

## Fourth ESPE Advanced Seminar in Developmental Endocrinology

### Developmental Biology and Disorders of Cartilage and Bone

30<sup>th</sup> June - 1<sup>st</sup> July, 2010

Venue: Astrid Lindgren Children's Hospital, 1<sup>st</sup> floor, Skandiasalen  
Stockholm, Sweden

Co-chairs

Cecilia Camacho-Hübner, Ola Nilsson and Lars Sävendahl

### Programme

Day 1: June 30

#### Session I

12.30 am-2.00 pm

Registration and lunch sandwich

2.00 pm – 4:00 pm **Cartilage Development and Differentiation**

Moderators: Lars Sävendahl (KI) and Andrea Vortkamp (Univ Duisburg-Essen)

Chondrocyte proliferation and differentiation

Andrea Vortkamp (University of Duisburg-Essen, Germany)

25'+5'

Local regulation of growth plate cartilage

Ola Nilsson (Karolinska Institutet)

25'+5'

Roles of the PTH/PTHrP receptor in growth plate fusion

Andrei Chagin (Karolinska Institutet)

25'+5'

1 participant presentation (10+5 min)

Vitamin D pathway and the PTHrP-IHH loop during postnatal growth

Marianna Tryfonidou

10'+5'

4:00 pm- 4:30 pm

Tea and Coffee Break

## Session II

4.30 pm – 6:15 pm **Signalling Interactions and Pathogenesis**

Moderators: Cecilia Camacho-Hübner (KI) and Dov Tiosano (Haifa)

An overview on hypophosphatemic rickets and the FGF-23-klotho axis.

Dov Tiosano (Haifa - Technion)

25' +5'

Molecular defects causing skeletal dysplasias

Lars Hagenäs (Karolinska Institutet)

25' +5'

Lessons from patients with de novo mutations affecting longitudinal bone growth

Jan-Maarten Wit (LUMC Leiden, the Netherlands)

25' +5'

**2 participant presentations (15 min each)**

Brachydactyly due to low Gs $\alpha$ -activity

Ulrich Paetow

10' +5'

Brachydactyly in Pseudohypoparathyroidism associated to genetic and epigenetic defects at GNAS locus

Luisa de Sanctis

10' +5'

**8.00 pm Dinner**

## Day II – July 1

### Session III

9.00 am - 10.30 am **Endocrinology of Linear Growth**

Moderators: Jan-Maarten Wit (LUMC Leiden, The Netherlands) and Ola Nilsson (KI)

Endocrine regulation of longitudinal bone growth

Cecilia Camacho- Hübner (Karolinska Institutet)

25' +5'

Estrogen signalling in growth plate cartilage

Lars Sävendahl (Karolinska Institutet)

25' +5'

Growth plate senescence and catch-up growth

Jeff Baron (NIH, Bethesda, USA)

25' +5'

**10:30 am- 11:00 am**

**Tea and Coffee Break**

**11:00 am - 12.00 am Methodology Section**

**Moderators: Marcel Karperien (Univ of Twente, The Netherlands) and Dionisos Chrysis (Patras Univ, Greece)**

- **Growth plate *in vitro* models, Dionisos Chrysis (Patras Univ)** 15'+5'
- **Microdissection and gene expression, Anenisia Andrade (Karolinska Institutet)** 15'+5'
- **Human foetal epiphyseal chondrocytes: Developmental and clinical applications, Laura Audi** 15'+5'

**12.00 pm - 12:30 pm; 2 participant presentations (15 min each)**

**IGF expression patterns and regulation in growth plate chondrocytes**  
**Daniel Halbauer** 10' + 5'

**Ihh-PTHrP feed-back loop in the postnatal growth plate**  
**Michael Chau** 10' + 5'

**Lunch 12:30 pm - 2 pm**

**Session IV**

**2:00 pm – 3:30 pm New Frontiers for OI**

**Moderators: Laura Audi (Univ of Barcelona, Spain) and Jeffrey Baron (NIH, USA)**

**Stem cells for bone and other mesenchymal tissues**  
**Paolo Bianco, La Sapienza, Rome** 25'+5'

**Allele-specific gene silencing in osteogenesis imperfecta**  
**Östen Ljunggren, Uppsala University, Sweden** 25'+5'

**2 participant presentations (15 min each)**

**Bone health in IBD children**  
**Saila Laakso** 10'+5'

**The Role of Estrogen Receptor- $\alpha$  in Growth Plate Cartilage for Longitudinal Bone Growth**  
**Anna Börjesson** 10' + 5'

**3:30 pm – 4:00 pm**

**Tea and Coffee Break**

4:00 pm – 5:20 pm **New Directions**

Moderators: Paolo Bianchi ( La Sapienza, Rome) and Ola Nilsson (KI)

**Cartilage tissue engineering**

Marcel Karperien (Univ of Twente, The Netherlands)

25'+5'

**3 participant presentations (15 min each)**

**Long-term clinical outcome in hypophosphatemia caused by DMP1 mutation**

Saila Laakso

10'+5'

**BMD in hypophosphatemic rickets**

Signe Beck-Nielsen

10'+5'

**Growth in XLH rickets: Effects of therapy**

Anke Pyper

10'+5'

**Closing remarks: Ola Nilsson (KI) and Lars Sävendahl (KI)**

5'