

ISL&T-XVIII PROGRAM

Podium Sessions

<u>Time</u>	<u>Topic</u>	<u>Speaker</u>
7:30	Registration and Light Breakfast	
8:00	Welcome	David T. Corr, PhD
8:15	<i>Clinical Keynote Lecture</i> Analysis and Treatment for Failed Anterior Cruciate Ligament Surgery (pg. 24)	Chih-Hwa Chen, MD
8:30	<i>Discussion</i>	
	Podium Session I: Development and Maturation (pg. 25-29)	Moderators: Jess Snedeker, PhD James H-C. Wang, PhD
8:35	<i>Keynote Lecture</i> Bi-Fated Tendon-to-Bone Attachment Cells are Regulated by Shared Enhancers and KLF Transcription Factors	Elazar Zelzer, PhD
8:50	<i>Discussion</i>	
8:55	<i>Keynote Lecture</i> Hedgehog Signaling in Perinatal and Adult Tendon-to-Bone Formation	Nathaniel Dymant, PhD
9:10	<i>Discussion</i>	
9:15	Characterizing the Structural Components and Their Stem Cell Properties of Pig Achilles Tendon	Jianying Zhang, PhD
9:20	Decoding the Regulatory Network for Postnatal Tendon Maturation by Single Cell RNA-Seq	Chunmei Fan, MS
9:25	Thenar Muscle Origins on the Transverse Carpal Ligament	Jeremy Loss, MEng
9:30	<i>Discussion</i>	
9:35	Coffee Break/Poster Session I (even numbers) (pg. 51-59)	Moderators: Chih-Hwa Chen, MD Pernilla Eliasson, PhD Anne Gingery, PhD Zhaozhu Li, MD

<u>Time</u>	<u>Topic</u>	<u>Speaker</u>
	Podium Session II: Multi-Scale Biomechanics (pg. 30-35)	Moderators: Gail Thornton, PhD Jillian Beveridge, PhD
10:05	<i>Keynote Lecture</i> Can Measures of Tendon Structure and Mechanical Properties Inform Clinical Practice?	Karin Grävare Silbernagel, PT, ATC, PhD
10:20	<i>Discussion</i>	
10:25	<i>Keynote Lecture</i> The Role of Elastic Fibers in Tendon Mechanics	Spencer Lake, PhD
10:40	<i>Discussion</i>	
10:45	<i>Savio L-Y. Woo Young Researcher Award – Biomechanical</i> Measuring Ligament Stiffness: Effects of Fiber Splay and the Future with Fill-Field Methods (pg.17)	Callan Luetkemeyer, PhD
10:55	<i>Discussion</i>	
11:00	The Tendon Mechanosensor PIEZO1 Determines Tissue Mechanical Properties	Fabian Passini, MSc
11:05	Ultrasound Shear Wave Elastography (SWE) of the Tibialis Posterior Tendon (PIT) and Tibiospring/Spring Ligaments at Rest and Stress in Normal Feet Compared to Asymptomatic and Symptomatic Acquired Flatfoot Deformity	Daniel Latt, MD, PhD
11:10	<i>Discussion</i>	
11:15	Joint Laxity Increases with Partial and Complete ACL Injury as a Function of Age but not Sex in a Porcine Model	Danielle Howe, BS
11:20	Tissue Resection Alters Regional Tissue Mechanics of Patellar Tendons	Stephanie Cone, PhD
11:25	<i>Discussion</i>	
11:30	Lunch (Group Photo and Poster Viewing)	

<u>Time</u>	<u>Topic</u>	<u>Speaker</u>
	Podium Session III: Inflammation, Healing and Remodeling (pg. 36-43)	Moderators: Nathan Schiele, PhD Brianne Connizzo, PhD
12:30	<i>Keynote Lecture</i> Cellular Mechanisms of Fibrotic Tendon Healing and Opportunities for Regeneration	Alayna Loiselle, PhD
12:45	<i>Discussion</i>	
12:50	<i>Keynote Lecture</i> MSC-Derived Exosomes for the Treatment of Tendinopathy	Hui B. Sun, PhD
13:05	<i>Discussion</i>	
13:10	Decreased Shear Viscosity with Achilles Tendinopathy in Individuals with Diabetes Compared to Non-Diabetics	Jennifer Zellers, DPT, PhD
13:15	Postnatal Energy-Storing and Positional Tendon Development Shows Distinct Levels of Mechanotransducers	Sophia Theodossiou, BA
13:20	<i>Discussion</i>	
13:25	HMGB1 Plays a Role in Tendon Wound Healing	Devon Scott, BS
13:30	The Effect of Age on Achilles Tendon Healing	Thomas Leahy, BS
13:35	<i>Discussion</i>	
13:40	A Patient-Specific Micro-Tissue Platform to Compare Biological Properties <i>In Vitro</i> to Patient Outcome for Anterior Cruciate Ligament Reconstruction	Marc van Vijden, MSc
13:45	Visualization of Soft Tissue Composition in a Rat Model of ACL Reconstruction Using Spectral Computed Tomography	Shiyi Yao, PhD
13:50	<i>Discussion</i>	
13:55	Coffee Break/Poster Session II (odd numbers) (pg. 51-59)	Moderators: Chih-Hwa Chen, MD Pernilla Eliasson, PhD Anne Gingery, PhD Zhaozhu Li, MD

<u>Time</u>	<u>Topic</u>	<u>Speaker</u>
	Podium Session IV: Tissue Engineering and Regenerative Medicine (pg. 44-49)	Moderators: Dianne Little, DVM, PhD Alejandro Almarza, PhD
14:30	<i>Keynote Lecture</i> Strategic Biomimicry in the Design of Soft Tissue ECM Models	Helen Lu, PhD
14:45	<i>Discussion</i>	
14:50	<i>Keynote Lecture</i> The Immunomodulation of Tendon and Ligament Healing	Connie Chamberlain, PhD
15:05	<i>Discussion</i>	
15:10	<i>Savio L-Y. Woo Young Researcher Award – Biological</i> Identification of a Latent Resident Progenitor Population in the Adult Mouse Tendon (pg.20)	Mor Grinstein, PhD
15:20	<i>Discussion</i>	
15:25	Comparison of the Efficacy Between Allogenic Dermal Fibroblast and Platelet-Rich Plasma for the Repaired Tendon-to-Bone Healing in a Rabbit Model of a Chronic Rotator Cuff Tear	Sung-Min Rhee, MD
15:30	Hypoxia Improves Biomechanical Properties of Scaffold-Free Engineered Tendon Fibers	Michael Bramson, BS
15:35	<i>Discussion</i>	
15:40	Rotator Cuff Repair Augmentation via Delivery of a Novel Combination of Growth Factors From PVA Tyramine Hydrogel in an Ovine Chronic Tear Model	Scott Bolam, MBChB
15:45	Conditioned Medium Derived From Tendon Stem Cells Co-Culture with Hepatocyte Growth Factor Promotes Injured Tendon Healing In Vitro	Ze'nan Zhang, MS
15:50	<i>Discussion</i>	
15:55	Closing Remarks for ISL&T-XVIII	James Goh, PhD
16:00	Reception and Award Ceremony Room 225	
18:00	<i>Meeting adjourned</i>	

Poster Presentations

<u>Poster Number</u>	<u>Title</u>	<u>Presenter</u>
1	Longitudinal Non-Invasive Ultrasonography to Measure Tensile Mechanical Properties During Tendon Healing	Alayna Loiselle, PhD
2	Carpal Arch Changes by Transcutaneous Electrical Stimulation of The Thenar Muscle	Hui Zhang, BEng
3	Healing of the Anterior Cruciate Ligament Partial Tear After Implanting Genipin-Crosslinked Extracellular Matrix Gel	Kuan-Hao Chen, ME
4	Local Application of Non-Oxidizable HMGB1 Enhances Healing of Injured Enthesis by Recruiting Mesenchymal Stem Cells	Feng Li, PhD
5	Hepatocyte Growth Factor Inhibits Transforming Growth Factor- β 1-Induced Osteogenic Differentiation of Tendon-Derived Stem Cell	Zhaozhu Li, MD
6	New Quantified Measurement of Fatty Degeneration of the Rotator Cuff Muscles Using Magnetic Resonance Imaging	Joo Han Oh, MD. PhD
7	The Use of PRP and Surgical Debridement Decreases the Chondrogenic Burden in Degenerative Tendonopathy of the Patellar Tendon	Roshawn Brown, BS
8	Influence of IL1RA Genetically Modified MSCs	Connie Chamberlain, PhD
9	Blockage of SMAD3 Signaling Enhances Rotator Cuff Repair Through Reducing the Aberrantly Distributed Sclerostin-Producing Fibroblasts	Jiankun Xu, PhD