AIMM 2020 Program

Session 1. Parathyroid Disorders (Clinical)
Chair: Michael Mannstadt

 Speakers
Bart Clarke (Mayo Clinic): “Hypoparathyroidism - to treat or not to treat with PTH”

Learning objectives
1. Understand disease manifestations of deficient PTH signaling
2. Understand treatment approaches for Jansen’s metaphyseal chondrodysplasia
3. Appreciate the complex decision making that governs treating patients with PTH

Session 2. Fracture repair, a model of regeneration: evolving concepts (Basic-Translational)
Chair: Dan Bikle (UCSF)

 Speakers
Regis O’Keefe (Washington University): “Prostaglandin regulation of periosteal cell differentiation” (Tentative title)

Learning objectives
1. Explain molecular mechanisms that result in chondrocyte transformation to osteoblasts
2. Understand sources of bone forming cells in bone healing
3. Appreciate the many signals that intersect to regulate bone formation in bone healing

Session 3. “Cutting Edge Genetics in Diagnosis and Treatment of Musculoskeletal Disease” (Clinical)
Chair: Suzanne Jan de Beur (Johns Hopkins)

 Speakers
Ingrid Holm, MD, MPH (Boston Children’s Hospital): “Application of New Genetic Technologies in the Clinic”
Julie Hoover Fong, MD, PhD, (Johns Hopkins): “The Latest in Skeletal Dysplasias: Genetics, Phenotyping and Treatment”

Learning objectives
1. Describe real-world examples of using next generation sequencing to diagnosis skeletal dysplasias
2. Understand on genetic diagnoses can guide treatment approaches
3. Understand limitations to using advanced genetic techniques for skeletal dysplasia diagnosis
Session 4. Novel therapies to target the bone marrow niche in cancer (Translational-Clinical)

Chair: Melissa Kacena (IU)

Speakers
Teresita Bellido (IU): “Osteocytes and the bone/bone marrow niche of cancer in bone”
Joy Wu (Stanford): “PTH actions in the breast cancer bone metastatic niche”

Learning objectives
1. Understand the action of PTH on the metastatic niche
2. Understand the role of osteocytes on the cancer in bone niche
3. Appreciate the complex interactions between bone marrow cells and cancer development and progression

Session 5. PTH Action in bone: ‘back to the future’ (Basic)

Chair – Larry Suva

Speakers
Renee St. Arnaud (McGill University and Shriners Hospital): “The NACA transcriptional coregulator is an effector of PTH anabolism”
Marc Wein (Harvard University): “Salt inducible kinases dictate Pth1r action in bone and mineral metabolism”

Learning objectives
1. Understand the basis of PTH action
2. Understand signal pathways downstream of the PTH Receptor(s)
3. Appreciate the extent to which PTH and related molecules can impact bone biology

Session 6. Neuropsychiatric disorders and medications: Impact on bone (Translational-Clinical)

Chair: Tamara King

Madhu Misra (Harvard Medical School): “Impact of autism spectrum disorder and anorexia nervosa on bone in adolescents and young adults”
Karen Houseknecht, (University of New England): “Bone as a target of psychiatric medications: Pharmacology underlying efficacy and adverse effects”

Learning Objectives
1. Understand how classically neurological conditions impact bone health
2. Explore the use of neuropsychiatric drugs on bone modeling and remodeling
3. Appreciate the intersections between neural system and the skeleton