboratory, Bambino Gesù Children’s Hospital, IRCCS, Rome/ITALY, 3Metabolomics And Proteomics Unit, Bambino Gesù Children’s Hospital, IRCCS, Rome/ITALY, 4Dept. Of Nephrology And Urology, Bambino Gesù Children’s Hospital, IRCCS, Rome/ITALY, 5Multifactorial Disease And Complex Phenotype Research Area, Bambino Gesù Children’s Hospital, IRCCS, Rome/ITALY

P-PEDI-7 BONE MINERAL DENSITY IN PATIENTS WITH EPIDERMOLYSIS
P-PEDI-8  ETOLOGY IDENTIFICATION USING TARGETED NEXT-GENERATION SEQUENCING AND SERUM FGF-23 LEVELS IN PATIENTS WITH FANCONI SYNDROME
Juan Du1, Qian-Qian Pang1, Yan Jiang2, Ou Wang2, Mei Li2, Xiaoping Xing2, Weibo Xia2
1Department Of Endocrinology, Peking Union Medical College Hospital, Beijing/CHINA, 2Department Of Endocrinology, Peking Union Medical College Hospital, Beijing/CHINA

P-PEDI-9  GENU-VALGUM AND VITAMIN D
Narendra Gemawat
Pediatrics, HINDUSTAN CHAMBER CHIKITSALAYA, MUMBAI/INDIA

Other diseases of bone and mineral metabolism

P-OTHD-1  RECURRENT BONE MARROW OEDEMAS AND INSUFFICIENCY FRACTURES IN HIV PATIENTS ON ANTIVIRAL THERAPY
Sebastian Radmer1, Julian Ramin Andresen2, Reimer Andresen3
1Orthopaedic Practice, Centre of Orthopaedics, Berlin/GERMANY, 2Medical Faculty, Sigmund Freud University, Vienna/AUSTRIA, 3Institute Of Diagnostic And Interventional Radiology/neuroradiology, Westkuestenklinikum Heide, Academic Teaching Hospital of the Universities of Kiel, Luebeck and Hamburg, Heide/GERMANY

P-OTHD-2  INFLUENCE OF CYCLOSPORINE AND TACROLIMUS ON MINERAL METABOLISM
Ruzica Smalcelj1, Branko Kolaric2
1Dialysis Unit, Zagreb University Hospital Center, Zagreb/CROATIA, 2Department For Social Medicine And Epidemiology, Medical School, University of Rijeka, Rijeka/CROATIA

P-OTHD-3  NORMOCALCAEMIC HYPERPARATHYROIDISM: PREVALENCE IN A UK REFERRAL POPULATION
Marian Schini1, Richard Jacques2, Nicola Peel3, Jennifer S. Walsh1, Richard
Eastell1
1Oncology And Metabolism, University of Sheffield, Sheffield/UNITED KINGDOM, 2School Of Health And Related Research, University of Sheffield, Sheffield/UNITED KINGDOM, 3Metabolic Bone Centre, Sheffield Teaching Hospitals, Sheffield/UNITED KINGDOM

P-OTHD-4 HEAVY WEIGHT- AS A RISK FACTOR OF OSTEOPOROSIS
Lali Kilasonia1, Luba Lagvilava2, Tamar Rukhadze3, Medea Kopaliani1, Nino Dolidze4
1Rheumatology, Tbilisi Heart and vascular clinic, Tbilisi/GEORGIA, 2Rheumatology, Consilium Medulla, Tbilisi/GEORGIA, 3Rheumatology, Tbilisi Heart and Vascular Clinic, Tbilisi/GEORGIA, 4Rheumatology, Medical Clinic „Curatcio“, Tbilisi/GEORGIA

P-OTHD-5 This abstract has been withdrawn

P-OTHD-6 CORRELATION OF BLOOD BONE TURNOVER BIOMARKERS AND WNT SIGNALING ANTAGONISTS WITH AS, DISH, OPLL, AND OYL
Chi-Chien Niu, Song-Shu Lin, Li-Jen Yuan, Chuen-Yung Yang, Wen-Jer Chen, Lih-Huei Chen
Department Of Orthopaedic, Chang Gung Memorial Hospital, Taoyuan/TAIWAN

P-OTHD-7 A NOVEL BIODEGRADABLE CHITOSAN BASED METFORMIN INTRAPOCKET DENTAL FILM REDUCES SEVERITY OF EXPERIMENTAL PERIODONTITIS AND ALVEOLAR BONE LOSS IN RATS
Deepak Kumar Khajuria, David Karasik
The Musculoskeletal Genetics Laboratory, Faculty Of Medicine In The Galilee, Bar-Ilan University, Safed/ISRAEL

P-OTHD-8 BIOCHEMICAL AND PHYSICAL FUNCTION OUTCOMES IN ADOLESCENTS AND ADULTS WITH HYPOPHOSPHATASIA TREATED WITH ASFOTASE ALFA FOR 5 YEARS: RESULTS FROM A PHASE 2 STUDY
Priya S. Kishnani1, Cheryl Rockman-Greenberg2, Andrew E. Denker3, Scott Moseley4, Michael P. Whyte5
1Yt And Alice Chen Pediatrics Genetics And Genomics Center, Duke University Medical Center, Durham/NC/UNITED STATES OF AMERICA, 2Pediatrics And Child Health & Biochemistry And Medical Genetics, The University of Manitoba, Rady Faculty of Health Sciences, Max Rady College of Medicine, Children’s Hospital Research Institute of Manitoba, Winnipeg/MB/CANADA, 3Global Medical Sciences, Alexion Pharmaceuticals, Inc., New Haven/CT/UNITED STATES OF AMERICA, 4Director Biostatistics, Alexion Pharmaceuticals, Inc, New Haven/CT/
P-OTHD-9  EVALUATION OF THE UTAH ALGORITHM FOR IDENTIFYING HYPOPHOSPHATASIA TO ESTIMATE PREVALENCE IN THE UNITED KINGDOM
Sara Jenkins-Jones¹, Craig Currie², Ioannis C. Tomazos³, Bonnie M. Donato³, Richard Eastell⁴
¹Research Fellow/data Manager, Pharmatelligence, Cardiff/UNITED KINGDOM, ²Cochrane Institute Of Primary Care And Public Health, Cardiff University, Cardiff/UNITED KINGDOM, ³Global Payer Evidence & Value Translation, Alexion Pharmaceuticals, Inc, New Haven/UNITED STATES OF AMERICA, ⁴Oncology And Metabolism, University of Sheffield, Sheffield/UNITED KINGDOM

P-OTHD-10  DIAGNOSTIC ACCURACY OF BIOMARKERS AND IMAGING IN PREDICTING BONE TURNOVER IN ADVANCED CHRONIC KIDNEY DISEASE
Syazrah Salam¹, Orla Gallagher², Fatma Gossiel³, Richard Jacques⁴, Margaret Paggiosi³, Arif Khwaja⁵, Richard Eastell³
¹Sheffield Kidney Institute, Sheffield Teaching Hospitals NHS Trust, Sheffield/UNITED KINGDOM, ²Department Of Oncology And Metabolism, University of Sheffield, Sheffield/UNITED KINGDOM, ³Academic Unit Of Bone Metabolism And Mellanby Research Centre, University of Sheffield, Sheffield/UNITED KINGDOM, ⁴School Of Health And Related Research (scharr), University of Sheffield, Sheffield/UNITED KINGDOM, ⁵Sheffield Kidney Institute, Sheffield Teaching Hospitals NHS Foundation Trust, Sheffield/UNITED KINGDOM

P-OTHD-11  GORHAM-STOUT DISEASE: RADIOLOGICAL, HISTOLOGICAL, AND CLINICAL FEATURES OF ONE SINGLE CENTRE
Shuzhong Liu
Department Of Orthopedic Surgery, Peking Union Medical College Hospital, Chinese Academy of Medical Sciences & Peking Union Medical College, Beijing/CHINA

P-OTHD-12  COLLAGEN C-PROPEPTIDE CLEAVAGE DEFICIENCY INCREASES BONE MINERALIZATION AND ALTERS BONE CELL DIFFERENTIATION
Aileen M. Barnes¹, Joseph E. Perosky², Stephane Blouin³, M. H. Rajpar¹, Basma Khoury², Klaus Klauschofer⁴, Paul Roschger⁵, Nadja Fratzl-Zelman⁶, Kenneth M. Kozloff², Joan C. Marini¹
¹Section On Heritable Disorders Of Bone And Extracellular Matrix, National Institutes of Health, Bethesda/MD/UNITED STATES OF AMERICA, ²Cochrane Institute Of Primary Care And Public Health, Cardiff University, Cardiff/UNITED KINGDOM, ³Global Payer Evidence & Value Translation, Alexion Pharmaceuticals, Inc, New Haven/UNITED STATES OF AMERICA, ⁴Oncology And Metabolism, University of Sheffield, Sheffield/UNITED KINGDOM, ⁵Sheffield Kidney Institute, Sheffield Teaching Hospitals NHS Foundation Trust, Sheffield/UNITED KINGDOM
P-OTHD-13  EFFECT OF HYPERTHYROIDISM AND ZOLEDRONIC ACID TREATMENT ON BONE MATRIX MINERALIZATION IN MICE
Barbara Misof¹, Paul Roschger¹, Elena Tsourdi², Franziska Lademann², Klaus Klaushofer¹, Lorenz C. Hofbauer², Martina Rauner²
¹1st Med. Dept. Hanusch Hospital, Ludwig Boltzmann Institute of Osteology at Hanusch Hospital of WGKK and AUVA Trauma Centre Meidling, Vienna/AUSTRIA, ²Division Of Endocrinology, Diabetes And Bone Diseases, Department Of Medicine iii, Technische Universität Dresden, Dresden/GERMANY

P-OTHD-14  THE POTENTIAL ROLE OF MESENCHYMAL STEM CELL-EDUCATED MACROPHAGES IN THE TREATMENT OF PERIPROSTHETIC OSTEOLYSIS
Heidrun Jablonski¹, Mareike Muny¹, Dominik Creuzberg¹, Heike Rekasi¹, Marcel Haversath¹, Sven Brandau², Max D. Kauther¹, Marcus Jäger¹
¹Department Of Orthopaedics And Trauma Surgery, University Hospital Essen, Essen/GERMANY, ²Department Of Otorhinolaryngology, University Hospital Essen, Essen/GERMANY

P-OTHD-15  INCREASED RISK OF FRACTURE IN PREMENOPAUSAL WOMEN WITH POLYCYSTIC OVARY SYNDROME: A PROPENSITY-SCORE MATCHED COHORT STUDY
Hsin-Yi Yang¹, Wan-Ting Huang¹, Ming-Jer Chen², Yueh-Han Hsu¹
¹Clinical Medical Research Center, Ditmanson Medical Foundation Chia-Yi Christian Hospital, Chia-Yi City/TAIWAN, ²Department Of Obstetrics And Gynecology And Women’s Health, Taichung Veterans General Hospital, Taichung City/TAIWAN

P-OTHD-16  OSTEOCYTES ARE INVOLVED IN THE PATHOGENESIS OF OSTEOPOROSIS IN CHRONIC CHOLESTASIS. EFFECTS OF BILIRUBIN AND BILE ACIDS ON OSTEOCYTIC CELL LINES
Silvia Ruiz-Gaspà, Albert Parés, Andrés Combalia, Pilar Peris, Ana Monegal, Núria Guàñabens
Liver And Metabolic Bone Diseases Units, Hospital Clínic, IDIBAPS,
P-OTHD-17 THE INFLUENCE OF HYPERBARIC OXYGEN THERAPY ON BONE METABOLISM PARAMETERS
Zaida Salmón, Camilo González, Javier Anchuelo, Mayte García-Unzueta, José Antonio Riancho, Carmen Valero
Department Of Internal Medicine, University Hospital Marqués de Valdecilla. RETICEF. IDIVAL., Santander/SPAIN

P-OTHD-18 MICROCRACKS IN THE PATHOGENESIS OF BISPHOSPHONATE-RELATED OSTEONECROSIS OF THE JAW
Seonyeong Kim¹, Angenine Marie Alfaara², Jin-Woo Kim³, Sun-Jong Kim³
¹Ewha Womans University Medical Center, Oral and Maxillofacial Surgery Department, Research Department, Seoul/REPUBLIC OF KOREA, ²Oral And Maxillofacial Surgery Department, Research Department, Ewha Womans University Medical Center, Seoul/REPUBLIC OF KOREA, ³Oral And Maxillofacial Surgery, Ewha Womans University, Seoul/REPUBLIC OF KOREA

P-OTHD-19 IS THERE A ROLE FOR SPHINGOSINE-1-PHOSPHATE PATHWAY IN CYSTIC FIBROSIS BONE DISEASE?
Marie-Laure Jourdain¹, Dina M. Abdallah¹, Christine Guillaume¹, Françoise Le Pimpec-Barthes², Sophie Catherine Gangloff¹, Isabelle Sermet-Gaudelus³, Jacky Jacquot¹, Frédéric Velard¹
¹Ea 4691 Bios, Université de Reims Champagne-Ardenne, Reims/FRANCE, ²Département De Chirurgie Thoracique, Hôpital Européen Georges Pompidou, Paris/FRANCE, ³Inserm U1551, Hôpital Necker, Unité de Pneumo-Pédiatrie Allergologie, Paris/FRANCE

P-OTHD-20 TREATMENT WITH ZOLEDRONIC ACID AMELIORATES BONE MASS AND STRENGTH BUT MITIGATES IMPROVED GLUCOSE TOLERANCE IN MICE WITH EXOGENOUS HYPERTHYROIDISM
Elena Tsourdi¹, Franziska Lademann², Ulrike Baschant¹, Holger Henneicke³, Martina Rauner², Lorenz C. Hofbauer²
¹Center For Healthy Aging, University Clinic Dresden, Dresden/ GERMANY, ²Division Of Endocrinology, Diabetes And Bone Diseases, Department Of Medicine Iii, Technische Universität Dresden, Dresden/ GERMANY, ³Department Of Endocrinology, University Clinic Dresden, Dresden/GERMANY

P-OTHD-21 A NEW MOUSE MODEL OF AUTOSOMAL DOMINANT OSTEOPETROSIS TYPE 2
Joana Caetano-Lopes¹, Samantha G. Lessard¹, Steven Hann¹, Katherine
Espinoza², Haley R. Noonan², Alexander G. Robling³, Matthew L. Warman¹
¹Department Of Orthopaedic Research, Boston Childrens Hospital, Boston/MA/UNITED STATES OF AMERICA, ²Department Of Genetics, Harvard Medical School, Boston/MA/UNITED STATES OF AMERICA, ³Department Of Anatomy And Cell Biology, Indiana University School of Medicine, Indianapolis/IN/UNITED STATES OF AMERICA

**P-OTHD-22 SIMULTANEOUS APPLICATION OF BONE MORPHOGENIC PROTEIN 2 AND PLATELET-RICH FIBRIN IMPROVES HEALING IN MEDICATION-RELATED OSTEONECROSIS OF THE JAW**
Angenie Marie Alfafara, Seonyeong Kim, Jin-Woo Kim, Sun-Jong Kim
Oral And Maxillofacial Surgery Department, Research Department, Ewha Womans University Medical Center, SeoulREPUBLIC OF KOREA

**P-OTHD-23 ALTERED BONE MICROARCHITECTURE IN MYELODYSPLASTIC MICE IS ASSOCIATED WITH HIGH FGF-23 SERUM LEVELS AND IMPAIRED BONE MINERALIZATION**
Heike Weidner¹, Ekaterina Balaian¹, Cryrus Khandanpour², Martin Bornhäuser¹, Lorenz C. Hofbauer³, Uwe Platzbecker⁴, Martina Rauner⁴
¹Department Of Medicine I, Technische Universität Dresden, Dresden/GERMANY, ²Department Of Hematology, West German Cancer Center, University Hospital Essen, Essen/GERMANY, ³Partner Site Dresden And German Cancer Research Center (dkfz), German Cancer Consortium (DKTK), Dresden/GERMANY, ⁴Center For Healthy Aging, Technische Universität Dresden, Dresden/GERMANY

**P-OTHD-24 CLINICAL AND RADIOGRAPHIC FEATURES OBSERVED IN A CASE SERIES OF PATIENTS WITH FIBROUS DYSPLASIA. OUR EXPERIENCE**
Silvina Mastaglia¹, Diana González², Alicia Bagur², Adriana Frigeri², Dolores Gómez Glorioso², Beatriz Oliveri³
¹Medicina Interna, Osteoporosis and Metabolic Bone Diseases Laboratory. Institute of Immunology, Genetics, and Metabolism (INIGEM) CONICET–UBA., Buenos Aires/ARGENTINA, ²Mautalen, Health And Research. Institute Of Research In Public Health (idisa), Mautalen, Health and Research. Institute of Research in Public Health (IDISA), Buenos Aires/ARGENTINA, ³Medicina Interna, Osteoporosis and Metabolic Bone Diseases Laboratory. Institute of Immunology, Genetics, and Metabolism (INIGEM) CONICET – UBA, Buenos Aires/ARGENTINA

**P-OTHD-25 CHARACTERIZING THE EPIDEMIOLOGY OF HYPOPHOSPHATASIA IN A UK POPULATION**
Sara Jenkins-Jones¹, Craig Currie², Ioannis C. Tomazos³, Bonnie M. Donato³, Nick Bishop⁴, Richard Eastell⁵
P-OTHD-26 THYROID HORMONE TRANSPORTER MCT8 DEFICIENCY CAUSES OPPOSING EFFECTS ON TRABECULAR VS. CORTICAL BONE IN MICE
Franziska Lademann1, Elena Tsourdi1, Heike Heuer2, Lorenz C. Hofbauer1, Martina Rauner1
1Division Of Endocrinology, Diabetes, And Bone Diseases, Department of Medicine III & Center of Healthy Aging, Technische Universität Dresden, Dresden/GERMANY, 2Environmentally-induced Endocrine Disruption, Leibniz Research Institute for Environmental Medicine Düsseldorf, Düsseldorf/GERMANY

P-OTHD-27 THE RELATIONSHIP BETWEEN SERUM 25-HYDROXYVITAMIN D LEVELS AND RENAL FUNCTION IN KOREANS WITHOUT CHRONIC KIDNEY DISEASE
Byung Yeon Yu
Family Medicine, Konyang University Hospital, Daejeon/REPUBLIC OF KOREA

P-OTHD-28 ENVIRONMENTAL FACTORS AND PAGET’S DISEASE OF BONE: POSSIBLE ROLE OF TOLL-LIKE RECEPTOR POLYMORPHISMS
Judit Donáth, Márton Pálinkás, Rita Rásonyi, Gyula Poór
First Department Of Rheumatology, National Institute of Rheumatology and Physiotherapy, Budapest/HUNGARY

P-OTHD-29 THE PAGET’S DISEASE SUSCEPTIBILITY GENE PML REGULATES OSTEOCLAST ACTIVITY IN VITRO
Sachin Wani1, Stuart H. Ralston1, Omar M. Albagha2
1Institute Of Genetics And Molecular Medicine, University of Edinburgh, Edinburgh/UNITED KINGDOM, 2Institute Of Genetics And Molecular Medicine,edinburgh,uk; Qatar Biomedical Research Institute, Doha, Qatar, Hamad Bin Khalifa University,University of Edinburgh, Edinburgh/UNITED KINGDOM

P-OTHD-30 COMPARISON OF BISPHOSPHONATE PRE-TREATMENTS ON SIMULATED MICROGRAVITY UNLOADING EFFECTS AT THE TIBIA AND FEMUR IN ADULT RATS
Harry A. Hogan¹, Jon P. Elizondo¹, Jeremy M. Black¹, Jessica E. Brezicha², Scott E. Lenfest¹, Jennifer L. Kosniewski¹, Matthew R. Allen³, Susan A. Bloomfield⁴
¹Mechanical Engineering, Texas A&M University, College Station/TX/UNITED STATES OF AMERICA, ²Biomedical Engineering, Texas A&M University, College Station/TX/UNITED STATES OF AMERICA, ³Anatomy And Cell Biology, Indiana University School of Medicine, Indianapolis/IN/UNITED STATES OF AMERICA, ⁴Health And Kinesiology, Texas A&M University&M University, College Station/TX/UNITED STATES OF AMERICA

P-OTHD-31 BONE DENSITY AND GEOMETRY IS INFLUENCED BY PARATHYROID RESPONSE TO VITAMIN D INSUFFICIENCY: A CROSS-SECTIONAL COMPARISON OF PATIENTS WITH OR WITHOUT SECONDARY HYPERPARATHYROIDISM
Lene Langagergaard Rødbro¹, Lise Sofie Bislev², Tanja Sikjær², Lars Rejnmark²
¹Department Of Endocrinology And Internal Medicine, Aarhus University Hospital, Aarhus C/DENMARK, ²The Osteoporosis Clinic, Department Of Endocrinology And Internal Medicine, Aarhus University Hospital, Aarhus/DENMARK

P-OTHD-32 BONE MICROSTRUCTURE IN HISTORIC BONE SAMPLES WITH PAGET’S DISEASE
Elena Nebot Valenzuela¹, Patrick Heimel², Janina Patsch³, Martin Dockner⁴, Gerhard W. Weber⁴, Eduard Winter⁴, Maria Teschler-Nicola⁵, Michael Pretterklieber⁶, Peter Pietschmann¹
¹Department Of Pathophysiology And Allergy Research, Center Of Pathophysiology, Infectiology And Immunology, Medical University Of Vienna, Vienna/AUSTRIA, ²Tissue Engineering, Ludwig Boltzmann Institute for Experimental and Clinical Traumatology, Vienna/AUSTRIA, ³Department Of Biomedical Imaging And Image-guided Therapy, Medical University of Vienna, Vienna/AUSTRIA, ⁴Department Of Anthropology, And Core Facility For Micro-computed Tomography, University of Vienna, Vienna/AUSTRIA, ⁵Collection Of Anatomical Pathology In The Madhouse Tower, Department Of Anthropology, Natural History Museum Vienna, Vienna/AUSTRIA, ⁶Center Of Anatomy And Cell Biology, Division Of Anatomy, Medical University of Vienna, Vienna/AUSTRIA

P-OTHD-33 CHANGE OF BONE MINERAL DENSITY AND SURVIVAL AFTER HORMONE THERAPY IN WOMEN WITH EARLY STAGE ENDOMETRIAL CANCER
Dong Ock Lee¹, Ji Young Lee²
P-OTHD-34  USE OF CHEMICAL CHAPERONES TO TARGET CELLULAR STRESS IN CHIHUAHUA, A ZEBRAFISH MODEL OF DOMINANT OSTEOGENESIS Imperfecta  
Francesca Tonelli1, Roberta Gioia1, Ilaria Ceppi1, Marco Biggiogera2, Shannon Fisher3, Thorsten Schinke4, Sergey Leikin5, Antonio Rossi6, Antonella Forlino1  
1Department Of Molecular Medicine, Biochemistry Unit, University of Pavia, Pavia/ITALY, 2Department Of Biology And Biotechnology, University of Pavia, Pavia/ITALY, 3Cell And Developmental Biology, University of Pennsylvania, Philadelphia/UNITED STATES OF AMERICA, 4Osteology And Biomechanics, University Medical Center Hamburg-Eppendorf, Hamburg/GERMANY, 5National Institutes Of Child Health And Human Development, National Institutes Of Health, Bethesda/MD/UNITED STATES OF AMERICA, 6Dept. Of Molecular Medicine - Unit Of Biochemistry, University of Pavia, Pavia/ITALY

P-OTHD-35  IL-6 DETECTION IN SUBGINGIVAL BIOFILMS OF CHRONIC PERIODONTITIS PATIENTS: A PILOT STUDY  
François Bikard1, Catherine Behets1, Michel Brecx2, Jérôme Lasserre2, Selena Toma2  
1Morphology, Université catholique de Louvain, Woluwe-Saint-Lambert/BELGIUM, 2Periodontology, Université catholique de Louvain, Woluwe-Saint-Lambert/BELGIUM

P-OTHD-36  NOREPINEPHRINE REUPTAKE INHIBITOR, NOT SEROTONIN REUPTAKE INHIBITOR, AND VOLUNTARY RUNNING EXERCISE AMELIORATED BONE MICROSTRUCTURAL DEFECT IN STRESSED RATS  
Panan Suntornsaratoon1, Sarawut Lapmanee1, Jantarima Charoenphandhu2, Narattaphol Charoenphandhu3  
1Department Of Physiology, Mahidol University, Bangkok/THAILAND, 2Physiology Division, Thammasat University, Pathumthani/THAILAND, 3Institute Of Molecular Biosciences, Mahidol University, Nakhon Pathom/THAILAND

P-OTHD-37  EXPRESSION OF BONE MORPHOGENETIC PROTEINS IN COLORECTAL CANCER  
Ivana Maric1, Harry Grbas2, Giordano Bacic2, Natalia Kucic3, Kristina Grabusic3, Andrica Lekic4, Ivana Smoljan5, Dragica Bobinac1  
1Department Of Anatomy, University of Rijeka, Faculty of Medicine,
P-OTHD-38 OPG – EARLY MARKER FOR CKD-MBD DIAGNOSIS?
Tanja Ćelić1, Antun Gršković2, Josip Španjol2, Olga Cvijanović Peloza3, Ivana Marić2, Dragica Bobinac3
1Anatomy, Medical faculty, rijeka/CROATIA, 2Urology, University Hospital, Rijeka/CROATIA, 3Anatomy, Medical faculty, Rijeka/CROATIA

P-OTHD-39 TREM-2 AFFECTS THE GROWTH BUT NOT THE SHAPE OF THE MOUSE SKULL
Uwe Y. Schwarze1, Yuxin Ni2, Sylvia Knapp3, Reinhard Gruber4
1School Of Dentistry, Austrian Cluster for Tissue Regeneration, Vienna/AUSTRIA, 2School And Hospital Of Stomatology, Jilin University, Changchun Shi/CHINA, 3Cemm Research Center For Molecular Medicine, Austrian Academy of Sciences, Vienna/AUSTRIA, 4Department Of Preventive, Restorative And Pediatric Dentistry, University of Bern, Switzerland, Bern/SWITZERLAND

P-OTHD-40 PERIOSTIN AS A NOVEL BONE BIOMARKER FOR RENAL OSTEODYSTROPHY IN ADVANCED CHRONIC KIDNEY DISEASE
Syazrah Salam1, Orla Gallagher2, Fatma Gossiel3, Margaret Paggiosi3, Arif Khwaja4, Richard Eastell3
1Sheffield Kidney Institute, Sheffield Teaching Hospitals NHS Trust, Sheffield/UNITED KINGDOM, 2Department Of Oncology And Metabolism, University of Sheffield, Sheffield/UNITED KINGDOM, 3Academic Unit Of Bone Metabolism And Mellanby Research Centre, University of Sheffield, Sheffield/UNITED KINGDOM, 4Sheffield Kidney Institute, Sheffield Teaching Hospitals NHS Foundation Trust, Sheffield/UNITED KINGDOM

P-OTHD-41 BISPHOSPHONATE SKELETAL DISTRIBUTION PATTERNS ARE ALTERED IN EARLY STAGE CHRONIC KIDNEY DISEASE
Mohammad W. Aref1, Neal X. Chen2, Sharon Moe3, Matthew R. Allen1
1Anatomy And Cell Biology, Indiana University School of Medicine, Indianapolis/IN/UNITED STATES OF AMERICA, 2Medicine, Indiana University, Indianapolis/IN/UNITED STATES OF AMERICA, 3Medicine, Indiana University School of Medicine, Indianapolis/IN/UNITED STATES OF AMERICA
P-OTHD-42 PREGNANCY-ASSOCIATED OSTEOPOROSIS WITH VERTEBRAL FRACTURES IN A WOMAN WITH UNDIAGNOSED PRIMARY HYPERPARATHYROIDISM: A CASE REPORT
Konstantinos Stathopoulos1, Nikolaos Papaioannou2, Grigoris Skarantavos1, Panagiotis Papagelopoulos1, Symeon Tournis2
1Bone Metabolic Unit, 1st Department Of Orthopaedics, National and Kapodistrian University of Athens, School of Medicine, Athens/GREECE, 2Laboratory For Research Of The Musculoskeletal System (Irms), National and Kapodistrian University of Athens, School of Medicine, KAT General Hospital, ATHENS/GREECE

P-OTHD-43 ANTIOXIDANT ACTIVITY AS AN AORTIC CALCIFICATION MARKER IN TYPE 2 DIABETES AND ITS RELATION TO BONE METABOLISM MARKERS
Sonia Morales Santana1, Ana Coto-Montes2, Susana Rodríguez2, Beatriz García-Fontana3, Cristina Novo-Rodríguez4, Verónica Ávila-Rubio5, Rebeca Reyes García6, Antonia García Martín6, Josefa León3, Pedro Rozas-Moreno6, Manuel Muñoz-Torres6
1Proteomic Research Service, Hospital Universitario San Cecilio, Instituto de Investigación Biosanitaria de Granada (ibs.GRANADA), Granada, Spain., Granada/SPAIN, 2Department Of Morphology And Cellular Biology. Faculty Of Medicine, University of Oviedo., Oviedo/SPAIN, 3Hospital Universitario San Cecilio, Instituto de Investigación Biosanitaria de Granada (ibs.GRANADA), Granada, Spain., Granada/SPAIN, 4Metabolic Bone Unit, Endocrinology Division (ciber Fragilidad Y Envejecimiento)reticef),, Hospital Universitario San Cecilio, Instituto de Investigación Biosanitaria de Granada (ibs.GRANADA), Granada, Spain., Granada/SPAIN, 5Metabolic Bone Unit, Endocrinology Division., Hospital Universitario San Cecilio, Instituto de Investigación Biosanitaria de Granada (ibs.GRANADA), Granada, Spain., Granada/SPAIN, 6Metabolic Bone Unit, Endocrinology Division (ciber Fragilidad Y Envejecimiento),, Hospital Universitario San Cecilio, Instituto de Investigación Biosanitaria de Granada (ibs.GRANADA), Granada, Spain., Granada/SPAIN

Objectives: Biochemical factors known to be primarily involved in the healthy bone metabolism also

P-OTHD-44 RELIABILITY OF THE 6-MINUTE WALK TEST IN CHILDREN, ADOLESCENTS, AND ADULTS WITH HYPOPHOSPHATASIA
Dawn Phillips1, Ioannis C. Tomazos2, Scott Moseley3, Gil L’Italien4, Sergio Lerma Lara5
1Department Of Allied Health Sciences, University of North Carolina, Chapel Hill/NC/UNITED STATES OF AMERICA, 2Global Payer Evidence & Value Translation, Alexion Pharmaceuticals, Inc, New Haven/CT/UNITED STATES OF AMERICA, 3Director Biostatistics, Alexion Pharmaceuticals,
P-OTHD-45 BONE INDICES IN PATIENTS WITH NON-SURGICAL HYPOPARATHYROIDISM AND PSEUDOHYPOPARATHYROIDISM
Line Underbjerg, Tanja Sikjaer, Lars Rejnmark
Department Of Endocrinology And Internal Medicine, Aarhus University Hospital, Aarhus C/DENMARK

P-OTHD-46 EFFECT OF ANTIRETROVIRAL THERAPY ON BONE TURNOVER AND BONE MINERAL DENSITY IN HIV POSITIVE MEN
Mariska C. Vlot¹, Marlous L. Grijzen², Jan M. Prins³, Renate T. De Jongh⁴, Robert De Jonge¹, Martin Den Heijer⁴, Annemieke C. Heijboer¹
¹Endocrine Laboratory, VUMC, Amsterdam/NETHERLANDS, ²Dermatology, LUMC, Leiden/NETHERLANDS, ³Infectious Diseases, AMC, Amsterdam/NETHERLANDS, ⁴Endocrinology, VUMC, Amsterdam/NETHERLANDS

P-OTHD-47 SALVIANOLIC ACID B- INCORPORATED PLGA/TCP COMPOSITE SCAFFOLD PROMOTES BONE FUSION BY ENHANCING ANGIogenesis AND OSTEOGENESIS IN A RAT SPINAL FUSION MODEL
Wayne Y. Lee¹, Sien Lin², Yuxiao Lai³, Tie Wu⁴, Ling Qin¹, Gang Li¹
¹Department Of Orthopaedics And Traumatology, The Chinese University of Hong Kong, Shatin/HONG KONG PRC, ²Department Of Orthopaedics And Traumatology, The Chinese University of Hong Kong, Hong Kong/HONG KONG PRC, ³Translational Medicine R&d Center, Institute Of Biomedical And Health Engineering, Chinese Academy of Sciences, Shenzhen Institutes of Advanced Technology, Shenzhen/CHINA, ⁴Department Of Pharmacology, Guangdong Key Laboratory For Research And Development Of Natural Drugs, Guangdong Medical University, Guangdong/CHINA

P-OTHD-48 P.R179 MUTATION HAS EARLIER ONSET THAN P.R176 MUTATION IN AUTOSOMAL DOMINANT HYPOPHOSPHATEMIC RICKETS (ADHR)
Chang Liu, Zhao Zhen, Yan Jiang, Ou Wang, Mei Li, Xiaoping Xing, Weibo Xia
Department Of Endocrinology, Key Laboratory Of Endocrinology, Ministry Of Health, Peking Union Medical College Hospital, Peking Union Medical College, Chinese Academy of Medical Sciences, Beijing/CHINA

P-OTHD-49 UNCERTAINTY OF CURRENT ALGORITHM FOR MEDICATION-
RELATED OSTEONECROSIS OF THE JAW IN POPULATION-BASED STUDIES
Hye-Yeon Kim¹, Jin-Woo Kim², Sang-Hwa Lee¹
¹Graduate School Of Medicine, Ewha Womans University, Seoul/REPUBLIC OF KOREA, ²Oral And Maxillofacial Surgery, Ewha Womans University, Seoul/REPUBLIC OF KOREA

Chondrocytes and cartilage

P-CHON-1 EXPRESSION OF CHONDROREGULATORY PROTEINS AND PROTEOGLYCANS IN THE TIBIAL GROWTH PLATE OF POST-NURSING RATS
Kannikar Wongdee¹, Natchayaporn Thonapan², Maytinee Chaimitchid³, Jaruwan Boonchuay⁴, Narattaphol Charoenphandhu²
¹Department Of Biomedical Sciences, Faculty of Allied Health Sciences, Burapha University, Chonburi/THAILAND, ²Department Of Physiology, Faculty of Science, Mahidol University, Bangkok/THAILAND, ³Anatomical Pathology Program, Faculty of Allied Health Sciences, Burapha University, Chonburi/THAILAND, ⁴Anatomical Pathology Program, Faculty of Allied Health Sciences, Burapha University, Chonburi/THAILAND

P-CHON-2 LEF1-MEDIATED MMP13 GENE EXPRESSION IS REPRESSED BY SIRT1 IN HUMAN CHONDROCYTES
Mona Dvir-Ginzberg
Faculty Of Dental Medicine, HEBREW UNIVERSITY OF JERUSALEM, JERUSALEM/ISRAEL

P-CHON-3 HYPERBARIC OXYGEN REDUCES THE HMGB-1/RAGE SIGNALING IN OSTEOARTHRITIC CHONDROCYTES
Li-Jen Yuan¹, Song-Shu Lin², Chi-Chien Niu², Wenneng Ueng², Lih-Huei Chen², Wen-Jer Chen², Chuen-Yung Yang²
¹Department Of Orthopaedic Surgery, Chang Gung Memorial Hospital, Taoyuan/TAIWAN, ²Department Of Orthopaedic, Chang Gung Memorial Hospital, Taoyuan/TAIWAN

P-CHON-4 N-ACETYLCYSTEINE TREATMENT AMELIORATES THE SKELETAL PHENOTYPE OF A MOUSE MODEL OF DIASTROPHIC DYSPLASIA
Chiara Paganini¹, Luca Monti², Rossella Costantini², Ilaria Monti², Silvia Lecci², Martine Cohen-Solal³, Eric Hay⁴, Andrea Superti-Furga⁶, Antonella Forlino², Antonio Rossi⁶
¹Dept. Of Molecular Medicine - Unit Of Biochemistry, University of Pavia, Pavia/ITALY, ²Dept. Of Molecular Medicine, University of Pavia, Pavia/ITALY, ³Rheumatology/inserm-1132, Hôpital Lariboisière-INSERM, Paris/
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Chahrazad Cherifi¹, Augustin Latourte², Olivier Cuvilier³, Korng Ea¹, Sabine Vettorazzi⁴, Pascal Richette⁶, Eric Hay¹, Martine Cohen-Solal⁶
¹Hopital Lariboisiere, INSERM 1132, PARIS/FRANCE, ²Lariboisiere, INSERM 1132, PARIS/FRANCE, ³Sphingolipids And Cancer, Institute of Pharmacology and Structural Biology, Toulouse/FRANCE, ⁴Institute For Comparative Molecular Endocrinology, University of ULM, Ulm/ GERMANY, ⁵Rhumathologie, HOPITAL LARIBOISIERE, PARIS/FRANCE, ⁶Umr-1132, INSERM, Paris/FRANCE

P-CHON-6 EFFECTS OF PHYLLOQUINONE AND MAGNESIUM ON ATDC5 PRECHONDROCYTE DIFFERENTIATION
Adalbert Raimann¹, Alireza Javanmardi¹, Susanne Sagmeister¹, Diana A. Ertl¹, Claudia Höchsmann², Monika Egerbacher², Gabriele Haeusler¹
¹Department Of Pediatrics And Adolescent Medicine, Mediacal University of Vienna, Vienna/AUSTRIA, ²Institute Of Anatomy, Histology & Embryology, Department Of Pathobiology, University of Veterinary Medicine, Vienna/AUSTRIA

P-CHON-7 EFFECT OF FIBROBLAST GROWTH FACTOR 1 (FGF-1) ON CHONDROCYTES THROUGH CCN2 REGULATION AND ITS POSSIBLE ROLE IN OSTEOARTHRITIS
Abdellatif Elseoudi¹, Tarek Abd El Kader², Takashi Nishida¹, Eriko Aoyama², Takanori Eguchi², Masaharu Takigawa², Satoshi Kubota¹
¹Biochemistry And Molecular Dentistry, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences., Okayama/JAPAN, ²Advanced Research Center For Oral And Craniofacial Sciences, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences., Okayama/JAPAN, ³Dental Pharmacology, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences., Okayama/JAPAN

Arthritis and other joint diseases: translational and clinical

P-ARTH-1 THE ROLE OF FERRITIN AND ADIPOSECTIN AS A PREDICTORS OF CARTILAGE DAMAGE ASSESSED BY ARTHROSCOPY IN PATIENTS WITH SYMPTOMATIC KNEE OSTEOARTHRITIS
M Shargorodsky
Endocrinology, Wolfson Medical Center, Holon/ISRAEL

**P-ARTH-2**  
**PATHOGENIC ROLES OF CXCL10 SIGNALING THROUGH CXCR3 AND TLR4 IN COLLAGEN ANTIBODY-INDUCED ARTHRITIS**  
Bongjun Kim, Won Jong Jin, Hong-Hee Kim, Zang Hee Lee  
Cell And Developmental Biology, Seoul National University School of Dentistry, Seoul/REPUBLIC OF KOREA

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**PROTEOMIC ANALYSIS OF PROTEIN EXPRESSION IN OSTEOARTHRITIC BONE MARROW LESIONS**  
Maziar G. Shabestari¹, Milaim Pepaj², Janne Reseland¹, Erik F. Eriksen³  
¹Dept. Of Biomaterials, Faculty of Dentistry, University of Oslo, Oslo/NORWAY, ²Hormone Laboratory, Oslo University Hospital, Oslo/NORWAY, ³Dept. Of Clinical Endocrinology, Morbid Obesity And Preventive Medicine, Oslo University Hospital, Oslo/NORWAY

**P-ARTH-4**  
**LILT APPLICATION IN FVB MICE SUBMITTED TO ACUTE AND CHRONIC ARTHRITIS**  
João Paulo M. Issa¹, Lothar Lilge², Bianca F. Trawitzki¹, Edilson Ervolino³, Ana Paula Macedo⁴  
¹Morphology, Physiology And Basic Pathology, University of São Paulo, Ribeirão Preto/BRAZIL, ²Department Of Medical Biophysics, Princess Margaret Cancer Centre, University Health Network, Toronto/CANADA, ³Basic Science, Paulista State University, Araçatuba/BRAZIL, ⁴Dental Materials And Prothesis, University of São Paul, Ribeirão Preto/BRAZIL

**P-ARTH-5**  
**INCREASED EXPRESSION OF ANGIOGENESIS MARKERS AND INTERLEUKIN-6 IN BONE MARROW LESIONS IN OSTEOARTHRITIS**  
Maziar Shabestari¹, Erik F. Eriksen², Janne Reseland¹, Yashar R. Shabestari¹  
¹Biomaterials, Institute of Clinical Dentistry, Oslo/NORWAY, ²Dept. Of Clinical Endocrinology, Morbid Obesity And Preventive Medicine, Oslo University Hospital, Oslo/NORWAY, ³Dept. Of Biomaterials, Faculty of Dentistry, University of Oslo, Oslo/NORWAY

**P-ARTH-6**  
**THE P394L POINT MUTATION IN SQSMT1, CAUSING PAGET’S DISEASE LIKE DISORDER IN MICE, DOES NOT PREDISPOSE TO OSTEOARTHRITIS**  
Anna E. Törnqvist¹, Simon B. Roberts¹, Stuart H. Ralston²  
¹Centre For Genomic And Experimental Medicine, Mrc Institute Of Genetics And Molecular Medicine, Rheumatology and Bone Diseases Unit, Edinburgh/UNITED KINGDOM, ²Rheumatology And Bone Disease Unit, Cgem-igmm, University of Edinburgh, Edinburgh/UNITED KINGDOM
P-ARTH-7  A NOVEL COLLAGEN SCAFFOLD FOR IMPROVED TENDON-BONE HEALING
Jillian Cornish¹, Dipika Patel², Dorit Naot¹, David S. Musson¹
¹Medicine, University of Auckland, Auckland/NEW ZEALAND,
²Ophthalmology, University of Auckland, Auckland/NEW ZEALAND

P-ARTH-8  DEVELOPMENT AND VALIDITY OF A NEW QUALITY OF LIFE QUESTIONNAIRE FOR THE PATIENTS WITH HAND ARTHRITIS
Han Joo Baek, Hee Jung Ryu, Mi Ryoung Seo, Hyo Jin Choi, Hyo Jin Kim
Rheumatology, Gachon University Gil Medical Center, Incheon/REPUBLIC OF KOREA

P-ARTH-9  EFFECT OF ESTROGEN DEFICIENCY ON LOADED AND NON-LOADED AREA OF TEMPOROMANDIBULAR OR KNEE JOINT
Soon Jung Hwang¹, In Sook Kim²
¹Department Of Oral And Maxillofacial Surgery, School Of Dentistry, Seoul National University, Seoul/REPUBLIC OF KOREA, ²Dental Research Institute, Seoul National University, Seoul/REPUBLIC OF KOREA

P-ARTH-10  This abstract has been withdrawn

P-ARTH-11  EARLY ARTHRITIS INDUCES DISTURBANCES AT BONE NANOSTRUCTURAL LEVEL REFLECTED IN DECREASED TISSUE HARDNESS
Bruno Vidal¹, Rita Cascão², Mikko Finnilä³, Inês Lopes², Simo Saarakkala³, Peter Zioupos⁴, Helena Canhão⁵, João Fonseca⁶
¹Instituto De Medicina Molecular, Faculdade de Medicina da Universidade de Lisboa, Lisboa/PORTUGAL, ²Instituto De Medicina Molecular, Faculdade de Medicina, Universidade de Lisboa, Lisboa/PORTUGAL, ³Research Unit Of Medical Imaging, Physics And Technology, Faculty of Medicine, University of Oulu, Oulo/FINLAND, ⁴Biomechanics Labs, Cranfield Forensic Institute, Cranfield University, Shrivenham/UNITED KINGDOM, ⁵Epidoc Unit, CEDOC, NOVA Medical School, NOVA University, Lisboa/PORTUGAL, ⁶Instituto De Medicina Molecular, Faculdade de Medicina, Universidade de Lisboa, Lisboa, Lisboa/PORTUGAL

P-ARTH-12  EFFECT OF ALLOPURINOL THERAPY ON ULTRASOUND PICTURE OF AFFECTED JOINTS IN PATIENTS WITH GOUTY ARTHRITIS
Lesia Mykhailiv, Mykola Shved
Emergency Care, Ternopil Medical University, Ternopil/UKRAINE

P-ARTH-13  This abstract has been withdrawn
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Kahyun Kim, Hyun Sik Gong
Orthopedic Surgery, Seoul National University Bundang Hospital, Seongnam/REPUBLIC OF KOREA

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Sang-Hoon Lee¹, Ji-Young Choi², Ran Song¹, Seung-Jae Hong³, Yeon-Ah Lee¹, Hyung-In Yang¹
¹Rheumatology, Kyung Hee University, Hospital at Gangdong, Seoul/REPUBLIC OF KOREA, ²Rheumatology, Rheumatology, Kyung Hee University Medical Center, Seoul/REPUBLIC OF KOREA, ³Rheumatology, Kyung Hee University Medical Center, Seoul/REPUBLIC OF KOREA

Cancer and bone

P-CANC-1 CIRCULATING TUMOUR CELLS AS A BIOMARKER OF EARLY/RECURRENT DISEASE AND THERAPEUTIC RESPONSE IN A PRECLINICAL MODEL OF OSTEOSARCOMA
Marta Tellez-Gabriel¹, Antoine Chalopin², Marie-Francoise Heymann³, Francois Gouin⁴, Dominique Heymann⁵
¹Laboratorio Hematologia Oncologica Y De Transplantes, Institut Investigacions Biomèdiques (ibb) Sant Pau, Hospital de la Santa Creu i Sant Pau, Barcelona/SPAIN, ²Inserm, Umr957, University of Nantes, Nantes cedex/FRANCE, ³Oncology And Metabolism, Inserm, Sarcoma Research Unit, University of Sheffield, Medical School, Sheffield/UNITED KINGDOM, ⁴Dept Of Orthopaedic Surgery, Nantes University Hospital, Nantes cedex/FRANCE, ⁵Oncology And Metabolism, Inserm, Lea Sarcoma Research Unit, University of Sheffield, Medical School, Sheffield/UNITED KINGDOM

P-CANC-2 EXTRACELLULAR VESICLES MEDIATE THE CROSSTALK BETWEEN OSTEOBLASTS AND BONE TUMOURS
Alexander Loftus, Cristopher George, Riccardo Paone, Marco Ponzetti, Alfredo Cappariello, Anna Teti, Nadia Rucci
Department Of Biotechnological And Applied Clinical Sciences, University of L’Aquila, L’Aquila/ITALY

P-CANC-3 EFFECTS OF RHBMP-2 ON THE PROLIFERATION OF BREAST CANCER MCF-7 CELLS THROUGH INHIBITING PI3K/AKT/MTOR SIGNALING PATHWAY
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Shuzhong Liu, Yipeng Wang
Department Of Orthopedic Surgery, Peking Union Medical College Hospital, Chinese Academy of Medical Sciences & Peking Union Medical College, Beijing/CHINA

P-CANC-5 **ROLE OF THE WNT RECEPTORS RYK AND FZD5 IN PROSTATE CANCER**
Stefanie Thiele, Andy Göbel, Ariane Zimmer, Sandra Hippauf, Tilman Rachner, Martina Rauner, Lorenz C. Hofbauer
Department Of Medicine Iii, Technical University, Dresden, Division of Endocrinology, Diabetes, and Bone Diseases, Dresden/GERMANY

P-CANC-6 **INVOLVEMENT OF INTERLEUKIN-34 IN THE COMMUNICATIONS BETWEEN OSTEOSARCOMA CELLS AND THEIR MICROENVIRONMENT**
Kristina Schiavone, Stuart Hunt, Hannah Brown, Aude Segaliny, Regis Brion, Paul Heath, Robin Young, Dominique Heymann
Oncology And Metabolism, University of Sheffield, Sheffield/UNITED KINGDOM

P-CANC-7 **ANTI-OSTEOSARCOMA ACTIVITIES OF PYRIDAZINONES**
Aurélie Moniot1, Camille Bour1, Christine Guillaume1, Janos Sapi2, Sophie Catherine Gangloff1, Stéphane Gerard2, Frédéric Velard1
1Ea4691 Bios, Université Reims champagne Ardenne, REIMS/FRANCE, 2Icmr, Umr 7312 Cnrs, universite reims champagne ardenne, reims/FRANCE

P-CANC-8 **MATERNAL EMBRYONIC LEUCINE ZIPPER KINASE (MELK) INHIBITION HAS DIRECT EFFECTS ON BONE CELLS AND PREVENTS THE DEVELOPMENT OF OSTEOLYTIC BONE DISEASE IN MULTIPLE MYELOMA**
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1Giga-i3 - Hematology, University of Liège, Liège/BELGIUM, 2Medicine I, Wilhelmnen Cancer Research Institute, Vienna/AUSTRIA, 3Chemical Engineering, University of Liège, Liège/BELGIUM, 4Umr-1132, INSERM, Paris/FRANCE
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Joséphine Muller¹, Marilène Binsfeld², Sophie Dubois¹, Gertrudis Carmeliet³, Yves Beguin⁴, Roy Heusschen¹, Jo Caers⁴
¹Giga-i3 - Hematology, University of Liège, Liège/BELGIUM, ²Biological Hematology & Immuno-hematology, University Hospital of Liège, Liège/BELGIUM, ³Clinical And Experimental Endocrinology, University of Leuven, Leuven/BELGIUM, ⁴Hematology, University Hospital of Liège, Liège/BELGIUM

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¹Dept. Of Urology And Dept. Of Clinical Research, Universität Bern, Bern/SWITZERLAND, ²Clayton Foundation Laboratories For Peptide Biology, The Salk Institute for Biological Studies, La Jolla CA/UNITED STATES OF AMERICA, ³Dept. Of Molecular Cell Biology, Leiden University Medical Centre, ZC Leiden/NETHERLANDS, ⁴Dept. Of Urology, Leiden University Medical Centre, ZA Leiden/NETHERLANDS

P-CANC-11 **This abstract has been withdrawn.**

P-CANC-12 **BIOLOGICAL EFFECTS OF CABOZANTINIB ON OSTEOSARCOMA-BONE MICROENVIRONMENT MODEL: RANKL EXPRESSION AS PREDICTIVE FACTOR OF OSTEOSARCOMA RESPONSE TO CABOZANTINIB TREATMENT**
Marco Fioramonti¹, Valentina Fausti¹, Francesco Pantano¹, Michele Iuliani¹, Giulia Ribelli¹, Fiorenza Lotti², Giovanni Grignani³, Ymera Pignochino⁴, Daniele Santini¹, Giuseppe Tonini¹, Bruno Vincenzi¹
¹Translational Oncology, Campus BioMedico University, Rome/ITALY, ²Orthopaedics And Trauma Surgery, Campus BioMedico University, Rome/ITALY, ³Oncology, Candiolo Cancer Institute-FPO, IRCCS, Candiolo (TO)/ITALY, ⁴Sarcoma Unit, Division Of Medical Oncology, Candiolo Cancer Institute-FPO, IRCCS, Candiolo (TO)/ITALY
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Eugenio Zoni\(^1\), Markus Krebs\(^2\), Mirjam Kiener\(^1\), Philip Herreiner\(^2\), Charis Kalogirou\(^2\), Lanpeng Chen\(^3\), Ewa Snaar-Jagalska\(^3\), George Thalmann\(^4\), Hubertus Riedmiller\(^2\), Marianna Kruithof-De Julio\(^4\), Burkhard Kneitz\(^2\), Martin Spahn\(^4\)
\(^1\)Department Of Clinical Research, University of Bern, Bern/SWITZERLAND, \(^2\)Department Of Urology, University of Würzburg, Würzburg/GERMANY, \(^3\)Ibl, University of Leiden, Leiden/NETHERLANDS, \(^4\)Dept. Of Urology And Dept. Of Clinical Research, Universität Bern, Bern/SWITZERLAND

P-CANC-14 **LEVEL OF VITAMIN D AND BMD IN LUMBAR SPINE IN PATIENTS WITH BREAST CANCER**
Vaclav Vyskocil\(^1\), Jindrich Finek\(^2\)
\(^1\)Department Of Medicine Ii Center Of Bone Diseases, Charles University Faculty Hospital, Plzen/CZECH REPUBLIC, \(^2\)Oncology And Radiotherapy Clinic, Charles University Faculty Hospital, Plzen/CZECH REPUBLIC

P-CANC-15 **SELECTIVE INHIBITION OF IKKALPHA DECREASES PROSTATE CANCER CELL MOTILITY, SUPPRESSES OSTEOCLASTOGENESIS AND STIMULATES OSTEOBLAST DIFFERENTIATION IN VITRO**
Abdullah Aljeffery\(^1\), Silvia Marino\(^2\), Marco Ponzetti\(^3\), Nadia Rucci\(^3\), Aymen Idris\(^2\)
\(^1\)Oncology And Human Metabolism, University of Sheffield, Sheffield/UNITED KINGDOM, \(^2\)Oncology And Metabolism, University of Sheffield, Sheffield/UNITED KINGDOM, \(^3\)Biotechnological And Applied Clinical Sciences, University of L’Aquila, Coppito (AQ)/ITALY

P-CANC-16 **EVIDENCE THAT THE TUMOR INHIBITORY ACTIVITY OF THE SRC-TYROSINE KINASE INHIBITOR DASATANIB IN BONE IS SITE-SPECIFIC**
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\(^1\)Radiology & Neuroradiology, University Hospital Schleswig-Holstein, Kiel/GERMANY, \(^2\)Gynecology & Obstetrics, University Hospital Schleswig-Holstein, Kiel/GERMANY, \(^3\)department Of Gynecology And Obstetrics, University Medical Center Schleswig-Holstein (UKSH), Kiel/GERMANY, \(^4\)Department Of Gynecology And Obstetrics, University Hospital Schleswig-Holstein, Kiel/GERMANY, \(^5\)Section Biomedical Imaging, Department Of Radiology And Neuroradiology, University Medical Center Schleswig-Holstein (UKSH), Christian-Albrechts-Universität zu Kiel, Kiel/GERMANY, \(^6\)Klinik Für Radiologie Und
P-CANC-17 POLY-ASPARTIC ACIDS PEPTIDE-POLY (ETHYLENE GLYCOL)-POLY (ε-CAPROLACTONE) MICELLES: A BONE SPECIFIC CARRIER OF CURCUMIN TO TREAT CANCER METASTASIZED TO BONE
Janak L. Pathak1, Jinsong Liu2, Youyun Zeng3, Shuai Shi4, Lihua Xu5, Hualian Zhang6, Yihuai Pan7
1School Of Pharmaceutical Science And Technology, Health Sciences Platform, Tianjin University, Tianjin/CHINA, 2School And Hospital Of Stomatology, Wenzhou Medical University, Wenzhou/CHINA, 3School And Hospital Of Stomatology, Wenzhou Medical College, Wenzhou/CHINA, 4Institute Of Biomedical Engineering, School Of Ophthalmology & Optometry And Eye Hospital, Wenzhou Medical University, Wenzhou/CHINA, 5The First Affiliated Hospital Of Wenzhou Medical University, Wenzhou Medical University, Wenzhou/CHINA, 6College Of Stomatology, Ningxia Medical University, Yinchuan/CHINA, 7School And Hospital Of Stomatology, Wenzhou Medical University, Wenzhou/CHINA

P-CANC-18 NEURONAL HGF REGULATES BREAST CANCER PROGRESSION AND BONE PAIN INDUCTION
Tatsuo Okui1, Masahiro Hiasa2, Fletcher White3, G David Roodman3, Toshiyuki Yoneda4
1Oral And Maxillofacial Surgery, Okayama Univ, okayama/JAPAN, 2Department Of Biomaterials And Bioengineerings, Tokushima University, Tokushima/JAPAN, 3Department Of Hematology And Oncology, Indiana University School of Medicine, Indianapolis/IN/UNITED STATES OF AMERICA, 4Department Of Molecular And Cellular Biochemistry, Osaka University Graduate School Of Dentistry, Osaka University Japan, Osaka/JAPAN

P-CANC-19 This abstract has been withdrawn.
Zebrafish

P-FB-1 FUNCTION OF CSF1R PARALOGUES IN REGULATION OF OSTEOCLASTOGENESIS AND ACTIVITY IN THE ZEBRAFISH
Joana Caetano-Lopes¹, Katia Urso², Katrin Henke¹, Julia F Charles², Matthew P Harris¹
¹Department of Orthopaedic Surgery, Boston Children's Hospital, Boston, MA, USA; Department of Genetics, Harvard Medical School, Boston, MA, USA, ²Department of Medicine, Brigham and Women’s Hospital and Harvard Medical School, Boston, MA, USA

P-FB-2 INTRAMUSCULAR BONES OF THE ATLANTIC HERRING FISH AS A NEW MODEL TO ESTABLISH THE LINK BETWEEN MINERAL-RELATED PARAMETERS AND MICRO-MECHANICAL PROPERTIES AT EARLY STAGES OF TISSUE MATURATION
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¹Department of Physical Therapy, City University of New York - College of Staten Island, USA; ²Department of Materials, Imperial College London, UK; ³Department of Chemistry, City University of New York - College of Staten Island, USA; ⁴Department of Biomedical Engineering, City University of New York - City College of New York, USA

P-FB-3 AGEING ZEBRAFISH TO MODEL OSTEOARTHRITIS
Erika Kague¹; Karen Roddy¹; Roddy Skinner¹; Elizabeth Lawrence¹; Kate Robson-Brown¹; Chrissy Hammond¹
¹Physiology, Pharmacology and Neuroscience, University of Bristol, Bristol, UK; ²School of Arts, University of Bristol, Bristol, UK

P-FB-4 MICROCT-BASED SKELETAL PHENOMICS IN ZEBRAFISH REVEALS VIRTUES OF DEEP PHENOTYPING AT THE WHOLE-ORGANISM SCALE
Matthew Hur¹, Charlotte A. Gistelinck², Philippe Huber¹, Jane Lee¹, Marjorie H. Thompson¹, Adrian T. Monstad-Rios¹, Claire J. Watson¹, Sarah K. McMenamin³, Andy Willaert², David M Parichy⁴, Paul Coucke², Ronald Y. Kwon¹⁴
¹Department of Orthopaedics and Sports Medicine, University of Washington, Seattle, Washington, USA, ²Center for Medical Genetics, Ghent University, Ghent, Belgium; ³Biology Department, Boston College, Chestnut Hill, Massachusetts, USA, ⁴Department of Biology, University of Virginia, Charlottesville, VA, USA
P-FB-5  MODELLING SKELETAL ASPECTS OF STICKLER SYNDROME IN ZEBRAFISH
Elizabeth Lawrence, Karen Roddy, Erika Kague, Chrissy Hammond
Faculty of Biomedical Sciences, University of Bristol, Bristol, BS8 1TD

P-FB-6  LOST IN EVOLUTION: NOVEL FORM OF MODELING BYPASSES THE NEED FOR OSTEOCYTES IN THE ADAPTATION OF BONES TO MECHANICAL LOADING
Lior Ofer¹, Elazar Zelzer², Ron Shahar¹
¹The Hebrew University of Jerusalem, Laboratory of Bone Biomechanics, Rehovot, Israel, ²Department of Molecular Genetics, Weizmann Institute of Science, Rehovot, Israel

P-FB-7  BASIC HELIX LOOP HELIX TRANSCRIPTION FACTOR TWIST1A AND TWIST1B AND THEIR INVOLVEMENT IN THE SKELETAL DEVELOPMENT OF ZEBRAFISH
Jérémie Zappia, Thomas Windhausen, Jordan Cornet, Joerg Renn, Marc Müller
Laboratory of organogenesis and regeneration, GIGA-R, Université de Liège. B34 Sart-Tilman 4000 Liège.
NETWORKING PROGRAMME

Official ECTS 2017 Events

Welcome Reception
Saturday 13 May 2017
from 21:15 in the Exhibition Area (1st floor of the congress centre)

An informal gathering open to all participants of ECTS 2017 with a welcome cocktail and some light snacks. Take this opportunity to re-connect with old acquaintances, make some new contacts and together look forward to some inspirational and educational days ahead. Participation is included in the congress registration fee.

New Investigator Gathering
Sunday 14 May 2017
At 17:45, before the New Investigator Seminar (Papageno Hall, ground floor of the Sheraton, directly accessible from the congress centre)

Postdocs, PhD students and junior faculty staff are invited to gather together for the New Investigator Seminar, student presentations and a social gathering. Light refreshments will be served in a relaxed and informal environment and delegates will have the opportunity to interact with other new investigators, as well as meet up with ECTS staff and members of the New Investigator Committee to discuss what the ECTS can do for YOU!

AHP Networking
Sunday 14 May 2017
from 19:00 – 2nd Floor Foyer

Official Congress Evening
Monday 15 May 2017
21:00 – Stiegl Keller
Doors open: 20:30

An informal three-course dinner, open to a limited number of delegates. Join us for a typical Austrian meal and seize the opportunity to network with your colleagues in a relaxing atmosphere.
**Contribution per person:**
Delegate fee: EUR 40,-/person
Accompanying person’s fee: EUR 65,-/person

A limited number of tickets is still available. Please inquire at the registration counter.

**Coffee & Lunch Breaks**
daily from Saturday 13 May 2017 to Tuesday, 16 May 2017
in the Exhibition Area (1st floor of the congress centre)
Exhibition & Industry Sponsored Sessions

EXHIBITION FLOOR PLAN
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Aginko
Stand 14

AGINKO Research is a premium CRO specialized in osteoarticular pathologies and medical device development. Our team provides comprehensive preclinical and clinical trial management services in bone tissue repair, cartilage, spine, as well as in the inflammation and pain therapeutic areas to pharmaceutical, biotechnological and other musculoskeletal companies. AGINKO specializes in tailoring each service to specific sponsor requirements while maintaining the strictest of ICH-GCP quality standards, regulatory requirements in adherence to regional guidelines. What sets AGINKO apart is the unique approach to osteoarticular disease management and its large network of investigators that help our clients to achieve maximum value.

Alexion
Stands 4,5

Alexion is a global biopharmaceutical company focused on developing and delivering life-transforming therapies for patients with devastating and rare disorders. Alexion’s metabolic franchise includes two highly innovative enzyme replacement therapies – Strensiq® (asfotase alfa) for patients with hypophosphatasia (HPP) and Kanuma™ (sebelipase alfa) for patients with lysosomal acid lipase deficiency (LAL-D). Alexion also developed and commercializes Soliris® (eculizumab), the first and only approved complement inhibitor to treat paroxysmal nocturnal hemoglobinuria (PNH) and atypical hemolytic uremic syndrome (aHUS). Alexion is advancing the most robust rare disease pipeline in the biotech industry with highly innovative product candidates in multiple therapeutic areas. www.alexion.com
Amgen

Stands 6, 7, 8

Amgen is committed to unlocking the potential of biology for patients suffering from serious illnesses by discovering, developing, manufacturing and delivering innovative human therapeutics. This approach begins by using tools like advanced human genetics to unravel the complexities of disease and understand the fundamentals of human biology. Amgen focuses on areas of high unmet medical need and leverages its expertise to strive for solutions that improve health outcomes and dramatically improve people’s lives. A biotechnology pioneer since 1980, Amgen has grown to be one of the world’s leading independent biotechnology companies, has reached millions of patients around the world and is developing a pipeline of medicines with breakaway potential.

For more information, visit www.amgen.com and follow us on www.twitter.com/amgen.

Biomedica

Stand 9a

Biomedica Immunoassays provides internationally recognized, high quality ELISAs for clinical research in the field of bone and mineral disorders as well as renal and cardiovascular diseases. Biomedica serves international academic scientific institutions, CROs, and laboratories in the pharmaceutical industry. All assays are fully validated according to ICH-Q2 guidelines and include serum-based calibrators and controls for biologically reliable data. New in the ELISA portfolio is Bioactive Sclerostin, soluble Semaphorin 4D, and Periostin. Since 2017, Biomedica exclusively distributes TAmiRNA’s osteomiR™ miRNA biomarker assay which serves as a novel fracture-risk assessment tool.

www.bmgrp.com

Bruker

Stand 10

Offering the largest range of Preclinical Imaging systems, with an unmatched nine in-vivo modalities, Bruker is committed to supporting the scientific community with high-end instruments dedicated to disease research, translational science and Molecular Imaging. Benefitting from more than 5 decades of passionate innovation, Bruker customers enjoy a vast portfolio of possibility; from a single source they
have endless opportunities for combining multiple modalities for seamless workflow and higher productivity. Our non-invasive in-vivo imaging modalities are designed to deliver greater scientific insight based on animal-centric solutions.

ECTS
Stands 1, 2, 3
The European Calcified Tissue Society (ECTS) is the major organisation in Europe for researchers and clinicians working in the field of calcified tissues and related fields. For over 50 years the Society has acted as a forum to promote the highest levels of knowledge, research and education through its annual meetings, training courses and grants and awards. Membership of the ECTS is open to anyone working in the field at whatever stage in their career. Come and meet us in Salzburg at stand numbers 1, 2, 3. www.ectsoc.org

Faxitron
Stand 13
Faxitron is the pioneer and continues to be the most used brand in cabinet X-ray. Faxitron offers compact digital imaging and pre-clinical DEXA systems with the highest resolution (< 10Qm) and the largest field of view in the market. These systems are less expensive, expose animals to lower doses, and offer faster results than microCT or 3D systems. Faxitron cabinets can be placed directly in the animal facility or surgical suite with no other shielding required.

IDS
Stand 15
Immunodiagnostic Systems Limited is a leading in-vitro diagnostic solution provider to the clinical laboratory market. Our immunoassay portfolio is available for use on our fully-automated IDS-iSYS Multi-Discipline Automated System, or as stand-alone manual assay kits. This complete offering meets the needs of both clinical and research laboratories of all types and sizes with their diagnostic testing requirements. Immunodiagnostic Systems offers a unique and full panel of bone turnover markers, for the measurement and monitoring of bone resorption and formation markers which provide highly accurate and reliable results.
For more product information visit us at stand 15 or go to www.idsplc.com
Kyowa Hakko Kirin

Kyowa Hakko Kirin (KHK) is a biopharmaceutical company focusing on its core business area of oncology, nephrology, and immunology/allergy. KHK discovered KRN23, an investigational fully human monoclonal antibody administered via subcutaneous injection designed to bind and thereby reduce the excess biological activity of FGF23. KHK formed a collaboration with Ultragenyx to jointly develop KRN23 for the treatment of X-Linked Hypophosphatemia (XLH), a rare genetic metabolic bone disease, and Tumor-Induced Osteomalacia (TIO). Ultragenyx is a clinical-stage biopharmaceutical company committed to bringing to market novel products for the treatment of rare and ultra-rare diseases, with a focus on serious, debilitating genetic diseases.

Medi-ManAge Innovation

Medi-ManAge Innovation in Mainz/Germany is an innovative and powerful company that specializes in the distribution and service of medical systems. The main focus is the efficient probes and MRI coil repair, the osteology, pain therapy. Here we offer you only the latest technologies and scientifically validated systems for diagnostics and therapy. Through customer proximity, as well as a worldwide network with partners and access to more than 12,000 rental probes, we are in a position to help the users in practices and clinics in the shortest possible time. In the service sector, our supervisors have many years of experience and in-depth knowledge, which are constantly updated through further training.

Perkin Elmer

PerkinElmer is a global life sciences company uniquely positioned to bring instruments and software solutions to enable comprehensive imaging & detection solutions for your preclinical research. Our Quantum GX microCT imaging system combines high resolution microCT imaging with high-speed, low dose CT scanning across multiple species, ideal for bone and tissue research. When coupled with AccuCT™, our automated, advanced bone analysis software, researchers can perform ASBMR bone morphometry and BMD analysis with just a few clicks. Stop by booth 16 and learn how PerkinElmer preclinical solutions can work for you.
**PolyGene**  
**Stand 9b**
PolyGene is based in Switzerland. Founded in 2001, PolyGene is now one of the world top 5 professional transgenic service companies. For the generation of tailor-made animal models, PolyGene offers all standard services (classical transgenesis, blastocyst injection), but also state-of-the-art technologies such as CRISPR/Cas9, piggyBAC transgenesis, conditional and inducible gene knock-outs /-ins, gene humanization and cryopreservation. All services can be ordered in mice, but also in rats or rabbits. Inducible gene expression systems available at PolyGene allow to reversibly switch on/off gene expression in cell culture and in vivo, simply by adding or removing drugs such as RU486.

**SCANCO Medical**  
**Stand 18**
SCANCO Medical has been a pioneer in the field of high-resolution computed tomography for more than two decades. Starting with the first installation in Switzerland in 1988 we now have systems for medical and industrial applications operating on six continents. We offer a wide range of microCT scanners for specimen and preclinical as well as clinical use. These systems are supplied with high-end computing equipment and sophisticated analysis and visualization software to provide the most comprehensive and industry-leading imaging solutions. SCANCO Medical also offers scanning, analysis and consulting services for a wide range of applications.

**Stratec Medizintechnik**  
**Stand 12**
Stratec Medizintechnik is the world’s most successful producer of pQCT-based bone densitometry scanners. Results are presented in real density units (g/cm³). Additionally geometrical properties of bone can be analysed which allow the estimation of mechanical properties. The combined analysis of muscle and bone allows differentiation of disuse osteopenia from true osteoporosis. The sister company Novotec Medical is manufacturer of Galileo vibration training devices for muscle stimulation and of Leonardo motion analysis systems (mechanography). The side alternating technology employs a natural movement similar to human gait. Improvement of muscle function, treatment of back pain and immobility are typical fields of application.
INDUSTRY-ORGANISED SESSIONS

A number of programme slots have been set aside by the Scientific Programme Committee for industry-organised sessions.

All delegates are invited to attend these industry organised sessions. The programmes of these sessions are designed by the sponsoring companies and vetted by the Scientific Programme Committee to ensure balance, independence, objectivity and scientific rigor.

Saturday 13 May 2017

16:00 – 17:30  Mozart

ALEXION

Sunday 14 May 2017,

12:30 – 14:00  Europa

AMGEN®

Monday 15 May 2017

12:45 – 14:15  Mozart

ucb
Hypophosphatasia in adults with paediatric onset of disease: unmet needs, challenges and opportunities

SATURDAY 13 MAY 2017
16:00-17:30 Mozart Hall, Salzburg Congress
Salzburg, Austria

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<td>Professor Franz Jakob (Co-chair) University of Würzburg, Würzburg, Germany</td>
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<td>16:05</td>
<td>Case study: Investigation of bone pain in an adult patient with paediatric-onset hypophosphatasia (HPP)</td>
<td>Professor Florian Barvencik (Co-chair) University Clinic Hamburg-Eppendorf, Hamburg, Germany</td>
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<td>16:25</td>
<td>The physiotherapist perspective on assessing physical function in adults with paediatric-onset HPP</td>
<td>Chantal Verhille University of Leuven, Leuven, Belgium</td>
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<td>16:40</td>
<td>Case study: Managing and treating adult patients with paediatric-onset HPP</td>
<td>Professor Francesco Conti Sapienza University, Rome, Italy</td>
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<td>17:05</td>
<td>Panel discussion and Q &amp; A session</td>
<td>All faculty</td>
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<td>17:25</td>
<td>Conclusions</td>
<td>Professor Franz Jakob University of Würzburg, Würzburg, Germany</td>
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# Optimising the management of osteoporosis in elderly patients

Sunday 14 May 2017, 12.30–14.00
Europa Hall, Salzburg Congress, Salzburg, Austria

## Programme

**Chair:** Heinrich Resch, Austria

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<td>How can we best identify elderly patients with increased risk of fracture?</td>
<td>Kristina Åkesson, Sweden</td>
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<td>13.40–14.00</td>
<td>Discussion – reflecting back</td>
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FRAGILITY FRACTURES: USING SCIENCE TO BREAK THE SILENCE

Monday 15 May 2017, 12:45–14:15
Mozart Hall

12:45–12:55 Welcome
Mattias Lorentzon (Sweden), Lorenz Hofbauer (Germany)

12:55–13:30 Part 1. Why the first fracture is seldom the last – bone biology, pathology and fracture risk
Kassim Javaid (UK)
Moderated by: Mattias Lorentzon and Lorenz Hofbauer

13:30–14:10 Part 2. From rare skeletal disorders to novel treatments – a molecular approach
Ken Poole (UK)
Moderated by: Mattias Lorentzon and Lorenz Hofbauer

14:10–14:15 Summary and close
Mattias Lorentzon, Lorenz Hofbauer

A UCB-sponsored satellite symposium.
This symposium is only open to healthcare professionals who are registered for the ECTS Congress.
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Notes
Low alkaline phosphastase (ALP) levels are associated with hypophosphatasia (HPP), whose symptoms can include multiple bone fractures.²

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