



Join the ECTS Community

- Substantially reduced registration fee for ECTS Congress
- Access to other ECTS Events and IFMRS activities
- Monthly member e-newsletter
- Society App
- Opportunity to be actively involved in the organisation of the ECTS and be part of an international network of Key Opinion Leaders in the field

- Access to session recordings of ECTS and ECTS Academy Webinars
- Best research: ECTS Fellowship and ECTS Academy
- Best education: access to the ECTS Resource Center, our online educational library
- Access to the Members' Lounge with members directory









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Welcome



Acknowledgement

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



KYOWA KIRIN





ECTS thanks the following organisations for their support of the 46^{th} Calcified Tissue Society Congress 2019 in Budapest.

Platinum Supporter



Gold Supporters







Additional Supporters and Educational Grants

































Welcome Message

Dear Colleagues,

It is a great pleasure to invite you to the ECTS 2019, the 46th annual meeting of the European Calcified Tissue Society. ECTS 2019 will take place from 11-14 May 2019 in Budapest, Hungary, with pre-congress day on 10 May 2019.

ECTS serves as a forum for researchers and clinicians working in the musculoskeletal field to discover and discuss the latest advances and controversies in research and in the daily care of patients. A special highlight this year will be the 50th year anniversary of bisphosphonates. Everyone in the field knows their history and impact on clinical medicine, but what will be their future? A forward looking session will review future developments.

Also new this year, the meeting will include relevant hot clinical sessions to help managing patients going along the newest knowledge in the field.

The educational aspects of ECTS 2019 will include pre-meeting courses, working group meetings and workshops. There will be many interactive sessions: Meet-the-Experts, ECTS-ASBMR clinical debate and the Opening Ceremony will review ECTS Practice Guidelines issued during the past year. As in previous years, ECTS 2019 will include a New Investigator programme fully organised by our young leaders, the ECTS Academy.

This programme will give the opportunity to new investigators to network, share common interests, receiving mentoring advices and start building their own collaborative projects at an international level. Collaboration will also be highlighted in several joint sessions with international bone societies: ASBMR and our partners from China, Japan and Korea.

ECTS Congress is recognised a successful scientific meeting thanks to the large number of contributions coming via abstract submissions. We are committed to offer large visibility to promising abstracts by including them in plenary oral sessions, poster orals, SNAPS or via dedicated poster viewing sessions. We therefore, strongly encourage you to take note of the abstract submission deadline and to send your abstracts in due time.

Whether you are a young investigator, clinician, basic scientist, nurse or allied health professional, industry representative, you will be exposed to the latest topics in our field. Take part in this exciting meeting and stay tuned for more information coming soon. We look forward to welcoming you in Budapest.

Warm regards,

Anna Teti SPC Chair

Awards



Awards

Awardee Wall

We are excited to introduce the awardee wall, new to the ECTS 2019 Congress. The wall will be positioned at the end of the Bartók corridor and will display all award winners.

ECTS Grants and Awards

ECTS Named Awards

ECTS 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 2019 Steven Boonen Award is supported by Amgen (Europe) GmbH AMGEN

Saturday, 11 May 2019, 17:15 – 17:45, Pàtria, Award Winner: Roger Bouillon (Belgium)

ECTS 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.

Sunday, 12 May 2019, at 12:40, Awardee Wall, Award Winner: Christian Meier (Switzerland)

ECTS 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, 12 May 2019, at 12:40, Awardee Wall, Award Winner: Björn Busse (Germany)



ECTS Mike Horton Basic/Translational 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, 12 May 2019, at 12:40, Awardee Wall, Award Winner: Miep Helfrich (United Kingdom)

ECTS Fellowship Awards

ECTS is presenting two one-year fellowships this year, which are available to our New Investigator members. Fellowships are open to both pre-clinical and clinical researchers and will be used exclusively to fund research in the area of bone disease.

Monday, 13 May 2019, at 13:00, Awardee Wall, Award Winner: Valentina Capo (Italy) and Elena Tsourdi (Germany)

FCTS Webinar Award

Education is at the heart of ECTS activities. Since our foundation, ECTS has been providing through its congresses, trainings, and workshops standard of practice in the musculoskeletal field. Since 2013, we have been pioneering e-learning through the establishment of Congress Highlights and Webcasts and since 2016 we moved to the next stage of e-learning services establishing two series of webinars: ERC Grant Winners Webinars organized by the ECTS Academy

Bone, Muscle & Beyond Series

The ECTS Webinar Award is aimed at recognizing the best Clinical and Basic Science ECTS Webinar organized in 2018. The winners will be selected by the E-Learning Action Group and announced during the ECTS 2019 Closing Ceremony.

Tuesday, 14 May, 13:45 - 14:30, Pàtria

ECTS 2019 Lecture Award

ECTS 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.

Monday, 13 May, 10:50 – 11:00, Pàtria, Award Winner: Klaus Engelke (Germany)



ECTS 2019 Abstract and Congress Awards

ECTS-AgNovos New Investigator 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 ECTS-AgNovos New Investigator Awards are supported by AgNovos Healthcare

Tuesday, 14 May, 13:45 - 14:30, Pàtria



ECTS-Bone Reports New Investigator 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 ECTS-Bone Reports New Investigator Awards are supported by Elsevier Inc.

Tuesday, 14 May, 13:45 - 14:30, Pàtria



ECTS-ICCBH New Investigator Awards

These awards are available to ECTS members who submit an abstract to the "Paediatric bone diseases" category 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 ECTS-ICCBH New Investigator Awards are supported by International Conference on Children's Bone Health (ICCBH)



Tuesday, 14 May, 13:45 - 14:30, Pàtria

ECTS 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.

Tuesday, 14 May, 13:45 - 14:30, Pàtria

ECTS Allied Health Professional Award

These awards are available to ECTS members who submit an abstract to the congress and who satisfy the specific award criteria. The award winners will be selected during the AHP Sessions and presented during the ECTS 2019 Closing Ceremony.

Tuesday, 14 May, 13:45 - 14:30, Pàtria



East-Meets-West Research Award

As part of the East-Meets-West programme, ECTS will award the top three highest ranking abstracts submitted from China, Japan, Korea and India. For the third 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).

Tuesday, 14 May, 13:45 - 14:30, Pàtria

ECTS Academy-IBI Poster Focus Award

Two awards are available for New Investigators presenting during the Poster Focus session. These awards are organised by the ECTS Academy and supported by IBI



Tuesday, 14 May, 13:45 – 14:30, Pàtria

ECTS Academy-IBI New Investigator Seminar Award

Organised by the ECTS Academy, this award will reward the Best Presentation from the NI Seminar. This Award is supported by IBI

Tuesday, 14 May, 13:45 - 14:30, Pàtria



IFMRS Travel Grants

IFMRS travel grants are available for members of IFMRS member societies to attend any IFMRS member society congress.

The 2019 IFMRS Travel Grants are supported and independently organised by the International Federation of Musculoskeletal Research Societies.

Recipients will be listed on the Awardee Wall.

3rd ECTS Charity Event

Actioned by the ECTS & ECTS Academy









With your friends and colleagues form a team, join the ECTS Charity Football Tournament and help us fundraising for the National, Hungarian Federation of Patients with Rare and Congenital Disorders

Supporters are also welcome to join the event

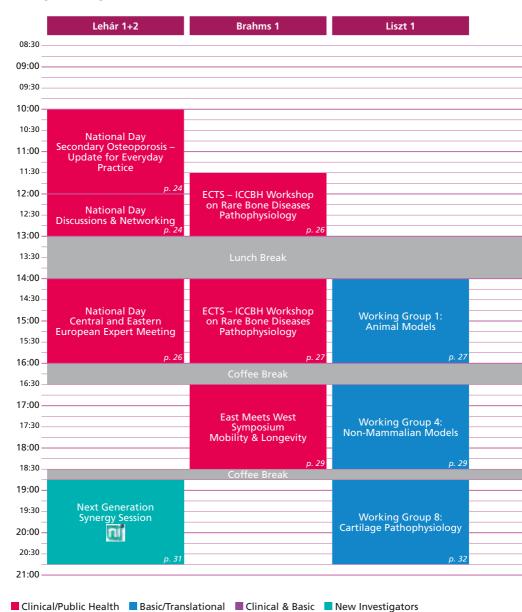
Sunday 12 May 2019 starting at 20:30hrs

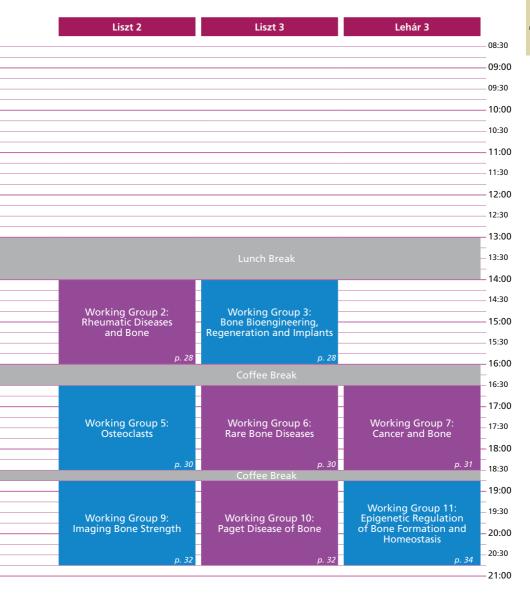
MOM Swimming Pool and Sports Center 2 minute walk from the congress center

For more information, visit ECTS Booth or NI Lounge

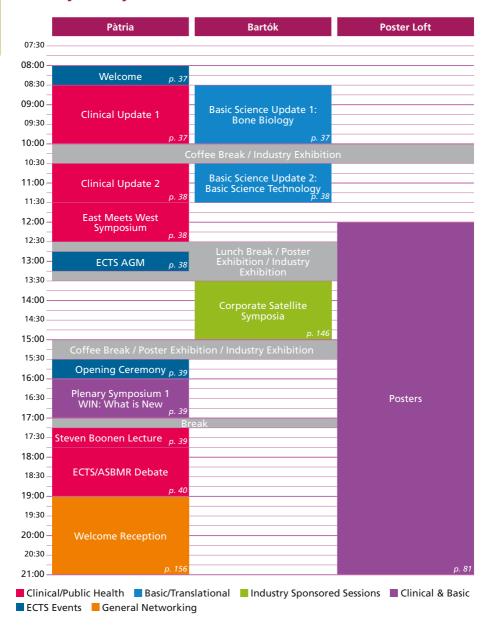
Scientific Programme

Friday, 10 May 2019





Saturday, 11 May 2019



NOT TO BE MISSED:

Expert Forum on X-linked hypophosphatmia (XLH): A debate will be held in which eminent experts will interactively discuss with the audience about the multifaceted feature of this debilitating rare bone disease. Supported by an educational grant from Kyowa Kirin.

Sunday 12 May 2019, 13:30-14:30

Presentations by Signe Beck-Nilsen & Peter Kamenicky.

Educational Symposium ENPP1 deficiency: from bench to clinic, a review of latest science and clinical practice in two rare diseases caused by ENPP1 deficiency—Generalized Arterial Calcification of Infancy (GACI) and Autosomal recessive hypophosphatemic rickets type 2 (ARHR2). Supported by an educational grant from Inozyme.

Sunday 12 May 2019, 19:00-20:00

Presentations by Frank Rutsch, Stefan Schulte-Merker, Ralf Oheim, Demetrios Braddock.

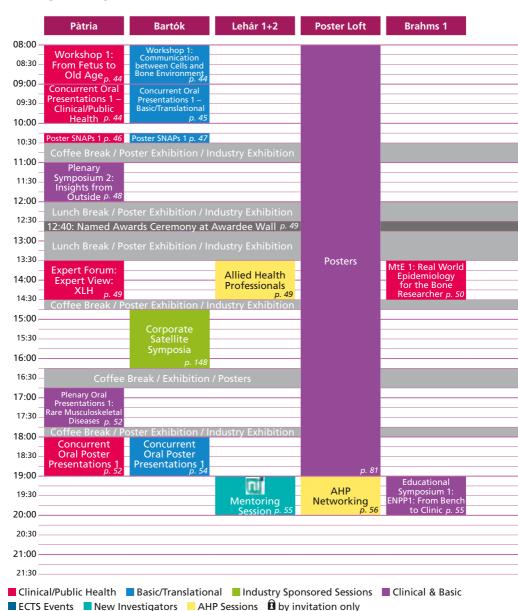
Educational Symposium on FGF23: all you want to know about FGF23 and its involvement in hypophosphatemia.

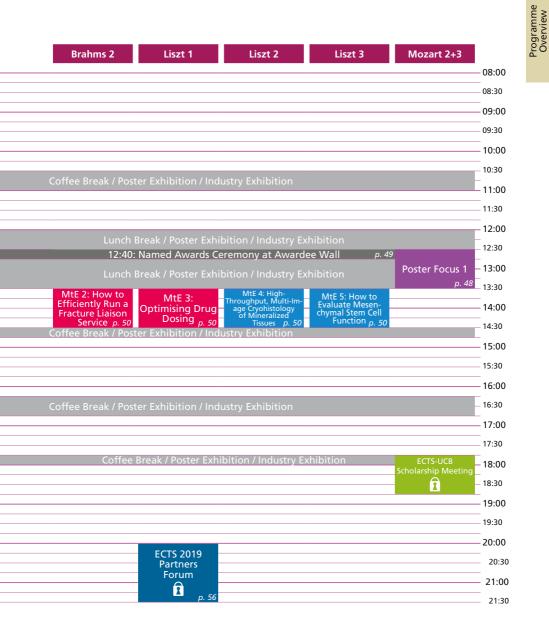
Supported by an educational grant from Kyowa Kirin.

Monday 13 May 2019, 13:30-14:30

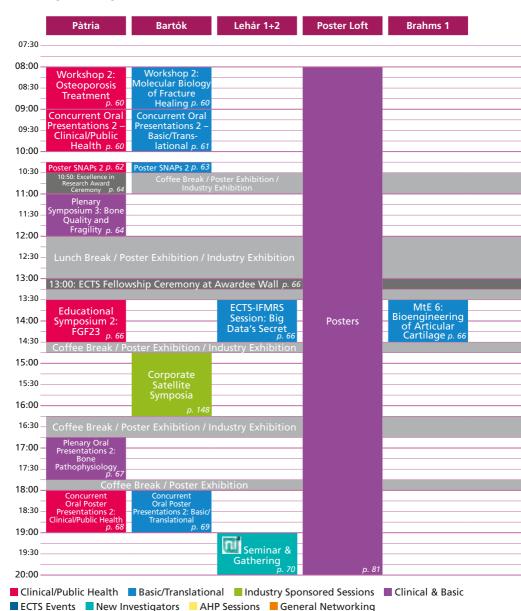
Presentations by Reinhold Urban & Christian Faul.

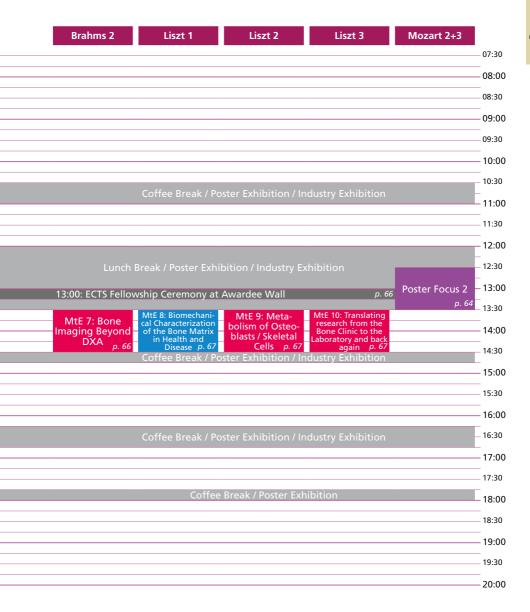
Sunday, 12 May 2019





Monday, 13 May 2019

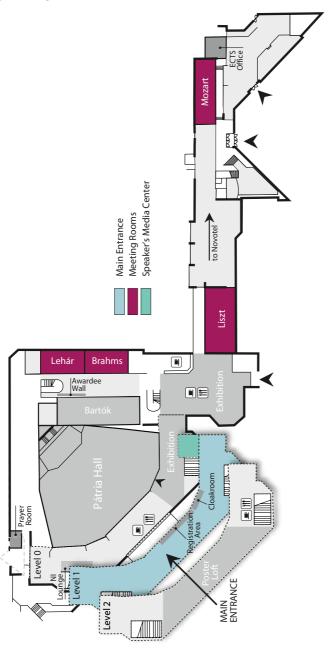




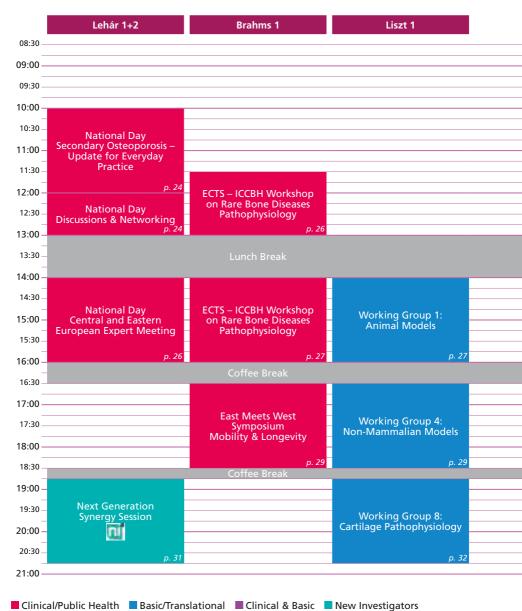
Tuesday, 14 May 2019

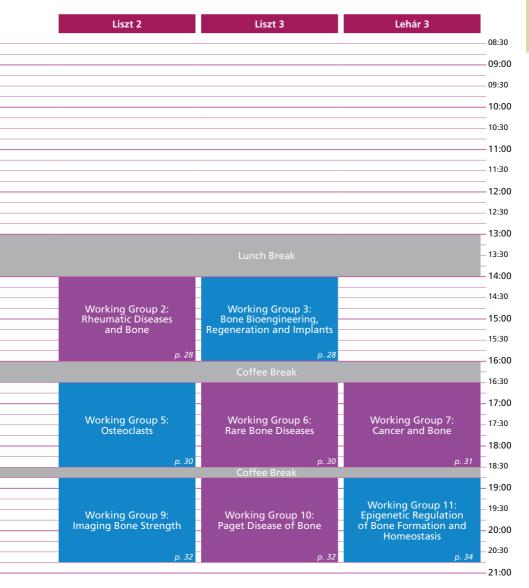


Floor Plan



Friday, 10 May 2019





Pre-Congress ECTS 2019

Friday, 10 May 2019

10:00 – 12:00	National Day Secondary Osteoporosis – Update for Everyday Pract	Lehár 1+2
	Sponsored by the Hungarian Society of Osteoporosis and Osteoarthrology Chair: Zoltan Szekanecz (Hungary)	
10:00 – 10:20	Effect of thyroid diseases on bone Péter Lakatos (Hungary)	
10:20 – 10:40	Glucocorticoids and bone health György Nagy (Hungary)	
10:40 – 11:00	Autoimmune diseases and secondary osteoporosis – effe treatments Zoltan Szekanecz (Hungary)	cts of
11:00 – 11:20	Osteo-Cardiology: Common links between osteoporosis atherosclerosis Willem Lems (Netherlands)	and
11:20 – 11:40	Connection between malabsorption and bone loss Pal Miheller (Hungary)	
12:00 – 13:00	National Day Discussions & Networking	Lehár 1+2
	Sponsored by the Hungarian Society of Osteoporosis and Osteoarthrology	
13:00 – 14:00	Lunch Break	



7-10 September 2019 · ITALY

This prestigious PhD Training Course, aimed at promoting general knowledge of bone research to young investigators, is now in its 13th Edition and has been hailed as one of the most innovative and successful courses in the bone field.

Programme highlights

Full programme and speaker details are available from www.ectsoc.org

- Intellectual property and plagiarism
- ER stress and bone
- Muscle and bone cross-talk
- Bone fragility: from basic research to clinical trial
- Bone metastases: basic and clinical overview
- Bone rare diseases: from the research to the patient
- Zebrafish models of bone diseases

Workshops on how to prepare a presentation.

Venue:

Camplus Guest Bononia
Bologna
Italy
www.camplusguest.it

Course Co-Chairs:

Nadia Rucci (Italy) Luca Sangiorgi (Italy) Nuria Guañabens (Spain) Gudrun Stenbeck (UK)

Full programme & registration details can be found at www.ectsoc.org/education/phd-training



Rosemary Oduor

Email: rosemary.oduor@ectsoc.org Tel: +32 471 78 4125





14:00 – 16:00	National Day Central and Eastern European Expert Meeting Discussion of Osteoporosis Treatment Gap: Country-Specific Expert Evaluations Sponsored by the Hungarian Society of Osteoporosis and Osteoarthrology Chair: Edward Czerwinski (Poland) Péter Lakatos (Hungary)	Lehár 1+2
14:00 – 14:12	Country-Specific Expert Evaluations – Hungary Csaba Horváth (Hungary)	
14:12 – 14:24	Country-Specific Expert Evaluations – Austria Gerold Holzer (Austria)	
14:24 – 14:36	Country-Specific Expert Evaluations – Slovenia Tomaz Kocjan (Slovenia)	
14:36 – 14:48	Country-Specific Expert Evaluations – Poland Edward Czerwinski (Poland)	
14:48 – 15:00	Country-Specific Expert Evaluations – Slovakia Martin Kužma (Slovakia)	
15:00 – 15:12	Country-Specific Expert Evaluations – Czech Republic Vladimir Palicka (Czech Republic)	
15:12 – 15:24	Country-Specific Expert Evaluations – Bulgaria Mihail Boyanov (Bulgaria)	
11:30 – 13:00	ECTS – ICCBH Workshop on Rare Bone Diseases Pathophysiology and Manifestations and Treatment from Childhood to Adulthood Chair: Nick Bishop (United Kingdom) Outi Mäkitie (Finland) Carola Zillikens (Netherlands)	Brahms 1
11:30 – 12:00	The spectrum of skeletal dysplasias and diagnostic challen Uwe Kornak (Germany)	ges
12:00 – 12:30	Model systems of skeletal fragility Antonella Forlino (Italy)	
12:30 – 13:00	Emerging new treatments for skeletal dysplasia <i>Melita Irving (United Kingdom)</i>	
	Supported by educational grants from industry	

13:00 - 14:00

Lunch Break



14:00 – 16:00	ECTS – ICCBH Workshop on Rare Bone Diseases Pathophysiology and Manifestations and Treatment from Childhood to Adulthood Chair: Nick Bishop (United Kingdom) Outi Mäkitie (Finland) Carola Zillikens (Netherlands)
14:00 – 14:30	Multidisciplinary Management of patients with Rare Bone Disease Klaus Mohnike (Germany)
14:30 – 15:00	Rare Bone Diseases – Transition from paediatric to adult care Martine Cohen-Solal (France)
15:00 – 15:40	Presentations from Patient Groups
15:40 – 15:50 P200	Mice lacking Plastin-3 display a specific defect of cortical bone acquisition Timur Yorgan (Germany)
15:50 – 16:00 P334	A novel LRP4 mutation in a middle-aged woman with widely distributed osteosclerosis Yiming Feng (China)
	Supported by educational grants from industry
14:00 – 16:00	Working Group 1: Animal Models Animal Models in Bone Research: Cancer Models,
	Transgenic Animal Models Chair: Ulrike Baschant (Germany) Ciro Menale (Italy) Mattia Capulli (Italy)
14:00 – 14:30	Chair: Ulrike Baschant (Germany) Ciro Menale (Italy)
14:00 – 14:30 14:30 – 15:00	Chair: Ulrike Baschant (Germany) Ciro Menale (Italy) Mattia Capulli (Italy) Pre-clinical cancer models
	Chair: Ulrike Baschant (Germany)



14:00 – 16:00	Working Group 2: Rheumatic Diseases and Bone Bone, Heart and Rheumatic Diseases Chair: Willem Lems (Netherlands)
14:00 – 14:30	Basic interactions between bone and atherosclerotic vessels Zoltan Szekanecz (Hungary)
14:30 – 15:00	Clinical interaction between bone and cardiovascular events Hennie Raterman (Netherlands)
15:00 – 15:30	Refracture and mortality, competing risks after initial fracture Piet Geusens (Netherlands)
15:30 – 15:40 P159	Cardio-metabolic health and bone mineral density in postmenopausal women: a Korean population–based study Hoon Kim (Republic of Korea)
15:40 – 15:50 P290	Male spontaneously hypertensive rats develop poor bone mass and strength Worachet Promruk (Thailand)
	Supported by an educational grant from industry
14:00 – 16:00	Working Group 3: Bone Bioengineering, Regeneration and Implants Biomechanics of Pathological Bone Tissue and of the Relevant Repair Strategies Chair: Fabio Galbusera (Italy)
14:00 – 14:30	Biomechanics of the metastatically involved spine Tito Bassani (Italy)
14:30 – 15:00	Biomechanical aspects of non-rigidity in lumbopelvic reconstruction following total sacrectomy Peter Eltes (Hungary)
15:00 – 15:30	Numerical simulation of the failure of pathological bone tissue <i>Mirit Sharabi (Israel)</i>
15:30 – 15:45 P020	Stress-shielding-induced bone loss following total hip arthroplasty affects orientation of newly formed collagen in the proximal femur <i>Kilian Stockhausen (Germany)</i>
15:45 – 16:00 P022	The frequency of loading alters the bone healing response around implants Antonio Nanci (Canada)
16:00 – 16:30	Coffee Break



16:30 – 18:30	East Meets West Symposium Mobility & Longevity Chair: Claus Glüer (Germany) Salvatore Minisola (Italy)
16:30 – 16:35	Welcome Salvatore Minisola (Italy) Claus Glüer (Germany)
16:35 – 17:00	Essential question to be addressed by research: Western perspective Steve Cummings (United States)
17:00 – 17:25	Essential question to be addressed by research: Eastern perspective Lin Chen (China)
17:25 – 17:40	Exemplifying research from China Weibo Xia (China)
17:40 – 17:55	Exemplifying research from Japan Yuuki Imai (Japan)
17:55 – 18:10	Exemplifying research from Korea Kwang Joon Kim (Republic of Korea)
18:10 – 18:25	Podium Discussion: Exiting perspectives for research
18:25 – 18:30	Summary
18:30	Closed session on future plans for developing the theme "Mobility and Longevity" Claus Glüer (Germany) Salvatore Minisola (Italy)
16:30 – 18:30	Working Group 4: Non-Mammalian Models Fish Models of Rare Skeletal Disorders Chair: Leonor Cancela (Portugal) Antonella Forlino (Italy)
16:30 – 17:00	Modifier in the skeletal dysplasia of SHOX deficiency Gudrun Rappold (Germany)
17:00 – 17:30	Zebrafish a tool to dissect muscle-to-bone interaction David Karasik (Israel)
17:30 – 18:00	Modeling GACI and PXE in zebrafish Stefan Schulte-Merker (Germany)
18:00 – 18:10 P169	Validation of GWAS-derived novel regulators of bone homeostasis Iryna Khrystoforova (Israel)



18:10 – 18:20 P098	Marine plants as valuable sources of antioxidant and anabolic bone compounds Vânia Palma Roberto (Portugal)
18:20 – 18:30 P198	Characterising the interplay between inflammation and skeletal remodelling during fracture repair in zebrafish Lucy McGowan (United Kingdom)
	Supported by an educational grant from industry
16:30 – 18:30	Working Group 5: Osteoclasts Novel Fundamental Insights by Translation from Genetic Disorders into Mouse Models and back Chair: Jan Tuckermann (Germany)
16:30 – 16:55	Genetics of Osteopetrosis and Osteoclast Biology Cristina Sobacchi (Italy)
16:55 – 17:20	Osteoclast fusion revisited – lessons from mouse models of SNX10 related osteopetrosis Ari Elson (Israel)
17:20 – 17:45	New frontiers for osteopetrosis treatment -promising data from mouse models Anna Teti (Italy)
17:45 – 18:10	Osteopetrosis, a tricky clinical problem Ansgar Schulz (Germany)
18:10 – 18:17 P118	Pleckstrin homology domain containing protein family member 1 (PLEKHM1) regulates bone resorption through sealing zone dynamics and lysosomal targeting in osteoclasts Anh Tran (United Kingdom)
18:17 – 18:24 P319	Biophysical analysis of novel disease-causing mutation of CLCN7 gene Alessandra Picollo (Italy)
18:24 – 18:31 P116	Comprehensive analysis of osteoclastogenic proteome reshaping reveals a novel regulator of osteoclast differentiation and function <i>Maria Materozzi (Italy)</i>
16:30 – 18:30	Working Group 6: Rare Bone Diseases Rare Disorders with Increased/Ectopic Bone Formation Chair: Uwe Kornak (Germany)
16:30 – 17:00	Disorders with cranial hyperostosis Gretl Hendrickx (Germany)



17:00 – 17:30	Focally sclerosing bone disorders Lothar Seefried (Germany)
17:30 – 18:00	Clinical presentation and treatment of juvenile Paget disease Corinna Grasemann (Germany)
18:00 – 18:30	Novel mechanistic aspects and treatment of fibrodysplasia ossificans progressiva (FOP) Martina Rauner (Germany)
16:30 – 18:30	Working Group 7: Cancer and Bone Primary Bone Tumours Chair: Peyman Hadji (Germany) Nadia Rucci (Italy)
16:30 – 17:15	Molecular mechanisms driving primary bone sarcomas Dominique Heymann (United Kingdom)
17:15 – 18:00	Primary Bone Tumors – the surgeon's point of view Miklós Szendrői (Hungary)
18:00 – 18:15 P066	Role of autophagy in the crosstalk between osteosarcoma and the bone microenvironment Georges F. Carle (France)
18:15 – 18:30 P073	Contribution of cancer stem cells to the metastatic capacities of osteosarcoma Joelle Tchicaya Bouanga (France)
18:45 – 20:45	Next Generation Synergy Session Lehár 1+2 Most Exciting Developments in the Musculoskeletal Field Chair: Nicolas Bonnet (Switzerland) Elena Tsourdi (Germany)
18:45 – 18:50	Welcome Nicolas Bonnet (Switzerland) Elena Tsourdi (Germany)
18:50 – 19:00	Next Gen networks in Europe – MuSkITYR (Germany) Marietta Herrmann (Germany)
19:00 – 19:10	Next Gen networks in Europe – BRS (UK) Elizabeth M Curtis (United Kingdom)
	,
19:10 – 19:20	Next Gen networks in Europe – EMEUNET (EULAR) (Switzerland) Felice Rivellese (United Kingdom)



19:45 – 20:10	Chinese Society of Osteoporosis and Bone Mineral Research (CSOBMR) (China) Hua Yue (China)	
20:10 – 20:35	ECTS Academy Abbas Jafari (Denmark) Daniela Merlotti (Italy)	
20:35 – 20:45	Discussion	
18:45 – 20:45	Working Group 8: Cartilage Pathophysiology Common and Rare Disorders of Cartilage Chair: Antonio Rossi (Italy)	Liszt 1
18:45 – 19:15	Developmental regulation of lysosome biogenesis, function ar cellular identity in cartilage Laura Cinque (Italy)	ıd
19:15 – 19:45	Phosphate transport-dependent and independent functions of and PiT2 in cartilage growth plate biology Laurent Beck (France)	PiT1
19:45 – 20:15	Role of the sympathetic nervous system in osteoarthritis Zsuzsa Jenei-Lanzl (Germany)	
20:15 – 20:35 P130	Parathyroid hormone treatment modulates cartilage quality Patrick Ammann (Switzerland)	
18:45 – 20:45	Working Group 9: Imaging Bone Strength: HR-pQT Chair: Andrew Burghardt (United States)	Liszt 2
18:45 – 19:15	HR-pQCT in the prediction of fracture risk Pawel Szulc (France)	
19:15 – 19:45	HR-pQCT for monitoring bone strength Bert van Rietbergen (Netherlands)	
19:45 – 20:15	HR-pQCT in the assessment of rare bone disease Florian Barvencik (Germany)	
	Supported by educational grants from industry	
18:45 – 20:45	Working Group 10: Paget Disease of Bone Chair: Stuart Ralston (United Kingdom)	Liszt 3
18:45 – 19:15	Extended genome wide association and genome sequencing to discover new PDB loci Omar Albagha (United Kingdom)	0



Bone, Muscle & Beyond Webinar Series

The Webinar Series Bone, Muscle & Beyond is offered by ECTS.

To register, please visit www.ectsoc.org

30 May 2019 16:00 - 17:00 CET

Energy Metabolism Featuring Nicolas Bonnet Moderated by Nika Lovsin

Also coming soon

27 June 2019 16:00 - 17:00 CET

Bone- Muscle cross-talk under pathological conditions
Featuring Maria Luisa Bianchi

12 September 2019 16:00 - 17:00 CET

Nerves & Bone Featuring Florent Elefteriou

17 October 2019 16:00 - 17:00 CET

Fundamental and clinical aspects of Bone & Cancer Gabriel van der Pluijm & Peyman Hadji

14 November 2019 16:00 - 17:00 CET

Mechanotransduction of ECM-cell interactions Featuring Dennis Discher

> 12 December 2019 16:00 - 17:00 CET

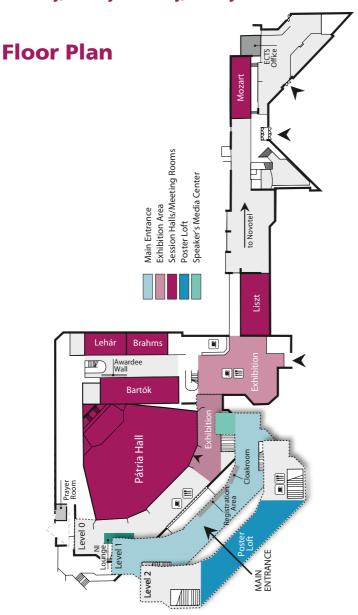
Treatments for osteoporosis Featuring Bente Langdahl



19:15 – 19:45	Functional analysis of ZNF678 in PDB and giant cell tumour Fernando Gianfrancesco (Italy)
19:45 – 20:15	Guidelines for diagnosis and management of PDB and future directions for collaborative research Núria Guanabens (Spain)
20:15 – 20:30 P112	Targeted inactivation of Rin3 increases trabecular bone mass in aged mice Mahéva Vallet (United Kingdom)
20:30 – 20:45 P068	Investigating the functional role of the ZNF687 transcription factor in aggressive forms of Paget's disease of bone Federica Scotto di Carlo (Italy)
18:45 – 20:45	Working Group 11: Lehár 3 Epigenetic Regulation of Bone Formation and Homeostasis
	Non-Coding RNAs – Characterization of the State of the Art in Small and Long Non-Coding RNAs Chair: Andre van Wijnen (United States)
18:45 – 19:15	Non-Coding RNAs – Characterization of the State of the Art in Small and Long Non-Coding RNAs
18:45 – 19:15 19:15 – 19:45	Non-Coding RNAs – Characterization of the State of the Art in Small and Long Non-Coding RNAs Chair: Andre van Wijnen (United States) Long non-coding RNAs in osteogenesis
	Non-Coding RNAs – Characterization of the State of the Art in Small and Long Non-Coding RNAs Chair: Andre van Wijnen (United States) Long non-coding RNAs in osteogenesis Jane B. Lian (United States) Biological role of microRNAs in bone homeostasis
19:15 – 19:45	Non-Coding RNAs – Characterization of the State of the Art in Small and Long Non-Coding RNAs Chair: Andre van Wijnen (United States) Long non-coding RNAs in osteogenesis Jane B. Lian (United States) Biological role of microRNAs in bone homeostasis Jorma Antero Määttä (Finland) Epigenetic regulators of Heterochromatin during skeletogenesis

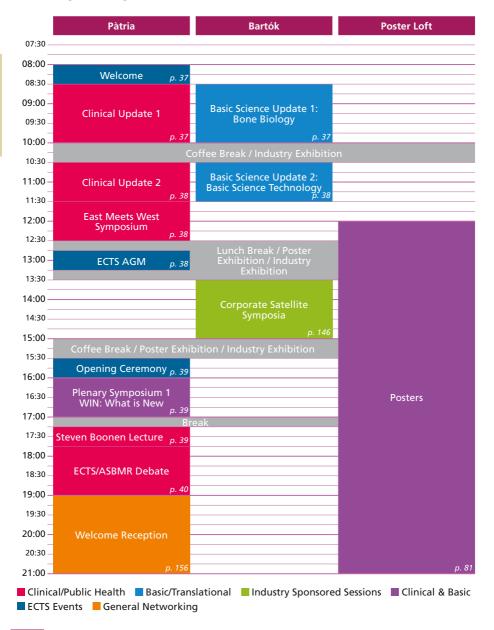
ECTS Congress 2019

Saturday, 11 May - Tuesday, 14 May 2019



Programme Overview

Saturday, 11 May 2019





Scientific Programme

Saturday, 11 May 2019

08:00 - 08:30	Welcome	Pàtria
	Welcome: President's Address Anna Teti (Italy)	
08:30 – 10:00	Clinical Update 1 Chair: Christian Meier (Switzerland) Pawel Szulc (France)	Pàtria
08:30 - 09:00	The new anabolics – evidence and concerns Juliet Compston (United Kingdom)	
09:00 - 09:30	Managing the patient after denosumab Bente Langdahl (Denmark)	
09:30 – 10:00	Where are we going with vitamin D and bone health Carola Zillikens (Netherlands)	
08:30 – 10:00	Basic Science Update 1: Bone Biology Chair: Graziana Colaianni (Italy) Reinhold Erben (Austria)	Bartók
08:30 - 09:00	Bone marrow adiposity Annegreet G. Veldhuis-Vlug (Netherlands)	
09:00 - 09:30	Phosphate sensing Laurent Beck (France)	
09:30 – 10:00	Chondrocyte osteoblast transition Christine Hartmann (Germany)	
10:00 – 10:30	Coffee Break / Industry Exhibition	



10:30 – 11:30	Clinical Update 2 Chair: Csaba Horváth (Hungary) Willem Lems (Netherlands)	Pàtria
10:30 – 11:00	Secondary Osteoporosis – Endocrine Andrea Palermo (Italy)	
11:00 – 11:30	Secondary Osteoporosis – Other Causes Stuart Ralston (United Kingdom)	
10:30 – 11:30	Basic Science Update 2: Basic Science Technology Chair: Ulrike Baschant (Germany) Graham Williams (United Kingdom)	Bartók
10:30 – 11:00	High-throughput, multi-image cryohistology of mineralized David W. Rowe (United States)	d tissues
11:00 – 11:30	Two-photon microscopy to discover the mysterious world o Michelle McDonald (Australia)	f bone
11:30 – 12:30	East Meets West Symposium Chair: Bo Abrahamsen (Denmark) Salvatore Minisola (Italy)	Pàtria
11:30 – 11:45	Optimising drug dosing: Eastern perspective Yoshiya Tanaka (Japan)	
11:45 – 12:00	Optimising drug dosing: Western perspective Erik Fink Eriksen (Norway)	
12:00 – 12:15	How to efficiently run a Fracture Liaison Service: Eastern per Yong-Chan Ha (Republic of Korea)	erspective
12:15 – 12:30	How to efficiently run a Fracture Liaison Service: Western perspective Kristina Akesson (Sweden)	
12:30 – 13:30	Lunch Break / Poster Exhibition / Industry Exhibition	



13:30 – 15:00	Industry Sponsored Session See page 146	Bartók
15:00 – 15:30	Coffee Break / Poster Exhibition / Industry Exhibition	
15:30 – 16:00	Opening Ceremony Chair: Anna Teti (Italy) István Takács (Hungary)	Pàtria
15:30 – 15:45	President's Welcoming Remarks Anna Teti (Italy)	
15:45 – 16:00	Local Organising Committee Chair's Welcoming Remarks István Takács (Hungary)	
16:00 – 17:00	Plenary Symposium 1 WIN: What is New Chair: Timothy R Arnett (United Kingdom) Judit Donáth (Hungary) Marietta Herrmann (Germany)	Pàtria
16:00 – 16:30	Basic/Translational Update Martina Rauner (Germany)	
16:30 – 17:00	Clinical Update Martine Cohen-Solal (France)	
17:00 – 17:15	Break / Poster Exhibition / Industry Exhibition	
17:15 – 17:45	Steven Boonen Lecture Chair: Geert Carmeliet (Belgium) Anna Teti (Italy)	Pàtria
17:15 – 17:45	Two billion years of evolution of vitamin D Roger Bouillon (Belgium)	



17:45 – 19:00	ECTS/ASBMR Debate This House Believes that Intervention to Increase Peak Bone Mass rather than Targeting Bone Loss Would be More Effective in Reducing the Osteoporosis Fracture Chair: Bo Abrahamsen (Denmark) Juliet Compston (United Kingdom) Anna Teti (Italy)	Pàtria re
17:45 – 17:55	Introduction by the chairs and vote	
17:55 – 18:10	Debate: For the motion Nicholas Harvey (United Kingdom)	
18:10 – 18:25	Debate: Against the motion Benjamin Leder (United States)	
18:25 – 18:35	Comments and questions from the audience	
18:35 – 18:45	Rebuttal Nicholas Harvey (United Kingdom) Benjamin Leder (United States)	
18:45 – 18:50	Vote	
18:50 – 19:00	Debate closed	



14TH INTERNATIONAL CONFERENCE ON OSTEOGENESIS IMPERFECTA

OI2020 5-8 SEPTEMBER 2020

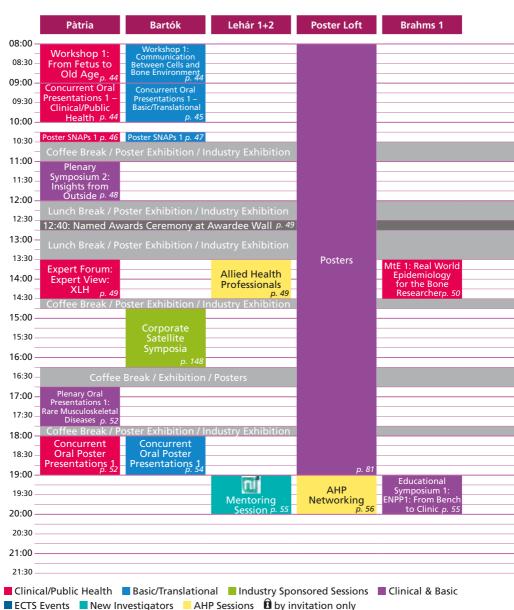
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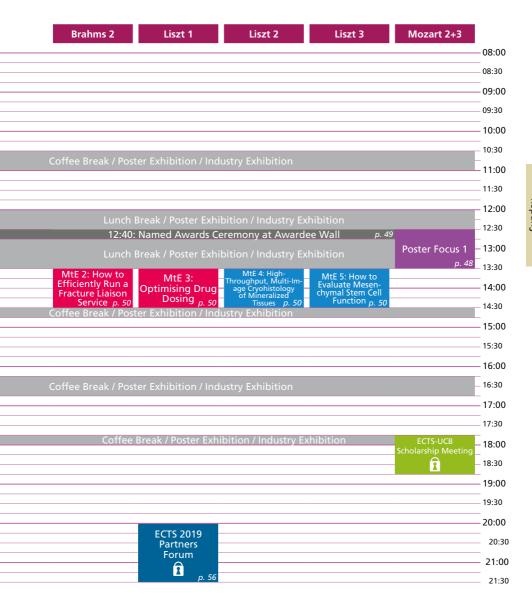




Programme Overview

Sunday, 12 May 2019







Scientific Programme

Sunday, 12 May 2019

Suriday, 12 i	ay 2015	
08:00 – 09:00	Workshop 1: Clinical/Public Health From Fetus to Old Age Chair: Ling Oei (Netherlands)	
	Zsuzsanna Valkusz (Hungary)	
08:00 – 08:30	A lifecourse approach to osteoporosis. Fetal, placental and early life factors	
	Jonathan Tobias (United Kingdom)	
08:30 – 09:00 The fascinating process of growth plate chondrogenesis an clinical implications Ola Nilsson (Sweden)		
08:00 – 09:00	Workshop 1: Basic/Translational Communication between Cells and Bone Environment Chair: Christine Hartmann (Germany) Bram van der Eerden (Netherlands)	
08:00 - 08:30	Function of blood vessel and vascular niches in bone Saravana Ramasamy (United Kingdom)	
08:30 – 09:00	Targeting skeletal endothelium to counteract bone loss Matthew Greenblatt (United States)	
	Selected session for ,Ask a Question' app feature	
09:05 – 10:05	Concurrent Oral Presentations 1 – Clinical/Public Health: Pàtria Rare Bone Diseases and Early Onset Osteoporosis Chair: Pál Géher (Hungary) Fernando Gianfrancesco (Italy)	
	– 7 minutes presentation + 3 minutes discussion –	
09:05 – 09:12 COP01	Persistent and recurrent cases in tumor-induced osteomalacia: a retrospective study Xiang Li (China)	
09:15 – 09:22 COP02	Biomarker profiles in PLS3 and WNT1 osteoporosis – elevated serum DKK1 in abnormal PLS3 function <i>Riikka Mäkitie (Finland)</i>	
09:25 – 09:32 COP03	The relationship of radiographic rickets severity score with clinical outcomes in children with X-linked hypophosphatemia	

Tom Thacher (United States)



09:35 - 09:42 COP04	Early onset osteoporosis due to heterozygous ENPP1 loss of function mutations in humans is recapitulated by homozygous ENPP1 loss of function mutations in mice Demetrios Braddock (United States)		
09:45 – 09:52 COP05	Exome sequencing with functional follow-up identifies KIF26B as a novel genetic determinant of familial osteoporosis <i>Melissa M. Formosa (Malta)</i>		
09:55 – 10:02 Blood as a proxy for bone tissue – An epigenome-wide pilot st COP06 bone-blood pairs Parvaneh Ebrahimi (Sweden)			
09:05 – 10:05	Concurrent Oral Presentations 1 – Basic/Translational: Bartók Osteoblasts and Bone Formation Chair: Natalie C Butterfield (United Kingdom) Antonella Forlino (Italy)		
	– 7 minutes presentation + 3 minutes discussion –		
09:05 – 09:12 COP07	The bone anabolic effect of Wnt1 is quickly reversed Julia Luther (Germany)		
09:15 – 09:22 COP08	Altered lipid/cholesterol metabolism in mesenchymal stromal cells following low-serum adaptation accelerates osteogenesis in vitro and in vivo by modifying secretome compartments Alasdair Kay (United Kingdom)		
09:25 – 09:32 COP09	Deletion of PKA regulatory subunit 1A in osteoblasts causes dramatic bone turnover with an expansion of trabecular area at the expense of cortical bone Carole Le Henaff (United States)		
09:35 - 09:42 COP10	FGFR3: a key regulator of zebrafish cranial vault development Emilie Dambroise (France)		
09:45 – 09:52 COP11	Osteoblast lineage-specific deletion of PDGFR signaling potentiates the bone anabolic effect of anti-sclerostin antibody treatment in mice Cyril Thouverey (Switzerland)		
09:55 – 10:02	Role of Dlx5 and Dlx6 in the commitment of osteoblastic		

differentiation: application to osteoporosis

Camille Blandin (France)

COP12



10:10 – 10:30	Poster SNAPs Presentations 1 – Clinical / Public Health Chair: Pál Géher (Hungary) Fernando Gianfrancesco (Italy)
	– 1 minute presentation; no discussion –
P017	Sex steroids as determinants of Wnt-Signalling markers in men Thiberiu Banica (Belgium)
P044	Microcracks in subchondral bone plate is associated with cartilage preservation Mylène Zarka (France)
P060	Bone health index for the assessment of pediatric fracture risk Olja Grgic (Netherlands)
P077	Myeloma-specific oncolytic adenovirus induces significant tumour oncolysis in vitro and in vivo and prevents cell line regrowth <i>Georgia Stewart (United Kingdom)</i>
P080	Changes in trabecular bone score and bone mineral density following allogeneic hematopoietic stem cell transplantation Yejee Lim (Republic of Korea)
P163	Bone characteristics in elderly men with hypolactasia Christoph Haudum (Austria)
P179	Identification of novel predisposing mutations in familial Paget's disease of bone Maria Materozzi (Italy)
P327	COL1A1 C-propeptide mutations affect procollagen ER localization and reduce C-terminal procollagen processing Joan Marini (United Staes)
P326	Interfamilial diversity in patients with collagen-related osteogenesis imperfecta Lidiia Zhytnik (Estonia)
P338	The design of a long-acting PTH (TransCon PTH) phase 2 trial in patients with hypoparathyroidism, based on phase 1 results in healthy subjects David B. Karpf (United States)



10:10 – 10:30	Poster SNAPs Presentations 1 – Basic / Translational Chair: Natalie C Butterfield (United Kingdom) Antonella Forlino (Italy)	
	– 1 minute presentation; no discussion –	
P031	Osteoblast-derived extracellular vesicles drive mineral nucleation in stem cell cultures Owen Davies (United Kingdom)	
P043	A novel algorithm to predict bone changes based on physiological loading in a preclinical murine model Vee San Cheong (United Kingdom)	
P076	Osteosarcoma cell-derived exosomes affect tumor microenvironment by specific packaging of microRNAs Lavinia Raimondi (Italy)	
P103	hMSC-TERTSCAS9: a versatile tool to study osteoblast gene function Jeroen van de Peppel (Netherlands)	
P104	Syndecan-1 deficiency influences bone cell communication in vivo and in vitro in Mice Melanie Timmen (Germany)	
P119	Macrophage-derived thymidine phosphorylase promotes osteoclastogenesis and bone resorption in inflammatory osteolysis <i>Gen Matsumae (Japan)</i>	
P120	miR-342-3p regulates the generation of osteoclasts Florence Apparailly (France)	
P125	Relationship between the fluid flow pattern through the lacunocanalicular network and adaptive mechano-response in mouse tibia Alexander van Tol (Germany)	
P134	Endogenous Lin28a protects osteoarthritic cartilage breakdown through HMGA2 expression Yohan Jouan (France)	
10:30 – 11:00	Coffee Break / Poster Exhibition / Industry Exhibition	



11:00 – 12:00	Plenary Symposium 2: Pàtria Insights from Outside: Cancer Dormancy Chair: Nadia Rucci (Italy) Hanna Taipaleenmaeki (Germany)	
11:00 – 11:30	Mechanisms governing metastatic dormancy Juergen Dittmer (Germany)	
11:30 – 12:00	Clinical impact of bone targeted agents on cancer cell dormancy in breast cancer Caroline Wilson (United Kingdom)	
12:00 – 13:30	Lunch Break / Poster Exhibition / Industry Exhibition	
12:30 – 13:30	Poster Focus 1 Mozart 2+3	
	– 5 minutes presentation + 5 minutes discussion –	
12:30 – 12:35 P184	Microtomographic assessment of bone quality in murine joints affected by psoriasis arthritis Felix N. Schmidt (Germany)	
12:40 – 12:45 P317	Defective O-glycosylation of FGF23 in a Chinese hyperphosphatemic familial tumoral calcinosis patient Chang Liu (China)	
12:50 – 12:55 P089	Towards a nutraceutical-based complementary medicine in bone health: cruciferous vegetables extracts and derivates induce osteogenic differentiation of human mesenchymal stromal cells Francesco Grassi (Italy)	
13:00 – 13:05 P309	Progressive, immobilizing osteoporosis in a 11 year old, male, identical twin – an (unsolved) case report <i>Mirko Rehberg (Germany)</i>	
13:10 – 13:15 P298	Paget's disease or bone metastasis? A case report with diagnostic challenge Izabella Gomez (Hungary)	
13:20 – 13:25 P269	Short-term teriparatide treatment effect in patients with severe osteoporosis Min Hyung Jung (Republic of Korea)	



12:40 – 12:50	ECTS Named Awards Ceremony	Awardee Wall
	2019 ECTS Philippe Border Clinical Award: Christian Meier (Switzerland)	
	2019 ECTS lan T Boyle Award: Björn Busse (Germany)	
	2019 ECTS Mike Horton Award: Miep Helfrich (United Kingdom)	
13:30 – 14:30	Expert Forum Expert View: XLH: A Bone or Musculoskeletal / Me Disorder? Chair: Martine Cohen-Solal (France) Corinna Grasemann (Germany)	Pàtria tabolic
13:30 – 14:00	XLH – An inherited bone disease Signe Beck-Nielsen (Denmark)	
14:00 – 14:30	XLH – A multifaceted metabolic disorder Peter Kamenicky (France)	
	Supported by an educational grant from industry	
13:30 – 14:30	Allied Health Professionals Chair: Margaret Paggiosi (United Kingdom) Mette Rothmann (Denmark)	Lehár 1+2
13:30 – 13:50	Atypical Femur Fractures: causes, management and prevention Bo Abrahamsen (Denmark)	
13:50 – 14:00 P267	Clinical effectiveness and safety of Denosumab in ESRF patients on dialysis: a systematic review Asad Ullah (United Kingdom)	
14:00 – 14:10 P279	Zoledronate, but not solely calcium and vitamin D, can prevent the accelerated periprosthetic bone loss after total hip arthroplasty in patients with low systematic BMD Guangtao Fu (China)	
14:10 – 14:30	Treating osteoporosis – What's new? Barbara Obermayer-Pietsch (Austria)	



13:30 – 14:30	Meet the Expert 1 – Clinical/Public Health Real World Epidemiology for the Bone Researcher Daniel Prieto-Alhambra (United Kingdom)	Brahms 1
13:30 – 14:30	Meet the Expert 2 – Clinical/Public Health How to Efficiently Run a Fracture Liaison Service Kristina Akesson (Sweden) Yong-Chan Ha (Republic of Korea)	Brahms 2
13:30 – 14:30	Meet the Expert 3 – Clinical/Public Health Optimising Drug Dosing Erik Fink Eriksen (Norway) Yoshiya Tanaka (Japan)	Liszt 1
13:30 – 14:30	Meet the Expert 4 – Basic/Translational High-Throughput, Multi-Image Cryohistology of Mineralized Tissues David W. Rowe (United States)	Liszt 2
13:30 – 14:30	Meet the Expert 5 – Basic/Translational How to Evaluate Mesenchymal Stem Cell Function Matthew Greenblatt (United States)	Liszt 3
14:45 – 16:15	Industry Sponsored Session See page 148	Bartók
16:15 – 16:45	Coffee Break / Poster Exhibition / Industry Exhibition	

Advancing the mechanistic understanding of human development and disease

Cells Tissues Organs

We warmly invite submission of high-quality, primary data that support or challenge our understanding of:

- Developmental Biology
- Stem Cells
- Tissue Engineering





Ryan Gilbert, Ph.D. Associate Professor, Biomedical Engineering Rensselaer Polytechnic Institute (RPI), Troy, NY



Guojun Sheng, Ph.D.
Professor, International Research
Center for Medical Sciences
(IRCMS)
Kumamoto University, Japan



Christoph Viebahn, M.D. Professor, Anatomy and Embryology University of Göttingen, Germany



16:45 – 17:45	Plenary Oral Presentations 1: Rare Musculoskeletal Diseases Chair: Csaba Kiss (Hungary) Uwe Kornak (Germany)	
	- 7 minutes presentation + 3 minutes discussion -	
16:45 – 16:52 PLO01	A rare mutation in SMAD9 associated with high bone mass identifies the BMP signalling pathway as a potential osteo-anabolic target for osteoporosis Celia Gregson (United Kingdom)	
16:55 – 17:02 PLO02	Therapeutic targeting of ER exit site engulfment by lysosomes in osteogenesis imperfecta Sergey Leikin (United States)	
17:05 – 17:12 PLO03	Role of Lipocalin-2 in muscle failure-induced bone loss in the MDX mouse model of duchenne muscle dystrophy Marco Ponzetti (Italy)	
17:15 – 17:22 PLO04	Burosumab showed greater improvement in phosphate metabolism, rickets, and bowing than continuation with conventional therapy in children with X-linked hypophosphatemia (XLH) Ola Nilsson (Sweden)	
17:25 – 17:32 PLO05	Global natural history studies of generalized Arterial Calcification of Infancy (GACI) and Autosomal Recessive Hypophosphatemic Rickets type 2 (ARHR2) due to ENPP1 or ABCC6 deficiencies Frank Rutsch (Germany)	
17:35 – 17:42 PLO06	The iron-sensing receptor Tfr2 regulates osteoclastogenesis and the differentiation ability of hematopoietic stem cells <i>Ulrike Baschant (Germany)</i>	
17:45 – 18:00	Break / Poster Exhibition / Industry Exhibition	
18:00 – 19:00	Concurrent Oral Poster Presentations 1: Pàtria Clinical /Public Health Chair: Xavier Nogués (Spain) Barbara Obermayer-Pietsch (Austria) - 3 minutes presentation + 2 minutes discussion –	
18:00 – 18:03 P003	The effect of vitamin D supplementation on its metabolism in a randomized controlled trial Stan Ursem (Netherlands)	



18:05 – 18:08 P001	Low bone turnover is associated with functional hypoparathyroidism in type 2 diabetes Janina Vavanikunnel (Switzerland)
18:10 – 18:13 P005	The association between osteocalcin, adiposity and bone health: results from a population based cohort Katerina Trajanoska (Netherlands)
18:15 – 18:18 P041	Alterations of bone geometry, bone volumetric density, and microarchitecture but not areal bone mineral density in Chinese patients with primary hypertrophic osteoarthropathy <i>Yuping Xu (China)</i>
18:20 – 18:23 P042	Secondary dislocation of distal radius fractures is associated with lower total and cortical volumetric bone mineral density and lower cortical thickness at the distal radius Anne Marjan Daniels (Netherlands)
18:25 – 18:28 P133	A 'NGS-digital PCR' method gives new evidences on the molecular mechanism responsible for osteochondromas' growth in mo disease <i>Elena Pedrini (Italy)</i>
18:30 – 18:33 P161	Changes in bone marrow adipose tissue one year after Roux-en-Y gastric bypass: a prospective cohort study Erik Fink Eriksen (Norway)
18:35 – 18:38 P162	Maternal citamin D status in 2nd and 3rd trimester and offspring bone mass at age 8-9 years: an observational study Astrid Kamilla Stunes (Norway)
18:40 – 18:43 P175	Functional assays of two non-coding variants in WNT16 Núria Martínez-Gil (Spain)
18:45 – 18:48 P176	Genome-wide association study identifies one novel locus associated with thickness and mineralization of metacarpal bones Olja Grgic (Netherlands)
18:50 – 18:53 P177	Variants within the ZNF384 and COL1A1 genes influence bone mineral density and fracture risk in maltese postmenopausal women <i>Melissa M. Formosa (Malta)</i>
18:55 – 18:58 P220	Birthweight, limb muscle mass and abdominal adiposity in middle age: findings from the UK biobank imaging enhancement Elizabeth M Curtis (United Kingdom)



18:00 – 19:00	Concurrent Oral Poster Presentations 1: Bart Basic / Translational Chair: Ilaria Roato (Italy) Teun de Vries (Netherlands)	ók
	– 3 minutes presentation + 2 minutes discussion –	
18:00 – 18:03 P030	Extracellular vesicle protein and miRNA cargo reflect functional heterogeneity of mesenchymal stromal cells Andrew Stone (United Kingdom)	
18:05 – 18:08 P039	Differential response of trabecular and cortical bone following recovery from microgravity – induced bone loss Katharina Jähn (Germany)	
18:10 – 18:13 P058	Novel role of syndecan 3 in regulating osteoblastogenesis through the wnt signalling pathway Andrew Butcher (United Kingdom)	
18:15 – 18:18 P040	Cortical shell thickness in thoracic vertebrae is age- and region- dependent Annika vom Scheidt (Germany)	
18:20 – 18:23 P056	Delayed bone healing in HFD-induced obesity model: evidence for impaired differentiation capacity of osteoblasts and osteoclasts progenitors Florence Figeac (Denmark)	
18:25 – 18:28 P057	Glucocorticoid receptor dimerization is deleterious in trauma- induced compromised fracture healing Yasmine Hachemi (Germany)	
18:30 – 18:33 P074	Metastatic breast cancer burden is reduced in a Tgif1-deficient bor microenvironment Marie-Therese Haider (Germany)	ıe
18:35 – 18:38 P321	New mouse model for atypical type VI osteogenesis imperfecta caused by IFITM5 S40L mutation Joan Marini (United States)	
18:40 – 18:43 P322	Development of lentiviral vector gene therapy for the treatment or autosomal recessive osteopetrosis Sara Penna (Italy)	f
18:45 – 18:48 P324	Enzyme replacement therapy corrects bone remodeling pathologies but not chondrocyte pathologies, in a mouse model for mucopolysaccharidosis type VI (MPS-VI) Gretl Hendrickx (Germany)	es,
18:50 – 18:53 P323	Mutations in the neuroblastoma amplified sequence (NBAS) gene acrofrontofacionasal dysostosis type 1 Eleonora Palagano (Italy)	in



19:00 – 20:00 NI Mentoring Session



Lehár 1+2

Chair: Hermann Agis (Austria)

This is an interactive session giving the New Investigators an opportunity to discuss various topics with the leaders in the field: Interactive, round table discussion (3x15 min). Light snacks and beverages will be provided.

How to get a grant

Duncan Bassett (United Kingdom)

How to publish Christa Maes (Belgium)

How to start a spin-off Johannes Grillari (Austria)

How to image Michelle McDonald (Australia)

How to transition to independence Andrea Burden (Switzerland)

How to balance life and work Carola Zillikens (Netherlands)

How to work in Industry
Nicolas Bonnet (Switzerland)

19:00 – 20:00	Educational Symposium 1: ENPP1: From Bench to Clinic – Advancements in Understanding ENPP1 Deficiency Disease Chair: Leonor Cancela (Portugal) Uwe Kornak (Germany)
19:00 – 19:10	ENPP1 Deficiency manifesting as Generalized Arterial Calcification of Infancy (GACI) and Autosomal recessive hypophosphatemic rickets type 2 (ARHR2) Frank Rutsch (Germany)
19:10 – 19:20	ENPP1 Deficiency in animal models: zebrafish and mouse Stefan Schulte-Merker (Germany)
19:20 – 19:30	Case Report – ENPP1 Deficiency Ralf Oheim (Germany)
19:30 – 19:40	Treatment options and initial experience with Enzyme Replacement Therapy in GACI and ARHR2 Demetrios Braddock (United States)



Supported by an educational grant from industry

Light snacks and beverages will be provided as part of a small reception after the scientific part of the session.

19:00 – 20:00	AHP Networking Chair: Margaret Paggiosi (United Kingdom) Mette Rothmann (Denmark)	Poster Loft
19:10 – 19:15 P015	Biocompatibility and osteogenic potential of calcium phos for cleft palate repair Mehdi Alrubayee (United Kingdom)	phate
19:15 – 19:20 P142	Diabetes Mellitus: a synonym to functional hypoparathyro Amit Saraf (India)	idism
19:20 – 19:25 P143	The effectiveness of vitamin D supplementation in function outcome and quality of life of lumbar spinal stenosis requisurgery: randomized prospective controlled trial Sangbong Ko (Republic of Korea)	
19:25 – 19:30 P145	Normocalcaemic hypoparathyroidism: study of the prevale natural history in a United Kingdom referral population <i>Marian Schini (United Kingdom)</i>	nce and
19:30 – 19:35 P246	Prevalence of modifiable and non modifiable risk factors of osteoporosis in health care workers of < 40 years at tertian center of remote India Amit Saraf (India)	· · -
	Light snacks and beverages will be provided.	

20:00 - 21:30 ECTS 2019 Partners Forum

Liszt 1

Welcome & Introduction of new ECTS Academy Members

The Future of BioMedical Education

Discussions

Networking

Light snacks and beverages will be provided

New Interactive **App Features** this year at the **ECTS 2019 Congress!**





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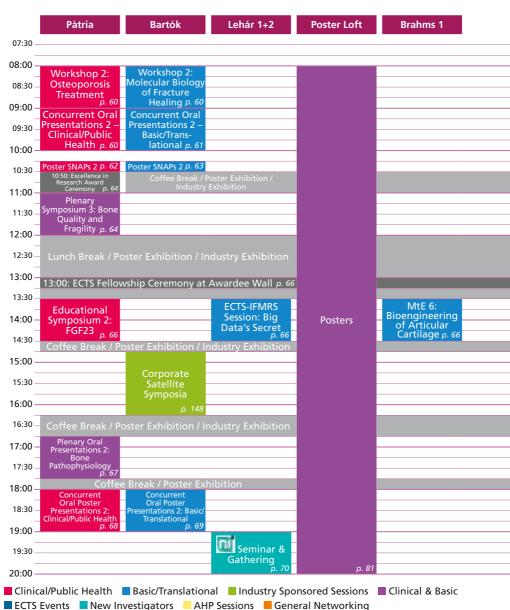


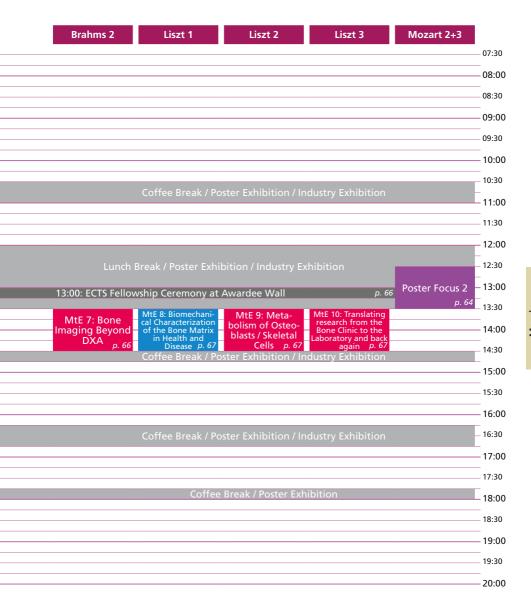
http://bit.ly/2A76LLa

http://bit.ly/2A7argl

Programme Overview

Monday, 13 May 2019







Scientific Programme

Monday, 13 May 2019

08:00 - 09:00	Workshop 2: Clinical/Public Health Osteoporosis Treatment	ria
	Chair: Jean Jacques Body (Belgium) Zsolt Nagy (Hungary)	
08:00 - 08:30	Imminent risk after prior fracture Serge Ferrari (Switzerland)	
08:30 – 09:00	Imminent risk other than prior fracture Anna Nilsson (Sweden)	
08:00 – 09:00	Workshop 2: Basic/Translational Molecular Biology of Fracture Healing Chair: Clemens Bergwitz (United States) Mattia Capulli (Italy)	ók
08:00 - 08:30	Regulation of fracture healing by inflammatory pathways Anita Ignatius (Germany)	
08:30 – 09:00	Periosteal stem cells define the regenerative potential for fracure healing Celine Colnot (France)	
09:05 – 10:05	Concurrent Oral Presentations 2 – Clinical/Public Health: Pàtr Osteoporosis and Risk Predictors Chair: Elizabeth M Curtis (United Kingdom) Péter Somogyi (Hungary)	ria
	– 7 minutes presentation + 3 minutes discussion –	
09:05 – 09:12 COP13	A machine learning approach to predict non-vertebral fracture risk from dual X-ray absorptiometry images Tilen Kranjc (Netherlands)	(
09:15 – 09:22 COP14	Does screening for high hip fracture risk impact on falls risk? A poshoc analysis from the SCOOP study Eugen McCloskey (United Kingdom)	it
09:25 – 09:32 COP15	T-score as an Indicator of fracture risk on therapy: evidence from romosozumab vs alendronate treatment in the ARCH trial Cesar Libanati (Belgium)	



09:35 – 09:42 COP16	Added value of bone biopsy in the assessment of skeletal status within a year of renal transplantation? Nathalie Bravenboer (Netherlands)
09:45 – 09:52 COP17	Fracture risk assessment in women treated with aromatase inhibitors: effect of oral bisphosphonates Xavier Nogués (Spain)
09:55 – 10:02 COP18	Genome-wide association meta-analysis identifies four loci for osteocalcin levels Katerina Trajanoska (Netherlands)
09:05 – 10:05	Concurrent Oral Presentations 2 – Basic/Translational: Bartók Local and Systemic Regulators of Bone Turnover Chair: Miep Helfrich (United Kingdom) Ciro Menale (Italy)
	– 7 minutes presentation + 3 minutes discussion –
09:05 – 09:12 COP19	Loss of mechanosensitivity in a mouse model for gerodermia osteodysplastica due to an altered lacuno-canalicular osteocyte network Uwe Kornak (Germany)
09:15 – 09:22 COP20	Weekly shifts in light-dark cycle disrupt circadian clock gene expression in bone and reduce bone turnover Elizabeth Winter (Netherlands)
09:25 – 09:32 COP21	The microbiome plays a crucial role in mediating negative effects of chronic psychosocial stress on bone growth Melanie Haffner-Luntzer (Germany)
09:35 – 09:42 COP22	Role of matricellular protein periostin (Postn) on bone fragility in two models of type 2 diabetes Nicolas Bonnet (Switzerland)
09:45 – 09:52 COP23	Evidence that the intestinal microbiome regulates susceptibility to osteoarthritis in mice Antonia Sophocleous (Cyprus)
09:55 – 10:02 COP24	Skeletal muscle-specific ablation of Slc20a1/Pit1 andSlc20a2/Pit2 causes early postnatal lethality in mice Clemens Bergwitz (United States)



10:10 – 10:30	Poster SNAPs Presentations 2 – Clinical / Public Health Chair: Elizabeth M Curtis (United Kingdom) Péter Somogyi (Hungary)
	– 1 minute presentation; no discussion –
P194	Mutations in osteoarthritis susceptibility genes cause joint shape variation detectable at larval stages in zebrafish Erika Kague (United Kingdom)
P238	Trabecular bone score (TBS) and life expectancy (LE) with and without osteoporotic fracture Enisa Shevroja (Switzerland)
P239	Peripheral trabecular bone microarchitecture is impaired in postmenopausal non-osteoporotic women with fragility fracture-the ChiVOS case-control study Ning Jiang (China)
P263	The accuracy of self-reported fractures among a Belgian cohort of postmenopausal women: the FRISBEE study Felicia Baleanu (Belgium)
P262	Incidence of osteoporotic refractures and associated mortality in Korea using nationwide claims data Yong-Chan Ha (Republic of Korea)
P264	Clinical risk factors (CRFs) for osteoporotic fractures (OFs) are function of the fracture site: data from the FRISBEE study Laura Iconaru (Belgium)
P285	Motivations for eight years adherence to alendronate therapy Jessica Pepe (Italy)
P293	Differentiation and functional activity of osteoclasts are impaired in CFTR-f508DEL patients Marie-Laure Jourdain (France)
P306	Hypophosphatemic osteomalacia induced by long-term low-dose adefovir Dipivoxil: clinical characteristics of 140 cases Jiao Zhao (China)
P314	Effects of zoledronic acid on vertebral shape of children and adolescents with osteogenesis imperfecta <i>Lujiao Li (China)</i>



10:10 – 10:30	Poster SNAPs Presentations 2 – Basic / Translational Chair: Miep Helfrich (United Kingdom) Ciro Menale (Italy) Bartók
	– 1 minute presentation; no discussion –
P139	The thyroid hormone transporter Mct8 is a negative regulator of trabecular bone mass in male mice Franziska Lademann (Germany)
P140	Anti-Müllerian Hormone deficiency: a new mouse model for bone changes following natural menopause? Christiane van As (Netherlands)
P178	MiR-146a a key Player in bone metabolism Victoria Saferding (Germany)
P193	New role for RANKL as a proinflammatory modulator in modeled inflammatory arthritis Eleni Douni (Greece)
P202	Tissue specific effects of glucocorticoids suggest inter-organ communication during fin regeneration Franziska Knopf (Germany)
P208	Longitudinal evaluation of the musculoskeletal and frailty phenotype in a mouse model of accelerated aging <i>Ariane C. Scheuren (Switzerland)</i>
P291	Humanin might protect against glucocorticoid induced osteoporosis in a mouse model of Duchenne muscular dystrophy Therése Cedervall (Sweden)
P292	Hepcidin-resistant ferroportin mutation causes low bone mass in mice Maria G. Ledesma-Colunga (Germany)
P305	Irisin in post-menopausal women with primary hyperparathyroidism: an interplay between Irisin and PTH Andrea Palermo (Italy)
P325	Chronic recurrent multifocal osteomyelitis in children with hypophosphatasia explained by anti-inflammatory nucleotidase activity of tissue nonspecific alkaline phosphatase David Magne (France)
10:30 – 11:00	Coffee Break / Poster Exhibition / Industry Exhibition



10:50 – 11:00	Excellence in Research Award	Pátria
	Excellence in Research Award: Klaus Engelke (Germany)	
	Presented by Anna Teti (Italy)	
11:00 – 12:00	Plenary Symposium 3: Bone Quality and Fragility Chair: Péter Lakatos (Hungary) Barbara Obermayer-Pietsch (Austria)	Pàtria
11:00 – 11:30	Significance of bone quality as determinant of bone fragility Philipp Thurner (Austria)	
11:30 – 12:00	What do QCT and HRpQCT add to DXA for the assessment of fragility and bone quality of patients? Klaus Engelke (Germany)	bone
12:00 – 13:30	Lunch Break / Poster Exhibition / Industry Exhibition	
12:30 – 13:30	Poster Focus 2 Moz	zart 2+3
	– 5 minutes presentation + 5 minutes discussion –	
12:30 – 12:35 P070	Dissecting the role of CXCR4 in breast cancer cell-bone microenvironment interaction Mattia Capulli (Italy)	
12:40 – 12:45 P014	Diagnostic accuracy of a novel TRAP5b assay in diagnosing resosteodystrophy Syazrah Salam (United Kingdom)	nal
12:50 – 12:55 P024	Dynamic deformation by fluid flow on hematopoietic progen cells alters osteoclast differentiation <i>Cornelia Bratengeier (Sweden)</i>	itor
13:00 – 13:05 P219	SOST polymorphisms are associated with lean mass in Chinese offspring Luyue Qi (China)	male
13:10 – 13:15 P048	Skeletal maturation in relation to ethnic background in childr school age Olja Grgic (Netherlands)	en of
13:20 – 13:25 P052	Variation in mandibular cortical thickness in relation to bone mineral density in children of school age Olja Grgic (Netherlands)	

bisphosphonates 2019



Dear Colleagues

The year 2019 will mark 50 years since the first publications on the biological effects of the bisphosphonates. Since then more than 27,000 papers have appeared on PubMed! We invite you to join us in Sheffield as we celebrate this golden anniversary. The meeting will review developments over the past 50 years, discuss our current understanding and look at what the future may hold.

The discovery that bisphosphonates could inhibit bone resorption led very quickly to their clinical use in Paget's disease and in patients with skeletal complications of cancer and later in osteoporosis. They remain the major drugs used for these conditions and their use in clinical therapeutics is likely to continue well into the future.

Sheffield is England's 5th largest city, and with its two universities has been voted the UK's most popular student destination. It has a vibrant and diverse social scene, and at the same time is one of the UK's greenest cities, with one third of the city lying within the Peak District National Park. Transport links are good and there is a choice of international airports within an hour of the city.

We hope to welcome you to Sheffield in July

Richard Eastell & Graham Russell (Meeting Chairs)

Register now at www.bisphosphonates2019.org

For more information contact Janet Crompton, Meeting Organiser, info@bisphosphonates2019.org

Organising Committee

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Mike Rogers (Sydney, Australia)

bisphosphonates2019









13:00 – 13:10	ECTS Fellowship Ceremony	Awardee Wall
	2019 Fellowship – Clinical: Elena Tsourdi (Germany)	
	2019 Fellowship – Basic: Valentina Capo (Italy)	
13:30 – 14:30	Educational Symposium 2 FGF23 – A Phosphotropic Hormone and Beyond Chair: Alison Boyce (United States) Outi Mäkitie (Finland)	Pàtria
13:30 – 14:00	FGF23-induced hypophosphatemias Reinhold Erben (Austria)	
14:00 – 14:30	FGF23 effects beyond phosphate homeostasis Christian Faul (United States)	
	Supported by an educational grant from industry	
13:30 – 14:30	ECTS-IFMRS Session: Big Data's Secret Chair: Duncan Bassett (United Kingdom) Fernando Rivadeneira (Netherlands)	Lehár 1+2
13:30 – 14:00	The International Mouse Phenotyping Consortium: An important new resource for skeletal research Graham Williams (United Kingdom)	
14:00 – 14:30	Big Data and the Skeleton – Lessons and Perspectives Biobank Jonathan Tobias (United Kingdom)	from the UK
13:30 – 14:30	Meet the Expert 6 – Basic/Translational: Bioengineering of Articular Cartilage Jennifer H. Elisseeff (United States)	Brahms 1
13:30 – 14:30	Meet the Expert 7 – Clinical/Public Health Bone Imaging Beyond DXA Andrew Burghardt (United States)	Brahms 2



13:30 – 14:30	Meet the Expert 8 – Basic/Translational Biomechanical Characterization of the Bone Matrix in Health and Disease Björn Busse (Germany)	Liszt 1
13:30 – 14:30	Meet the Expert 9 – Basic/Translational Metabolism of Osteoblasts / Skeletal Cells Ryan Riddle (United States)	Liszt 2
13:30 – 14:30	Meet the Expert 10 – Clinical/Public Health Translating research from the Bone Clinic to the Laboratory and back again Stuart Ralston (United Kingdom)	Liszt 3
14:30 – 14:45	Break / Poster Exhibition / Industry Exhibition	
14:45 – 16:15	Industry Sponsored Session 3 See page 148	Bartók
16:15 – 16:45	Break / Poster Exhibition / Industry Exhibition	
16:45 – 17:45	Plenary Oral Presentations 2: Bone Pathophysiology Chair: Antonia Sophocleous (Cyprus) Bender Tamás (Hungary) – 7 minutes presentation + 3 minutes discussion –	Pàtria
16:45 – 16:52 PLO07	Absence of the fractalkine receptor CX3CR1 decreases inflammatory bone resorption but increases the inflammatory phenotype of inflammatory osteoclasts Maria-Bernadette Madel (France)	
16:55 – 17:02 PLO08	Tumour-derived extracellular vesicles affect the molecular prosteoblasts and stimulate osteoclast and endothelial function Alfredo Cappariello (Italy)	



17:05 – 17:12 PLO09	Mendelian randomization analysis reveals a causal influence of circulating sclerostin levels on bone mineral density and fractures <i>Jie Zheng (United Kingdom)</i>
17:15 – 17:22 PLO10	Skin autofluorescence, a non-invasive biomarker for advanced glycation end-products, is associated with prevalent vertebral fractures independent of BMD: the Rotterdam study Komal Waqas (Netherlands)
17:25 – 17:32 PLO11	Keratinocyte-derived S100A9 is important for psoriatic arthritis, but not psoriasis Liliana Mellor (Spain)
17:35 – 17:42 PLO12	22 new osteoarthritis susceptibility genes identified using novel rapid-throughput joint phenotyping methods Natalie C Butterfield (United Kingdom)
	? Selected session for ,Ask a Question' app feature
17:45 – 18:00	Break / Poster Exhibition
18:00 – 19:00	Concurrent Oral Poster Presentations 2: Pàtria Clinical / Public Health Chair: Izabella Gomez (Hungary) Peter Pietschmann (Austria)
18:00 – 19:00	Clinical / Public Health Chair: Izabella Gomez (Hungary)
18:00 – 19:00 18:00 – 18:03 P236	Clinical / Public Health Chair: Izabella Gomez (Hungary) Peter Pietschmann (Austria)
18:00 – 18:03	Clinical / Public Health Chair: Izabella Gomez (Hungary) Peter Pietschmann (Austria) - 3 minutes presentation + 2 minutes discussion – The fracture predictive ability of lumbar spine BMD and TBS as calculated based on different combinations of the lumbar spine vertebrae
18:00 – 18:03 P236 18:05 – 18:08	Clinical / Public Health Chair: Izabella Gomez (Hungary) Peter Pietschmann (Austria) - 3 minutes presentation + 2 minutes discussion – The fracture predictive ability of lumbar spine BMD and TBS as calculated based on different combinations of the lumbar spine vertebrae Enisa Shevroja (Switzerland) Balance function impairment and muscles strength deficiency in patients with osteoporotic vertebral fractures
18:00 – 18:03 P236 18:05 – 18:08 P237 18:10 – 18:13	Clinical / Public Health Chair: Izabella Gomez (Hungary) Peter Pietschmann (Austria) - 3 minutes presentation + 2 minutes discussion – The fracture predictive ability of lumbar spine BMD and TBS as calculated based on different combinations of the lumbar spine vertebrae Enisa Shevroja (Switzerland) Balance function impairment and muscles strength deficiency in patients with osteoporotic vertebral fractures Larisa Marchenkova (Russia) Men with COPD have increased risk of vertebral fractures independent of smoking: a prospective cohort study

Denise van de Laarschot (Netherlands)



18:25 – 18:28 P284	Impact of renal function on BMD response to bisphosphonate treatment: real world observational data using linkage to national registers Bo Abrahamsen (Denmark)
18:30 – 18:33 P304	Lumbosacral transitional vertebrae and the association with low back pain and spine degeneration: the Rotterdam study Satya Ramcharan (Netherlands)
18:35 – 18:40 P307	Clinical, biochemical and radiological profile of normocalcaemic hyperparathyroidism: a multicentric cross-sectional evaluation Andrea Palermo (Italy)
18:40 – 18:43 P308	Vitamin D supplementation in pregnancy: a randomized double- blind controlled trial Rajesh Khadgawat (India)
18:45 – 18:48 P313	-308G/A tumor necrosis factor gene polymorphism may influence bone mineral density in pediatric inflammatory bowel diseases Michail Kostik (Russia)
18:50 – 18:58 P337	Long-term bone mineral density changes after surgical cure in patients with tumor Induced osteomalacia Luciano Colangelo (Italy)
18:00 – 19:00	Concurrent Oral Poster Presentations 2: Basic / Translational Chair: Eleni Douni (Greece) Vito Guarnieri (Italy)
18:00 – 19:00	Concurrent Oral Poster Presentations 2: Bartól Basic / Translational Chair: Eleni Douni (Greece)
18:00 – 19:00 18:00 – 18:03 P118	Concurrent Oral Poster Presentations 2: Bartól Basic / Translational Chair: Eleni Douni (Greece) Vito Guarnieri (Italy)
18:00 – 18:03	Concurrent Oral Poster Presentations 2: Basic / Translational Chair: Eleni Douni (Greece) Vito Guarnieri (Italy) - 3 minutes presentation + 2 minutes discussion – Pleckstrin homology domain containing protein family member 1 (PLEKHM1) regulates bone resorption through sealing zone dynamics and lysosomal targeting in osteoclasts
18:00 – 18:03 P118 18:05 – 18:08	Concurrent Oral Poster Presentations 2: Basic / Translational Chair: Eleni Douni (Greece) Vito Guarnieri (Italy) - 3 minutes presentation + 2 minutes discussion – Pleckstrin homology domain containing protein family member 1 (PLEKHM1) regulates bone resorption through sealing zone dynamics and lysosomal targeting in osteoclasts Anh Tran (United Kingdom) Three-dimensional mechanical loading activates YAP/TAZ pathway and chemokines expression in osteocytes
18:00 – 18:03 P118 18:05 – 18:08 P124 18:10 – 18:13	Concurrent Oral Poster Presentations 2: Basic / Translational Chair: Eleni Douni (Greece) Vito Guarnieri (Italy) - 3 minutes presentation + 2 minutes discussion – Pleckstrin homology domain containing protein family member 1 (PLEKHM1) regulates bone resorption through sealing zone dynamics and lysosomal targeting in osteoclasts Anh Tran (United Kingdom) Three-dimensional mechanical loading activates YAP/TAZ pathway and chemokines expression in osteocytes Mylène Zarka (France) Theobroma cacao extracts as a treatment for FGFR3-related disorders



18:25 – 18:28 P153	Synergistic effects of chronic nicotine exposure and diabetes mellitus (DM) on deterioration in bone microstructure and geometry: an experimental study in male rats Petar Milovanovic (Serbia)
18:30 – 18:33 P154	Osteocalcin administration improves glucose metabolism in a lean model of type 2 diabetes Patricia Das Neves Borges (Portugal)
18:35 – 18:38 P173	Far upstream element binding protein 3 expression is associated with bone formation Nika Lovsin (Slovenia)
18:40 – 18:43 P174	Leveraging unconfounded genetic risk scores to stratify fracture risk by age at onset Carolina Medina-Gomez (Netherlands)
18:45 – 18:48 P192	Mid1 is a novel mediator of subchondral bone resorption in antigen- induced arthritis Nina Lukač (Croatia)
18:50 – 18:53 P207	Impaired muscle fiber morphology in the Chihuahua zebrafish model of classical dominant osteogenesis imperfecta Imke A.K. Fiedler (Germany)
18:55 – 18:58	The bone biomechanical response during sclerostin-neutralizing
P282	antibodies treatment is maintained in periostin knockout mice Maude Gerbaix (Switzerland)
	antibodies treatment is maintained in periostin knockout mice
P282	antibodies treatment is maintained in periostin knockout mice Maude Gerbaix (Switzerland) New Investigator Seminar and Gathering Lehár 1+2
P282	antibodies treatment is maintained in periostin knockout mice Maude Gerbaix (Switzerland) New Investigator Seminar and Gathering Lehár 1+2 Chair: Abbas Jafari (Denmark)
P282 19:00 – 20:00 19:00 – 19:06	antibodies treatment is maintained in periostin knockout mice Maude Gerbaix (Switzerland) New Investigator Seminar and Gathering Lehár 1+2 Chair: Abbas Jafari (Denmark) - 6 minutes presentation + 2 minutes discussion – Chronic inflammation in HLA-B27 transgenic rats, a model of spondyloarthritis, results in body and bone marrow fat depletion
P282 19:00 - 20:00 19:00 - 19:06 P190 19:08 - 19:14	antibodies treatment is maintained in periostin knockout mice Maude Gerbaix (Switzerland) New Investigator Seminar and Gathering Chair: Abbas Jafari (Denmark) - 6 minutes presentation + 2 minutes discussion – Chronic inflammation in HLA-B27 transgenic rats, a model of spondyloarthritis, results in body and bone marrow fat depletion Stefanie Thiele (Germany) Oxytocin-increase in bone, soleus muscle and hypothalamic paraventricular nuclei regulates the response to cold stress in mice exerting phenotype-dependent protective effects towards slow-twitch muscle



19:32 – 19:38 P016	Serum levels of Wnt-signalling parameters poorly reflect bone mass and metabolism in healthy boys and men Thiberiu Banica (Belgium)
19:40 – 19:46 P302	Vascular calcification relationship to bone microstructure in advanced chronic kidney disease Syazrah Salam (United Kingdom)



9TH INTERNATIONAL CONFERENCE ON CHILDREN'S BONE HEALTH

22-25 June 2019

SALZBURG, AUSTRIA



Scientific Programme

The aim of this Conference is to bring together scientists and clinicians from a wide range of disciplines and from across the globe to gain a better understanding of the growing skeleton in health and disease. Attendees will have an interest in rare and inherited bone disorders, general aspects of bone health and bone disease in children, adolescents and young adults.

KEY TOPICS

- Bone development
- Bone fragility and metabolism
- Bone diagnostics
- Bone health in chronic and rare diseases
- **■** Epidemiology

- Novel drug targets and medical therapies
- Nutrition and rickets
- Orthopaedics
- Physical activity and biomechanics

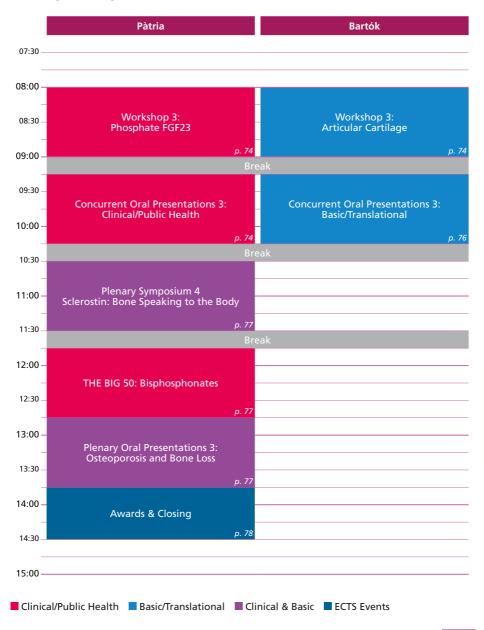
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- "I spent four wonderful, inspiring, exciting days"
- "One of the friendliest and best organised conferences I have ever attended"
- "This conference was amazing, both in terms of speakers and organisation"



Programme Overview

Tuesday, 14 May 2019





Scientific Programme

Tuesday, 14 May 2019

08:00 – 09:00	Workshop 3: Clinical/Public Health Phosphate FGF23 Chair: Carola Zillikens (Netherlands) István Takács (Hungary)	Pàtria
08:00 – 08:30	New insights into the FGF23 health and disease Seiji Fukumoto (Japan)	
08:30 – 09:00	Osteomalacia, FGF23 in health and beyond Alison Boyce (United States)	
08:00 - 09:00	Workshop 3: Basic/Translational Articular Cartilage Chair: Thomas Funck-Brentano (Sweden) Laurence Legeai-Mallet (France)	Bartók
08:00 - 08:30	Articulate cartilage stem cells and renewal Andrei S. Chagin (Sweden)	
08:30 – 09:00	Articulate cartilage senescence Jennifer H. Elisseeff (United States)	
	? Selected session for ,Ask a Question' app feature	
09:00 – 09:15	Break	
09:15 – 10:15	Concurrent Oral Presentations 3 – Clinical/Public Health: Metabolism, Diabetes and Bone Quality Chair: Roger Bouillon (Belgium) Bente Langdahl (Denmark)	Pàtria
	– 7 minutes presentation + 3 minutes discussion –	
09:15 – 09:22 COP25	Bone quality analyses in cases with type 2 diabetes mellitus repatterns of femoral cortical bone reorganization along with porosity Eva Maria Wölfel (Germany)	



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09:25 – 09:32 COP26	Changes in bone quality after Roux-en-Y gastric bypass: a prospective cohort study in subjects with and without type 2 diabetes Erik Fink Eriksen (Norway)
09:35 – 09:42 COP27	The effect of the glucagon-like peptide-1 receptor agonist Liraglutide on bone turnover and bone mass in type 2 diabetes patients, a randomized controlled trial Katrine Hygum (Denmark)
09:45 – 09:52 COP28	Genetic evidence for a causal role of serum phosphate in coronary artery calcification: the Rotterdam study Carola Zillikens (Netherlands)
09:55 – 10:02 COP29	Periosteal expansion in response to endosteal resorption through periostin and RANKL interaction is conserved in humans <i>Nicolas Bonnet (Switzerland)</i>
10:05 – 10:12 COP30	No progression in the bone phenotype with age in patients with the LRP5-High bone mass phenotype Jens-Jacob Lindegaard Lauterlein (Denmark)
	? Selected session for ,Ask a Question' app feature
09:15 – 10:15	Concurrent Oral Presentations 3 – Basic/Translational: Bartók Molecular Basis of Bone Pathology Chair: Laurent Beck (France)
09:15 – 10:15	Molecular Basis of Bone Pathology Chair: Laurent Beck (France)
09:15 - 10:15 09:15 - 09:22 COP31	Molecular Basis of Bone Pathology
09:15 – 09:22	Molecular Basis of Bone Pathology Chair: Laurent Beck (France) – 7 minutes presentation + 3 minutes discussion – TGFβ inhibition with chemotherapy heals murine myeloma bone disease and improves fracture resistance
09:15 - 09:22 COP31 09:25 - 09:32	Molecular Basis of Bone Pathology Chair: Laurent Beck (France) - 7 minutes presentation + 3 minutes discussion – TGFβ inhibition with chemotherapy heals murine myeloma bone disease and improves fracture resistance Andrew Chantry (United Kingdom) Absence of Dipeptidyl Peptidase 3 leads to increased oxidative stress and bone pathology
09:15 - 09:22 COP31 09:25 - 09:32 COP32 09:35 - 09:42	Molecular Basis of Bone Pathology Chair: Laurent Beck (France) - 7 minutes presentation + 3 minutes discussion – TGFβ inhibition with chemotherapy heals murine myeloma bone disease and improves fracture resistance Andrew Chantry (United Kingdom) Absence of Dipeptidyl Peptidase 3 leads to increased oxidative stress and bone pathology Ciro Menale (Italy) Correlation between bone marrow adiposity and bone resorption in modeled osteoporosis
09:15 - 09:22 COP31 09:25 - 09:32 COP32 09:35 - 09:42 COP33 09:45 - 09:52	Molecular Basis of Bone Pathology Chair: Laurent Beck (France) - 7 minutes presentation + 3 minutes discussion – TGFβ inhibition with chemotherapy heals murine myeloma bone disease and improves fracture resistance Andrew Chantry (United Kingdom) Absence of Dipeptidyl Peptidase 3 leads to increased oxidative stress and bone pathology Ciro Menale (Italy) Correlation between bone marrow adiposity and bone resorption in modeled osteoporosis Eleni Douni (Greece) Acvr2b ligand trap (luspatercept) improves bone mass in myelodysplastic mice and mice with ovariectomy-induced bone loss



10:05 – 10:12 COP36	Paradoxical effects of JZL184, an inhibitor of monoacylglycerol lipase, on bone remodelling in healthy and cancer-bearing mic <i>Silvia Marino (United Kingdom)</i> 3 Selected session for 'Ask a Question' app feature	
10:15 – 10:30	Coffee Break	
10:30 – 11:30	Plenary Symposium 4 Sclerostin: Bone Speaking to the Body Chair: Geert Carmeliet (Belgium) Frank H. Ebetino (United States)	Pàtria
10:30 – 11:00	Sclerostin white adipose tissue and systemic metabolism Ryan Riddle (United States)	
11:00 – 11:30	Extended phenotype of human sclerostin deficiency Natasha Appelman-Dijkstra (Netherlands)	
11:45 – 12:45	THE BIG 50: Bisphosphonates Chair: Claus Glüer (Germany) Peyman Hadji (Germany)	Pàtria
11:45 – 11:55	From water softeners to major medicines. Historical highlights. Graham Russell (United Kingdom)	
11:55 – 12:05	Treatment of osteoporosis – New insights into an old story? Erik Fink Eriksen (Norway)	
12:05 – 12:15	Treatment and prevention of bone metastasis – fact or fiction? Robert Coleman (United Kingdom)	
12:15 – 12:25	Future direction – Where do we go from here? Frank H. Ebetino (United States)	
12:45 – 13:45	Plenary Oral Presentations 3: Osteoporosis and Bone Loss Chair: Szilvia Mészáros (Hungary)	Pàtria
	- 7 minutes presentation + 3 minutes discussion -	
12:45 – 12:52 PLO13	Loss of Dkk-1 in osteocytes prevents alveolar bone loss in mice subjected to experimental periodontitis Paula Goes (Brazil)	



12:55 – 13:02 PLO14	Can the circulating Wnt-antagonists Sclerostin and DKK1 alter bone mass by endocrine signalling? Paul Baldock (Australia)
13:05 – 13:12 PLO15	T cell-derived Dkk1 controls bone homeostasis and contributes to the pathogenesis of estrogen deficiency-induced bone loss Juliane Colditz (Germany)
13:15 – 13:22 PLO16	Childhood exposure to passive smoking and bone health in adulthood Sanna Tolonen (Finland)
13:25 – 13:32 PLO17	Comparison of the predictive ability of quantitative and qualitative scoring methods of osteoporotic vertebral fractures using operational skeletal fragility outcomes Fjorda Koromani (Netherlands)
13:35 – 13:42 PLO18	Low levels of sex steroids are associated with accelerated deterioration of cortical microarchitecture, in older men <i>Anne Piot (France)</i>

13:45 – 14:30 Awards & Closing

Pàtria

Chair: Anna Teti (Italy)

Onsite selected Oral Presentation – Basic/Translational: TBA

Onsite selected Oral Presentation - Clinical/Public Health: TBA

2019 East-Meets-West Research Award Presented by Anna Teti (Italy)

2019 ECTS-AgNovos New Investigator Awards Presented by Anna Teti (Italy)

2019 ECTS-Bone Reports New Investigator Awards Presented by Anna Teti (Italy)

2019 ECTS-ICCBH New Investigator Awards

Presented by Anna Teti (Italy)

2019 ECTS Travel Awards
Presented by Anna Teti (Italy)

2019 ECTS Allied Health Professional Award Presented by Anna Teti (Italy)

Presented by Anna Teti (Italy)

2019 ECTS Webinar Award Presented by Anna Teti (Italy)

2019 ECTS Academy-IBI Poster Focus Award Presented by Anna Teti (Italy)



2019 ECTS Academy-IBI New Investigator Seminar Award Presented by Anna Teti (Italy)

Handover & Closing Remarks *Anna Teti (Italy)*

Tuesday May 14th, 2019, 15:00 - 16:00

RUBICON Symposium

Novotel Budapest City, Alkotas utca 63-67, 1123 Budapest (Hungary)

14:55 - 15:00

Conference Room Mozart I-III

Welcome remarks

Anna Teti

Department of Biotechnological and Applied Clinical Sciences, University of L'Aquila, Italy

15:00 - 16:00

Conference Room Mozart I-III

Scientific session

Chairs: Michael Briggs

Institute of Genetic Medicine, University of Newcastle Upon Tyne,

Newcastle, UK Malcolm Collins

Department of Human Biology, University of Cape Town,

Cape Town, South Africa

15:00 - 15:30

Fatty acid metabolism by osteoblasts and osteoclasts

Ryan C. Riddle

Department of Orthopaedic Surgery, Johns Hopkins University School of Medicine,

Baltimore, USA

15:30 - 16:00

ZIKA virus infection perturbs human bone cell function

Bram van der Eerden

Department of Internal Medicine, ERASMUS Universitair Medisch Centrum Rotterdam,

Rotterdam, The Netherlands

Posters

All posters will be displayed in the poster exhibition located on Level 2 in the Poster Loft.

Presenters are kindly asked to be present at their poster during the morning and afternoon coffee break, as well as during the lunch break for personal discussion about their results.

Presenters must be present at their poster during the following times:

12:00 - 13:00 on Sunday, 12 May for posters with the below topics:

- Biomarkers and Biochemical Testing
- Bone Bioengineer, Regeneration and Implants
- Bone Biomechanics and Quality
- Bone Development/Growth and Fracture Repair
- · Cancer and Bone
- Energy Metabolism, Fat, Diabetes, Nutrition
- Mammalian and Non-Mammalian Models, including Preclinical Imaging
- Muscle, Physical Activity and Bone
- Osteoporosis: Evaluation and Imaging
- Osteoporosis: Pathophysiology and Epidemiology

12:00 – 13:00 on Monday, 13 May for posters with the below topics:

- Osteoblasts and Bone Formation
- Osteoclasts and Bone Resorption
- Osteocytes and Mechanobiology
- Chondrocytes and Cartilage
- Endocrine Factors
- Genetics & Epigenetics
- Inflammation, Arthritis and Other Joint Diseases
- Osteoporosis: Treatment
- Other Diseases of Bone and Mineral Metabolism
- Paediatric Bone Diseases
- Rare Bone Diseases



All posters are sorted by abstract topic:

Biomarkers and Biochemical Testing

P001 Low bone turnover is associated with functional hypoparathyroidism in type 2 diabetes <u>Janina Vavanikunnel</u>¹, Lilian Sewing¹, Maria Triantafyllidou², Christoph Henzen², Leticia Grize³, Marius Kraenzlin⁴, Christian Meier^{1,4}

¹Division of Endocrinology, Diabetes and Metabolism, University Hospital Basel, Basel, Switzerland, ²Department of Internal Medicine, Kantonsspital Luzern, Luzern, Switzerland, ³Swiss Tropical and Public Health Institute, University of Basel, Basel, Switzerland, ⁴Endocrine Clinic and Laboratory, Basel, Switzerland

P002 The significance of two serum markers in the diagnosis of rheumatoid arthritis
Nikolaos Varsamis¹, Nikolaos Zotos¹, Panagiotis Christodoulou¹, Maria Gianniki¹, Lampros
Papageorgiou¹, Niki Tsifetaki¹
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P003 The effect of vitamin D supplementation on its metabolism in a randomized controlled trial

Vito Francic¹, Stan Ursem², Niek Dirks², Martin Keppel³, Verena Schwetz¹, Christian Trummer¹, Marlene Pandis¹, Felix Aberer¹, Martin R. Grübler¹, Nicolas D. Verheyen⁴, Winfried März⁵, Andreas Thomaschitz⁶, Stefan Pilz¹, Annemieke C. Heijboer², Barbara Obermayer-Pietsch¹

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P004 Presence of anti-nuclear antibodies in patients with positive anti-ccp antibodies
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Papageorgiou¹, Niki Tsifetaki¹
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P005 The association between osteocalcin, adiposity and bone health: results from a population based cohort

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P006 Serum 25-hydroxyvitamin D levels of healthy men in greece

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P007 A pilot study of a-KLOTHO serum concentrations in patients with kidney disease using a highly sensitive fluorescence immunoassay based on plasmonic microtiter plates <u>Gerhard Hawa</u>¹, Linda Sonnleitner¹, Albert Missbichler¹

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P008 Association between bone turnover marker and bone density in middle aged women Heungyeol Kim¹, Hoon Choi²

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P009 C-reactive protein for early detection of postoperative systemic infections in intertrochanteric femoral fractures

<u>Won Chul Shin</u>¹, Nam Hoon Moon², Seung Min Son¹, Kuen Tak Suh¹
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- P010 Development and characterization of an extraction-free human CGRP sandwich ELISA <u>Elisabeth Gadermaier</u>', Jacqueline Wallwitz', Gabriela Berg², Gottfried Himmler¹

 ¹The Antibody Lab GmbH, Vienna, Austria, ²Biomedica Medizinprodukte GmbH, Vienna, Austria
- P011 Association of telomere length with lifestyle factors in postmenopausal women

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 Ljubljana, Slovenia, ²Department of Endocrinology, Diabetes and Metabolic Diseases,
 University Medical Centre Ljubljana, Ljubljana, Slovenia
- P012 FluoBoltTM-PERIOSTIN, a new highly sensitive fluorescence immunoassay for this matricellular protein based on plasmonic microtiter plates

 <u>Albert Missbichler</u>¹, Teresa Jungwirth¹, Gerhard Hawa¹

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- P013 Changes in protein profile in bone marrow extracts before and one year after gastric bypass surgery

 Safiyye Süslü', Ingvild Kristine Blom-Høgestøl², Erik Fink Eriksen³, Janne Elin Reseland¹

 Biomaterials, University of Oslo, Oslo, Norway, Department of Endocrinology, Oslo

 University Hospital, Oslo, Norway, Institute of Clinical Medicine and Department of Endocrinology, University of Oslo and Oslo University Hospital, Oslo, Norway
- P014 Diagnostic accuracy of a novel TRAP5b assay in diagnosing renal osteodystrophy Syazrah Salam¹.²³, Orla Gallagher¹, Fatma Gossiel¹, Arif Khwaja³, Richard Eastell¹.²
 ¹Oncology and Metabolism, University of Sheffield, Sheffield, United Kingdom,
 ²Academic Unit of Bone Metabolism, Sheffield Teaching Hospitals NHS Foundation Trust, Sheffield, United Kingdom, ³Sheffield Kidney Institute, Sheffield Teaching Hospitals NHS Foundation Trust, Sheffield, United Kingdom
- P015 Biocompatibility and osteogenic potential of calcium phosphate for cleft palate repair Mehdi Alrubayee^{1,2}, Sarah Jones¹, Mohammad Islam², Peter Mossey³

 ¹Cell Biology, University of Dundee, Dundee, United Kingdom, ²University of Dundee, Dundee, United Kingdom, ³Orthdontic and Craniofacial, University of Dundee, United Kingdom
- P016 Serum levels of Wnt-signalling parameters poorly reflect bone mass and metabolism in healthy boys and men

 Thiberiu Banica¹, Charlotte Verroken¹, Hans-Georg Zmierczak¹, Stefan Goemaere², Sara

Vandewalle¹, Jean-Marc Kaufman², Bruno Lapauw¹
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P017 Sex steroids as determinants of Wnt-Signalling markers in men

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Defreyne¹, Guy T'Sjoen¹, Jean-Marc Kaufman¹, Bruno Lapauw¹



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ND-P001 Age-related changes in bone cells

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Bone Bioengineer, Regeneration and Implants

P018 Glycoengineering as a tool for regulating behaviour of bone marrow-derived mesenchymal stromal cells in biofabrication

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P019 The impact of kaolinite on human periodontal cells

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P020 Stress-shielding-induced bone loss following total hip arthroplasty affects orientation of newly formed collagen in the proximal femur

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P021 Synergistic effect of hyperbaric oxygen therapy with parathyroid hormone [1-34] on calvarial bone graft in irradiated rat

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P022 The frequency of loading alters the bone healing response around implants Renan de Barros e Lima Bueno¹, Ana Paula Dias¹, Katia Ponce¹, John Brunski², Antonio Nanci¹

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P023 A decellularized human bone scaffold as an in vitro model of the skeletal stem cell niche Ana Rita Pereira^{1,2}, Dominic Gehweiler³, Drenka Trivanovic^{1,2}, Theresa Kreuzahler^{1,2}, Marietta Herrmann^{2,4}

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P024 Dynamic deformation by fluid flow on hematopoietic progenitor cells alters osteoclast differentiation

<u>Cornelia Bratengeier</u>¹, Aneta Liszka¹, Astrid D. Bakker², Anna Fahlgren¹
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P025 Longitudinal monitoring of degradation processes of bioresorbable magnesium-alloy implants using micro-CT in-vivo: the MgBone project

<u>Timo Damm</u>¹, Heike Helmholz², Olga Will¹, Mirko Gerle³, Jana Humbert¹, Berengere Luthringer⁴, Oula Penata-Medina¹, Tuula Penate-Medina¹, Sanjay Tiwari¹, Claus-C. Glüer¹, Regine Willumeit-Römer²

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P026 Single-dose local administration of teriparatide with octacalcium phosphate collagen composites achieved bony reconstruction after canine mandibular amputation Keiko Matsui¹, Tadashi Kawai², Yushi Ezoe¹, Toshiki Yanagisawa², Ayato Yasuda³, Tetsu Takahashi¹, Shinji Kamakura³

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P027 Promoted efficiency of alendronate-coated β-tricaclium phosphate in local delivery of bone morphogenetic protein-2

Soon Jung Hwang^{1,2,3}, In Sook Kim², Nari Kim³

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P028 Autologous blood coagulum as a carrier for BMP6 in posterolateral lumbar spine fusion <u>Igor Erjavec</u>¹, Marko Pecin², Lovorka Grgurevic¹, Nikola Stokovic¹, Tatjana Bordukalo-Niksic¹, Slobodan Vukicevic¹

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P029 Improved proliferation and differentiation potential of aged adipose stem-progenitor cells

<u>Rebecca E. Holding</u>^{1,2}, Sanjay Sharma³, Richard O.C. Oreffo², Sylvia L.F. Pender^{1,2}
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Southampton, United Kingdom, ²Centre for Human Development, University of
Southampton, Southampton, United Kingdom, ³Maxillo-Facial, University Hospital
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P030 Extracellular vesicle protein and miRNA cargo reflect functional heterogeneity of mesenchymal stromal cells

<u>Andrew Stone</u>¹, Rachel Crossland², Emma Rand¹, Alasdair Kay¹, Xiao-Nong Wang², Ian Hitchcock¹, Paul Genever¹

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P031 Osteoblast-derived extracellular vesicles drive mineral nucleation in stem cell cultures

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United Kingdom, ²School of Chemical Engineering, University of Birmingham,
Birmingham, United Kingdom



ND-P002 Synergistic effect of hyperbaric oxygen therapy with parathyroid hormone [1-34] on calvarial bone graft in irradiated rat

<u>Kyeong-Mee Park</u>¹, Wonse Park¹, Kee-Deog Kim¹, Sungtae Kim²

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ND-P003 Dynamic deformation by fluid flow on hematopoietic bone marrow cells alters osteoclast differentiation

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ND-P004 Titanium with nanotopography induces osteoblast and inhibits osteoclast differentiation

<u>Helena Bacha Lopes</u>¹, Rayana Longo Bighetti-Trevisan¹, Beatriz Poker¹, Larissa Castro-Raucci², Emanuela Prado Ferraz³, Alann Thaffarell Portilho Souza¹, Gileade Freitas¹, Adalberto Luis Rosa¹, Marcio Mateus Beloti¹

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Bone Biomechanics and Quality

P032 Application of pair distribution function studies to hydroxyapatite for assessment of physicochemical bone quality

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P033 Effects of manganese enhanced hydroxyapatite implants into tibia on strength of the mandible in rats

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P035 Cortical quantitative ultrasound variables for the estimation of proximal femur BMD Reinhard Barkmann¹, Florian Fischer¹, Melanie Gräsel¹, Claus-C. Glüer¹ ¹Biomedical Imaging, University Clinic Kiel, Kiel, Germany

P036 Bone tissue level changes in the human clavicle and ribs with aging <u>Hannah McGivern</u>¹, Nicholas Marquez-Grant¹, Peter Zioupos¹ ¹Cranfield Forensic Institute, Cranfield University, Shrivenham, United Kingdom

P037 Assessment of bone loss in distal phalangeal joint in Chinese patients with primary hyperthrophic osteoarthropathy by high-resolution peripheral quantitative computed tomography

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P038 Osteocalcin is required for the alignment of biological apatite crystallites but not for the regulation of bone formation, glucose metabolism, testosterone synthesis, and muscle mass <u>Toshihisa Komori</u>, Ryosuke Ozasa², Takuya Ishimoto², Takayoshi Nakano², Takeshi Moriishi¹

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P039 Differential response of trabecular and cortical bone following recovery from microgravity-induced bone loss

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- P040 Cortical shell thickness in thoracic vertebrae is age- and region-dependent

 <u>Annika vom Scheidt</u>¹, Eric Flavio Grisolia Seifert¹, Michael Amling¹, Björn Busse¹

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- P041 Alterations of bone geometry, bone volumetric density, and microarchitecture but not areal bone mineral density in Chinese patients with primary hypertrophic osteoarthropathy

 Yuping Xu¹, Qianqian Pang², Weibo Xia¹, Ling Qin²

 ¹Peking Union Medical College Hospital, Beijing, China, ²The Chinese University of Hong Kong, Hong Kong, Hong Kong, Hong Kong
- P042 Secondary dislocation of distal radius fractures is associated with lower total and cortical volumetric bone mineral density and lower cortical thickness at the distal radius Anne Marjan Daniels^{1,2}, Heinrich M.J. Janzing¹, Caroline E. Wyers³, Bert van Rietbergen^{4,5}, Piet P.M.M. Geusens^{6,7}, Sjoerd Kaarsemaker³, Martijn Poeze², Joop P. van den Bergh², Piet P.M.M. Geusens^{6,7}, Sjoerd Kaarsemaker³, Martijn Poeze², Joop P. van den Bergh², Piet P.M.M. Geusens^{6,7}, Sjoerd Kaarsemaker³, Martijn Poeze², Joop P. van den Bergh², Vargery, Viecuri Medical Centre, Venlo, Netherlands, Pustricht University, Maastricht University, Maastricht University, Maastricht, Netherlands, Caphall Orthopaedic Surgery, Maastricht University, Maastricht, Netherlands, Passelt Faculty of Medicine, Hasselt, Belgium, Porthopaedic Surgery, Viecuri Medical Centre, Venlo, Netherlands, Surgery, Maastricht University Medical Centre, Maastricht, Netherlands, Internal Medicine, Maastricht University Medical Centre, Maastricht, Netherlands
- P043 A novel algorithm to predict bone changes based on physiological loading in a preclinical murine model

<u>Vee San Cheong</u>^{1,2}, Ana Campos Marin^{1,2}, Damien Lacroix^{1,2}, Enrico Dall'Ara^{1,3}

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P044 Microcracks in subchondral bone plate is associated with cartilage preservation

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Oudet³, Klaus Engelke⁴, Jean-Denis Laredo⁵, Martine Cohen-Solal¹
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France, ⁵Department of Bone and Joint Imaging, Hôpital Lariboisière, Paris, France

Bone Development/Growth and Fracture Repair

P045 Histomorphometric parameters and histological findings of the guided bone regeneration using biphasic calcium phosphate paste

<u>Olga Cvijanović Peloza¹,</u> Željka Perić Kačarević², Marija Pejakić³, Marko Matijević³, Tanja Ćelić¹, Ana Terezija Jerbić Radetić¹, Sanja Zoričić Cvek¹

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P046 Periostin accelerates bone healing mediated by human mesenchymal stem cellembedded hydroxyapatite/tricalcium phosphate scaffold

Won Chul Shin¹, Nam Hoon Moon², Seung Min Son¹, Kuen Tak Suh¹
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P048 Skeletal maturation in relation to ethnic background in children of school age
Olja Grgic¹, Carolina Medina-Gomez¹, Katerina Trajanoska¹, Brunilda Dhamo², Andre G.
Uitterlinden³, Eppo B. Wolvius², Fernando Rivadeneira³

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P049 Autologous bone graft substitute containing autologous blood coagulum with rhBMP6 accelerates bone formation compared to commercial rhBMP2 on bovine collagen Nikola Štoković¹, Igor Erjavec¹, Natalia Ivanjko¹, Kristian Bakić¹, Viktorija Rumenović¹, Ivona Matić-Jelić¹, Slobodan Vukičević¹

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P050 miR-31-5p and miR-33a-family promoters of human mesenchymal stem cells osteoblast differentiation by HIF-1α and EMT signaling modulation

<u>Viviana Costa</u>¹, Francesca Salamanna², Valeria Carina¹, Lavinia Raimondi¹, Angela De Luca¹, Daniele Bellavia¹, Alice Conigliaro³, Milena Fini², Riccardo Alessandro^{3,4}, Gianluca Giavaresi¹

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P051 Distinct pre-osteoblastic expression of the novel high bone mass gene SMAD9 in the zebrafish skeletal model

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P052 Variation in mandibular cortical thickness in relation to bone mineral density in children of school age

Olja Grgic¹, Carolina Medina-Gomez¹, Justin T. van der Tas², Constanza Andaur-Navarro², Katerina Trajanoska³, Andre G. Uitterlinden³, Eppo B. Wolvius², Fernando Rivadeneira³

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P054 Roles of a transcription factor 19A in the osteoblast development of sternum <u>Mao Kuriki</u>¹, Fuminori Sato¹, Kenta Sumiyama², Koichi Kawakami³, Atsuko Sehara-Fujisawa¹

¹Kyoto University, Kyoto, Japan, ²REKEN Center for Developmental Biology, Kobe, Japan, ³National Institute of Genetics, Mishima, Japan



P055 Histopathologic hypoxia-like changes and decreased volume in fetal growth plates following gestational hypoglycaemia in rats

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P056 Delayed bone healing in HFD-induced obesity model: evidence for impaired differentiation capacity of osteoblasts and osteoclasts progenitors

<u>Florence Figeac</u>^{1,2}, Michaela Tencerova^{1,2,3}, Thomas L. Andersen^{4,5}, Dan Remi Appadoo¹, Nicholas Ditzel^{1,2}, Moustapha Kassem^{1,2,6}

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P057 Glucocorticoid receptor dimerization is deleterious in trauma-induced compromised fracture healing

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P058 Novel role of syndecan 3 in regulating osteoblastogenesis through the wnt signalling pathway

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P060 Bone health index for the assessment of pediatric fracture risk

<u>Olja Grgic</u>¹, Carolina Medina-Gomez², Katerina Trajanoska², Andre G. Uitterlinden², Eppo B. Wolvius³, Fernando Rivadeneira²

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ND-P005 Effect of Nerve Growth Factor monoclonal antibody on pain behaviours in a mouse model of fracture

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ND-P006 New bone mineral density standards adjusted for biological ages in children

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ND-P007 Inhibition of KIAA1199 (CEMIP) enhances osteoblast differentiation and in vivo bone formation

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ND-P008 PDGFRβ signaling drives the expansion, recruitment, and blood vessel affinity of skeletal stem/progenitor cells for bone repair

<u>Naomi Dirckx</u>¹, Anna-Marei Böhm¹, Robert J. Tower¹, Nicolas Peredo¹, Sebastiaan Vanuytven², Koen Theunis², Elena Nefyodova¹, Ruben Cardoen¹, Volkhard Lindner³, Thierry Voet², Matthias Van Hul¹, Christa Maes¹

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Cancer and Bone

P061 Inhibition of breast cancer bone metastasis by KT

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P062 CD73/adenosine pathway involvement in bone metastases induced by non-small cell lung cancer stem cells

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P063 Effect of PDE4 inhibitors on osteosarcoma cells growth in-vitro

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P064 Potentiated anti-tumor effects in human osteotropic breast cancer cells by combined inhibition of the mevalonate pathway and the p38 kinase

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P065 Bone microarchitecture and bone turnover in the irradiated human mandible

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P066 Role of autophagy in the crosstalk between osteosarcoma and the bone microenvironment

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P067 Alpha-tocopheryl succinate suppresses osteolytic bone metastasis of breast cancer by inhibiting migration of cancer cells and RANKL expression of osteoblasts

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P068 Investigating the functional role of the ZNF687 transcription factor in aggressive forms of Paget's disease of bone

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P069 Disruption of prostate cancer cell – macrophage – osteoclast crosstalk by a novel TRAF6 inhibitor

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P070 Dissecting the role of CXCR4 in breast cancer cell-bone microenvironment interaction <u>Mattia Capulli</u>', Jon Karl Jürgenstein', Isabella Baldini', Kashmala Carys', Antonio Maurizi', Nadia Rucci', Anna Teti'

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P071 Targeting the CaSR in breast cancer cells brings down colonization and migratory response in a trabecular bone explant model, and reduces osteolytic lesions in vivo Souvik Das¹, Antoine Gabrion², Isabelle Six¹, Cedric Boudot¹, Said Kamel¹, Philippe Clezardin³, Michel Brazier¹, Romuald Mentaverri¹

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P072 RANKL and mammary gland pathophysiology in modeled osteoporosis
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P073 Contribution of cancer stem cells to the metastatic capacities of osteosarcoma

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P074 Metastatic breast cancer burden is reduced in a Tgif1-deficient bone microenvironment <u>Marie-Therese Haider</u>¹, Hiroaki Saito¹, Jennifer Zarrer¹, Eric Hesse^{1,2}, Hanna Taipaleenmäki¹

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P076 Osteosarcoma cell-derived exosomes affect tumor microenvironment by specific packaging of microRNAs

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P077 Myeloma-specific oncolytic adenovirus induces significant tumour oncolysis in vitro and in vivo and prevents cell line regrowth

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P078 Vitamin D deficiency and increased risk of bladder and kidney carcinoma in mediterranean population

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P079 Bone mineral density of lumbar spine and femur in patients with gynaecologic cancer <u>Hoon Choi</u>¹, Heungyeol Kim²

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P080 Changes in trabecular bone score and bone mineral density following allogeneic hematopoietic stem cell transplantation

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ND-P009 Is targeting Wnt signalling in Osteosarcoma therapeutically relevant? Kazuhiko Matsuoka¹, Latifa Bakiri¹, Erwin F Wagner²

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ND-P010 Changes of bone remodeling markers in breast cancer patients after combined treatment

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Osteoblasts and Bone Formation

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- P081 Vitamin K role on the osteocalcin:GPRC6A axis: insights from non-mammalian models Vânia Palma Roberto^{1,2}, Gil Martins¹, Jorge Dias³, Leonardo Mata¹, Graça Miguel⁴, Maria Leonor Cancela^{1,2}, Vincent Laizé¹, Paulo J Gavaia¹ ¹Centre of Marine Sciences, University of Algarve, Faro, Portugal, ²Department of Biomedical Sciences and Medicine and Algarve Biomedical Centre, University of Algarve,
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- P082 Low adhesive scaffold type I collagen prepared from porcine skin regulates the expression of genes relating to osteogenic differentiation

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- P083 Up-regulation of inhibitors of DNA binding/differentiation gene during alendronateinduced osteoblast differentiation <u>Heungyeol Kim¹</u>, Hoon Choi² ¹Department of OB and GYN, Kosin University, College of Medicine, Busan, Korea, Republic of, ²Department of OB and GYN, Inje University, College of Medicine, Seoul, Korea, Republic of
- P084 The effect of regulation of TRPC activation on periodontitis progression

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- P085 Role of Msx2 in the osteoblast bone specificity

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 Berdal², Valérie Geoffroy¹³
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 Recherche des Cordeliers, UFR d'Odontologie, Université Paris 7, Paris, France, ³Inserm,
 UMR 1229, RMeS, Regenerative Medicine and Skeleton, University Nantes, Nantes,
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- P086 Tuftelin, HIF-I and HIF-II in intramembranous osteogenesis

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Proposal of a new method to quantification of the mineralization process in vitro

models
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P088 Excessive O-GlcNAcylation-inducing conditions inhibit Wnt/beta-catenin signaling in mesenchynal stromal cells

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P089 Towards a nutraceutical-based complementary medicine in bone health: cruciferous vegetables extracts and derivates induce osteogenic differentiation of human mesenchymal stromal cells

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P090 SIRT-1 mediates zingerone-stimulated osteoblast differentiation

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P091 Osteoblastic differentiation is inhibited by autocrine effect of osteoblasts cocultured with adipocytes

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- P092 Identification of new players in phosphate signaling pathway in osteogenic cells
 Sana Khalid¹, Daisy Monier¹, Mairobys Socorro¹, <u>Dobrawa Napierala</u>¹
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- P093 Cyanobacteria as a source for bone anabolic compounds

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 of Biology, Faculty of Sciences, University of Porto, Porto, Portugal, ⁴Department of
 Biomedical Sciences and Medicine and Algarve Biomedical Center, University of Algarve,
 Faro, Portugal
- P094 Direct impact of glucocorticoid receptor on the RANKL promoter activity

 Nika Lovšin¹, Tina Goršek², Janja Marc³

 ¹University of Ljubljana, Ljubljana, Slovenia, ²University of Graz, Graz, Austria, ³Faculty of Pharmacy, University of Ljubljana, Ljubljana, Slovenia
- P095 Clinical results of bone marrow mesenchymal stem cell implantation for osteonecrosis of the femoral head

<u>Joon-Soon Kang</u>¹, Yeop Na¹, Young-Sook Park² ¹Inha University Hospital, Incheon, Korea, Republic of, ²Eulji Medical School, Seoul, Korea, Republic of

- P096 Regulation of collagen proteostasis by FAM134B during bone growth <u>Carmine Settembre</u>¹

 1TIGEM, Napoli, Italy
- P098 Marine plants as valuable sources of antioxidant and anabolic bone compounds

 Vânia Palma Roberto^{1,2}, Marco Tarasco¹, Glawdys Le Diouron³, Valerie Stiger-Pouvreau³,

 Paulo J Gavaia^{1,2}, Fabianne Guérard³, Maria Leonor Cancela^{1,2}, Vincent Laizé¹

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P099 Zika virus infection perturbs osteoblast function

Noreen Mumtaz¹, Andre van Wijnen², Amel Dudakovic², Marijke Schreuders-Koedam³, P. van den Doel¹, Johannes van Leeuwen³, Marion Koopmans¹, Barry Rockx¹, <u>Bram van der Eerden³</u>

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P100 AKAP11 is a positive regulator of osteoblast extracellular matrix formation and mineralization

<u>Vincent Ka Fai Cheng</u>¹, Gloria Hoi Yee Li¹, Kathryn Choon Beng Tan², William Weijia Lu³, Ching Lung Cheung¹.².⁴

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P101 SSC-derived adipocytes induce the transdifferentiation of osteoblasts into preadipocytes

<u>Aline Clabaut</u>¹, Céline Grare¹, Gaëlle Rolland-Valognes², Jean-Guillaume Letarouilly¹, Chantal Bourrier², Philippe Pastoureau³, Pierre Hardouin¹, Massimo Sabatini³, Odile Broux¹

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P102 Adaptor protein CrkII negatively regulates osteoblast differentiation and function through JNK phosphorylation

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P103 hMSC-TERTSCAS9: a versatile tool to study osteoblast gene function

<u>Jeroen van de Peppel</u>¹, Rosinda Mies¹, Yuan Guo¹, Bram van der Eerden¹, Moustapha Kassem², John van der Oost³, Irene Mathijssen⁴, Hans van Leeuwen¹

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P104 Syndecan-1 deficiency influences bone cell communication in vivo and in vitro in Mice <u>Melanie Timmen</u>¹, Heriburg Hidding¹, Thomas Pap², Martin Götte³, Thaqif El Khassawna⁴, Richard Stange¹

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ND-P011 MitoBoneLomics: Estradiol remodeling effect on mitochondrial activity during osteoblast differentiation

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ND-P012 Effect of local injection of osteoblastic cells differentiated from bone marrow or adipose tissue-mesenchymal stromal cells on bone repair

<u>Gileade Pereira Freitas</u>¹, Helena Bacha Lopes¹, Alann Thafarell Portilho de Souza¹, Paula Gabriela Faciola Pessôa de Oliveira², Adriana Luísa Gonçalves de Almeida¹, Paulo Guilherme Coelho², Márcio Mateus Beloti¹, Adalberto Luiz Rosa¹

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Osteoclasts and Bone Resorption

P105 Anti-inflammatory effect of Weissella cibaria on periodontal bone destruction mice model in vivo and Raw264.7 cell in vitro

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P106 Impact of a caspase inhibitor on alveolar shape changes following tooth extraction, a pilot study

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P107 Oleoylethanolamide, an endogenous GPR119 ligand, inhibits osteoclastic bone resorption and promotes apoptosis in mature osteoclasts

<u>Hyun-Ju Kim¹</u>, Xiangguo Che¹, Xian Jin¹, Je-Yong Choi¹ ¹Kyungpook National University, Daegu, Korea, Republic of

P108 Glucagon-like peptide 1 (GLP-1) increases bone resorptive activity of human osteoclasts in osteoclast/osteoblast co-cultures in vitro

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P109 Effect of anti-Ly6G Ab on LPS-induced osteoclast formation in air pouch of mice <u>Ae Ri Kim</u>^{1,2,3}, Yun Hui Choi¹, Jeong-Heon Cha^{1,2,3}, Eun-Jung Bak¹, Yun-Jung Yoo^{1,2} ¹Department of Oral Biology, Yonsei University College of Dentistry, Seoul, Korea, Republic of, ²Department of Applied Life Science, The Graduate School, Yonsei University, Seoul, Korea, Republic of, ³Yonsei University College of Dentistry, Seoul, Korea, Republic of

P110 Effect of KP-A038, an imidazole derivative, on osteoclast differentiation and inflammatory bone loss through downregulation of PRDM1

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P111 What are the peripheral blood determinants for increased osteoclast formation in the various inflammatory diseases associated with bone loss?

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P112 Targeted inactivation of Rin3 increases trabecular bone mass in aged mice <u>Mahéva Vallet</u>¹, Antonia Sophocleous¹², Anna E. Törnqvist³, Rob Van't Hof⁴, Omar M.E. Albagha¹, Stuart H. Ralston¹

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P113 Ablation of Stabilin-1 enhances bone resorbing activity in in vitro osteoclasts Soon-Young Kim^{1,2}, Eun-Hye Lee^{1,2}, Suk-Hee Lee^{1,2}, Seung-Hoon Lee^{1,2}, Jeong-Tae Koh³, Yeo Hyang Kim⁴, <u>Jung-Eun Kim^{1,2}</u>

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P114 RANKL-specific increase in p38 phosphorylation enhances NFATc1 and Atp6v0d2 causing increased osteoclastogenesis in ageing

<u>Jacqueline Lim</u>¹, Ellie McConachie¹, Gemma Charlesworth¹, Amanda Prior¹, Rob van ,t Hof¹, Anna Daroszewska¹

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P115 Regulation of the Cdc42-PAK2 axis by DCTN1 controls osteoclastogenesis
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Hee Lee¹, <u>Hong-Hee Kim¹</u>
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Comprehensive analysis of osteoclastogenic proteome reshaping reveals a novel

regulator of osteoclast differentiation and function

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P117 Increased resorption activity of osteoclasts observed in transient receptor potential channel TRPC6 deficient mice and cell lines can be attenuated by inhibition of TRPC3

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P118 Pleckstrin homology domain containing protein family member 1 (PLEKHM1) regulates bone resorption through sealing zone dynamics and lysosomal targeting in osteoclasts <u>Anh Tran</u>^{1,2}, Emma McDermott^{1,3}, Justin Rochford⁴, Miep Helfrich¹

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P119 Macrophage-derived thymidine phosphorylase promotes osteoclastogenesis and bone resorption in inflammatory osteolysis

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P120 miR-342-3p regulates the generation of osteoclasts

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ND-P013 Binding and uptake of CCL11 in preosteoclasts and osteoclasts

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ND-P014 A novel fetuin-A-based fusion protein generates functional human osteoclasts in vitro <u>Robert Dzhanaev¹</u>, Nina Petrova²³, Andrea Büscher¹, Carlo Schmitz¹, Cathy Shanahan⁴, Willi Jahnen-Dechent¹

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Osteocytes and Mechanobiology

P121 Response to PTH in an osteocyte-rich ex vivo model

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P122 Correlations between the osteocyte network and its surrounding matrix in newly formed bone

<u>Victoria Schemenz</u>^{1,2}, Ralph André Gjardy¹, Fereshteh Falah Chamasemani³, Alexander van Tol^{1,2}, Paul Roschger¹, Peter Fratzl¹, Roland Brunner³, Richard Weinkamer¹, Bettina M. Willie⁵, Wolfgang Wagermaier¹

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P123 Mineralization and autophagy in bone is suppressed by EphrinB2 through the RhoA/ROCK pathway

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P124 Three-dimensional mechanical loading activates YAP/TAZ pathway and chemokines expression in osteocytes

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P125 Relationship between the fluid flow pattern through the lacunocanalicular network and adaptive mechano-response in mouse tibia

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Chondrocytes and Cartilage

P126 Trichloroethylene-related compound S-(1, 2-dichlorovinyl)-L-cysteine localized on mouse cartilage

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P127 Glucocorticoid treatment in TNF-alpha overexpressing mice impairs bone growth and humanin levels

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P128 Low adhesive scaffold collagen prepared from type I collagen induces the chondrogenic differentiation of human bone marrow stromal cells

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P129 TFEB promotes chondrocyte ER remodelling via transcriptional regulation of ER-phagy

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P130 Parathyroid hormone treatment modulates cartilage quality

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P131 Investigating the role of the AP-1 transcription factor in osteoarthritis using genetically engineered mice

Kazuhiko Matsuoka¹, Erwin F Wagner²



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- P132 Theobroma cacao extracts as a treatment for FGFR3-related disorders

 Nabil Kaci^{1,2}, <u>Ludovic Martin</u>¹, Suzanne Decaudaveine¹, Valentin Estibals¹, María De la

 Luz Cádiz-Gurrea^{3,4}, Catherine Benoist-Lasselin¹, Salvador Fernández-Arroyo⁵, Antonio

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 Chemistry, University of Granada, Granada, Spain, ⁴Research and Development of

 Functional Food Centre (CIDAF), Granada, Spain, ⁵Biomedical Research Unit Medicine and

 Surgery Department, Tarragona, Spain
- P133 A 'NGS-digital PCR' method gives new evidences on the molecular mechanism responsible for osteochondromas' growth in mo disease

 Elena Pedrini¹, Serena Corsini¹, Ilaria Melandri¹, Elisabetta Abelli¹, Luca Sangiorgi¹

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- P134 Endogenous Lin28a protects osteoarthritic cartilage breakdown through HMGA2 expression

 Yohan Jouan^{1,2}, Joanna Sana^{1,2}, Augustin Latourte^{1,2,3}, Pascal Richette^{1,2,3}, Hang-Korng

 Ea^{1,2,3}, Martine Cohen-Solal^{1,2,3}, Eric Hay^{1,2}

 ¹Paris Diderot University, Paris, France, ²Inserm U1132, Paris, France, ³Hopital Lariboisière,

 Paris, France
- ND-P015 CRYAB suppresses the occurrence of osteoarthritis by regulating the proliferation of chondrocytes and degradation of extracellular matrix

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- ND-P016 Progression of histopathological OA hallmarks following mechanical joint loading

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 Hopkinson³, Rob Fowkes⁴, Chantal Chenu³

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 Biology Group, Comparative Biomedical Science, Royal Veterinary College, Londen,
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Endocrine Factors

- P135 The role of Dickkopf-1 in thyroid hormone-induced changes of bone remodeling

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 Christof Niehrs³⁴, Lorenz Hofbauer¹, Martina Rauner¹

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 Medical Center. Mainz. Germany
- P136 Oxytocin-increase in bone, soleus muscle and hypothalamic paraventricular nuclei regulates the response to cold stress in mice exerting phenotype-dependent protective effects towards slow-twitch muscle

 <u>Claudia Camerino</u>^{1,2}, Elena Conte³, Adele Romano², Marialuisa De Ceglia², Maria Rosaria Carratu¹, Silvana Gaetani², Domenico Tricarico³



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P137 Intestinal calcium absorption upregulates during lactation without the vitamin D receptor (VDR) but is downregulated without calcitriol: evidence of an alternate receptor?

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P138 Thyroid hormones augment osteoblast differentiation via the BMP-Smad1/5 signaling pathway

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P139 The thyroid hormone transporter Mct8 is a negative regulator of trabecular bone mass in male mice

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P140 Anti-Müllerian Hormone deficiency: a new mouse model for bone changes following natural menopause?

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P141 Obesity and flat vertebra

<u>Maria Del Pilar Ahijado Guzman</u>¹, Raul Maria Veiga Cabello², Miguel Cantalejo Moreira¹, Justo Ruiz Ruiz³, Antonio Zapatero Gaviria³

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P142 Diabetes Mellitus: a synonym to functional hypoparathyroidism

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P143 The effectiveness of vitamin D supplementation in functional outcome and quality of life of lumbar spinal stenosis requiring surgery: randomized prospective controlled trial Sangbong Ko, Wonkee Choi¹
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P144 A hospital based study of bone mass in asian Indian new born subjects

Rekha Ramot¹, Garima Kachhawa², Vidushi Kulshrestha², Viveka P Jyotsna¹, Nandita Gupta¹, Ramesh Aggarwal³, V Sreenivas⁴, Deva Kandasamy⁵, Rajesh Khadgawat¹¹Endocrinology & Metabolism, All India Institute of Medical Sciences, New Delhi, India, ²Obstetrics & Gynaecology, All India Institute of Medical Sciences, New Delhi, India, ³Pediatrics, All India Institute of Medical Sciences, New Delhi, India, ⁴Biostatistics, All India Institute of Medical Sciences, New Delhi, India, ⁵Radiology, All India Institute of Medical Sciences, New Delhi, India



P145 Normocalcaemic hypoparathyroidism: study of the prevalence and natural history in a United Kingdom referral population

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ND-P017 The vitamin D metabolite ratio (VMR) – a useful tool for the assessment of patients with high serum 25-hydroxy vitamin D concentrations

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Energy Metabolism, Fat, Diabetes, Nutrition

P146 Aggravation of trabecular bone defect in ovariectomized Goto-Kakizaki (GK) type-2 diabetic rats

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P147 A reduced lactose yogurt containing galactooligosaccharides (GOS) as a tool for lactose intolerant cover calcium daily intake that ensures bone health

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P148 The effects of 60-day sodium benzoate intake and ionizing radiation on chemical composition of the lower incisor dentin in rats

Igor Stepanenko¹, Vladyslav Luzin², Yuliya Vesenko², Anna Govorova², Dmitri Kolesnikov²

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P149 Macroelemental composition of bones in rats of various ages after excessive palm oil intake and administration of Garciniae cambogia extract

<u>Aleksandr Lyashchuk</u>¹, Vladyslav Luzin², Yuliya Venidiktova², Ilya Prikhodchenko²¹Surgery, Traumatology, and Orthopedics, SE, St. Luke Lugansk State Medical University′, Lugansk, Ukraine, ²Human Anatomy, SE, St. Luke Lugansk State Medical University′, Lugansk, Ukraine

- P150 The sensory and sympathetic innervation of rat femur with type 1 diabetes mellitus Sahar Mohsin¹, Jens Sunny¹, Maryam Hussain¹, Safa Shehab¹¹¹College of Medicine and Health Sciences, Anatomy, United Arab Emirates University, Al Ain, United Arab Emirates
- P151 Growth hormone secretagogue receptor is necessary to food restriction-induced increases in bone marrow adiposity in female mice

 Nathalie Al Rassy¹, Odile Viltart², Virginie Tolle², Alexandre Labarthe², Mathieu Méquinion³, Rawad El Hage⁴, Pierre Hardouin¹, Christophe Chauveau¹



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P152 PIT2 deficiency results in skeletal phenotype associated with alteration of bone marrow adipose tissue

Giulia Frangi¹, Greet Kerckhofs², Jeremy Boulestreau³, Florent Autrusseau^{3,4}, Joëlle Veziers^{3,4}, Jérôme Guicheux^{3,4}, Guillaume Penel⁵, Christophe Chauveau⁶, Xavier Prieur⁷, Laurent Beck³, Sarah Beck-Cormier³

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- P153 Synergistic effects of chronic nicotine exposure and diabetes mellitus (DM) on deterioration in bone microstructure and geometry: an experimental study in male rats Petar Milovanovic¹, Marko Stojanovic², Djordje Antonijevic¹, Aleksandar Cirovic¹, Miroslav Radenkovic², Marija Djuric¹

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- P154 Osteocalcin administration improves glucose metabolism in a lean model of type 2 diabetes

 Patricia Das Neves Borges¹, Tiago Rodrigues¹, Paulo Matafome¹, Raquel Maria Fino Seiça¹

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- P155 The comparison of serum vitamin D, bone mineral density and nutrient intake according to obesity in young adult women

<u>Dong Won Byun</u>¹, Hee-Sook Lim², Hae-Hyeog Lee³, Eui-Hyun Kim⁴, Kyo Il Suh¹, Hye Jeong Kim¹, Jae Hyuk Lee¹, Hyeong Kyu Park¹, Tae-Hee Kim³

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P156 Body mass index effect on total and undercarboxilated osteocalcin in normoglucemic adult men

Carlos Lugones¹, Marina Soledad Bonanno¹, Graciela M Brito², Dana Watson², Mariana Rey Saravia¹, Liliana Zago³, Carlos Alfredo Gonzalez Infantino⁴, <u>Susana Noemi Zeni</u>¹¹Inmunología, Genética y Metabolismo (INIGEM), Facultad de Farmacia y Bioquímica, Hospital de Clínicas, Caba, Argentina, ²Departamento de Nutrición de la Universidad Nacional de La Matanza, La Matanza, Argentina, ³Departamento de Nutrición, Facultad de Farmacia y Bioquímica, Caba, Argentina, ⁴Departamento de Nutrición de la Facultad de Medicina, Caba, Argentina

- P157 Association between global cardiac calcification (GCCS) and osteoporosis

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 Luigi Gennari¹, Ranuccio Nuti¹

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- P158 Clinical fractures following type 1 diabetes remission through pancreas transplantation alone: prevalence and patient characteristics

 <u>Caterina Conte</u>^{1,2}, Silvia Costantini¹, Elisabetta Falbo¹, Carlo Socci², Massimiliano Bissolati², Paola Angela Maffi², Antonio Secchi^{1,2}



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P159 Cardio-metabolic health and bone mineral density in postmenopausal women: a Korean population-based study

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P160 Investigation of bone fragility in patients with type 2 diabetes mellitus by high resolution quantitative computed tomography of the femoral shaft: the DiabOS study <u>Timo Damm</u>, Lilian Sewing², Janina Vavanikunnel², Claus-C. Glüer¹, Christian Meier² ¹Department of Radiology and Neuroradiology, Section Biomedical Imaging, Molecular Imaging North Competence Center (MOIN CC), University Medical Center Schleswig-Holstein (UKSH), Kiel University, Kiel, Germany, ²Division of Endocrinology, Diabetes and Metabolism, University Hospital Basel, Basel, Switzerland

P161 Changes in bone marrow adipose tissue one year after Roux-en-Y gastric bypass: a prospective cohort study

Ingvild Kristine Blom-Hogestol¹, Tom Mala¹, Jon A Kristinsson¹, Jette Barlach², Cathrine Brunborg³, Hanne L Gulseth¹, Erik Fink Eriksen¹

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P162 Maternal citamin D status in 2nd and 3rd trimester and offspring bone mass at age 8-9 years: an observational study

Astrid Kamilla Stunes^{1,2}, Mats Peder Mosti^{1,2}, Klara Evjen Seim¹, Elise Constance Trydal¹, Signe Nilssen Stafne³, Miriam Katharina Gustafsson^{3,4}, Unni Syversen^{1,5}
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P163 Bone characteristics in elderly men with hypolactasia

<u>Christoph W. Haudum</u>^{1,2}, Natascha Schweighofer^{1,2}, Albrecht Schmidt³, Caterina Colantonio³, Ewald Kolesnik³, Burkert Pieske³, Thomas R. Pieber^{1,2}, Barbara Obermayer-Pietsch^{1,2}

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ND-P018 Targeting the Calcium-Sensing Receptor in an inflammatory bowel disease model

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ND-P019 Red rice yeast (RRY). An alternative in Rheumatoid Arthritis (RA) and hyperlipidemia Blanca Varas de Dios¹, María Martín Fuentes²

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ND-P020 The efficacy of complex kinesiotherapy in weight loss and muscle function improving in obesity patients

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Genetics & Epigenetics

- P164 SOX 6 does not regulate RANKL gene expression through its proximal promoter region <u>Klemen Kodrič</u>¹, Nika Lovšin¹, Klemen Mezgec¹, Janja Marc¹

 ¹The Chair of Clinical Biochemistry, University of Ljubljana, Faculty of Pharmacy, Ljubljana, Slovenia
- P165 Screening for osteoarthritis candidate gene through TSA (Trial Sequential Analysis,TSA)

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- P166 Association of collagen type I alpha1 gene polymorphism with bone mineral density and fractures in patients with chronic kidney disease stage 5

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- Petersburg, Russian Federation
 P167 1,25-Dihydroxyvitamin D3 partially restores the osteoblast and osteoclast functions of hemizygous β-globin knockout thalassemic mice
 Narattaphol Charoenphandhu^{1,2,3}, Ratchaneevan Aeimlapa^{2,4}, Saovaros Svasti⁵, Kannikar

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P168 Genetic variants in PRRG1 are associated with cardiovascular parameters according to diabetes stage, sex and BMI

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- P169 Validation of GWAS-derived novel regulators of bone homeostasis

 | Iryna Khrystoforova | Einav Wircere | Chen Shochat-Carvalho | David Karasik |
 | The Azriely Faculty of Medicine, The Bar-Ilan University, Safed, Israel, 2The Bar-Ilan University, Safed, Israel
- P170 RNA-Sequencing analysis of peripheral blood monocytes from postmenopausal women with osteoporosis

 Aldo Hugo de la Cruz Montova¹, Eric Gustavo Ramírez Salazar², Pablo M González de la



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P171 A novel splicing mutation in LRP5 in idiopathic osteoporosis causes RANKL upregulation via noncanonical Wnt pathway

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P172 Zebrafish crispants recapitulate BMD decrease observed in Irp5 KO, indicating they may be used for screening of BMD candidate genes

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P173 Far upstream element binding protein 3 expression is associated with bone formation Nika Lovsin¹, Einav Wircer², Ajda Ogrin¹, Maša Zrimšek³, Chen Shochat², Iryna Khristoforova², Petra Malavašic⁴, Janja Zupan¹, Vid Prijatelj⁵, Bram van der Eerden⁵, Fernando Rivadeneira⁵, David Karasik², Janja Marc¹
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P174 Leveraging unconfounded genetic risk scores to stratify fracture risk by age at onset <u>Carolina Medina-Gomez'</u>, Katerina Trajanoska¹, Chun Chieh Fan², Ole A. Andreassen³, Anders M. Dale², Andre G. Uitterlinden¹, Tyler M. Seibert², Fernando Rivadeneira¹ ¹Department of Internal Medicine, Erasmus University Medical Centre, Rotterdam, Netherlands, ²Center for Multimodal Imaging and Genetics, University of California San Diego, San Diego, United States, ³NORMENT, KG Jebsen Centre, University of Oslo, Institute of Clinical Medicine, Oslo, Norway

P175 Functional assays of two non-coding variants in WNT16

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P176 Genome-wide association study identifies one novel locus associated with thickness and mineralization of metacarpal bones

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P177 Variants within the ZNF384 and COL1A1 genes influence bone mineral density and fracture risk in maltese postmenopausal women

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P178 MiR-146a a key Player in bone metabolism

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P179 Identification of novel predisposing mutations in familial Paget's disease of bone

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ND-P021 Pathogenic variants in SGMS2 define a novel form of early-onset osteoporosis and implicate sphingomyelin metabolism in skeletal homeostasis

Minna Pekkinen¹, Paulien Terhal², Lorenzo Botto³, Petra Henning⁴, Riikka Mäkitie¹, Paul Roschger⁵, Matthijs Kol⁶, Maria Magnusson⁴, John Carey³, Ulf Lerner⁴, Vesa Olkkonen¹, Klaus Klaushofer⁵, Joost Holthuis⁶, <u>Outi Mäkitie</u>¹

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Inflammation, Arthritis and other Joint Diseases

P180 Changes in the microstructural and mechanical properties in the medial condyle of human distal femur in advanced osteoarthritis

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P181 Aloe-emodin inhibits osteogenic differentiation and calcification of mouse vascular smooth muscle cells

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P182 The features and distribution of chronic non-bacterial osteomyelitis in Russian Federation

Mikhail Kostik¹, Maria Makhova¹, Alexander Mushkin², Vyacheslav Zorin², Evgeny Suspitsin^{1,3}, Eugenia Isupova¹, Shamay Magomedova^{4,5}, Hiroshi Takayanagi⁶
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P183 Description of a sandwich ELISA to quantify human leucine-rich α -2 glycoprotein 1 in serum and plasma

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P184 Microtomographic assessment of bone quality in murine joints affected by psoriasis arthritis

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P185 Potential of freeze-dried human dental pulp derived stem cell conditioned media on the healing of inflammatory alveolar bone loss

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P186 Preclinical diabetes accelerates onset of Osteoarthritis – lessons from model system

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Medical Research, Hyderabad, India

P187 The SoxC family transcription factor Sox4 plays a role in osteoarthritis onset by upregulating ADAMTS4 and ADAMTS5

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P188 Association of T-cell and B-cell aberrancies with disease activity in rheumatoid arthritis, psoriatic arthritis and ankylosing spondylitis

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- P189 Effects of a ketogenic diet on the progression of osteoarthritis in obese mice
 Thomas Solé¹², Sara Delon¹, Thierry Thomas¹², Laurence Vico¹, <u>Maura Strigini¹</u>
 ¹INSERM U1059 SAINBIOSE, UdL/UJM Saint-Etienne, Saint-Etienne, France, ²University
 Hospital CHU Saint-Etienne, Saint-Etienne, France
- P190 Chronic inflammation in HLA-B27 transgenic rats, a model of spondyloarthritis, results in body and bone marrow fat depletion

<u>Stefanie Thiele</u>¹, Ulrike Baschant¹, Sylvia Thiele¹, Luiza M. Araujo^{2,3}, Ingrid Fert^{2,3}, Maxime Breban^{2,3,4}. Lorenz C. Hofbauer¹. Martina Rauner¹

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- P191 Development of a novel biologic agent for treating RA

 <u>Masashi Honma</u>¹, Remi Kurata¹, Yuki Ikebuchi¹, Yoshiaki Kariya¹, Hiroshi Suzuki¹

 Department of Pharmacy, University of Tokyo Hospital, Tokyo, Japan
- P192 Mid1 is a novel mediator of subchondral bone resorption in antigen-induced arthritis

 Nina Lukači-², Alan Šućur²-³, Darja Flegar²-³, Tomislav Kelava²-³, Katerina Zrinski Petrović¹-²,
 Dino Šis²-³, Vedran Katavić¹-², Danka Grčević²-³, Nataša Kovačić¹-²

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 of Zagreb, School of Medicine, Zagreb, Croatia, ³Department of Physiology and
 Immunology, University of Zagreb, School of Medicine, Zagreb, Croatia



P193 New role for RANKL as a proinflammatory modulator in modeled inflammatory arthritis Maria Papadaki^{1,2}, Vagelis Rinotas^{1,2}, Foteini Violitzi^{1,2}, Trias Thireou², George Panayotou¹, Martina Samiotaki¹, Eleni Douni^{1,2}

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P194 Mutations in osteoarthritis susceptibility genes cause joint shape variation detectable at larval stages in zebrafish

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Mammalian and Non-Mammalian Models, including Preclinical Imaging

P195 Metatarsal open fracture model in rats for in-vivo investigation of secondary bone healing

Adamu Abdul Abubakar¹, Sahar Mohammed Ibrahim², Ahmed Khalaf Ali³, , Kareem Obayes Handool⁴, Mohammad Shuaib Khan⁵, Mohammed Mustapha Noordin⁶, Tengku Ibrahim Tengku-Azmi⁷, Mohamad Yusof Logman⁴

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P196 Activation of pro-apoptotic caspases in zebrafish skeletogenesis

<u>Veronika Oralova</u>^{1,2}, Ann Huysseune³, P. Eckhard Witten³, Eva Svandova¹, Barbora Vesela¹, Adela Kratochvilova¹, Eva Matalova^{1,2}

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P197 Deletion of SREBF1, a functional bone-muscle pleiotropic gene, alters arachidonic acidrelated lipid signaling in zebrafish

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P198 Characterising the interplay between inflammation and skeletal remodelling during fracture repair in zebrafish

<u>Lucy McGowan</u>¹, Alistair Vorster¹, Jessye Aggleton¹, Erika Kague¹, Chrissy Hammond¹

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P199 The curious case of bone pathology in Osx1-GFP::Cre mice

Laura Gorrell¹, Elena Makareeva¹, Anna M. Roberts-Pilgrim¹, Shakib Omari¹, Edward L. Mertz¹, Sergey Leikin¹

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P200 Mice lacking Plastin-3 display a specific defect of cortical bone acquisition

<u>Timur Yorgan</u>¹, Hatice Karakurt¹, Tim Rolvien¹, Sabine Windhorst², Ralf Oheim¹, Michael

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P201 Development of CRISPR/Cas9-based dual-fluorescent reporter mouse models to study in vivo single cell mechanomics of osteoblasts and osteoclasts

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P202 Tissue specific effects of glucocorticoids suggest inter-organ communication during fin regeneration

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ND-P022 A new mouse model for Osteogenesis imperfecta reveals a link between polydenylation by TENT5A and the pathogenesis of the disease

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ND-P023 The killifish (Nothobranchius furzeri) as unique short-lived vertebrate model to study musculoskeletal aging in a time-lapse

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Muscle, Physical Activity and Bone

P203 Methods of diagnosis and treatment in a patient with calcific supraspinal tendinitis case report

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P204 Sarcopenia feature selection and risk prediction using machine learning

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P205 Running-exercise conditioning improves the healing of non-critical size bone defects in male Wistar rats

<u>Céline Bourzac^{1,2}, Morad Bensidhoum^{1,2}, Mathieu Manassero^{1,2}, Stéphane Pallu^{1,2,3}, Hugues Portier^{1,2,3}</u>

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P206 Modulation for extracellular matrix synthesis using follistatin gene synthesis in scar tissue fibroblasts from patients with flexor tendon adhesions

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P207 Impaired muscle fiber morphology in the Chihuahua zebrafish model of classical dominant osteogenesis imperfecta

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P208 Longitudinal evaluation of the musculoskeletal and frailty phenotype in a mouse model of accelerated aging

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P209 Effect of a complex exercise programme on postural balance, endurance and falls in women with established osteoporosis

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P210 Physiotherapy of patients with bone tumor or metastatic bone disease

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P211 Effectiveness of occupational therapy in the management of femoral fractures in extended care units for elderly patients

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- P213 Relationship between body composition analysis and fracture risk in middle-aged and elderly women living in Northern China

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- P214 Relation between serum albumin and sarcopenia in osteoporotic hip fracture patients

 Jung-Taek Kim¹, Quan Hu Shen¹, <u>Ye-Yeon Won¹</u>

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- P215 Sarcopenia defined by bioelectrical impedance and handgrip strength analysis in elderly patients with new stroke or transitory ischemic attack

<u>Denis Krutko</u>¹, Andrey Gruzmanov¹, Izzet Nurullaev¹, Sergey Mazurenko¹ ¹Department of Introductory Course of Internal Diseases, Saint Petersburg State University, Saint Petersburg, Russian Federation



P216 Influence of muscle strength and balance on quality of life in postmenopausal osteoporosis women

<u>Ileana Monica Borda^{1,2}</u>, Laszlo Irsay^{1,2}, Viorela Ciortea^{1,2}, Ioan Onac^{1,2}, Rodica Ungur^{1,2}
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P217 Importance of sonoelastography in prediction of Achilles tendon rupture

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P218 Association between body composition, osteoporosis, and diabetes in Korean elderly subjects (KNHANES 2008-2010)

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P219 SOST polymorphisms are associated with lean mass in Chinese male offspring Luyue Qi^{1,2}, Youjia Xu³, Zhenlin Zhang²

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P220 Birthweight, limb muscle mass and abdominal adiposity in middle age: findings from the UK biobank imaging enhancement

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ND-P024 The body composition analysis as a complementary tool in the screening of bone structural abnormalities

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Osteoporosis: Evaluation and Imaging

P221 Radiofrequency echographic multi spectrometry for diagnosis of osteoporosis in senile women

<u>Elena Kirilova</u>¹, Nikola Kirilov², Iliya Popov³, Stoyanka Vladeva¹ ¹Trakia University, Stara Zagora, Bulgaria, ²Medical University-Sofia, Sofia, Bulgaria, ³University of Burgas ,Asen Zlatarov', Burgas, Bulgaria

P222 Orthopedic articles on surgery for osteoporotic fractures mentioned little about the treatment of osteoporosis

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P223 Diagnostic strategy for elderly patients with isolated greater trochanter fractures on plain radiographs

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P224 Correlation of bone mineral densities and body composition between GE-Lunar prodigy and Osteosys primus

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P225 Incidence of osteopenia and osteoporosis among postmenopausal women through radiofrequency echographic multi spectrometry

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P226 Neglected bodily senses in women living with vertebral fractures: a focus group study Sarah Drew¹, Emma M Clark¹, Usama Al-Sari¹, Rachael Gooberman-Hill¹, Jon H Tobias¹, Vfrac Study Team

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P227 Quality assurance of bone densitometry: 3 years experiences of a nation-wide follow-up in Hungary by using ESP Phantom

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P228 Can forearm bone mineral density predict late reduction loss of distal radius fracture treated by cast immobilization?

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P229 Study of cortical and trabecular compartments through 3d-shaper in lung transplanted patients

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P230 Transcultural adaptation and psychometric properties of the Korean version of the quality of life questionnaire of the European Foundation for Osteoporosis (QUALEFFO-41)

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P231 Discrimination of hip fracture type for men with spatial differences in the distribution of bone

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P232 Radiofrequency echographic multi spectrometry (REMS) and trabecular bone score (TBS) are significantly associated with fragility fracture in postmenopausal women

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P233 Utility of Trabecular Bone Score (TBS) for fracture risk assessment in glucocorticoidinduced osteoporosis

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P234 Association between muscle force and power with different pQCT and DXA-derived parameters in middle-aged adults

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P235 Difference in bone Loss in patients with erosive and non-erosive hand osteoarthritis: a two-year longitudinal study

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P236 The fracture predictive ability of lumbar spine BMD and TBS as calculated based on different combinations of the lumbar spine vertebrae

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P237 Balance function impairment and muscles strength deficiency in patients with osteoporotic vertebral fractures

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P238 Trabecular bone score (TBS) and life expectancy (LE) with and without osteoporotic fracture

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P239 Peripheral trabecular bone microarchitecture is impaired in postmenopausal nonosteoporotic women with fragility fracture- the ChiVOS case-control study Ning Jiang¹, Weibo Xia¹

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ND-P025 Patients on dialysis have markedly abnormal cortical hip parameters by dual-energy X-ray absorptiometry

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ND-P026 Fracture-Liaison-Service in Germany: T-Score results of DXA measurements in patients suffering from a fragility fracture

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Osteoporosis: Pathophysiology and Epidemiology

P240 Controlling hypoxia-inducible factor-2a is critical to maintaining bone homeostasis in mice

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P241 Association between RUNX2 gene polymorphism and osteopenia among Asian elderly: a population-based case-control study

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P242 Analysis of treatment, diagnostic measures and complications of osteoporosis in patients with new low-energy fractures

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P243 Association between VDR rs2228570 gene polymorphism and osteopenia among Asian elderly: a population-based case-control study

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P244 Primary hyperparathyroidism surgery. Our experience

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P245 Influence of bone health and vitamin D status in postmenopausal osteoporosis subjects in northern China

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- P246 Prevalence of modifiable and non modifiable risk factors of osteoporosis in health care workers of < 40 years at tertiary health center of remote India

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- P247 Risk of hip and subtrochanteric or femoral shaft fractures after bisphosphonate use in Korea women: an analysis using Korean national sample cohort Young-Kyun Lee¹, Hyoung Moo Park², Yong-Chan Ha³, Youjin Lee⁴

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- P248 Serum iron indices are associated with bone mineral density in premenopausal women Sung-Min Kim¹, A-Sol Kim², Hae-Jin Ko¹², Hana Moon³, Hye-In Choi¹, Ji-Eun Song¹¹¹Department of Family Medicine, Kyungpook National University Hospital, Daegu, Korea, Republic of, ²Department of Family Medicine, School of Medicine, Kyungpook National University, Daegu, Korea, Republic of, ³Department of Family Medicine, Kyungpook National University Chilgok Hospital, Daegu, Korea, Republic of
- P249 Osteoporotic fractures in the elderly: is hyponatremia player or bystander?

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 Michela Tibaldi¹, Elena Spertino¹, Carlotta Vezza¹, Giovanni Carlo Isaia¹, Patrizia

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P250 Management of osteoporosis in patients living with HIV – a systematic review and meta-analysis

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- P251 Gastrectomy is associated with increased risk of osteoporotic fracture in community-dwelling elderly men 20 years or more after the surgery: Formen Cohort Study Masayuki Iki¹, Yuki Fujita¹, Katsuyasu Kouda², Akiko Yura¹, Takahiro Tachiki¹, Junko Tamaki³, Yuho Sato⁴, Jong-Seong Moon⁵, Masami Hamada⁶, Etsuko Kajita⁶, Nozomi Okamoto⁻, Norio Kurumatani⁶, Fujiwara-kyo Study Group ¹Kindai University Faculty of Medicine, Osaka-Sayama, Japan, ²Kansai Medical University, Hirakata, Japan, ³Osaka Medical College, Takatsuki, Japan, ⁴Jin-ai University, Echizen, Japan, ⁵Kio University, Koryo-cho, Japan, ⁶Chukyo Gakuin University Faculty of Nursing, Mizunami, Japan, ʾHyogo University of Teacher Education, Kato, Japan, ⁶Nara Medical University, School of Medicine, Kashihara, Japan
- P252 Hematopoietic autophagy deterioration links to osteoporosis

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- P253 Seasonally dependent decrease of the number of fractures in Poland in the years 2010-2015

Kinga Jedynasty¹, Mariusz Zięba², Piotr Głuszko³, Władysław Grzeszczak⁴, Szypowska Agnieszka⁵, Andrzej Śliwczyński⁶, Magdalena Walicka¹, <u>Edward Franek¹¹,</u> ¹Department of Internal Diseases, Endocrinology and Diabetology, Central Clinical Hospital MSWiA, Warsaw, Poland, ²Analyses and Strategies Department, Ministry of Health, Warsaw, Poland, ³National Cancer Center, Institute of Geriatrics, Reumatology



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P254 Secular trend of lumbar and femur bone mineral density measurements in women above 50 over 10 years

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P255 Risk factors associated with the development of fractures in glucocorticoid treated patients. The role of hypogonadism

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P256 Bone and the vasculature – a link between macro- and microvascular factors and bone metabolism?

Ines Foess!', Christoph Walter Haudum', Vito Francic', Ewald Kolesnik², Albrecht Schmidt², Gerald Seidel³, Christoph Singer³, Catherina Colantonio², Natascha Schweighofer', Andreas Wedlich³, Thomas R Pieber', Barbara Obermayer-Pietsch⁴
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P257 Inflammatory bowel disease: a nationwide study of hip fracture and mortality risk Johann Bartko¹, Berthold Reichardt², Roland Kocijan¹, Klaus Klaushofer¹, Jochen Zwerina¹, <u>Martina Behanova</u>¹

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P258 Anterolateral femoral bowing and loss of thigh muscle are associated with occurrence of atypical femoral fracture: effect of failed tension band mechanism in mid-thigh Won Chul Shin¹, Nam Hoon Moon², Seung Min Son¹, Kuen Tak Suh¹

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P260 Men with COPD have increased risk of vertebral fractures independent of smoking: a prospective cohort study

Fjorda Koromani¹, Elizabeth Benz¹, Lies Lahousse¹, Enisa Shevroja¹, Carola Zillikens¹, Ling Oei¹, Didier Hans², Andre Uitterlinden¹, Gabriel Krestin¹, Bruno Stricker¹, Guy Brusselle¹, Edwin Oei¹, Fernando Rivadeneira¹

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P261 Gut microbiota analysis and its skeletal effects in a sample of elderly subjects from a prospective population-based study

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P262 Incidence of osteoporotic refractures and associated mortality in Korea using nationwide claims data

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P263 The accuracy of self-reported fractures among a Belgian cohort of postmenopausal women: the FRISBEE study

<u>Felicia Baleanu</u>¹, Pierre Bergmann², Virginie Kinnard¹, Laura Iconaru¹, S.I. Cappelle³, M. Moreau⁴, M. Paesmans⁴, R. Karmali¹, J.J. Body¹

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P264 Clinical risk factors (CRFs) for osteoporotic fractures (OFs) are function of the fracture site: data from the FRISBEE study

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ND-P027 The association between abdominal obesity and osteoporotic fractures among elderly Israeli women

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ND-P028 Sex hormones interaction with trabecular bone score and mineral density in men Vladyslav Povoroznyuk¹, Anna Musiienko¹

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Osteoporosis: Treatment

P266 Influence of drug-based osteoporosis therapy on physical performance parameters and pain <u>Guido Schröder</u>¹, Ulrike Voßmann², Verena Blaas², Hans-Christof Schober¹

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P267 Clinical effectiveness and safety of Denosumab in ESRF patients on dialysis: a systematic review

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P268 Treatment of osteoporotic hip fracture in asian elderly patients (osteosynthesis versus endoprosthesis)

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P269 Short-term teriparatide treatment effect in patients with severe osteoporosis

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P270 The influence of nacre nutritional supplementation on bone preservation in aged mice Patrice Laquerriere¹, Bruno Jessel¹, Norbert Laroche², Luc Malaval², Arnaud Vanden-Bossche², Marie-Thérèse Linossier², Mireille Thomas², Myriam Normand², Laurence Vico², Marthe Rousseau²

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P271 Effect of a synthetic osteoconductive bone graft substitute with zeta potential control (geneX-ds) in the treatment of intertrochanteric fracture

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P272 Efficacy and safety of vertebroplasty and kyphoplasty in osteoporotic vertebral compression fracture with posterior cortical bone injury

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P273 Is really full length inramedullary nail necessary for treatment for atypical subtrochanteric femur fracture?

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P274 The clinical utility of TRACP-5b to monitor intravenous zoledronate and denosumab treatment of osteoporosis

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P275 Outcome of osteoporosis evaluation, treatment and follow-up in patients referred to a specialised outpatient clinic compared to patients in care of general practitioners <u>Mette Friberg Hitz</u>^{1,2}, Sofie Arup¹, Jakob Praest Holm³, Anne Lyngholm Sorensen⁴, Thomas Alexander Gerds⁴, Jens-Erik Beck Jensen^{2,3}

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P276 Denosumab in patients with chronic renal failure

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P277 Regional positive effects of acarbose on bone properties in female mice

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- P278 IGF-I and Pamidronate affects differently mandible than other skeletal sites

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- P279 Zoledronate, but not solely Calcium and Vitamin D, can prevent the accelerated periprosthetic bone loss after total hip arthroplasty in patients with low systematic BMD <u>Guangtao Fu</u>, Yue Ding², Junxing Liao¹, Yuanchen Ma¹, Yu Zhang¹, Qiujian Zheng¹ ¹Orthopedics, Guangdong General Hospital, Guangdong Academy of Medical Sciences, Guangzhou, China, ²Orthopedics, Sun Yat-sen Memorial Hospital, Sun Yat-sen University, Guangzhou, China
- P280 Longitudinal effects of PTH(1-34) and mechanical loading on trabecular and cortical bone morphometry in the ovariectomized mouse

 Bryant Roberts¹-², Hector Arrendondo Carrera¹, Sahand Zanjani Pour¹-², Maya Boudiffa¹, Alison Gartland¹, Ning Wang¹, Enrico Dall'Ara¹-²
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Hip fracture risk and antiresorptive treatment in patients with type 2 diabetes; a

- nationwide population based case control study

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- P282 The bone biomechanical response during sclerostin-neutralizing antibodies treatment is maintained in periostin knockout mice

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- P283 Medical management of atypical femur fractures: a systematic literature review

 <u>Denise van de Laarschot</u>¹, Malachi McKenna², M Carola Zillikens¹

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 Netherlands, ²Internal Medicine, St. Vincent's University Hospital, Dublin, Ireland
- P284 Impact of renal function on BMD response to bisphosphonate treatment: real world observational data using linkage to national registers

 <u>Bo Abrahamsen^{1,2,3}, Martin T Ernst¹, Mads Nybo⁴, Katrine Hass Rubin¹, Maria Stougaard¹, Daniel Prieto-Alhambra^{3,5}, Anne Pernille Hermann⁶</u>

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P285 Motivations for eight years adherence to alendronate therapy

<u>Jessica Pepe</u>¹, Cristiana Cipriani¹, Veronica Cecchetti¹, Carla Ferrara¹, Vittoria Danese¹, Luciano Colangelo¹, Salvatore Minisola¹ ¹'Sapienza' University of Rome. Rome. Italy

ND-P029 Comparison of the efficacy of eenosumab and zoledronic acid in postmenopausal women

<u>Taewook Kang</u>¹, Si Young Park¹, Seung Woo Suh¹, Jae Young Hong¹, Soon Hyuck Lee¹ ¹Department of Orthopaedics, Korea University, Seoul, Korea, Republic of

ND-P030 A case report of pregnancy and lactation-associated osteoporosis

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ND-P031 Osteoporosis treatment effectively reduces the rate of any-cause hospitalization: data from a nation-wide analysis

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ND-P032 Clinical recommendations for the prevention of MRONJ

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ND-P033 Romanian teriparatide therapeutic protocol- relationship to the patient's profile and adherence to treatment

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Other Diseases of Bone and Mineral Metabolism

P286 Microstructural analyses of historical bone samples presenting with tuberculosis

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P287 Novel ELISA for the detection of intact FGF23

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P288 Difference of alveolar bone loss in ligature-induced periodontitis model according to mouse strain

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P289 Degenerative medial meniscus retains some protective effect against osteoarthritisinduced subchondral bone changes

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P290 Male spontaneously hypertensive rats develop poor bone mass and strength Worachet Promruk^{1,2}, Wacharaporn Tiyasatkulkovit^{2,3}, Kwanchit Chaimongkolnukul⁴, Kanchana Kengkoom⁴, Nattapon Panupinthu^{1,2}, Narattaphol Charoenphandhu^{1,2,5,6}

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P291 Humanin might protect against glucocorticoid induced osteoporosis in a mouse model of Duchenne muscular dystrophy

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P292 Hepcidin-resistant ferroportin mutation causes low bone mass in mice

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P293 Differentiation and functional activity of osteoclasts are impaired in CFTR-f508DEL

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P294 Hypophosphatasia, bilateral hip fractures and seizures

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P295 Endocrine osteoporosis: about 35 cases

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P296 Reversible hypophosphatemic osteomalacia in a patient in dialysis therapy

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P297 Correlation of serum 25-hydroxyvitamine D level with serum LDL, calcium level in Korean women

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P298 Paget's disease or bone metastasis? A case report with diagnostic challenge | <u>Izabella Gomez</u>|, | Ibolya Mikó|, Gyula Poór| | National Institute of Rheumatology and Physiotherapy, Budapest, Hungary

P299 Osteoporosis and hearing loss in older koreans: findings from the Korea National Health and Nutrition Examination Survey (KNHANES) 2009-2011

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P300 Effect of Roux-en-Y gastric bypass on bone marrow adipose tissue and bone mineral density in non-diabetic postmenopausal women

<u>Kerensa M. Beekman^{1,2}</u>, Annegreet G. Veldhuis-Vlug^{2,3}, Erik M. Akkerman¹, Geert J. Streekstra^{1,4}, Yair Acherman⁵, Victor E. Gerdes⁶, Martin den Heijer², Mario Maas¹, Nathalie Bravenboer^{7,8}, Peter H. Bisschop²

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P301 Cardiovascular autonomic neuropathy as a cause of impaired physical functioning in subjects with chronic hypoparathyroidism

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P302 Vascular calcification relationship to bone microstructure in advanced chronic kidney disease

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P303 Abdominal aortic calcification and cardiovascular events: a systematic review and metaanalysis of observational studies

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P304 Lumbosacral transitional vertebrae and the association with low back pain and spine degeneration: the Rotterdam study

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P305 Irisin in post-menopausal women with primary hyperparathyroidism: an interplay between Irisin and PTH

Andrea Palermo¹, Lorenzo Sanesi², Graziana Colaianni², Gaia Tabacco¹, Anda Mihaela Naciu¹, Roberto Cesareo³, Claudio Pedone⁴, Diana Lelli⁴, Giacomina Brunetti⁵, Giorgio Mori⁶, Silvia Colucci⁶, Silvia Manfrini¹, Nicola Napoli¹, Maria Grano² ¹Unit of Endocrinology, Campus Bio-Medico University, Rome, Italy, ²Department of Emergency and Organ Transplantation, University of Bari, Bari, Italy, ³Santa Maria Goretti Hospital, Latina, Italy, ⁴Unit of Geriatric, Campus Bio-Medico University, Rome, Italy, ⁵Department of Basic Medical Sciences, Neuroscience and Sense Organs, Section of Human Anatomy and Histology, University of Bari, Bari, Italy, ⁵Department of Clinical and Experimental Medicine, University of Bari, Bari, Italy, ⁵Department of Clinical

P306 Hypophosphatemic osteomalacia induced by long-term low-dose adefovir Dipivoxil: clinical characteristics of 140 cases

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P307 Clinical, biochemical and radiological profile of normocalcaemic hyperparathyroidism: a multicentric cross-sectional evaluation

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P308 Vitamin D supplementation in pregnancy: a randomized double-blind controlled trial Rajesh Khadgawat^{1,2}, Garima Kachhawa³, Vidushi Kulshreshtha², Tarang Gupta², V Sreenivas⁴, Nandita Gupta¹

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ND-P034 Manifestations of left ventricle function and arrhythmia in patients with long-standing hypoparathyroidism and pseudohypoparathyroidism

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ND-P035 Gender features of bone mineral density in the Ukrainian patients with neurological disorders

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ND-P036 Improvement of bone microarchitecture after 30 months of testosterone substitution therapy in young patients with Klinefelter syndrome

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ND-P037 Bone mineral density and fractures after lung transplantation – a long-term observational study

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Paediatric Bone Diseases

P309 Progressive, immobilizing osteoporosis in a 11 year old, male, identical twin – an (unsolved) case report

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P310 Identification of an ATP6V1B1 variant in two related patients with distal renal tubular acidosis

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P311 Longitudinal follow up of bone density in children with inflammatory bowel diseases Yael Levy-Shraga^{1,2}, Anatoly Shenkar², Dalit Modan-Moses^{1,2}, Amit Assa^{2,3}, Yael Haberman^{2,4}, Dror Shouval^{2,4}, Anat Guz-Mark^{2,3}, Avishay Lahad⁴, Batia Weiss^{2,4}



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P312 Intact mouse model to determine bioavailability of phosphorus from infant formulas Sampada Chande¹, Jonathan Fetene¹, Ardy van Helvoort².³, Steven Yanicelli⁴, Thomas Carpenter⁵, Clemens Bergwitz¹

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P313 -308G/A tumor necrosis factor gene polymorphism may influence bone mineral density in pediatric inflammatory bowel diseases

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P314 Effects of zoledronic acid on vertebral shape of children and adolescents with osteogenesis imperfecta

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ND-P038 Bone structural examinations in new subgroups of Turner-syndrome patients

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Rare Bone Diseases

P315 Bone and gaucher disease

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P316 Metabolic phenotyping in the rare bone disease Alkaptonuria: LC-QTOF-MS analysis of a new targeted HGD-/- mouse model identifies previously unreported urinary metabolite alterations

<u>Brendan P Norman¹</u>, Juliette Hughes¹, Andrew S Davison², Norman B Roberts², Lakshminarayan R Ranganath², George Bou-Gharios¹, James A Gallagher¹ ¹Institute of Ageing & Chronic Disease, University of Liverpool, Liverpool, United Kingdom, ²Department of Clinical Biochemistry and Metabolic Medicine, Liverpool Clinical Laboratories, Royal Liverpool and Broadgreen University Hospital, Liverpool, United Kingdom

P317 Defective O-glycosylation of FGF23 in a Chinese hyperphosphatemic familial tumoral calcinosis patient

<u>Chang Liu¹</u>, Yiyi Gong¹, Qianqian Pang¹, Ou Wang¹, Mei Li¹, Xiaoping Xing¹, Yan Jiang¹, Weibo Xia¹

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- P318 TNAP inhibition in periodontal ligament cells during osteogenic differentiation leads to differential expression of mineralization and inflammation associated genes Hannah Melms¹, Franz Jakob¹, Marietta Herrmann², Konrad Förstner³.⁴, Richa Bharti³.⁵, Birgit Mentrup⁶, Ulrich Schlagenhaufʹ, Stephanie Graser¹ ¹Orthopedic Research Center for Musculoskeletal Research, University of Wuerzburg, Wuerzburg, Germany, ²IZKF Research Group Tissue Regeneration in Musculoskeletal Diseases, Orthopedic Research Center for Musculoskeletal Research, University of Wuerzburg, Wuerzburg, Germany, ³Core Unit SysMed, University of Wuerzburg, Wuerzburg, Germany, ¹Department for Information Literacy, Technical University of Cologne and ZB Med Information Center for Life Science, Cologne, Germany, ⁵Department for Bioinformatics, Weihenstephan-Triesdorf University of Applied Sciences, TUM Campus Straubing for Biotechnology and Sustainability, Straubing, Germany, ⁵Institute of Musculoskeletal Medicine, University Hospital Muenster, Muenster, Germany, ¹Division of Periodontology, University Hospital Wuerzburg, Wuerzburg, Germany
- P319 Biophysical analysis of novel disease-causing mutation of CLCN7 gene Eleonora Di Zanni¹, <u>Alessandra Picollo</u>¹

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- P320 Gain-of-function of TMEM16E/ANO5 scrambling activity causes gnathodiaphyseal dysplasia (GDD), an autosomal-dominant generalized skeletal syndrome

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- P321 New mouse model for atypical type VI osteogenesis imperfecta caused by IFITM5 S40L mutation

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P322 Development of lentiviral vector gene therapy for the treatment of autosomal recessive osteopetrosis

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P323 Mutations in the neuroblastoma amplified sequence (NBAS) gene in acrofrontofacionasal dysostosis type 1

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- P324 Enzyme replacement therapy corrects bone remodeling pathologies, but not chondrocyte pathologies, in a mouse model for mucopolysaccharidosis type VI (MPS-VI)

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 University Medical Center Hamburg-Eppendorf, Hamburg, Germany
- P325 Chronic recurrent multifocal osteomyelitis in children with hypophosphatasia explained by anti-inflammatory nucleotidase activity of tissue nonspecific alkaline phosphatase Laurence Bessueille¹, Anne Briolay¹, Cylia Mansouri¹, Alaeddine El Jamal¹, René Buchet¹, Marie Gleizes², Etienne Mornet³, Jose Luis Millan⁴, Caroline Fonta², <u>David Magne¹</u> ¹ICBMS UMR CNRS 5246 Equipe MEM2, University of Lyon 1, Villeurbanne, France, ²CERCO UMR CNRS 5549, University Paul Sabatier, Toulouse, France, ³Unité De Génétique Constitutionnelle, Centre Hospitalier de Versailles, Le Chesnay, France, ⁴Sanford Children's Health Center, Sanford Burnham Prebys Medical Discovery Institute, La Jolla, United States
- P326 Interfamilial diversity in patients with collagen-related osteogenesis imperfecta

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- P327 COL1A1 C-propeptide mutations affect procollagen ER localization and reduce C-terminal procollagen processing

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P328 Radiological index in the flat vertebra

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P329 Bone islands

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P330 Lymphangiomatosis: a rare entity presented in two patients

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P331 Identification of a homozygous p.Arg101His mutation in MMP2 in a 15-year-old boy with Winchester-Torg syndrome

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P332 A new ALPL gene mutation case report

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P333 1-alpha-hydroxylase-deficiency – lost in transition

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P334 A novel LRP4 mutation in a middle-aged woman with widely distributed osteosclerosis <u>Yiming Feng</u>¹, Weibo Xia¹

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P335 Fracture prevalence and BMD in Danish adults with Hypophosphatasia (HPP)

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P336 Novel imaging approaches to the quantification of musculoskeletal alterations in X-linked hypophosphatemic rickets (XLH)

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P337 Long-term bone mineral density changes after surgical cure in patients with tumor Induced osteomalacia

<u>Luciano Colangelo</u>¹, Jessica Pepe¹, Chiara Sonato¹, Luciano Nieddu², Alfredo Scillitani², Federica Ferrone¹, Valeria Fassino¹, Maurizio Angelozzi¹, Salvatore Minisola¹, Cristiana Cipriani¹

¹Internal Medicine and Medical Disciplines, Sapienza, University of Rome, Rome, Italy, ²Faculty of Economics, University of International Studies, Rome, Italy, ³Endocrinology Unit, ,Casa Sollievo della Sofferenza', IRCCS, Foggia, Italy

P338 The design of a long-acting PTH (TransCon PTH) phase 2 trial in patients with hypoparathyroidism, based on phase 1 results in healthy subjects

<u>David B. Karpf^{1,2}</u>, Susanne Pihl³, Sanchita Mourya⁴, Eshwari Kovoor¹, Jonathan A. Leff¹ Clinical Development, Ascendis Pharma, Inc., Palo Alto, United States, ²Medicinel Endocrinology, Stanford University School of Medicine, Palo Alto, United States, ³Bioanalytics, Ascendis Pharma AlS, Copenhagen, Denmark, ⁴Clinical Development, Ascendis Pharma AlSPharma, Inc., Palo Alto, United States

ND-P039 Pro-osteogenic PEDF-PPAR γ axis is antagonized by TGF- β pathway in type VI osteogenesis imperfecta (OI)

Heeseog Kang¹, Susan Crawford², Joan C. Marini¹

¹National Institute of Child Health and Human Development, National Institutes of Health, Bethesda, United States, ²Saint Louis University, Sain Louis, United States

ND-P040 A case of differential diagnosis of hypophosphatemic rickets in Raine syndrome

<u>Silvia Vai</u>¹, Francesca Broggi², Nicoletta Masera³, Emanuela Ponti², Anna Maria Di Blasio²,

Maria Luisa Bianchi²



¹Bone Metabolism Unit, Istituto Auxologico Italiano IRCCS, Milano, Italy, ²Istituto Auxologico Italiano IRCCS, Milano, Italy, ³Clinica pediatrica, Ospedale San Gerardo, Milano, Italy

ND-P041 X-linked hypophosphataemia and hypoparathyroidism: amelioration of renal phosphate wasting and bone disease

Malachi McKenna^{1,2}, <u>Rachel Crowley</u>^{1,2}, Patrick Twomey^{1,2}, Mark Kilbane^{1,2}
¹St. Vincent's University Hospital, Dublin, Ireland, ²University College Dublin, Dublin, Ireland

ND-P042 Difficulties in the diagnosis of periapical translucencies of cemento-osseous dysplasia <u>Andrea Bródy</u>¹, Attila Zalatnai², Csaba Dobo-Nagy¹

> ¹Department of Oral Diagnostics, Semmelweis University, Faculty of Dentistry, Budapest, Hungary, ²Department of Pathology and experimental Cancer research, Semmelweis University, Faculty of Medicine, Budapest, Hungary

Scientific Programme Information



Committees

Scientific Programme Committee

Chair:

Anna Teti (L'Aquila, Italy)

Co-Chair:

Claus-Christian Glüer (Kiel, Germany)

Clinical Co-Chair:

Bo Abrahamsen (Copenhagen, Denmark)

Pre-Clinical Co-Chair:

Laurence Legeai-Mallet (Paris, France)

Members:

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Duncan Bassett (London, United Kingdom)
Geert Carmeliet (Leuven, Belgium)
Outi Mäkitie (Helsinki, Finland)
Peyman Hadji (Frankfurt, Germany)
Salvatore Minisola (Rome, Italy)

Local Organising Committee

Co-Chairs:

István Takács (Budapest, Hungary) Péter Lakatos (Budapest, Hungary)

Members:

Gyula Poór (Budapest, Hungary) Zoltán Szekanecz (Debrecen, Hungary) László Szekeres (Budapest, Hungary) Balázs Szili (Budapest, Hungary), Young investigator Bence Bakos (Budapest, Hungary), Young investigator

Abstract Reviewers

The ECTS thanks the 186 abstracts reviewers who marked all the abstract submissions for ECTS 2019 in their own time.

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

CME Accreditation

The 46th European Calcified Tissue Society Congress, Budapest, Hungary, 11/05/2019–14/05/2019 has been accredited by the European Accreditation Council for Continuing Medical Education (EACCME®) with 25 European CME credits (ECMEC®s). Each medical specialist should claim only those hours of credit that he/she actually spent in the educational activity.

Through an agreement between the Union Européenne des Médecins Spécialistes and the American Medical Association, physicians may convert EACCME® credits to an equivalent number of AMA PRA Category 1 CreditsTM. Information on the process to convert EACCME® credit to AMA credit can be found at www.ama-assn.org/education/earn-credit-participation-international-activities

Pre-Congress ECTS 2019

An application has been made for the Pre-Congress ECTS 2019 to the UEMS-EACCME® for CME accreditation of this event.

ECTS Congress 2019

Saturday 11 May 2019	6 credits
Sunday 12 May 2019	7 credits
Monday 13 May 2019	7 credits
Tuesday 14 May 2019	5 credits

Certificate of Attendance

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



Information for Speakers and Chairpersons

Information for Speakers

Please be at your session room at least 15 minutes prior to the start of your session. 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. Julia Prätzas at the registration desk.

How to Submit your Presentation On-Site

Presentations for Pàtria, Bartók & Lehár 1 + 2

These rooms are connected to the media center. Therefore, we kindly ask all speakers presenting in these rooms to deliver and view/check their PowerPoint presentations at the speaker's Media Center (located on Level 1, close to the registration desk) at least 2 hours prior to the start of their respective session. For sessions starting at 08:00 o'clock, the presentation should be delivered the previous day.

In order to avoid any delays, speakers are kindly requested to hand in their PowerPoint presentations on a USB stick. If you are bringing your own laptop, your presentation will be transferred on-site in the speaker's Media Center.

Presentations for all other rooms

We kindly ask all speakers that are not presenting in Pàtria, Bartók, or Lehár 1 + 2 to bring their presentations on a USB stick to their respective session room. There will be no central media check for these rooms.

Speaking Times for Oral Presentations

- Plenary Oral Presentation: 7 minutes + 2 minutes discussion
- Concurrent Oral Presentations: 7 minutes + 3 minutes discussion
- Concurrent Oral Poster Presentations: 3 minutes presentation + 3 minutes discussion (Please prepare no more than 3-5 slides)
- SNAPs Presentations: 1 minute presentation (Please prepare a single slide)
- Poster Focus: 5 minutes presentation + 5 minutes discussion

Information for Poster Presenters

The poster exhibition is located in the Poster Loft on Level 2.

Posters will be on display from Saturday, 11 May (12:00 o'clock) to Monday, 13 May (18:00 o'clock).

Posters can be mounted on Saturday, 11 May from 08:00 – 11:00 and removed on Monday, 13 May from 18:00 – 19:00. 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 GesconOnline SL – PosterSessionOnline for printing, you will be able to pick it up at the poster helpdesk on-site during the exhibition opening hours. The poster helpdesk is located in the Poster Loft.

Presenters must be present at their poster during the following times:

12:00 – 13:00 on Sunday, 12 May for posters with the below topics:

- Biomarkers and Biochemical Testing
- Bone Bioengineer, Regeneration and Implants
- Bone Biomechanics and Quality
- Bone Development/Growth and Fracture Repair
- Cancer and Bone
- Energy Metabolism, Fat, Diabetes, Nutrition
- Mammalian and Non-Mammalian Models, including Preclinical Imaging
- · Muscle, Physical Activity and Bone
- Osteoporosis: Evaluation and Imaging
- Osteoporosis: Pathophysiology and Epidemiology

12:00 – 13:00 on Monday, 13 May for posters with the below topics:

- Osteoblasts and Bone Formation
- Osteoclasts and Bone Resorption
- Osteocytes and Mechanobiology
- Chondrocytes and Cartilage
- Endocrine Factors
- Genetics & Epigenetics
- Inflammation, Arthritis and Other Joint Diseases
- Osteoporosis: Treatment
- Other Diseases of Bone and Mineral Metabolism
- Paediatric Bone Diseases
- Rare Bone Diseases

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

Information for Chairpersons

Please locate your session room in due time. We kindly ask you to be at your session room at least 15 minutes prior to the start of the session.

We may remind you that speakers need to strictly observe the time schedule.

Industry

This event is supported, in part, by funding from the industry. All support is managed in strict accordance with CME/CPD accreditation criteria and standards for commercial support.

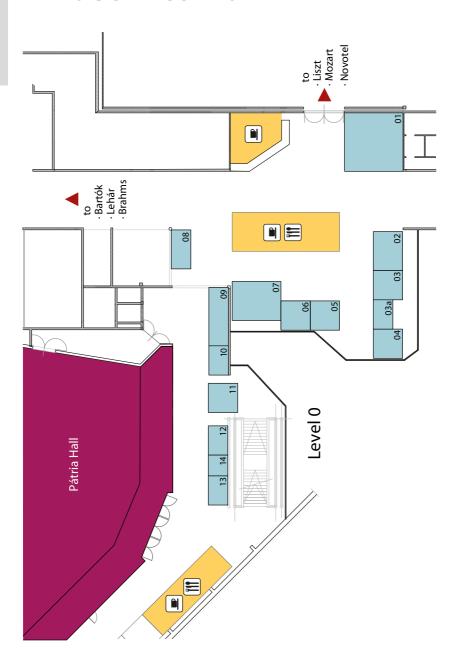
This section contains information that is promotional in nature, distinct from the scientific/educational elements of the main CME/CPD event.







Exhibition Floor Plan



List of Exhibitors

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UCB BIOPHARMA01
UCONN Cryohistology Imaging Core04
World Osteoarthritis Day Intergenerational Events (WODIES)



Sponsors / Supporters

We kindly thank all sponsors for their support!

Sponsor names are in alphabetical order.

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Ascendis Pharma Inc.



Elsevier Inc.



Inozyme Pharma, Inc.



International Federation of Musculoskeletal Research Societies



Scanco Medical

SCANCO MEDICAL

This event is supported, in part, by funding from the industry. All support is managed in strict accordance with CME/CPD accreditation criteria and standards for commercial support.



Exhibitor and Supporter Company Profiles

Amgen (Europe) GmbH

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

Biomedica provides internationally recognized, high quality ELISAs which are fully validated for clinical research. For specific markers Biomedica has become a world-wide market leader, e.g. Slerostin, DKK-1, free sRANKL and OPG, with a continuously growing portfolio.

Most assays are CE marked and ready-for-use in IVD. Biomedica uses serum-based calibrators and controls enabling researchers to collect biologically reliable data.

This year's highlights: intact FGF23 ELISA, C-terminal FGF23 ELISA, and cancer and bone biomarker ELISAs

Partners and products: TAmiRNAs osteomiR™ kit, Fianostics' FluoBolt™ assays.

Service measurements are available on request.

Visit us at Biomedica's booth #12 for details.

www.bmgrp.com

BRUKER

Bruker-MicroCT develops and manufactures micro and nano-CT scanners both in vivo and ex vivo, with the highest resolution and imaging performance over both categories. Invivo imaging with physiological monitoring is within proven safe dose limits. Our broad product line is founded on three decades at the leading edge of microtomography development. Scanners are supplied with comprehensive analysis software featuring high speed GPU reconstruction, versatile volume of interest selection tools, measurement of a long list of 3d and 2d parameters and customisable batch operations. In-depth bone research and morphometry support is provided. Bruker-MicroCT customers are closely supported by 27 distributors worldwide.



European Calcified Tissue Society (ECTS)

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 Budapest at our booth.

www.ectsoc.org

Faxitron, a Hologic Company

Faxitron, a Hologic company, 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 (< 10µm) 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.

Gedeon Richter Plc

Gedeon Richter Plc., Budapest/Hungary, is a major pharmaceutical company in Central Eastern Europe, with an expanding direct presence in Western Europe, China and Latin America. Richter's consolidated sales were approximately EUR 1.4 billion in 2018, reaching a market capitalisation of EUR 4.1 billion. Richter's product portfolio covers many important therapeutic areas, including Women's Healthcare and Central Nervous System. Richter is also active in biologic product development, and committed to bringing biosimilar products to global markets.

International Federation of Musculoskeletal Research Societies (IFMRS)

The IFMRS is an international, not for profit federation of musculoskeletal research societies. The IFMRS mission is to advance musculoskeletal research globally in order to prevent and treat musculoskeletal diseases by collaborating with international societies to share resources, raise public awareness and provide education.

New: Hubl F

A unique knowledge environment for New Investigators

New: Education Working Group

To establish education projects fostering worldwide links between communities

with a common interest in musculoskeletal research

New: Big Data Working group

Knowledge Portal group to work on a collaborative project to set up a

comprehensive NEW Big Data Portal – more to follow!

Join us on Stand 3a for an update our current activities.

Further information at www.ifmrs@ifmrs.org



Inozyme Pharma, Inc.

Inozyme Pharma is a biotechnology company developing novel medicines to treat rare disorders of calcification. These diseases are characterized by PPi imbalances, which lead to over-calcification of soft tissues and under-mineralization of bone. Founded in 2016, the company possesses a deep understanding of the biology of calcification which it uses to develop new medicines with the potential to drastically improve the standard-of-care and change treatment paradigms. Inozyme's lead candidate is an enzyme replacement therapy designed to treat ENPP1 Deficiency (GACI type 1 and ARHR2) and ABCC6 Deficiency (GACI type 2 and PXE) for which insufficient treatment options currently exist.

International Conference on Children's Bone Health (ICCBH)

ICCBH is your opportunity to hear about and discuss the newest developments in our understanding of paediatric bone health and disease.

We invite anyone with an interest in bone metabolism and bone mass in children, adolescents and young adults to attend. The ICCBH conference takes place every two years and is attended by up to 500 delegates from across the globe, making it truly multinational and multidisciplinary – a unique networking opportunity.

Come and participate in a lively interactive meeting with the leaders in the field! 9th International Conference on Children's Bone Health (ICCBH) / 22-25 June 2019 / Salzburg, Austria

www.iccbh.org

Kyowa Kirin Services Ltd

Kyowa Kirin Services Ltd is a rapidly growing specialty pharmaceutical company focused on innovative medicines in rare diseases and therapeutic areas with high medical needs. Kyowa Kirin Services has business operations throughout Europe and the United States.

Kyowa Kirin Services is a wholly owned subsidiary of Japan-based Kyowa Hakko Kirin Co. Ltd., a leading research-based life sciences company with particular strength in antibody technologies for oncology, nephrology and immunology/allergy. Through its research and global commercialisation of innovative medicines, the company seeks to contribute to the health and wellbeing of people around the world.

PerkinElmer

PerkinElmer is a global leader committed to innovating for a healthier world. Our dedicated team is passionate about providing customers with an unmatched experience as they help solve critical issues especially impacting the diagnostics and discovery and analytical solutions markets. Our innovative detection, imaging, informatics, and service capabilities, combined with deep market knowledge and expertise, help customers gain earlier and more accurate insights to improve lives and the world around us.



Scanco Medical

Scanco Medical (www.scanco.ch) is the leading global provider of μ CT and the only provider of HR-pQCT systems (XtremeCT). The range of scanners offer capabilities of obtaining images with sub-micron resolution from specimen scanners to 10 micron resolution from in vivo scanners. All systems are bundled with easy to use and comprehensive tools for Scan Acquisition, Image analyses (including Finite Element Analysis), Visualization and Archiving solutions. The micro-CT systems are bundled with high-performance workstations with large memory and data storage capabilities and optional GPU-based reconstruction solutions. Scanco also provides contract based scanning and analysis services for academic and industrial groups.

Stratec Medizintechnik

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.

UCB BIOPHARMA

UCB, Brussels, Belgium is a global biopharmaceutical company focused on the discovery and development of innovative medicines and solutions to transform the lives of people living with severe diseases of the immune system or of the central nervous system. UCB has around 7 500 people in approximately 40 countries working with them.

UCONN Cryohistology Imaging Core

This core provides our experience with tape-capture of intact frozen sections of mineralized tissues followed by whole section imaging of the fluorescent and chromogenic signals emanating from the section. It has proven useful in imaging the accumulated mineral, fluorescent mineralization lines, AP and TRAP positive cells, and GFP, EdU and immunofluorescent signals all from the same section. This multimodal histological approach provides discriminating biological signals for interpreting injury/repair and transplantation models of skeletal tissues (long bone, calvaria, knee, TMJ and teeth) and computer-controlled high throughput trabecular static, dynamic and cellular histomorphometry that is particularly attractive for analyzing IMPC-produced KO mouse lines. These techniques can be contracted through the core and we offer hands-on training to laboratories that what to implement these methods.



World Osteoarthritis Day Intergenerational Events (WODIES)

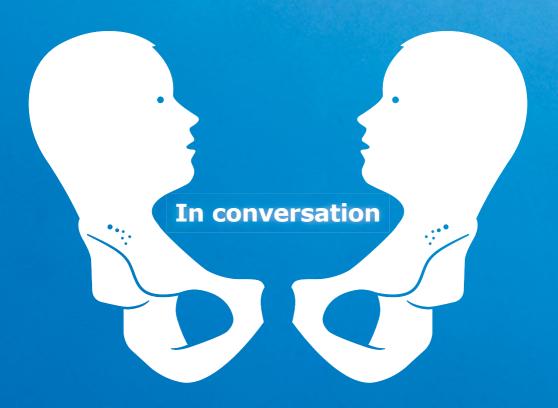
The event promises an innovative programme tailored specifically to the general public. The objective of this public and free-of-charge event is to raise awareness and showcase means preventions, innovations and new advances in treatments around the condition and how it can affect us all. Participants will meet patients, researchers, associations and health care professionals to learn more about osteoarthritis and related illnesses. Listen, learn and live through the activities, sessions and debates. We will showcase the latest and most important information on osteoarthritis and related illnesses from leading experts in the field.



Corporate Satellite Symposia

Saturday, 11 May 2019

13:30 – 15:00	Satellite Symposium UCB BIOPHARMA The Expedition: Exploring our Understanding of the Methods to Predict Fracture Risk Reduction
13:30 – 13:45	Clinical tools to assist goal-directed therapy for fragility fracture patients Serge Ferrari (Switzerland)
13:45 – 14:25	Debate Mass vs structure: Which measurement can help guide my patients' therapy? Serge Ferrari (Switzerland) Roland Chapurlat (France)
14:25 – 14:50	How do cells translate drug effects into bone strength? Roland Baron (United States)
14:50 – 15:00	Looking to the future All, led by Serge Ferrari (Switzerland)



Biosimilars in the future treatment of osteoporosis

Three KOL led sessions exploring benefits, experiences, guidelines and studies around biosimilar treatments in osteoporosis.

Monday 13 May 2019 | 14:45-16:15 | Bartók Rooms

We look forward to seeing you there.



Date of preparation: February 2019, TER-2019-02-01



Sunday, 12 May 2019

14:45 – 16:15	Satellite Symposium Amgen (Europe) GmbH Putting Patient Care at the Forefront of Osteoporosis Management
14:45 – 14:50	Welcome and introduction Serge Ferrari (Switzerland) Péter Lakatos (Hungary)
14:50 – 15:15	Building long term therapy into patient management Bente Langdahl (Denmark)
15:15 – 15:40	Real world data – impact on our understanding of osteoporosis treatment Daniel Prieto-Alhambra (United Kingdom)
15:40 – 16:05	Individualising patient care to reach osteoporosis treatment goals Serge Ferrari (Switzerland)
16:05 – 16:15	Q&A session and closing comments Serge Ferrari (Switzerland) Péter Lakatos (Hungary)

Monday, 13 May 2019

14:45 – 16:15	Satellite Symposium Gedeon Richter Plc In Conversation: Biosimilars in the Future Treatment of Osteoporosis Bartók Bartók
14:45 – 14:55	Welcome and Introduction Eugene McCloskey (United Kingdom)
14:55 – 15:15	Biosimilars in Rheumatology in the EU – Benefits, Experiences and Practices Julie Maréchal-Jamil (Belgium)
15:15 – 15:45	Teriparatide in the Treatment Guidelines – Theory and Reality Peyman Hadji (Germany)
15:45 – 16:00	RGB-010 Development – Concept and Results István Takács (Hungary)
16:00 – 16:15	Q&A session and closing comments

PUTTING PATIENT CARE AT THE FOREFRONT OF OSTEOPOROSIS MANAGEMENT

Sunday 12 May 2019, 14.45–16.15 Room Bartók, Budapest Congress Center, Budapest, Hungary

PROGRAMME

14.45-14.50	Welcome and introduction
	Serge Ferrari (Switzerland) and
	Peter Lakatos (Hungary)
14.50-15.15	Building long-term therapy into
	patient management
	Bente Langdahl (Denmark)
15.15-15.40	Real-world data – impact on our
	understanding of osteoporosis treatment
	Daniel Prieto-Alhambra (UK)
15.40-16.05	Individualising patient care to reach
	osteoporosis treatment goals
	Serge Ferrari (Switzerland)
16.05–16.15	Q&A session and meeting close
	Serge Ferrari (Switzerland) and
	Peter Lakatos (Hungary)

This symposium is only open to healthcare professionals who are registered for the ECTS 2019 Congress



General Congress Information

Opening Hours

Registration Counter Pre-Congress, Friday, 10 May 2019

Pre-Congress delegates can pick up their name badges at the registration counter located in the entrance hall on Level 1 of the Budapest Congress Center on Friday, 10 May 2019, from 09:00 o'clock.

Registration Counter

The registration counter is located in the entrance hall on the first floor of the Budapest Congress Center and is open during the following times:

Friday, 10 May 2019: 09:00 – 20:30 Saturday, 11 May 2019: 07:00 – 20:00 Sunday, 12 May 2019: 07:30 – 19:30 Monday, 13 May 2019: 07:30 – 19:30 Tuesday, 14 May 2019: 07:30 – 14:30

Exhibition

The Exhibition Area is located on Level 0 and is open during the following times:

Saturday, 11 May 2019: 08:30 – 18:00 Sunday, 12 May 2019: 09:00 – 18:00 Monday, 13 May 2019: 09:00 – 18:00

Speaker's Media Center

The speaker's Media Center is located on Level 1, close to the registration desk, and is open during the following times:

Friday, 10 May 2019: 08:30 – 19:00 Saturday, 11 May 2019: 07:00 – 20:00 Sunday, 12 May 2019: 07:30 – 19:30 Monday, 13 May 2019: 07:30 – 19:30 Tuesday, 14 May 2019: 07:30 – 14:00



Badges and Tickets

Each registered participant will receive a name badge upon arrival. For organisational and security reasons, we request that all participants and exhibitors wear their badges at all times during congress activities. Lost badges can be replaced at the registration desk at a cost of $10 \in \text{per badge}$ (VAT included).

A barcode is printed on each name badge. This may be scanned by exhibitors/ supporters to access your name, affiliation, country, email address and professional interests provided by you when registering for the congress. We would like to point out that this is entirely voluntary and not compulsory for the participation in corporate events. Delegates can refuse to be scanned at any time. By permitting an exhibitor or supporter to scan your badge, you agree that these details may be used by the company to contact you with relevant product information.

Badges will be colour-coded as follows:

Invited Speaker
Organizer
ECTS Board
Exhibitor
Company Symposium Only
Staff
Delegate

Please note that your delegate badge will also be your entrance ticket to the Networking Dinner. To be admitted to the Networking Dinner, you need to bring your delegate badge.

Congress App

Are you looking for additional information on the congress or ECTS? Download the ECTS Society App to access all relevant information on **ECTS 2019!**

The app allows you to:

- Access ECTS 2019 by clicking on the respective congress tile and pressing "install"
- Access the event programme, posters and speakers list
- Find your way around the congress with the interactive floor plan
- Create your own daily schedule that will guide you through the day
- Stay informed and receive the latest messages and news

New Interactive App Features

We are excited to introduce the following new interactive app features for selected sessions this year:

Ask a Ouestion

This in-app function allows you to simply send in your question to the speaker during selected sessions using the app.

Rating

This new function enables you to rate your sessions by only one simple click through the app.

Chat

You can now chat and connect with other attendees to form valuable connections at the congress.

Do you have any questions? Don't hesitate to contact us! ects2019@interplan.de

How to Download:

The easiest way to download our mobile app is to scan one of the following barcodes. Alternatively, you can also search for 'ECTS' in the Apple App Store or Google Play Store.











http://bit.ly/2A76LLq

http://bit.ly/2A7argl



Scavenger Hunt

The ECTS invites you to participate in our second ever scavenger hunt for ECTS 2019. Take part in this activity and complete the challenge to get the chance to win a prize.

What do you have to do to participate?

- Pick up your scavenger hunt pass at the ECTS booth situated on Level 0 in the exhibition area
- 2) Visit the listed booths and get your pass stamped at each of them
- 3) Hand in your completed pass, with a stamp from every stand, at the ECTS booth by 19:00 on Monday, 13 May and you will be entered into the ECTS Prize Draw with the following prizes:

1st Place: FREE congress registration for ECTS 2020 in Marseille

2nd Place: FREE ECTS Membership for 1 year

3rd Place: One night's hotel accommodation at the ECTS HQ Hotel during ECTS 2020

The winners will be announced at the Closing Ceremony.

Wi-Fi and Social Media

Wi-Fi

Complimentary Wi-Fi access will be available throughout the venue.

SSID: ECTS2019 Password: ECTS2019

Social Media

Twitter: You can view the ECTS Congress 2019 Twitter feed by clicking on the "News" button on the home screen of the app. To tweet from the app, click on "View on Twitter" at the bottom, your Twitter app will then open. Don't forget to use the #ECTS2019 hashtag when you tweet!





Official ECTS 2019 Events

Welcome Reception

Saturday, 11 May 2019 19:00 – 21:00 Mirror Corridor (in front of Pàtria Hall)

The Welcome Reception on Saturday evening is the place to connect with other experts, physicians and researchers from around the globe.

Please join us at this informal get-together to greet old friends, meet new colleagues, and exchange impressions of the Congress. Enjoy traditional Hungarian finger food in the casual atmosphere of the Budapest Congress Center.

Ticket: Included in Registration Fee

New Investigator Gathering

Sunday, 12 May 2019 19:00 – 20:00 in Lehár 1+2

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 to meet with ECTS staff and members of the New Investigator Committee to discuss what the ECTS can do for YOU!

AHP Networking

Sunday, 12 May 2019 19:00 – 20:00 in the Poster Loft

Allied Healthcare Professionals (AHPs) are invited to gather together on Sunday evening. The networking session is structured as an informal poster tour. Posters of relevance to AHPs (and others) will be displayed and presented by the authors. The session provides an ideal opportunity for AHPs to discuss their own work and other research studies whilst enjoying light refreshments.

ECTS Charity Football Tournament

Sunday, 12 May 2019

20:00 – 22:00 at MOM Swimming Pool and Sports Center

Matches officially start at 20:30

Form a team and join the ECTS Charity **Football five-a-side tournament** with your friends and colleagues to help fundraise for the National Federation of Patients with Rare and Congenital Disorders.

This Fundraising Event is organized by the ECTS and ECTS Academy to bring together members, corporate supporters, and friends.

During the last couple of years, thanks to your support, we were able to support various local patient organizations. Let's team up again this year to raise awareness and fundraise of rare and congenital bone diseases.

Ticket: Separate registration required.

Networking Dinner

Monday, 13 May 2019

20:00 - 24:00 at the Larus Restaurant and Event Center

Just a short 5-minute stroll away from the Budapest Congress Center, the Larus Restaurant and Event Center has an exceptional view of the Gesztenyés (Chestnut) park. It is an extraordinary place for focusing on communication and networking. With a relaxed atmosphere where both dancing and mingling are possible, it is the perfect place for an informal gathering open to all participants of the ECTS 2019 Congress. A casual buffet dinner provides an ideal opportunity to reconnect with old acquaintances or make new contacts.

Ticket: Delegate fee: EUR 45 per person incl. VAT
Accompanying person's fee: EUR 65 per person incl. VAT

Please note that your delegate badge will also be your entrance ticket to the Networking Dinner. To be admitted to the Networking Dinner, you need to bring your delegate badge.

Sold out. If you still require a ticket, please check on-site at the registration desk to see if there have been any cancellations.



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Speakers and Authors

Invited Faculty Index

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