



**Penn Center for Musculoskeletal Disorders (PCMD) sponsored
Orthopaedic Research Club Seminar**

Orthopaedic Research Club Seminar Series - 2020

Wednesday, December 2, 2020, 12:00pm – 1:00pm, Virtual Meeting

Title: “Regulatory mechanisms in load-induced osteogenesis”

Alesha Castillo, Ph.D., Assistant Professor of Biomedical Engineering and Orthopaedic Surgery, New York University

Wednesday, October 28, 2020, 12:00pm – 1:00pm, Virtual Meeting

Title: “Imaging-based experiments and modeling for bone-implant biomechanics”

Jing Du, Ph.D., Assistant Professor of Mechanical Engineering, Penn State University

Wednesday, September 23, 2020, 12:00pm – 1:00pm, Virtual Meeting

Title: “NF- κ B dysregulation in skeletal stem cells prevents resolution of inflammation during diabetic fracture healing”

Trainee: Kang Ko (Dana Grave)

Wednesday, August 26, 2020, 12:00pm – 1:00pm, Virtual Meeting

Title: “The function of mTORC1 signaling in postnatal tendon development and healing”

Kyu Sang Joeng, Ph.D., Assistant Professor of Orthopaedic Surgery, Perelman School of Medicine, University of Pennsylvania

Thursday, June 25, 2020, 10:00am – 11:00am, Virtual Meeting

Title: “Bone Sarcomas: Kids, Dogs, and the Future”

Kristy Weber, M.D., Abramson Family Professor in Sarcoma Care Excellence, Professor of Orthopaedic Surgery, Perelman School of Medicine, University of Pennsylvania

Wednesday, May 27, 2020, 1:00pm – 2:00pm, Virtual Meeting

Title: “Nuclear Mechanobiology for Musculoskeletal Repair”

Su Chin Heo, Ph.D., Assistant Professor of Orthopaedic Surgery, Perelman School of Medicine, University of Pennsylvania

Wednesday, April 22, 2020, 11:00am – 12:00pm, Virtual Meeting

Title: “Regulation of tendon regeneration”

Alice Huang, Ph.D., Associate Professor, Departments of Orthopaedics, Cell, Developmental, and Regenerative Biology, Icahn School of Medicine at Mount Sinai

~~Wednesday, March 25, 2020, 4:00pm – 5:00pm, BRB252~~ **Cancelled due to Coronavirus**

Title: “The function of mTORC1 signaling in postnatal tendon development and healing”

Kyu Sang Joeng, Ph.D., Assistant Professor of Orthopaedic Surgery, University of Pennsylvania

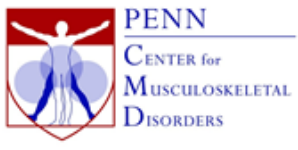
Wednesday, February 26, 2020, 4:00pm – 5:00pm, BRB252

Title: “Role of Sonic Hedgehog Signaling in the Regulation of Intervertebral Disc Growth and Differentiation”

Chitra Dahia, Ph.D., Assistant Professor of Cell and Developmental Biology, Weill Cornell Medicine; Director of Spine Development and Regeneration Lab, Hospital for Special Surgery

Wednesday, January 29, 2020, 4:00pm – 5:00pm, BRB252

Title: “Heterotopic ossification and FOP: How does one tissue become another?”



Eileen Shore, Ph.D., Cali/Weldon Professor, Departments of Orthopaedic Surgery and Genetics, University of Pennsylvania

Orthopaedic Research Club Seminar Series - 2019

Wednesday, December 11, 2019, 4:00pm – 5:00pm, BRB252

Title: “Functional Regeneration of Craniofacial Bone and Skeletal Muscle”

Warren Grayson, Ph.D., Associate Professor of Biomedical Engineering, Translational Tissue Engineering Center, Johns Hopkins University

Wednesday, October 30, 2019, 4:00pm – 5:00pm, CHOP ARC124

Title: “Maintenance of growth plate and articular chondrocyte phenotype by SOX9”

Ranjan Kc, Student, Division of Orthopaedic Surgery, CHOP

Title: “Sustained IKK β activation in postnatal chondrocytes accelerates the onset of age-associated murine osteoarthritis”

Sarah Catheline, Student, Division of Orthopaedic Surgery, CHOP

Wednesday, September 25, 2019, 4:00pm – 5:00pm, CHOP ARC124

Title: “New Approaches to Therapeutic Discovery & Delivery”

George Dodge, Ph.D., Associate Professor of Orthopaedic Surgery and Otorhinolaryngology, University of Pennsylvania, Director of Translational Musculoskeletal Research Center, Philadelphia Crescenz VA Medical Center

Wednesday, August 28, 2019, 4:00pm – 5:00pm, CHOP ARC124

Title: “Loads and signaling for cartilage regeneration”

Riccardo Gottardi, Ph.D., Assistant Professor of Bioengineering and Biomaterials Laboratory, CHOP

Wednesday, July 31, 2019, 4:00pm – 5:00pm, CHOP ARC124

Title: “Growth and remodeling of musculoskeletal interfaces”

Megan Killian, Ph.D., Assistant Professor of Biomedical Engineering, University of Delaware

Wednesday, May 29, 2019, 4:00pm – 5:00pm, CHOP ARC124

Title: “Applied biomechanics to improve treatment options for Achilles tendon ruptures”

Josh Baxter, Ph.D., Assistant Professor of Orthopaedic Surgery, Director of Human Motion Lab, Perelman School of Medicine, University of Pennsylvania

Wednesday, April 24, 2019, 4:00pm – 5:00pm, CHOP ARC124

Title: “Growth factor and metabolic regulation of bone formation”

Fanxin Long, Ph.D., Professor of Orthopaedic Surgery, Translational Research Program in Pediatric Orthopaedics, CHOP

Wednesday, March 27, 2019, 4:00pm – 5:00pm, CHOP ARC124

Title: “Blocking Substance P signaling reduces tissue fibrosis and improves sensorimotor declines in a rat model of overuse injury”

Mary Barbe, Ph.D., Professor of Anatomy, Cell Biology and Physical Therapy, Temple University

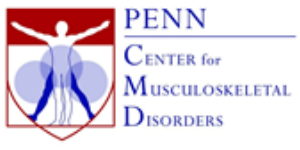
Wednesday, February 27, 2019, 4:00pm – 5:00pm, CHOP ARC124

Title: “Macroscopic In Vitro, In Silico, and In Vivo Models of Shoulder Reconstructions”

Michael Hast, Ph.D., Assistant Professor of Orthopaedic Surgery, Director, Biedermann Lab for Orthopaedic Research, Perelman School of Medicine, University of Pennsylvania

Wednesday, January 23, 2019, 4:00pm – 5:00pm, CHOP ARC124

Title: “Deciphering the molecular basis of SOXopathies, developmental syndromes due to mutations affecting SOX transcription factor activities”



Veronique Lefebvre, Ph.D., Professor of Orthopaedic Surgery, Translational Research Program in Pediatric Orthopaedics, Children's Hospital of Philadelphia

Orthopaedic Research Club Seminar Series - 2018

Wednesday, November 28, 2018, 4:00pm – 5:00pm, CHOP ARC124

Title: “Altered bone metabolism by hyperglycemia: a new function of an old metabolite”

Xin, Li, Ph.D., Associate Professor of Basic Science and Craniofacial Biology-College of Dentistry, New York University

Wednesday, October 31, 2018, 4:00pm – 5:00pm, CHOP ARC124

Title: “Primary cilia are essential for cell alignment and polarity during bone development through regulating Ceramide-PKCz apicobasal polarity signaling.”

Jormay Lim, Student, Department of Anatomy & Cell Biology, University of Pennsylvania, School of Dental Medicine

Title: “Potential therapeutic targets to reduce osteochondromas in patients with Hereditary Multiple Exostoses”

Christina Mundy, Student, Department of Orthopaedic Surgery, CHOP

Wednesday, October 4, 2018, 4:00pm – 5:00pm, JMB Class of ‘62

Title: “Identification of periosteal progenitors involved in bone healing”

Brya Matthews, Ph.D., Senior Research Fellow, Department of Molecular Medicine and Pathology, University of Auckland, New Zealand

Wednesday, September 26, 4:00pm – 5:00pm, CHOP ARC124

Title: “Large Gap Peripheral Nerve Regeneration with Orofacial Stem Cells Based Nerve Guidance Conduits”

Ahn D. Le, DDS, Ph.D., Chair and Norman Vine Endowed Professor of Oral Rehabilitation, Department of Oral & Maxillofacial Surgery/Pharmacology, Penn Dental Medicine

Wednesday, August 29, 2018, 4:00pm – 5:00pm, CHOP ARC124

Title: “Insulin-mimetic salt induces of bone formation and inhibits osteoclast differentiation and fusion to restore cortical porosity in a type I diabetic-induced osteolysis rat model”

David Paglia, Ph.D., Investigator of Orthopaedics, Rutgers University

Wednesday, June 19, 2018, 4:00pm – 5:00pm, Smilow 9-146AB

Title: “Rotator Cuff Repair - From Bench to Bedside, Challenges and Opportunities”

Andy Kuntz, M.D., Assistant Professor of Orthopaedic Surgery, Director, Shoulder Study Group
Perelman School of Medicine, University of Pennsylvania

Wednesday, May 30, 2018, 4:00pm – 5:00pm, CHOP ARC124

Title: “Skeletal/mesenchymal stem cells: how much do we know about them? A lineage-tracing perspective”

Noriaki Ono, Ph.D., Assistant Professor of Orthodontics and Pediatric Dentistry, University of Michigan School of Dentistry

Wednesday, April 25, 2018, 4:00pm – 5:00pm, CHOP ARC124

Title: “Forceful feedback: mechanosensation in cell motility and morphogenesis”

Joel Boerckel, Ph.D., Assistant Professor of Orthopaedic Surgery and Bioengineering, University of Pennsylvania

Wednesday, March 28, 2018, 4:00pm – 5:00pm, CHOP ARC124

Title: “New Therapeutic Strategies for Preventing Cartilage Degeneration and Post-Traumatic Osteoarthritis”

Christopher Price, Ph.D., Assistant Professor of Dept. of Biomedical Engineering, University of Delaware

Wednesday, February 21, 2018, 4:00pm – 5:00pm, CHOP ARC124

Title: “Morphogenesis of articular cartilage: implications for repair strategies”



Maurizio Pacifici, Ph.D., Director and Professor of Translational Research Program in Pediatric Orthopaedics, CHOP

Wednesday, January 17, 2018, 4:00pm – 5:00pm, CHOP ARC124

Title: “Hand transplantation: current challenges and future prospects”

L. Scott Levin, M.D., Paul B. Magnuson Professor of Bone & Joint Surgery, Chair, Department of Orthopaedic Surgery, Professor of Surgery (Plastic Surgery), Perelman School of Medicine, University of Pennsylvania

Orthopaedic Research Club Seminar Series - 2017

Wednesday, November 29, 2017, 4:00pm – 5:00pm, CHOP ARC124

Title: “Novel Spectroscopic Imaging Tools for Assessment of Musculoskeletal Tissues”

Nancy Pleshko, Ph.D., Professor of Bioengineering, Temple University

Wednesday, October 25, 2017, 4:00pm – 5:00pm, CHOP ARC124

Title: “Inflammatory Signals in Stress Fracture Risk and Repair”

Ryan Tomlinson, Ph.D., Assistant Professor of Orthopaedic Surgery, Thomas Jefferson University

Wednesday, September 28, 2017, 4:00pm – 5:00pm, CHOP ARC124

Title: “In vivo Bone Quality Assessment by Phosphorus and Proton MRI”

Xia Zhao, Ph.D. Student, Department of Radiology, Perelman School of Medicine, University of Pennsylvania

Title: “Hox Genes in the Adult Skeleton: Patterning Cues Beyond Embryonic Development”

Danielle Rux, Ph.D., Postdoctoral Researcher, Department of Orthopaedic Surgery, CHOP

Wednesday, August 30, 2017, 4:00pm – 5:00pm, CHOP ARC124

Title: “Vitamin D deficiency in the 21st Century: New Insights into an Old Problem”

Michael Levine, M.D., Ph.D., Chief of the Division of Endocrinology and Diabetes and Director of the Center for Bone Health at CHOP

Wednesday, June 28, 2017, 4:00pm – 5:00pm, CHOP ARC124

Title: “Mechanisms of PTH Bone Anabolic Action - New Perspectives on an Old Topic”

Mei Wan, Ph.D., Professor of Orthopaedic Surgery, Johns Hopkins University School of Medicine

Wednesday, May 24, 2017, 4:00pm – 5:00pm, CHOP ARC124

Title: ““Micro-noodles” for Cartilage Repair: A Strategy to Achieve Tunable Cell shape, Mechanosensing, and ECM organization in 3-D”

Li-Hsin Han, Ph.D., Assistant Professor of Mechanical Engineering and Mechanics, College of Engineering, Drexel University

Wednesday, April, 2017, 4:00pm – 5:00pm, CHOP ARC124

Title: “Regulators of cartilage development and maintenance”

Li Zheng, Ph.D., Tufts University School of Medicine

Wednesday, March 28, 2017, 4:00pm – 5:00pm, CHOP ARC124

Title: “Tendon Healing in a Rotator Cuff Animal Model”

Lou Soslowky, Ph.D., Fairhill Professor of Orthopaedic Surgery, Associate Dean for Research Integration, Perelman School of Medicine, University of Pennsylvania

Wednesday, February 22, 2017, 4:00pm – 5:00pm, CHOP ARC124

Title: “Infections in synovial fluid: new challenges”

Noreen Hickok, Ph.D., Associate Professor of Orthopaedic Surgery, Thomas Jefferson University

Wednesday, January 24, 2017, 4:00pm – 5:00pm, CHOP ARC124

Title: “Defining the lineage of tendon and ligament cells”



Nat Dymant, Ph.D., Assistant Professor of Orthopaedic Surgery, University of Pennsylvania

Orthopaedic Research Club Seminar Series - 2016

Wednesday, December 7, 2016, 4:00pm – 5:00pm, CHOP ARC124

Title: “Mechanism of Ciliary Intraflagellar Transport Protein in Bone Formation”

Shuying Yang, M.D., M.S., Ph.D., Associate Professor of Anatomy and Cell Biology, Dental School, University of Pennsylvania

Wednesday, November 2, 2016, 4:00pm – 5:00pm, CHOP ARC124

Title: “Multiscale Mechanisms of Low Back Pain”

Simon Tang, Ph.D., Assistant Professor of Orthopaedic Surgery, Washington University

Wednesday, September 28, 2016, 4:00pm – 5:00pm, CHOP ARC124

Title: “Recent Developments in Imaging Techniques for Evaluation of Bone Disorders”

Chamith Rajapske, Ph.D., Assistant Professor of Radiology, University of Pennsylvania

Wednesday, July 27, 2016, 4:00pm – 5:00pm, CHOP ARC124

Title: “Applied MRI Quantitative Imaging Sequences and Tissue Engineering for the Treatment of Intervertebral Disc Degeneration”

Harvey Smith, M.D., Assistant Professor of Orthopaedic Surgery, University of Pennsylvania

Wednesday, June 22, 2016, 4:00pm – 5:00pm, CHOP ARC124

Title: “Understanding the mechanism of bone growth after MSC infusion”

Satoru Otsuru, Trainee, CHOP

Title: “Mesenchymal stem cell transplantation identifies miR151-5p as a therapeutic target for systemic sclerosis”

Chider Chen, Ph.D., Postdoc, University of Pennsylvania, School of Dental Medicine

Wednesday, May 25, 2016, 4:00pm – 5:00pm, CHOP ARC124

Title: “Inflammatory pathway activation in osteoarthritis: insights from patients and animal models”

Carla Scanzello, M.D., Ph.D., Assistant Professor, Department of Medicine, University of Pennsylvania

Wednesday, April 27, 2016, 4:00pm – 5:00pm, CHOP ARC124

Title: “Prevention of the Post-traumatic Fibrotic Response in Joints”

Andrzej Fertala, Ph.D., Professor of Orthopaedic Surgery, Thomas Jefferson University

Wednesday, March 23, 2016, 4:00pm – 5:00pm, CHOP ARC124

Title: “The role of CITED2 in cartilage and tendon: A basic study searching for translation”

Herb Sun, Ph.D., Associate Professor of Radiation Oncology and Orthopaedic Surgery, Albert Einstein College of Medicine

Wednesday, February 24, 2016, 4:00pm – 5:00pm, CHOP ARC124

Title: “The roles of Indian hedgehog in temporo-mandibular joint (TMJ) development and postnatal function”

Eiki Koyama, Ph.D., Professor of Bioengineering, University of Pennsylvania

Wednesday, January 27, 2016, 4:00pm – 5:00pm, CHOP ARC124

Title: “Engineering Hydrogels for Cartilage Repair”

Jason Burdick, Ph.D., Professor of Bioengineering, University of Pennsylvania

Orthopaedic Research Club Seminar Series - 2015

Wednesday, December 2, 2015, 4:00pm – 5:00pm, CHOP ARC124

Title: “Intervertebral disc degeneration and repair”



Yejia Zhang, M.D., Ph.D., Assistant Professor. Department of Physical Medicine and Rehabilitation, University of Pennsylvania

Wednesday, October 28, 2015, 4:00pm – 5:00pm, CHOP ARC124

Title: “Regenerative stem cell therapies to restore diseased skeletal muscles”

Foteini Mourkioti, Ph.D., Assistant Professor, Departments of Orthopaedic Surgery, Cell and Developmental Biology, University of Pennsylvania

Wednesday, September 23, 2015, 4:00pm – 5:00pm, CHOP ARC124

Title: “Contribution of Wnt/b-catenin-Responsive Cells to Articular and Growth Plate Cartilage Growth”

Yu Usami, Department of Surgery, Children's Hospital of Philadelphia

Title: “Modulation of osteoclast function: finding a niche in Notch signaling”

Jason Ashley, Ph.D., Postdoctoral Fellow, Department of Orthopaedic Surgery, University of Pennsylvania

Wednesday, August 26, 2015, 4:00pm – 5:00pm, CHOP ARC124

Title: “Trying to Make Sense of it All: The Regulation of Fracture Healing in a Trauma Setting”

Samir Mehta, M.D., Assistant Professor of Orthopaedic Surgery, University of Pennsylvania

Wednesday, July 29, 2015, 4:00pm – 5:00pm, CHOP ARC124

Title: “Nanomechanics: A Novel Interdisciplinary Tool to Uncover the Pathogenesis of Osteoarthritis”

Lin Han, Ph.D., Assistant Professor, School of Biomedical Engineering, Science & Health Systems, Drexel University

Wednesday, June 24, 2015, 4:00pm – 5:00pm, CHOP ARC124

Title: “Skeletal Stem Cells: is the jaw bone connected to the hip bone?”

Abhishek Chandra, Ph.D., Postdoctoral Fellow, Department of Orthopaedic Surgery, University of Pennsylvania

Title: “Effects of Pregnancy, Lactation, and Weaning on Maternal Bone Quality”

Chantel de Bakker, Ph.D. Student, Department of Bioengineering, University of Pennsylvania

Wednesday, May 27, 2015, 4:00pm – 5:00pm, CHOP ARC124

Title: “Skeletal Stem Cells: is the jaw bone connected to the hip bone?”

Sunday Akintoye, BDS, DDS, MS, Associate Professor of Oral Medicine, School of Dental Medicine University of Pennsylvania

Wednesday, April, 22, 2015, 4:00pm – 5:00pm, CHOP ARC124

Title: “Unraveling the Etiology of Spine Disease in Mucopolysaccharidosis Disorders”

Lachlan Smith, Ph.D., Assistant Professor of Neurosurgery, University of Pennsylvania

Wednesday, March 18, 2015, 4:00pm – 5:00pm, CHOP ARC124

Title: “Roles of Myo/Nog Cells in Embryogenesis, Wound Healing and Neuroprotection”

Minday George-Weinstein, Ph.D., Professor of Biomedical Sciences, Cooper Medical School of Rowan University

Wednesday, February 25, 2015, 4:00pm – 5:00pm, CHOP ARC124

Title: “Osteocyte’s hairy pericellular matrix in mechanosensing”

Liyun Wang, Ph.D., Associate Professor of Mechanical Engineering, University of Delaware

Orthopaedic Research Club Seminar Series - 2014

Wednesday, December 10, 2014, 4:00pm – 5:00pm, CHOP ARC124

Title: “Mesenchymal stem cells: from clinics to bench-top and back”

Songtao Shi, DDS, MS, Ph.D., Department of Oral and Maxillofacial Surgery / Pharmacology, School of Dental Medicine, University of Pennsylvania



Wednesday, October 10, 2014, 4:00pm – 5:00pm, CHOP ARC124

Title: "Previously unsuspected defects in the cranial base of a mouse model of Hereditary Multiple Exostoses"
Federica Sgariglia, Ph.D., Postdoctoral Fellow, Department of Surgery, CHOP

Title: "In situ fibril stretch and sliding is location-dependent in mouse supraspinatus tendons"
Brienne Connizzo, PhD Student, Department of Bioengineering, University of Pennsylvania

Wednesday, September 9, 2014, 4:00pm – 5:00pm, CHOP ARC124

Title: "Prevention and Treatment of Post-traumatic Osteoarthritis"
X. Lucas Lu, Ph.D., Assistant Professor of Mechanical Engineering, University of Delaware

Wednesday, August 13, 2014, 4:00pm – 5:00pm, CHOP ARC124

Title: "Enhancing fracture healing: lessons from our rodent friends"
Jaimo Ahn, M.D., Ph.D., Associate Professor of Orthopaedic Surgery, University of Pennsylvania

Wednesday, June 25, 2014, 4:00pm – 5:00pm, CHOP ARC124

Title: "GNAS inactivation in Progressive Osseous Heteroplasia (POH) and skeletal development"
Girish Ramaswamy, Ph.D., Postdoctoral Fellow, Orthopaedic Surgery, University of Pennsylvania

Title: "Load transmission between collagen fibrils in tendon through interfibrillar shear stress"
Spencer Szczesny, Ph.D., Postdoctoral Fellow, Orthopaedic Surgery, University of Pennsylvania

Wednesday, May 28, 2014, 4:00pm – 5:00pm, CHOP ARC124

Title: "Specification and maintenance of permanent articular cartilage"
Masahiro Iwamoto, Ph.D., Associate Professor of Orthopaedic Surgery, CHOP

Wednesday, April 30, 2014, 4:00pm – 5:00pm, CHOP ARC124

Title: "Forces and factors from muscle that modulate bone"
Elizabeth Barton, Ph.D., Associate Professor of Anatomy and Cell Biology, University of Pennsylvania, School of Dental Medicine

Wednesday, March 26, 2014, 4:00pm – 5:00pm, CHOP ARC124

Title: "Osteoblastic cells regulate the response of bone to inflammation"
Dana Graves, Ph.D., Professor of Periodontics, Dental School, University of Pennsylvania

Wednesday, February 26, 2014, 4:00pm – 5:00pm, CHOP ARC124

Title: "Regeneration - ASK1, can it provide some answers?"
Theresa Freeman, Ph.D., Associate Professor of Orthopaedic Surgery, Thomas Jefferson University

Wednesday, January 15, 2014, 4:00pm – 5:00pm, BRB Room 252

Title: "Material and Mechanobiologic Considerations for Engineering Dense Connective Tissues"
Robert Mauck, Ph.D., Associate Professor of Orthopaedic Surgery and Bioengineering, University of Pennsylvania