



# AIMM/ASBMR John Haddad Young Investigator Meeting April 7-11, 2025 Snowmass, Colorado

Welcome to our 39<sup>th</sup> annual meeting for Advances in Mineral Metabolism! The purpose of this conference is to bring scientists and clinicians together in a format of open verbal communication that permits the translation of basic science advances into clinical concepts. Physicians and scientists working in the field of bone and mineral metabolism are encouraged to participate.

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the Minnesota Medical Association and Advances in Mineral Metabolism. The Minnesota Medical Association (MMA) is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

The Minnesota Medical Association designates this activity for a maximum of 9 AMA PRA Category 1  $Credit(s)^{TM}$ . Physicians should claim only the credit commensurate with the extent of their participation in the activity.

# The 2025 AIMM Meeting is supported in part by educational grants from the following sponsors















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# 2025 Young Investigator Awardees

### **AIMM Young Investigator**



**Haydee Torres** Mayo Clinic

# Charles H. Turner **Young Investigator**



**Mariana Moraes** Indiana University

### **ASBMR John Haddad Young Investigators**



Mingxin Ashby John Hopkins University



**Birol Ay** MGM/Harvard



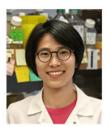
**Muriel Babey UCal-San Francisco** 



Jessica De Angelis Columbia University



Giulia Furesi Washington Univ-St Louis Weill Cornell Medicine



Lingling Hu



**Albert Kim** Garvan Institute



Hui Jean Kok Indiana University



**Tian Liang** U Michigan, Dentistry



**Courtney Mazur** MGH/Harvard



Garyfallia Papaioannou MGH/Harvard

# **2025 Advances in Mineral Metabolism ASBMR John Haddad Young Investigator Meeting**

April 7-11, 2025

All events are in the main floor conference area at Stonebridge Inn, Snowmass, CO Listed times are Mountain Time (MT)

#### Monday, April 7, 2025

2:00pm	Registration opens (Stonebridge Inn)	
4:30 – 4:45pm	Welcome	Michael Mannstadt, MD (AIMM President)
Session 1	Advancing Care for Fibrous Dysplasia: Innovations and Insights	Chair Dan Perrien, PhD (Emory) Co-Chair Murat Bastepe, MD/PhD (Harvard)
4:45 – 5:30pm	Fibrous dysplasia/McCune-Albright Syndrome: Natural history, treatment, and insights into mineral metabolism	Alison Boyce, MD (NIDCR, NIH)
5:30 – 6:15pm	Pain in fibrous dysplasia/McCune-Albright Syndrome	Jaymin Upadhyay, PhD (Boston Children's Hospital)
6:15 – 6:30pm	Break	
6:30 – 7:00pm	Mapping somatosensory afferent circuitry to bone identifies neurotrophic signals required for fracture healing	Mingxin Ashby, PhD, 2025 John Haddad YI (John Hopkins University)
7:00 – 7:15pm	Open discussion & overview	
8:00 – 9:30pm	Welcome Reception (meeting registrants only)	

### Tuesday, April 8, 2025

Breakfast (must present breakfast voucher)		
Frontiers in CaSR Research: Emerging Discoveries and Innovations	Chair John Wysolmerski, MD/PhD (Yale) Co-Chair Diana Athonvarangkul, MD/PhD (Yale)	
Regulation of tonic PTH secretion by CaSR/ GABBR1 heterodimer in hyperparathyroidism	Wenhan Chang, PhD (University of California-San Francisco)	
Structure-docking synergy for ligand discovery	Fangyu Liu, PhD	
Break	(University of California-San Francisco)	
Crosstalk between hormonal and mechanical signals in osteocytes	Garyfallia Papaioannou, MD/PhD, 2025 John Haddad YI, (MGH/Harvard)	
Open discussion & overview		
Group Photo		
Mid-day consultations between young and established investigators (optional)		
Meet The Professor: Society Leadership Panel	Jen Westendorf, Rene St Arnaud, Kurt Hankenson, Suzanne Jan de Beur	
	Frontiers in CaSR Research: Emerging Discoveries and Innovations  Regulation of tonic PTH secretion by CaSR/ GABBR1 heterodimer in hyperparathyroidism  Structure-docking synergy for ligand discovery  Break  Crosstalk between hormonal and mechanical signals in osteocytes  Open discussion & overview  Group Photo  Mid-day consultations between young and established investigators (optional)	

Session 3	John Haddad Young Investigators	Chair Courtney Karner, PhD (UTSW) Co-Chair Ryan Tomlinson, PhD (Thomas Jefferson University)	
4:30 – 5:00pm	Lysophosphatidic acid (LPA) and 1,25-dihydroxy Vitamin D coordinate skeletal synthesis of fibroblast growth factor-23 via MAPK and IL12a	Birol Ay, PhD, 2025 John Haddad YI (MGH/Harvard)	
5:00 – 5:30pm	Bone as a sensor and acute responder to inflammation through rapid secretion of Lipocalin-2	Jessica DeAngelis, PhD, 2025 John Haddad YI (Columbia University)	
5:30 – 6:00pm	Eccentric muscle contraction increases trabecular and cortical bone volume in aged mice	Hui Jean Kok, PhD, 2025 John Haddad YI (Indiana University)	
6:00 – 6:15pm	Break		
6:15 – 6:45pm	Dentin sialoprotein, dentin phosphoprotein, and chondroitin sulfate synergistically modulate peritubular dentin mineralization	Tian Liang, PhD, 2025 John Haddad YI (University of Michigan)	
6:45 – 7:15pm	Trafficking and translation of mRNA in osteocyte dendrites	Courtney Mazur, PhD, 2025 John Haddad YI (MGH/Harvard)	
8:00 – 10:00pm	Welcome Dinner (registrants & guests)		

# Wednesday, April 9, 2025

6:15 – 7:00am	Breakfast (must present breakfast voucher)			
Session 4	Progress & Innovation in Hypoparathyroidism Therapy	Chair	Ryan Tomlinson, PhD (Thomas Jefferson University)	
	.,	Co-Chair	Tom Ambrosi, PhD (UC-Davis)	
7:00 – 7:45am	Calcilytic therapy for ADH1 and post-surgical hypoparathyroidism	Kelly Laut	Kelly Lauter Roszko, MD (NIH)	
7:45 – 8:30am	Breakthroughs in PTH analogs	Michael M	Michael Mannstadt, MD (MGH/Harvard)	
8:30 – 8:45am	Break			
8:45 – 9:15am	CCN3, A novel hypothalamic hormone for sustaining the maternal skeleton and progeny	Muriel Babey, MD, 2025 John Haddad YI (Univ California-San Francisco)		
11:00 – 1:00pm	Ski Race (optional), Spider Sabich Race Arena	Suva, Hankenson, Athonvarangkul, Perrien		
noon – 1:30pm	Mid-day consultations between young and established investigators (optional)			
3:00 – 4:00pm	Meet The Professor: Industry Panel	Beate Lan	ske, Roz Puleo, Scott Adler	
Session 5	Unlocking Tendon Regeneration Through Stem Cell Science	Chair Co-Chair	Alex Lambi, MD, PhD (New Mexico) Connor Dolan, PhD (Arizona State)	
4:30 – 5:15pm	Building a molecular roadmap of regenerative tendon healing	Jenna Gal	lloway, PhD (Harvard)	
5:15 – 6:00pm	Hedgehog signaling as a master regulator of enthesis fibrocartilage mineralization	Nathaniel	Dyment, PhD (UPenn)	
6:00 – 6:15pm	Break			
6:15 – 6:45pm	Identification of the tendon/ligament stem cell in mice and human	Lingling Hu, PhD, 2025 John Haddad YI (Weill Cornell Medicine)		
6:45 – 7:15pm	Stat3 persistent activation in osteoblasts leads to high bone mass in mice		loreas, PhD candidate, 2025 Charles (Indiana University)	

# Thursday, April 10, 2025

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6:15 – 7:00am	Breakfast (must present breakfast voucher)	
Session 6	Oncology Meets Osteology: Advances in Cancer & Bone Research	Chair Gabe Pagnotti, PhD (MD Anderson) Co-Chair Shreya Venkatesh (CU-Boulder)
7:00 – 7:45am	Immunotherapy checkpoint signaling in bone metastatic niche regulates skeletal health and cancer outcomes	Rachelle Johnson, PhD (Vanderbilt)
7:45 – 8:30am	Pathological bone formation in cancer and vascular disease	Masayuki Tsukasaki, DDS/PhD (Showa University, Tokyo)
8:30 – 8:45am	Break	
8:45 – 9:15am	Bone-marrow derived Osterix+ cells drive breast cancer progression	Giulia Furesi, PhD, 2025 John Haddad YI (Washington University, St. Louis)
9:15 – 9:45am	Role of PHLPP phosphatases in sensory neuron joint innervation during OA progression in vivo	Haydee Torres, PhD, 2025 AIMM YI (Mayo Clinic)
noon – 1:30pm	Mid-day consultations between young and established investigators (optional)	
1:00 – 2:00pm	AIMM Board Meeting	Michael Mannstadt (AIMM President)
3:00 – 4:00pm	Meet The Professor: Osteoarthritis	Jen Westendorf, PhD (Mayo)
4:00 – 5:00pm	AIMM business meeting & election of new officers (all registrants invited)	Michael Mannstadt (AIMM President)
Session 7	Late-Breaking Topics: Clinical & Basic Science	Chair Gabe Pagnotti, PhD (MD Anderson) Co-Chair Shirley Wang, PhD (UTSW)
5:00 – 5:30pm	Prevention of rebound bone loss following withdrawal of RANKL inhibition	Albert Kim, PhD, 2025 John Haddad YI (Garvan Institute, Darlinghurst, Australia)
5:30 – 5:45pm	The inhibitory role of the bone-lineage transcription factor SP7 in osteosarcoma	Shirley Wang, PhD (UTSW)
5:45 – 6:00pm	Break	
6:00 – 6:15pm	A sheep model of progressive pseudorheumatoid arthropathy of childhood (PPAC)	Larry Suva, PhD (Texas A&M)
6:15 – 6:30pm	A modified type II activin receptor ligand trap as a novel treatment for osteogenesis imperfecta	Hitoshi Tanigawa (UConn)
6:30 – 6:45pm	A case of x-linked hypophosphatemic rickets that wasn't: A case of achondroplasia without short stature	Robert Gensure, MD/PhD (Dartmouth)
6:45 – 7:00pm	TBD	TBD
8:00 – 10:00pm	Awards Dinner (registrants & guests)	

### Friday, April 11, 2025

6:15 – 7:00am	Breakfast (must present breakfast voucher)		
Session 8	Intersection of Sickle Cell Disease and Bone Biology	Chair Rob Gensure, MD/PhD (Dartmouth) Co-Chair Abhishek Chandra, PhD (Mayo)	
7:00 – 7:45am	Potential treatment for sickle cell bone loss in Sickle Cell Disease mice	Liping Xiao, MD (UConn)	
7:45 – 8:30am	Engineering hope: The promise of gene therapy for Sickle Cell Disease	Nowah Afangbedji, PhD (Stanford)	
8:30 – 9:15am	Discussion & Overview		
noon – 1:30pm	Mid-day consultations between young and established investigators (optional)		
Session 9	Late-Breaking Topics: Basic & Translational Science	Chair Michaela Reagan, PhD (Maine Hlth) Co-Chair Brya Matthews, PhD (UConn)	
4:30 – 4:45pm	Genome-wide screen reveals protein translation and GAPDH as regulators of phosphate transporter SLC20A1/PiT1 and cellular phosphate sensing	Christoph Zechner, MD/PhD (UTSW)	
4:45 – 5:00pm	BMP-induced X chromosome inactivation regulates mesenchymal cell fate towards chondrogenic lineage during craniofacial and limb development in both sexes	Yuji Mishina, PhD (Michigan)	
5:00 – 5:15pm	Characterizing the biochemical responses that upset bone homeostasis in the metastatic vicious cycle	Shreya Venkatesh (Univ Colorado-Boulder)	
5:15 – 5:30pm	Characterizing and targeting acute senescence- related changes to prevent chronic bone loss	Abhishek Chandra, PhD (Mayo)	
5:30 – 5:45m	TBD	TBD	
5:45 – 6:15pm	TBD	TBD	
6:15 – 6:30pm	Final remarks & adjourn	Melissa Kacena, PhD (in-coming President)	

Next AIMM Meeting will be April 06-10, 2026