



UW Orthopedic Research Forum

Fluno Center

May 8, 2023

Welcome — Atrium/Auditorium

8:00 a.m. **Breakfast and Networking**

8:30 a.m. **Tamara Scerpella, MD, *Opening Remarks in the Auditorium***

Blitz Talks (3 minutes each) — Auditorium

8:35 a.m. **Keith Knurr, DPT, *Running Biomechanics Post-ACLR: Relationship to Quadriceps Performance and Bone Health***

8:38 a.m. **Daniel Cobian, PT, PhD, *Neuromuscular Correlates of Impaired Knee Extensor Torque Steadiness 4-to-12 Months post-ACLR in Collegiate Athletes***

8:41 a.m. **Josh Roth, PhD, *Surgical Augmentation and Preservation of Remnant ACL Tissue Best Restores Knee Function after Partial ACL Injury***

8:44 a.m. **Discussion**

8:50 a.m. **Jonathon Blank, MS, *Unaligned Fibers Alter the Mechanical Behavior of Loaded Ligaments***

8:53 a.m. **Soroush Irandoust, PhD, *Stress Fracture Risk Assessment Using CT-based Virtual Mechanical Testing***

8:56 a.m. **Pamela Lang, MD, *Imaging of Osteochondrosis of the Distal Femur in a Developing Porcine Model***

8:59 a.m. **Discussion**

9:05 a.m. **Jingyi Wang, MS, *In Vitro Platform to Measure Cartilage Redox Balance***

9:08 a.m. **Brandon Chelstrom, *Using Microfracture to Predict Failure Mechanics of Articular Cartilage: A Computational Study***

9:11 a.m. **Andrea Spiker, MD, *Intra-Articular Cellular and Molecular Factors Identified at the Time of Hip Arthroscopy Surgery***

9:14 a.m. **Discussion**

9:20-9:35 a.m. **Coffee Break**

Research Topic Breakout Discussions — Auditorium, Conference Room 212/214, Conference Room 216/218

9:35 a.m. Research Topic Breakout Discussions (9:35-10:05)

Group 1: Pre-clinical Biomechanical Testing in Auditorium

Lead by Josh Roth, PhD and Corinne Henak, PhD

Group 2: Regenerative Medicine in Conference Room 212/214

Lead by William Murphy, PhD, Wan-Ju Li, PhD, and Connie Chamberlain, PhD

Group 3: Clinical Outcomes Research in Conference Room 216/218

Lead by Bryan Heiderscheid, PT, PhD, Keith Knurr, DPT, PhD, and Mikel Joachim, PhD

Blitz Talks (3 minutes each) — Auditorium

- 10:05 a.m. Josh Choe, Mineral Coated Microparticle Mediated Co-Delivery of BMP-2 and BMP-7 mRNA for Osteogenic Induction of Autologous Bone Marrow Aspirate Clots**
- 10:08 a.m. Wan-Ju Li, PhD, Therapeutic Potential of Rejuvenated Stem Cells**
- 10:11 a.m. Connie Chamberlain, PhD, Effects of Exosomes on Tendon and Ligament Healing**
- 10:14 a.m. Discussion**
- 10:20 a.m. Matthew Blomquist, MS, Dynamic Bone Motion Tracking Using Ultrasound: A Cadaveric Validation**
- 10:23 a.m. Lesley Arant, MS, Novel Workflow for Replicating Joint and Ligament Mechanics during Clinical Exams using a Robotic Testing System**
- 10:26 a.m. Mary Laudon, Handheld Shear Wave Tensiometer Measurements are Sensitive to Regional Loading in Phantom Collateral Ligaments**
- 10:29 a.m. Discussion**
- 10:35 a.m. Josh Andreatta, Enhancement of a PAO Simulator for Orthopedic Surgical Training**
- 10:38 a.m. Quinn Steiner, Patient Reported Outcomes Following Hip Arthroscopy for Femoroacetabular Impingement are More Related to Mental Health Than Hip Pathology**
- 10:41 a.m. Mikel Joachim, PhD, The Influence of Training, Sleep, and Stress on Injury in High School Cross Country Runners**
- 10:44 a.m. Paul Whiting, MD, Overview of International/Global Orthopaedic Collaborations**
- 10:47 a.m. Discussion**
- 10:53-11:05 a.m. Coffee Break**

Clinical Challenges Breakouts — Auditorium, Conference Room 212/214, Conference Room 216/218

11:05 a.m. **Clinical Challenges Breakout Discussions (11:05-11:35)**

Group 1: Soft Tissue Injuries in Auditorium

Led by Tamara Scerpella, MD and Andrea Spiker, MD

Group 2: Degenerative Diseases in Conference Room 212/214

Led by Brian Grogan, MD and Katie Williams, MD

Group 3: Congenital Disorders in Conference Room 216/218

Led by Pamela Lang, MD and Laura Bellaire, MD

Lunch — Atrium/Auditorium

11:35 a.m. – 12:20 p.m.

Keynote Speaker — Auditorium

12:20 p.m. **Joshua Roth, PhD, *Introduction of Keynote Speaker***

12:25 p.m. **Keynote Speaker – Peter Muir, BVSc, MVetClinStud, PhD, DACVS, DECVS, FRCVS, *Is ACL Rupture a Disease or an Injury?***

PGY 5 Presentations — Auditorium

1:00 p.m. **Tamara Scerpella, MD, *Graduating Resident/Fellow Remarks***

1:05 p.m. **Michael Behun, MD, *Quantifying the Differential Functional Behavior Between the Medial and Lateral Meniscus After Posterior Meniscus Root Tears***

1:17 p.m. **Eamon Bernardoni, MD, *Effects of General Anesthesia Plus Multimodal Analgesia on Immediate Perioperative Outcomes of Hamstring Tendon Autograft ACL Reconstruction***

1:29 p.m. **Eric Cotter, MD, *Susceptibility of Cutibacterium Acnes to Blue Light Therapy***

1:41 p.m. **Thomas Knoedler, MD, *Bone Mineral Density Changes Following Fracture Liaison Service Intervention in Low Energy Distal Radius Fractures***

1:53 p.m. **Brian McGowan, MD, *Cement Viscosity Does Not Impact in vitro Efficacy Against Common Prosthetic Joint Infection Pathogens***

2:05 p.m. **Michael Stitgen, MD, *Incidence and Risk Factors for Secondary Surgery Following Digit Revision Amputation in the Emergency Department***

Networking — Atrium

2:17-2:55 p.m. **Cocktails and Hors d'oeuvres**

Group Photos – 1st Floor Atrium Staircase

- **Fellowships: Joints, NOPO, Spine and Sports**

Fellow Presentations — Auditorium

- 3:00 p.m.** **Lindsey Boyke, MD**, *Musculoskeletal Examination Curriculum of Knee and Shoulder Joints for Pediatric Residents*
- 3:12 p.m.** **Jace Heiden, MD**, *Differences Among 3 Anterior Cruciate Ligament Reconstruction Autograft Sources; Biodex Results in The Short-term Rehabilitation Period*
- 3:24 p.m.** **Christopher Lindsay, MD**, *Publicly Available Online Educational Resources for Anterior Lumbar Interbody Fusion (ALIF): Can patients read and understand them?*
- 3:36 p.m.** **Nicole Look, MD**, *Outcomes of Non-operatively Treated Atlas Fractures with Rigid Collar Immobilization*
- 3:48 p.m.** **David Martin, MD**, *American Joint Replacement Registry (AJRR): Cementless TKA Outcomes in Patients 65+*
- 4:00 p.m.** **End of event**