



2025 ORS Musculoskeletal Biology Workshop
51st International Musculoskeletal Biology Workshop
Zermatt, Utah | July 19 – 24, 2025

**Back to Basics: Bone Remodeling, Skeletal Cell Stimulation, and
Mechanisms of MSK Disease Prevention**

Saturday, July 19, 2025

3:00 PM – 5:30 PM Registration

7:00 PM – 10:00 PM Networking Reception – 51st Anniversary Celebration

Sunday, July 20, 2025

7:00 AM – 8:00 AM Breakfast

8:00 AM – 8:10 AM Welcome from the Workshop Co-Directors

Teresita Bellido, PhD (University of Arkansas for Medical Sciences UAMS) and Alex Robling PhD, (Indiana University IU)

8:10 AM – 9:10 AM Session: RIB Award and Lecture, Chronic Diseases and Musculoskeletal Dysfunction, Henry Donahue, PhD (Virginia Commonwealth University)

9:15 AM – 9:50 AM Blue Ribbon Posters, Chair: Teresita Bellido, PhD (UAMS)

9:50 AM – 10:00 AM Break

10:00 AM – 12:00 PM Session: Incretins and Bone. Chair: Elena Ambrogini, PhD (University of Arkansas for Medical Sciences-UAMS and Little Rock VA Medical Center)

- Introduction and goals of the session, Elena Ambrogini, PhD
- Role of Incretins in the Treatment of Obesity and Diabetes, Lisa Morselli, MD, PhD (Medical College of Wisconsin and Milwaukee VA Medical Center)
- Incretins and Bone in Pre-Clinical Models, Guillaume Mabileau, PhD (University of Angers, France)
- Incretins and Bone in Humans. What Do We Know? Elena Ambrogini, PhD
- Conclusions/Wrap-up, Elena Ambrogini, PhD

2:00 PM – 4:00 PM Recreation

4:00 PM – 7:00 PM Dinner

7:00 PM – 10:00 PM Poster Session and Poster Reception

Monday, July 21, 2025

7:00 AM – 8:00 AM Breakfast



8:00 AM – 9:00 AM ASBMR/Harold M. Frost Young Investigator Award Presentations. Chair: Teresita Bellido, PhD (UAMS)

9:00 AM – 9:15 AM Break

9:15 AM – 12:00 PM Session: Bone Modeling and Remodeling Revisited. Chair: Thomas LG Andersen, MSc, PhD (University of Southern Denmark, Aarhus University, Odense University Hospital, Denmark)

- Introduction, Thomas LG Andersen, MSc, PhD
- New Perspective on Cellular Organization and Regulation of Bone Remodeling, Thomas LG Andersen, MSc, PhD
- Novel Insights into Bone Remodeling Dynamics through Four-Dimensional Imaging of the Rabbit Model. David ML Cooper, BA (University of Saskatchewan, Saskatoon, Saskatchewan, Canada)
- To Model or Remodel: That is the Question! David W. Dempster, PhD (Vagelos College of Physicians and Surgeons of Columbia University, New York)
- Conclusions/Wrap-up, Thomas LG Andersen, MSc, PhD

12:00 PM – 1:00 PM Lunch

1:00 PM – 2:30 PM Career Development Session: How to Find a Post-Doctoral Position: From Academic, National Laboratory, and Industry Perspectives? Joel Boerckel, PhD (UPenn) and Gabriela Loots, PhD (UCDavis), Co-chairs

2:30 PM – 4:00 PM Recreation

4:00 PM – 7:00 PM Dinner

7:15 PM – 9:30 PM Session: Osteocytes, Chair: Marc Wein, MD, PhD (Massachusetts General Hospital and Harvard Med School)

- Introduction, Marc Wein, MD, PhD
- Targeting Sclerostin and DKK1 for Developing Treatments for Bone Diseases, David Ke, MD (Angitia Biopharmaceuticals)
- Osteocyte Dendrite Development and Function, Marc Wein, MD, PhD
- Sex-Specific Effects of Muscle-Derived Factors on Osteocytes, Lynda Bonewald, PhD (Indiana University)
- Conclusions/Wrap-Up/Future Studies, Marc Wein, MD, PhD

Tuesday, July 22, 2025

7:00 AM – 8:00 AM Breakfast

8:00 AM – 9:00 AM ASBMR/Harold M. Frost Young Investigator Award Presentations, Chair: Alexander Robling, PhD (IU)

9:00 AM – 9:10 AM Break



9:10 AM – 12:00 PM Session: Mechanobiology, Chair: Yingzi Yang, PhD (Harvard School of Dental Medicine)

- Introduction, Yingzi Yang, PhD
- Bone Anabolic Effects of Combined Mechanical Loading and Wnt Targeting, Matt Silva, PhD (Washington University)
- Osteocytic Connexin Hemichannels in Mechanotransduction and Osteogenesis, Jean Jiang, PhD (UT-HSC San Antonio)
- Piezo1-Mediated Mechanotransduction Controls Osteocyte Maturation and Dendrite Development, Yingzi Yang, PhD
- Conclusions/Wrap-Up, Yingzi Yang, PhD

12:00 PM – 1:00 PM Lunch

1:00 PM – 2:30 PM Career Development Session by and to Early/Mid-career Investigators: Title TBA, Natalia Harasymowicz, PhD (XXX) and TBA (XXX), Co-chairs

2:30 PM – 4:00 PM Recreation

6:00 PM – 8:00 PM Awards and Recognition Banquet

Wednesday, July 23, 2025

7:00 AM – 8:00 AM Breakfast

8:00 AM – 9:00 AM ASBMR/Harold M. Frost Young Investigator Award Presentations, Chair: Teresita Bellido, PhD (UAMS)

9:00 AM – 9:10 AM Break

9:15 AM – 12:00 PM Session: Osteomyelitis, Chair: Deb Veis, MD, PhD (Washington University, St Louis, US)

- Introduction, Deb Veis, MD, PhD
- Osteoclasts and Osteomyelitis, Deb Veis, MD, PhD
- Using Humanized Mice to Study S. Aureus Mediated Osteomyelitis, Gowrishankar Muthukrishnan, PhD (University of Rochester, NY)
- Biofilms in Osteomyelitis, Ebru Oral, PhD (MGH)
- Conclusions/Wrap up, Deb Veis, MD, PhD

12:00 PM – 1:00 PM Lunch

1:00 PM – 7:00 PM Recreation and Dinner

7:15 PM – 9:30 PM Session: Pain in Osteoarthritis. Chair: Gabriela Loots, PhD (University of California-Davis)

- Introduction, Gabriela Loots, PhD
- Title TBA, Rachel Miller, PhD (Rush University Medical Center, Chicago)



- Ion Channels as Gatekeepers of Pain and Pathology in Osteoarthritis, Chuan-Ju Liu, PhD (Yale University School of Medicine)
- MSK-Neuro Crosstalk in Osteoarthritis, Gabriela Loots, PhD
- Conclusions/Wrap-up, Gabriela Loots, PhD

Thursday, July 24, 2025; Departures; TB 4-9-2025