

Discovery to Delivery in Tendon Research: Team Approaches

ORS Tendon Section 2018 Conference

November 15-17, 2018

Oregon Health and Science University, Portland, Oregon

Conference Chairs: Ronen Schweitzer, PhD; Kathleen Derwin, PhD; Peter Amadio, MD; and Catherine K. Kuo, PhD

Thursday, November 15, 2018

10:00 AM – 2:00 PM	Registration
2:00 PM – 2:15 PM	Welcome and Meeting Goals
2:15 PM – 3:15 PM	Keynote Speaker: Lou Soslowsky, PhD, University of Pennsylvania <i>Perspectives on the Field of Tendon Research and the Roles of Decorin and Biglycan in Tendon Structure and Function</i>
3:15 PM – 3:30 PM	Break
3:30 PM – 7:00 PM	Session I: Tendon Biology Chair: Hazel Screen, PhD, Queen Mary, University of London Moderator: Catherine K. Kuo, PhD, University of Rochester
3:30 PM – 4:00 PM	Hazel Screen, PhD, Queen Mary, University of London <i>The Tendon Interfascicular Matrix Niche</i>
4:00 PM – 4:30 PM	Catherine K. Kuo, PhD, University of Rochester <i>Embryonically Inspired Tendon Regeneration Approaches</i>
4:30 PM – 4:45 PM	Short Talk Nathaniel Disser, BS, Hospital for Special Surgery <i>Insulin-like Growth Factor-1 Promotes Tenocyte Proliferation Through ERK1/2 Signal Transduction</i>
4:45 PM – 5:00 PM	Short Talk Joohyun Lim, PhD, Baylor College of Medicine <i>Loss of Fkbp10 in Murine Tendons and Ligaments Recapitulates Key Features of Bruck Syndrome</i>
5:00 PM – 5:30 PM	Break

5:30 PM – 6:00 PM	Michael Kjaer, MD, DMSc, Copenhagen University <i>Physiological Adaptation of Tendon Collagen to Exercise</i>
6:00 PM – 6:30 PM	Alayna Loiselle, PhD, University of Rochester <i>Defining Cell Lineage, Fate and Function to Inform Tendon Therapeutics</i>
6:30 PM – 6:45 PM	Short Talk Anne E.C. Nichols, PhD, Virginia-Maryland College of Veterinary Medicine <i>Scleraxis Regulates Cytoskeletal Dynamics in Adult Tenocytes</i>
6:45 PM – 7:00 PM	Short Talk Kenneth Weekes, BS, Oregon Health & Science University <i>Temporomandibular Joint Articular Disc: Development Guided Regeneration</i>
7:00 PM – 9:00 PM	Networking Dinner

Friday, November 16, 2018

7:00 AM – 8:00 AM	Networking Breakfast for Hyatt House Portland/Downtown Guests
8:30 AM – 12:00 PM	Session II: Tendon Development Chair: Jenna Galloway, PhD, Massachusetts General Hospital, Harvard Stem Cell Institute Moderator: Ronen Schweitzer, PhD, Shriners Hospital
8:30 AM – 9:00 AM	Jenna Galloway, PhD, Massachusetts General Hospital, Harvard Stem Cell Institute <i>Exploring Tendon Developmental Plasticity and Regeneration in the Zebrafish</i>
9:00 AM – 9:30 AM	Delphine Duprez, PhD, University Pierre et Marie Curie <i>Mechanical and Molecular Signals Involved in Tendon Formation</i>
9:30 AM – 9:45 AM	Short Talk Deepanwita Pal, PhD, Shriners Hospital for Children <i>Multiple Roles of Scleraxis in Cell Recruitment and Collagen Organization at Distinct Stages of Tendon Growth</i>
9:45 AM – 10:00 AM	Short Talk Dirk Hubmacher, PhD, Icahn School of Medicine at Mt. Sinai <i>Absence of the Extracellular Matrix Protein ADAMTSL2, Mutated in Geleophysic Dysplasia, Results in Short Tendons and Reduced Bone Length</i>
10:00 AM – 10:30 AM	Break
10:30 AM – 11:00 AM	Thomas Schilling, PhD, University of California Irvine <i>Mechanotransduction Regulates Tenocyte-ECM Dynamics in Zebrafish</i>
11:00 AM – 11:30 AM	Rui Diogo, Howard University <i>Evolutionary Developmental Pathology, or Macroevolutionary Medicine: A New Field of Science Bringing Together Anatomy, Human Evolution, Development, Genetics, Birth Defects and Medicine</i>

11:30 AM – 11:45 AM	<p>Short Talk</p> <p>Rulang Jiang, PhD, Cincinnati Children's Hospital Medical Center</p> <p><i>Mkx-deficient Mice Exhibit Hedgehog Signaling Dependent Heterotopic Ossification in the Achilles Tendons</i></p>
11:45 AM – 12:00 PM	<p>Short Talk</p> <p>Hiroshi Asahara, MD, PhD, The Scripps Research Institute</p> <p><i>Mechano-signal Pathway Regulating Tendon and Ligament Via Mlx</i></p>
12:00 PM -1:00 PM	Networking Lunch
1:00 PM – 3:00 PM	Poster Session
3:00 PM – 6:30 PM	<p>Session III: Tendon Injury and Repair</p> <p>Chair: Scott Rodeo, MD, Hospital of Special Surgery</p> <p>Moderator: Kathleen Derwin, PhD, Cleveland Clinic</p>
3:00 PM – 3:30 PM	<p>Chen-Ming Fan, PhD, Carnegie Science</p> <p><i>Molecular and Cellular Complexity of the Patellar Tendon Sheath</i></p>
3:30 PM – 3:45 PM	<p>Short Talk</p> <p>Guak-Kim Tan, PhD, Shriners Hospitals for Children</p> <p><i>TGF-beta Signaling is Essential for Cell Recruitment into Pathological Tendons</i></p>
3:45 PM – 4:15 PM	<p>Hani Awad, PhD, University of Rochester</p> <p><i>Differential Transcriptional Regulation in Models of Accelerated Tendon Repair</i></p>
4:15 PM – 4:30 PM	<p>Short Talk</p> <p>Franciele Dietrich-Zagonel, PhD, Linköping University</p> <p><i>Corticosteroid Treatment to Improve Achilles Tendon Healing is Dose and Time Dependent</i></p>
4:30 PM – 5:00 PM	Break
5:00 PM – 5:30 PM	<p>Scott Rodeo, MD, Hospital for Special Surgery</p> <p><i>Current Status of Cell-Based Therapies for Augmentation of Tendon Repair</i></p>
5:30 PM – 5:45 PM	<p>Short Talk</p> <p>Hua Shen, PhD, Washington University</p> <p><i>Anti-Inflammatory Effects of Stem Cell-Derived Extracellular Vesicles in the Early Phase of Tendon Healing</i></p>
5:45 PM – 6:00 PM	<p>Short Talk</p> <p>Jessica Ackerman, BS, University of Rochester Medical Center</p> <p><i>S100a4-lineage Cells Lose S100a4 Expression to Become Alpha-SMA+ Myofibroblasts During Scar-mediated Tendon Healing</i></p>
6:00 PM – 6:30 PM	<p>Brian Feeley, MD, University California San Francisco</p> <p><i>Stem Cells, Fat, and Muscle Changes after Rotator Cuff Injury and Repair</i></p>

6:30 PM – 8:30 PM Networking Dinner

Saturday, November 17, 2018

7:00 AM – 8:00 AM Networking Breakfast for Hyatt House Portland/Downtown Guests

8:30 AM – 12:00 PM Session IV: Biology and Pathology of the Enthesis

Chair: Leesa Galatz, MD, Mount Sinai Health System

Moderator: Kathleen Derwin, PhD, Cleveland Clinic

8:30 AM – 9:00 AM Elazar Zelzer, Weizmann Institute of Science
Enthesis Progenitors Combine the Tenogenic and Chondrogenic Genetic Programs

9:00 AM – 9:15 AM Short Talk
Amy Merrill, PhD, University of Southern California
Patterning Cell Fate at the Interface between Tendon and Bone

9:15 AM – 9:45 AM Steve Thomopoulos, PhD, Columbia University
Tendon Enthesis Development and Regeneration

9:45 AM – 10:00 AM Short Talk
Marie-Therese Noedl, PhD, Massachusetts General Hospital
Zebrafish as a Model of Tendon-Bone Attachment Injury and Regeneration

10:00 AM – 10:30 AM Break

10:30 AM – 11:00 AM Xu Ca, PhD, Johns Hopkins University
TGF- β in Skeletal Tissue Homeostasis and Enthesopathy

11:00 AM – 11:15 AM Short Talk
Keshia Mora, BS, University of Rochester
Location-dependent Changes in Nuclear Morphology in the Achilles Tendon Due to Ankle Rotation

11:15 AM – 11:30 AM Short Talk
Eva Liu, MD, Brigham and Women's Hospital
Impaired 1,25 Dihydroxyvitamin D Action Underlies Enthesopathy Development in Murine Hypophosphatemic Rickets

11:30 AM – 12:00 PM Leesa Galatz, MD, Mount Sinai Health System
Applying Translational Research to Rotator Cuff Repair: How Science Influences Practice

12:00 PM -1:00 PM Networking Lunch

1:00 PM – 3:00 PM Poster Session

3:00 PM – 6:30 PM Session V: Tendinopathy

Chair: James Wang, PhD, University of Pittsburgh

Moderator: Peter Amadio, MD, Mayo Clinic

3:00 PM – 3:30 PM James Wang, PhD, University of Pittsburgh

The Role of HMGB1 in the Development of Tendinopathy

3:30 PM – 4:00 PM	Ashlee Watts, DVM, PhD, Texas A&M University <i>Matrix Dysregulation in Tendinopathy</i>
4:00 PM – 4:15 PM	Short Talk Adam Abraham, PhD, Columbia University <i>IKKβ/NF-κB Activation Drives Rotator Cuff Tendinopathy</i>
4:15 PM – 4:30 PM	Short Talk Zijun Zhang, PhD, MS, Colorado State University <i>Expression of Estrogen Receptor and Accumulation of Advanced Glycation End-products in Tendinopathy</i>
4:30 PM – 5:00 PM	Break
5:00 PM – 5:30 PM	Vincent Wang, PhD, Virginia Tech <i>Assessment of Recombinant Human Hyaluronidase (rHuPH20) as a Novel Therapeutic for Tendinopathy</i>
5:30 PM – 6:00 PM	Andrew Carr, MDOS, University of Oxford <i>Improving Evidence for Tendinopathy Therapies; the role of Randomized Clinical Trials</i>
6:00 PM – 6:15 PM	Short Talk Mary Frances Barbe, PhD, Temple University <i>Blocking CTGF/CCN2 Prevents Development of Fibrotic Tendon Changes and Motor Declines in a Rat Model of Repetitive Overuse Injury</i>
6:15 PM – 6:30 PM	Short Talk Karin Gravare Silbernagel, PT, ATC, PhD <i>Comparison of Tendon Structure, Symptoms, and Function in Patients with Either Midportion or Insertional Achilles Tendinopathy</i>
6:30 PM – 6:45 PM	Awards and Closing Remarks
7:00 PM – 9:00 PM	Networking Dinner

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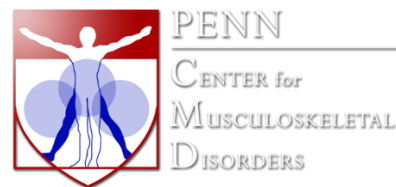


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