

Programme: Saturday 10 June



ALL SESSIONS IN FRANCONIA HALL UNLESS OTHERWISE INDICATED

12:30-14:30

CONCURRENT SESSIONS

Pre-meeting networking events (*pre-booking required*)

Allied Health Professionals

Organiser:
Nicola Crabtree
(Birmingham, UK)

PANORAMA ROOM 10

New Investigators

Organiser:
Maira Cheung
(London, UK)

PANORAMA ROOMS 11-13

14:15-14:50

Coffee

14:50-16:20

Children's bones in health and disease (case study-based educational session)

Chairs: Maria Luisa Bianchi (Milan, Italy)
Nick Bishop (Sheffield, UK)

Bone fragility
Outi Mäkitie (Helsinki, Finland)

Bone mineralisation
Keiichi Ozono (Osaka, Japan)

Bone dysplasia
Melita Irving (London, UK)

Abnormality of calcium and phosphate
homeostasis
Agnès Linglart (Paris, France)

16:20-16:30

Break

16:30-17:30

Workshop: osteogenesis imperfecta

SUPPORTED BY MERO BIOPHARMA

Chair: Nick Bishop (Sheffield, UK)

Introduction
Christine Burren (Bristol, UK)

Current approaches to treatment
Outi Mäkitie (Helsinki, Finland)

What does the future hold?
Leanne Ward (Ottawa, Canada)

17:30-17:45

Welcome address

Chairs: Nick Bishop (Sheffield, UK)
Christine Hofmann (Würzburg, Germany)

18:00-19:30

Satellite symposium: Novel insights into the broad clinical manifestations and management of XLH

19:30-20:00

Welcome Reception

FRANCONIA FOYER

Followed by free time

Programme: Sunday 11 June



ALL SESSIONS IN FRANCONIA HALL UNLESS OTHERWISE INDICATED

08:00-08:45

Meet the Expert Sessions

Prevention of rickets and osteomalacia - why, who, how?

Wolfgang Högler (Birmingham, UK)

PANORAMA ROOM 11

Physical activity to improve bone stability

Heike Hoyer-Kuhn/Oliver Semler (Cologne, Germany)

PANORAMA ROOM 12

The genetic basis of limb deformities

Stefan Mundlos (Berlin, Germany)

PANORAMA ROOM 13

09:00-10:00

What is new: 2 years in review

Chairs: Outi Mäkitie (Helsinki, Finland)
Anna Teti (Rome, Italy)

09:00

IS1 Highlights in basic bone research
Roland Baron (Boston, USA)

09:30

IS2 Highlights in clinical bone research
Frank Rauch (Montreal, Canada)

10:00-10:30

Coffee / Moderated ePosters (Screens 1-4)

10:30-11:00

Charles Slemenda Award Lecture

Chairs: Nick Bishop (Sheffield, UK)
Christine Hofmann (Würzburg, Germany)

Frank Rauch (Montreal, Canada)

11:00-11:40

Oral Communications: Genetics

Chairs: Susanne Bechtold-Dalla Pozza (Munich, Germany)
Antonella Forlino (Pavia, Italy)

11:00

OC1 NBAS variants causing a novel form of inherited bone fragility
Meena Balasubramanian (Sheffield, UK)

11:10
OC2 Methylation patterns at the novel DMR of GNAS (GNAS-AS2) in pseudohypoparathyroidism 1B (PHP1B or iPPSD3) subtypes
Agnès Linglart (Paris, France)

11:20
OC3 Principal component-derived bone density phenotypes and genetic regulation of the pediatric skeleton
Jonathan Mitchell (Philadelphia, USA)

11:30
OC4 25-hydroxyvitamin D response to antenatal cholecalciferol supplementation is associated with common vitamin D related genetic variants: findings from the MAVIDOS trial
Rebecca Moon (Southampton, UK)

11:40-12:00

Poster pitching

Chairs: Susanne Bechtold-Dalla Pozza (Munich, Germany)
Antonella Forlino (Pavia, Italy)

P013 Longitudinal evaluation of bone mass, geometry and metabolism in adolescent male athletes. The PRO-BONE study
Dimitris Vlachopoulos (Exeter, UK)

P019 Zebrafish as model organism for craniosynostosis
Rabea Bleumel (Würzburg, Germany)

P027 Sex and iron modify fibroblast growth factor 23 concentrations in 1-year-old children
Elisa Holmlund-Suila (Helsinki, Finland)

P039 Cystinosis deficiency affects bone phenotype
Giulia Battafarano (Rome, Italy)

P065 A novel form of congenital rickets due to a recurrent gain of function mutation in CYP3A4
Christine Rodda (Melbourne, Australia)

P079 Assessment of a semi-automated software program for the identification of vertebral fractures in children
Fawaz Alqahtani (Sheffield, UK)

P125 Identification and characterization of a novel microRNA inhibiting osteoblast functions by suppressing actin polymerization
Aljaz Ahmad John (Lucknow, India)

P141 Unique correlation pattern between cortical trabecular bone qualities and standard dynamometer handgrip strength in girls with adolescent idiopathic scoliosis (AIS)?
Ka-Yee Cheuk (Shatin, Hong Kong)

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P161 Early-life vitamin D status and bone mass at five years in a prospective birth cohort study
Carol ní Chaomh (Parkville, Australia)

P189 A deep phenotyping of autosomal dominant osteopetrosis type 2 (ADO2) mouse model revealed multiorgan dysfunctions
Antonio Maurizi (L'Aquila, Italy)

12:00-13:00

Posters

Odd numbers presented

13:00-14:00

Lunch

14:00-15:30

Basic bone biology: osteoblasts, osteocytes, microstructure

Chairs: Roland Baron (Boston, USA)
Klaus Klaushofer (Vienna, Austria)

14:00

IS3 Bone cells in health and disease
Antonella Forlino (Pavia, Italy)

14:30

IS4 Cortical bone structure and material properties
Björn Busse (Hamburg, Germany)

15:00

IS5 Skeletal mineralization – enzymes and animal models
José Millán (La Jolla, USA)

15:30-16:30

Oral Communications: Epidemiology and Nutrition

Chairs: Simon Schoenbuchner (Cambridge, UK)
Bonny Specker (South Dakota, USA)

15:30

OC5 Eight-year longitudinal analysis of physical activity and bone strength during adolescence: the Iowa Bone Development Study
Kathleen Janz (Iowa City, USA)

15:40

OC6 Lean mass accretion increases during summer and positively associates with vitamin D status in healthy children 2-8 years
Neil Brett (Montreal, Canada)

15:50

OC7 The effect of antenatal iron supplementation on fibroblast growth factor-23 concentration in mothers and infants: a randomised controlled trial in rural Kenya
Vickie Braithwaite (Cambridge, UK)

16:00

OC8 Effective therapeutic control of curve progression using calcium and vitamin D supplementation for adolescent idiopathic scoliosis – a randomized double-blinded placebo-controlled trial
Tsz Ping Lam (Hong Kong, Hong Kong)

16:10

OC9 Calcium carbonate supplementation of pregnant rural Gambian mothers alters offspring IGF-1 at age 7.5 years in a sex-dependent manner
Ann Prentice (Cambridge, UK)

16:20

OC10 Inadequate vitamin D status adversely affects trabecular bone mineral density in 14-18 year old adolescents
Taryn Smith (Guildford, Surrey)

16:30-17:00

Coffee / Moderated ePosters (Screens 1-4)

17:00-18:00

Muscle and bone

Chairs: Heike Hoyer-Kuhn (Cologne, Germany)
Franz Jakob (Würzburg, Germany)

17:00

IS6 The mechanobiology of the growing skeleton
Bettina Willie (Montreal, Canada)

17:30

IS7 A role for leptin as a myokine mediating muscle-bone interactions
Mark Hamrick (Atlanta, USA)

18:15-19:45

Satellite symposium: Hypophosphatasia in children: strengthening the foundations for managing a complex disease

Followed by free time

Programme: Monday 12 June



ALL SESSIONS IN FRANCONIA HALL UNLESS OTHERWISE INDICATED

08:00-08:45

Meet the Expert Sessions

The genetic basis of bone disorders- what every clinician needs to know

Outi Mäkitie (Helsinki, Finland)

PANORAMA ROOM 11

Bone pain: mechanisms and intervention

Jacqui Clinch (Bath, UK)

PANORAMA ROOM 12

DEXA – how, when and what

Nicola Crabtree (Birmingham, UK)

PANORAMA ROOM 13

09:00-10:30

Genetics and Epigenetics: The impact for rare bone diseases

Chairs: Stefan Mundlos (Berlin, Germany)
Leanne Ward (Ottawa, Canada)

09:00

IS8 Next generation sequencing and genome editing, game changers in the field of skeletal research

Uwe Kornak (Berlin, Germany)

09:30

IS9 Skeletal dysplasias

Melita Irving (London, UK)

10:00

IS10 Arterial calcification syndromes: causes and treatments

Frank Rutsch (Münster, Germany)

10:30-11:00

Coffee / Moderated ePosters (Screens 1-4)

11:00-11:40

Oral communications: Muscle and bone mineral density

Chairs: Agnès Linglart (Paris, France)
Keiichi Ozono (Osaka, Japan)

11:00

OC11 The effect of whole body vibration training on bone and muscle function in children with osteogenesis imperfecta and limited mobility: a randomized controlled pilot trial

Wolfgang Högler (Birmingham, UK)

11:10

OC12 Fracture incident rate and growth in a nationwide cohort of boys with Duchenne muscular dystrophy

Jarod Wong (Glasgow, UK)

11:20

OC13 *Enterococcus faecium* abundance in gut microbiome is associated with higher bone mineral density in school age children

Carolina Medina-Gomez (Rotterdam, Netherlands)

11:30

OC14 Body composition and associated biomarkers as determinants of bone mineral density in children 6-8 years of age - the Physical Activity and Nutrition in Children (PANIC) study

Sonja Soininen (Kuopio, Finland)

11:40-12:00

Poster pitching

Chairs: Agnès Linglart (Paris, France)
Keiichi Ozono (Osaka, Japan)

P004 Bone mass tracks into teenage years

Maria Rønne (Odense, Denmark)

P030 Outcomes of zoledronic acid use in paediatric conditions

Margaret Zacharin (Melbourne, Australia)

P034 Identification of bone remodelling alterations in Gorham-Stout disease

Michela Rossi (Rome, Italy)

P054 The influence of immune dysregulation on bone metabolism in children with inflammatory bowel disease: the potential for bone as a secondary lymphoid organ

Gareth Penman (Sheffield, UK)

P080 Bone age assessment using Greulich and Pyle and Tanner-Whitehouse methods: a systematic review

Khalaf Alshamrani (Sheffield, UK)

P102 Do measures of adiposity and muscle cross-sectionally predict the health of weight-bearing bones in 11-12 year old Australian children? A population-based study

Peter Simm (Melbourne, Australia)

P114 Rare copy number variants in array-based comparative genomic hybridization in early-onset skeletal fragility

Alice Costantini (Stockholm, Sweden)

Programme: Monday 12 June



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P132 Anti-RANKL treatment in a murine model of fibrous dysplasia

Biagio Palmisano (Rome, Italy)

P142 Walking within 12 months of age is related to higher whole body lean mass and bone mineral density in children at 3 years of age

Hope Weiler (Montreal, Canada)

P182 Osteonecrosis results in significant long term morbidity in patients with acute lymphoblastic leukaemia

Nadia Amin (Leeds, UK)

P202 Osteosarcoma-derived extracellular vesicles induce tumoral-like phenotypes in normal cells

Enrica Urciuoli (Rome, Italy)

12:00-13:00

Posters

Even numbers presented

13:00-14:00

Lunch

14:00-15:00

Rare bone diseases

Chairs: Maria Luisa Bianchi (Milan, Italy)
Gabriele Häusler (Vienna, Austria)

14:00

IS11 Overview: why study rare bone diseases?

Hans van Leeuwen (Rotterdam, Netherlands)

14:30

IS12 The ERNS as a tool for European research on rare diseases

Kassim Javaid (Oxford, UK)

15:00-15:30

Oral communications: Bone fragility and metabolism

Chairs: Hermann Girschick (Berlin, Germany)
Kassim Javaid (Oxford, UK)

15:00

OC15 Fractures in school age children in relation to sex, ethnic background and bone mineral density: the Generation R study

Olja Grgic (Rotterdam, Netherlands)

15:10

OC16 Pediatric hypophosphatasia – a retrospective single-center chart review of 50 children

Marius Vogt (Würzburg, Germany)

15:20

OC17 Vertebral fractures in children with chronic inflammatory and/or disabling conditions: the SNAP study

Nicola Crabtree (Birmingham, UK)

15:30-16:00

Coffee / Moderated ePosters (Screens 1-4)

16:00-17:30

Chronic disease and bone

Chairs: Alison Boyce (Bethesda, USA)
Elisabeth Steichen-Gersdorf (Innsbruck, Austria)

16:00

IS13 Osteoporosis in boys with Duchenne Muscular Dystrophy: morbidity, mechanisms and the path forward

Leanne Ward (Ottawa, Canada)

16:30

IS14 Bone, body composition and metabolic abnormalities after allogeneic hematopoietic stem cell transplantation during childhood

Sogol Mostoufi-Moab (Philadelphia, USA)

17:00

IS15 An integrated approach to kidney bone disease across the spectrum

Craig B Langman (Chicago, USA)

17:30-18:30

Workshop: Novel perspectives in two rare bone disorders

20:00-23:00

Conference Dinner

BÜRGERSPITAL RESTAURANT AND WEINSTUBEN



*Tweeting about
the meeting?*

Please use hashtag
#iccbh2017

Programme: Tuesday 13 June



ALL SESSIONS IN FRANCONIA HALL UNLESS OTHERWISE INDICATED

08:00-08:45

Meet the Expert Sessions

Recurrent fractures in childhood – causes, investigations and management

Nick Bishop (Sheffield, UK)

PANORAMA ROOM 11

From bench to bedside: Looking at the use of HR CT and QCT in a diagnostic setting

Kate Ward (Southampton, UK)

PANORAMA ROOM 12

Managing hypercalcemia in neonates/infants

Agnès Linglart (Paris, France)

PANORAMA ROOM 13

09:00-10:00

Nutrition and bone health

Chairs: Mairead Kiely (Cork, Ireland)
Kate Ward (Southampton, UK)

09:00

IS16 Body composition and physical activity

Bonny Specker (South Dakota, USA)

09:30

IS17 Factors influencing peak bone mass

Nick Harvey (Southampton, UK)

10:10-11:00

Oral Communications: Miscellaneous

Chairs: Marius Kraenzlin (Basel, Switzerland)
Frank Rutsch (Münster, Germany)

10:10

OC18 Stimulation of angiogenesis and osteogenesis by enhanced preosteoclast platelet derived growth factor type BB attenuates glucocorticoid-induced osteoporosis in growing mice

Janet Crane (Baltimore, USA)

10:20

OC19 Mesenchymal stromal stem cells in pediatric orthopedic oncology, focus on osteosarcoma

Valérie Trichet (Nantes, France)

10:30

OC20 Autoimmune hyperphosphatemic tumoral calcinosis

Mary Scott Ramnitz (Bethesda, USA)

10:40

OC21 Scoliosis in fibrous dysplasia/McCune-Albright syndrome

Alison Boyce (Bethesda, USA)

10:50

OC22 Type I collagen C-propeptide cleavage deficiency increases bone mineralization and alters bone cell differentiation

Joan Marini (Bethesda, USA)

11:00-11:30

Coffee

CONCURRENT SESSIONS

11:30-12:30

Signalling pathways and their significance for bone health and disease

Chairs: Franz Jakob (Würzburg, Germany)
Craig B Langman (Chicago, USA)

11:30

IS18 Phosphate and FGF23 signalling

Justine Bacchetta (Lyons, France)

11:50

IS19 Signalling pathways and their significance for bone health and disease. PTH/cAMP/PKA

Anya Rothenbuhler (Paris, France)

12:10

IS20 Canonical Wnt signaling in bone health and disease

Wim Van Hul (Antwerp, Belgium)

11:30-12:30

Allied health professionals session

PANORAMA ROOM 12

Chairs: Nicola Crabtree (Birmingham, UK)
Kate Ward (Southampton, UK)

11:30

P097 Evaluation of the use of body quantitative computed tomography for the assessment of the tibia in children with neurofibromatosis 1

Alex Ireland (Manchester, UK)

11:37

P020 Age at onset of walking affects bone mineral content in early childhood

Sarah Valkama (Helsinki, Finland)

11:44

P007 Effects of a 8-month physical activity and nutrition-induced weight loss program on bone health of obese adolescents

Elodie Chaplais (Aubiere, France)

Programme: Tuesday 13 June



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11:51

P101 Establishing the clinical need for a dedicated service for children and adolescents with osteogenesis imperfecta in the Republic of Ireland

Ciara McDonnell (Dublin, Ireland)

11:58

P204 Is a modified version of the Childhood Health Assessment Questionnaire (CHAQ) a useful tool to identify the level of disability in children with osteogenesis imperfecta?

Suzanne Ball (Birmingham, UK)

12:05

P208 Social barriers and needs of children with osteogenesis imperfecta (OI): a qualitative descriptive interview-based study

Jerzy Konstantynowicz (Bialystok, Poland)

12:12

Conference review and future plans for Allied Health Professionals

12:30-13:10

Lunch

13:10-14:10

Treating children's bones: present and future

Chairs: Coen Netelenbos (Amsterdam, Netherlands)
Frank Rauch (Montreal, Canada)

13:10

IS21 BOOSTB4: Boost Brittle Bones Before Birth A clinical trial on pre- and/or postnatal stem cell transplantation for treatment of osteogenesis imperfecta

Cecilia Götherström (Huddinge, Sweden)

13:40

IS22 Role of microRNAs in the development of osteosarcoma

Eric Hesse (Hamburg, Germany)

14:15-15:05

Oral Communications: Hot topics

Chairs: Wolfgang Högler (Birmingham, UK)
Margaret Zacharin (Melbourne, Australia)

14:15

OC23 Sustained radiographic and functional improvements with asfotase alfa treatment from up to 7 years in children with hypophosphatasia

Scott Moseley (Lexington, USA)

14:25

OC24 KRN23 effects on phosphate and vitamin D dysregulation in children <5 years old with x-linked hypophosphatemia (XLH)

Erik Imel (Indianapolis, USA)

14:35

OC25 Biochemical and physical function outcomes after 5 years of treatment with asfotase alfa in adolescents and adults with hypophosphatasia: phase 2 study results

Andrew Denker (Lexington, USA)

14:45

OC26 A randomized, open-label phase 2 study of KRN23, an investigational fully human anti-FGF23 monoclonal antibody, in children with x-linked hypophosphatemia (XLH)

Raja Padidela (Manchester, UK)

14:55

LB1 Treatment with a novel activin receptor IIB ligand trap improves muscle mass and bone geometry in a mouse model of severe osteogenesis imperfecta

Josephine Tauer (Montreal, Canada)

15:10-15:25

Presentation of awards

15:25-15:30

Close and final remarks