
Saturday

13:00-14:30 **What are bones made of?**

Chairs: *Jeremy Allgrove (London, UK), Klaus Klaushofer (Vienna, Austria)*

13:00-13:30 IS1
Fetal development
Yasemin Alanay (Istanbul, Turkey)

13:30-14:00 IS2
Bone and osteocyte biology: lessons from human genetic diseases
Brendan Lee (Houston, USA)

14:00-14:30 IS3
Bone material properties
Peter Fratzl (Potsdam, Germany)

14:30-14:50 Coffee

14:50-15:50 **Novel bone assessment tools Part I: the organ level**

Chairs: *Nicola Crabtree (Birmingham, UK), Claus Glüer (Kiel, Germany)*

14:50-15:20 IS4
Vertebral fracture assessment
Amaka Offiah (Sheffield, UK)

15:20-15:50 IS5
High resolution imaging of bones by HR-pQCT
Steven Boyd (Calgary, Canada)

15:50-16:50 **Oral Communications**

Chairs: *Marius Kraenzlin (Basel, Switzerland), Jean-Pierre Salles (Toulouse, France)*

15:50 **OC1**
Abnormal trabecular micro-architecture and bone mechanical properties in adolescent idiopathic scoliosis - a case-control study with high-resolution peripheral quantitative computed tomography and finite element analysis
Ka Yee Cheuk (Hong Kong, Hong Kong)

16:00 **OC2**
Feature-based recognition of trabecular microstructure using 1.5T magnetic resonance imaging - a new methodology
Paul Dimitri (Sheffield, UK)

16:10	OC3 Sedentary time negates the positive influence of moderate-to-vigorous physical activity but not vigorous physical activity on bone strength in adolescent girls Vina Tan (Kota Bharu, Malaysia)
16:20	OC4 Increased bone matrix mineralization in treatment-naïve children with Crohn's disease Paul Roschger (Vienna, Austria)
16:30	OC5 Bivariate analyses of BMD and lean mass in children identifies variants with novel pleiotropic effects across six BMD loci and in the TOM1L2 locus Carolina Medina-Gomez (Rotterdam, Netherlands)
16:40	OC6 Early life motor control is positively associated with adolescent bone strength Alex Ireland (Manchester, UK)
16:50-17:00	Welcome address <i>Chairs: Maria-Luisa Bianchi (Milan, Italy), Wolfgang Högler (Birmingham, UK)</i>
17:00-18:30	Satellite symposium The past, present and future of paediatric XLH <i>At the end of the satellite symposium please gather at the Congress Centre entrance from where members of the Local Organising Committee will lead you to the Salzburg Residenz Palace for the Welcome Reception.</i>
19:15-20:15	Welcome Reception and Chamber Concert (Salzburg Residenz Palace) Followed by free time

Sunday

08:00-08:45	Meet the Expert Sessions <i>(concurrent; first-come first-served - be sure to arrive early if there is a session you particularly want to join)</i> Mozart Hall Long-term effects of bisphosphonates: Nick Bishop (Sheffield, UK) Karajan 1 (1 st floor) Managing phosphate disorders: Rachel Gafni (Bethesda, USA) Karajan 3 (1 st floor) Chronic kidney disease and bone: Mary Leonard (Stanford, USA)
09:00-10:30	Monogenic forms of osteoporosis Chairs: <i>Maria-Luisa Bianchi (Milan, Italy), Francis Glorieux (Montreal, Canada)</i>
09:00-09:30	IS6 Classic osteogenesis imperfecta Nick Shaw (Birmingham, UK)
09:30-10:00	IS7 Recessive osteogenesis imperfecta Frank Rauch (Montreal, Canada)
10:00-10:30	IS8 Early-onset osteoporosis Outi Mäkitie (Stockholm, Sweden)
10:30-10:50	Coffee
10:50-11:15	Charles Slemenda Award Chairs: <i>Nick Bishop (Sheffield, UK), Michael Whyte (St Louis, USA)</i> Teeth, placentas and bones Zulf Mughal (Manchester, UK)
11:15-12:15	Oral Communications Chairs: <i>Susanne Bechtold-Dalla Pozza (Munich, Germany), Craig Munns (Sydney, Australia)</i>
11:15	OC7 Osteogenesis imperfecta - a pilot trial on treatment with the RANKL-antibody denosumab Heike Hoyer-Kuhn (Cologne, Germany)

11:25	OC8 Combination sclerostin antibody and zoledronic acid treatment outperforms either treatment alone in a mouse model of osteogenesis imperfecta Craig Munns (Sydney, Australia)
11:35	OC9 Skeletal manifestations in pediatric <i>WNT1</i> osteoporosis Riikka Mäkitie (Helsinki, Finland)
11:45	OC10 Lack of PEDF within the bone matrix is associated with osteoidosis and abnormally high bone mineral content Nadja Fratzl-Zelman (Vienna, Austria)
11:55	OC11 Comparison of RANKL blockade and bisphosphonate anti-resorptive therapies in a growing mouse model of OI - implications of prolonged treatment on bone health Cathleen Raggio (New York, USA)
12:05	OC12 A zebrafish osteogenesis imperfecta model: a new tool to develop novel pharmacological treatments Roberta Gioia (Pavia, Italy)
12:15-13:00	Posters (odd numbers presented)
13:00-14:00	Lunch
14:00-15:30	Advances in orthopaedic surgery Chairs: <i>David Little (Sydney, Australia), Frank Rauch (Montreal, Canada)</i>
14:00-14:30	IS9 Upper limb deformity in osteogenesis imperfecta Marie Gdalevitch (Montreal, Canada)
14:30-15:00	IS10 NF-1 bone biology and pseudoarthrosis David Little (Sydney, Australia)
15:00-15:30	IS11 Recent advances in limb lengthening John Herzenberg (Baltimore, USA)
15:30-16:30	Oral Communications Chairs: <i>Coen Netelenbos (Amsterdam, Netherlands), Oliver Semler (Cologne, Germany)</i>

15:30	<p>OC13 Meclozine has a potential effects on short stature and foramen magnum stenosis in transgenic mice with achondroplasia Masaki Matsushita (Nagoya, Japan)</p>
15:40	<p>OC14 Small interfering RNAs as an innovative therapeutic approach for the Autosomal Dominant Osteopetrosis type 2 (ADO2) Mattia Capulli (L'Aquila, Italy)</p>
15:50	<p>OC15 Osseous side effects on the growing skeleton exerted by tyrosine kinase inhibitor treatment: data observed in pediatric patients with chronic myeloid leukemia in comparison to a juvenile rat model Josephine Tauer (Dresden, Germany)</p>
16:00	<p>OC16 Medicarpin, a natural pterocarpan, enhances bone regeneration in cortical bone defect model by activation of notch and Wnt canonical signalling pathway Manisha Dixit (Lucknow, India)</p>
16:10	<p>OC17 Inhibition of TGFB signalling delays ossification in patients with fibrodysplasia ossificans progressiva Coen Netelenbos (Hoofddorp, Netherlands)</p>
16:20	<p>OC18 Improvement in bone manifestations and respiratory status in infants and young children with HPP treated with asfotase alfa: an update on the ENB-010-10 trial Christine Hofmann (Würzburg, Germany)</p>
16:30-17:00	Coffee
17:00-18:00	<p>New drug targets</p> <p>Chairs: <i>Brendan Lee (Houston, USA), Leanne Ward (Ottawa, Canada)</i></p>
17:00-17:30	<p>IS12 The role of TGFB in high turnover bone diseases Susan Schiavi (Boston, USA)</p>
17:30-18:00	<p>IS13 Shared therapeutic targets in genetic skeletal diseases Mike Briggs (Newcastle upon Tyne, UK)</p>
18:15-20:00	<p>Satellite symposium Asfotase Alfa: Introducing a new investigational therapy for the treatment of hypophosphatasia</p>
20:00-22:30	Symposium dinner

(Europa Hall, Salzburg Congress Centre)

Monday

08:00-09:00	Meet the Expert Sessions <i>(concurrent; first-come first-served - be sure to arrive early if there is a session you particularly want to join)</i> Mozart Hall Non-accidental injury or bone fragility as causes of infantile fractures?: Zulf Mughal (Manchester, UK) Karajan 1 (1 st floor) Managing hypoparathyroidism: Agnès Linglart (Paris, France) Karajan 3 (1 st floor) Metabolic and genetic approach to kidney stones: Craig B Langman (Chicago, USA)
09:00-10:30	Skeletal dysplasia Chairs: <i>Elisabeth Steichen-Gersdorf (Innsbruck, Austria), Margaret Zacharin (Melbourne, Australia)</i>
09:00-09:30	IS14 Somatic mosaic skeletal overgrowth disorders Matthew Warman (Boston, USA)
09:30-10:00	IS15 Achondroplasia - new therapy Laurence Legeai-Mallet (Paris, France)
10:00-10:30	IS16 Growth plate and diseases of calcinosis Ken White (Indianapolis, USA)
10:30-11:00	Coffee
11:00-12:00	Oral Posters Chairs: <i>Christof Land (Munich, Germany), Craig B Langman (Chicago, USA)</i>
11:00	OP1 Skeletal and bone material phenotype in recessive osteogenesis imperfecta due to a novel homozygous point mutation in <i>TMEM38B</i> Emma Webb (Birmingham, UK)
11:05	OP2 Abstract withdrawn
11:10	OP3 Increase of preosteoclasts and secretion of PDGF-BB by inhibition of cathepsin K activity increases mouse bone mass during development

	Janet Crane (Baltimore, USA)
11:15	OP4 Transplantation of culture-expanded bone marrow cells and platelet rich plasma in lower limb lengthening for short stature patients Hiroshi Kitoh (Nagoya, Japan)
11:20	OP5 Osteoclast phenotype of giant multinucleated cells in cherubism may determine the disease aggressiveness Natacha Kadlub (Paris, France)
11:25	OP6 Genetic variation is involved in impairment of bone mineral density in long-term adult survivors of childhood cancer M.A.H. den Hoed (Rotterdam, The Netherlands)
11:30	OP7 Lessons from homocystinuria: Cystathionine beta-synthase as a novel marker for osteogenic differentiation of human mesenchymal stem cells Laura Gambari (Bologna, Italy)
11:35	OP8 Characterising the muscle-bone unit in children and adolescents with and without cystic fibrosis using novel imaging techniques and jumping mechanography Kate Ward (Cambridge, UK)
11:40	OP9 Growth, body mass index, bone health and ambulatory status of boys with Duchenne Muscular Dystrophy (DMD) treated with daily versus intermittent oral glucocorticoid regimen Nicola Crabtree (Birmingham, UK)
11:45	OP10 Does degree of adiposity influence upper limb fracture site in children? Rebecca Moon (Southampton, UK)
11:50	OP11 Optimal dose of calcium for treatment of nutritional rickets Tom Thacher (Rochester, USA)
11:55	OP12 A non-invasive method for screening vitamin D (Vit-D) insufficiency for adolescents using skin colourimetry Tsz Ping Lam (Hong Kong, Hong Kong)
12:00-13:00	Posters (even numbers and Oral Posters presented)
13:00-14:00	Lunch
14:00-15:30	Sclerosing bone disorders

Chairs: *Rachel Gafni (Bethesda, USA), Gabriele Haeusler (Vienna, Austria)*

14:00-14:30 IS17
High bone mass disorders
Anna Villa (Milan, Italy)

14:30-15:00 IS18
Management of sclerosing bone disease
Michael Whyte (St Louis, USA)

15:00-15:30 IS19
Rare sclerosing bone disorders
Gen Nishimura (Tokyo, Japan)

15:30-16:00 Coffee

16:00-17:30 **Managing secondary osteoporosis**

Chairs: *Outi Mäkitie (Stockholm, Sweden), Nick Shaw (Birmingham, UK)*

16:00-16:30 IS20
Bone morbidity in children with leukaemia
Leanne Ward (Ottawa, Canada)

16:30-17:00 IS21
Cytokine- and steroid-induced osteoporosis
Sandy Burnham (Philadelphia, USA)

17:00-17:30 IS22
Anorexia nervosa
Madhu Misra (Boston, USA)

17:30-19:00 **Global Consensus on Nutritional Rickets**

Chairs: *John Pettifor (Johannesburg, South Africa), Leanne Ward (Ottawa, Canada)*

Consensus motivation and foundation
Wolfgang Högler (Birmingham, UK)

Defining nutritional rickets
Craig Munns (Sydney, Australia)

Prevention and treatment
Nick Shaw (Birmingham, UK)

Identification of risk factors

Mairead Kiely (Cork, Ireland)

Pregnancy and lactation

Bonny Specker (South Dakota, USA)

Public health strategies for intervention

Tom Thacher (Rochester, USA)

Discussion

20:00-23:00

Conference Dinner

(Stieglkeller)

Tuesday

08:00-08:45 **Meet the Expert Sessions**
(concurrent; first-come first-served - be sure to arrive early if there is a session you particularly want to join)

Mozart Hall
Managing fibrous dysplasia: **Alison Boyce** (Bethesda, USA)

Karajan 1 (1st floor)
Size-corrected bone density measures and their relation to fractures: **Nicola Crabtree** (Birmingham, UK)

Karajan 3 (1st floor)
Functional muscle training in rare skeletal disorders: **Heike Hoyer-Kuhn** (Cologne, Germany)/**Oliver Semler** (Cologne, Germany)

09:00-10:00 **Novel bone assessment tools Part II: the tissue level**
Generously supported by the Austrian Society for Bone and Mineral Research

Chairs: *Nadja Fratzl-Zelman (Vienna, Austria), Barbara Obermayer-Pietsch (Graz, Austria)*

09:00-09:30 IS23
Multiphoton microscopy
Eleonora Dondossola (Houston, USA)

09:30-10:00 IS24
The new histology
Barbara Misof (Vienna, Austria)

10:00-11:00 **Oral Communications and Late Breaking Abstracts**

Chairs: *Zulf Mughal (Manchester, UK), John Pettifor (Johannesburg, South Africa)*

10:00 **OC19**
The VINE study: vitamin D in newborns. A randomized controlled trial comparing daily and bolus supplementation in breastfed infants of vitamin D deficient mothers
Christine Rodda (Melbourne, Australia)

10:10 **OC20**
The effect of calcium supplementation on adolescent bone growth in pre-pubertal Gambian females - A 12-year follow-up study
Kate Ward (Cambridge, UK)

10:20 **OC21**
Maternal vitamin D deficiency alters later skeletal responsiveness to mechanical loading in a model system

	Stephanie Borg (Sheffield, UK)
10:30	OC22 Extra vitamin D from food fortification and bone fractures in adolescents: results from the D-tect study Mina Nicole Händel (Frederiksberg, Denmark)
10:40	LB1 Maternal vitamin D depletion disrupts neonatal skeletal development in mice Harriet Buckley (Sheffield, UK)
10:50	LB2 Recessive osteogenesis imperfecta caused by missense mutations in SPARC Frank Rauch (Montreal, Canada)
11:00-11:15	Coffee
11:15-11:30	Presentation of awards Chairs: <i>Maria Luisa Bianchi (Milan, Italy), Wolfgang Högler (Birmingham, UK)</i>
11:30-12:30	Muscle-bone relationship in health and disease Chairs: <i>Mary Leonard (Stanford, USA), Kate Ward (Cambridge, UK)</i>
11:30-12:00	IS25 Muscle's relationship with bone Lynda Bonewald (Kansas City, USA)
12:00-12:30	IS26 Duchenne and cerebral palsy Craig Munns (Sydney, Australia)
12:30-12:45	Close and final remarks Buses to airport