

PROGRAM

Podium Sessions

<u>Time</u>	<u>Topics</u>	<u>Presenting Author</u>
7:30	Registration and Light Breakfast	
8:00	Welcome	Zong-Ming Li, PhD Hong-Wei Ouyang, MD, PhD
8:10	<i>Clinical Lecture: Biological Strategy in ACL Surgery</i>	Chih-Hwa Chen, MD, MBA
	Podium Session I: Structure and Function of Soft Tissues	Moderators:
8:25	Turkey Model for Flexor Tendon Related Research: An Anatomic and Biomechanical Comparison of Human, Canine, Turkey, and Chicken Flexor Tendons	Assaf Kadar, MD
8:35	<i>Discussion</i>	
8:40	Regional Capsular Changes in Length of the Glenohumeral Capsule Underlying the Supraspinatus and Infraspinatus	Hansel E. Ihn, BA
8:45	Observation of Chiral Behavior in Tendon Fascicles	Kimberly Buchanan, BS
8:50	TCL Thickness Measurement Using Dynamic Ultrasound Imaging	Rakshit Shah, BS
8:55	Microstructural Analysis of a Dual-Injury Patellar Tendinosis Mouse Model	Dean Wang, MD
9:00	<i>Discussion</i>	
9:10	A Novel Mechanism for Intramuscular Fat Deposition After Muscle Injury	Yong-Soo Lee, PhD
9:15	Robust Modeling of Nonlinear History-Dependence of Passive Muscle-Tendon over the Preconditioned Time-Continuum, Gilen Structure and Key Protein Content	Jack Winters, PhD
9:20	<i>Discussion</i>	
9:25	Coffee Break/ Poster Session I (even numbers)	
	Podium Session II: Biomechanics of Tendons and Ligaments	Moderators:

9:50	Mechanical Loading Protects Murine Tendon Explants from the Acquisition of Tendinopathic Features	Stefania Wunderli, MSc
9:55	Influence of Quasi-Static and Dynamic Cyclic Mechanical Loading on Collagen I Deposition and Tensile/Failure Properties of Engineered Tendon Fibers	Kuwabo Mubyana, BS
10:00	Is Bone Marrow Concentrate Harvested During Arthroscopy from the Humeral Head as Good as Concentrate Harvested from the Iliac Crest?	Michael Schär, MD
10:05	Formation of Tendon Organoid by a Defined Uni-Axial Mechanical Loading in 3D Bioreactor Culture	Tao Wang, PhD
10:10	The Effect of Insertion Angle and Pulling Angle on the Pullout Strength of All-Suture Type Anchors - A Biomechanical Study	Hyeon Jang Jeong, MD
10:15	<i>Discussion</i>	
	Podium Session III: ACL Biomechanics, Repair and Regeneration	Moderators:
10:30	Decreased Matrix Metalloproteinase 2, 3, 9, and 13 Activity with External Fixation in a Murine Model of Anterior Cruciate Ligament Reconstruction	Yusuke Nakagawa
10:40	<i>Discussion</i>	
10:45	Preclinical Evaluation of the Silk-Based Sheath for Enhanced Osteointegration of Tendon Graft Post Anterior Cruciate Ligament Reconstruction	James Goh, PhD
10:50	Knee Joint Center of Rotation in Patients Following Anterior Cruciate Ligament Reconstruction: A Comparison between Hamstring and Patellar Tendon Grafts	Nigel Zheng, PhD
10:55	One Step Method to Promote the Regeneration of ACL Using Composite Silk Scaffold with Autologous Ligament Derived Stem/Progenitor Cell	Weiliang Shen, MD
11:00	Varus-Valgus Instability in the Anterior Cruciate Ligament-Deficient Knee: Effect of Posterior Tibial Load	Tomoki Ohori, MD
11:05	<i>Discussion</i>	
11:15	Flash Presentation by Poster Presenters	Moderators:

	Podium Session IV: Surgery and Therapeutics	Moderators:
11:45	Effect of Low-Intensity Pulsed Ultrasounds after Autologous Adipose-Derived Mesenchymal Stem Cells Transplantation for Tendon-Bone Healing in a Rabbit Model	Can Chen, BS
11:55	<i>Discussion</i>	
12:00	Effects of Extracorporeal Shock Wave Therapy on Treating Refractory Patella Tendinitis With Respect To MRI Findings	Yusuke Nishida, MD
12:05	A Novel Technique for Repair of Posterior Medial Meniscus Root Tear: A Biomedical Study Using Porcine Knees	Yu-Shu Lai, PhD
12:10	Immediate Effects of Photobiomodulation Therapy on Achilles Tendon Viscoelastic Properties	Patrick Corrigan, PT, DPT
12:15	Effects of Anteromedial Portal vs. Transtibial ACL Tunnel Preparation on Tibial Tunnel Aperture Contact Characteristics	Charles Lin, BSE
12:20	<i>Discussion</i>	
12:35	Lunch (Group Photo and Poster Viewing)	
	Podium Session V: Tissue Engineering, Regeneration and Healing	Moderators :
13:35	Differentiated Tenocytes Revert to a Progenitor-Like State in Mice with Targeted Disruption of TGF-beta Type II Receptor	Guak-Kim Tan, PhD
13:45	<i>Discussion</i>	
13:50	An Unexpected Role for Scleraxis in Skeletal Muscle Regeneration	Tyler Harvey, BS
13:55	Alteration of MMPs and TIMPs in a Longitudinal Analysis of Achilles Tendon Tears	Susann Minkwitz, PhD
14:00	Corrosion Characterization of Magnesium Coated via Micro-Arc Oxidation	Jonquil R. Mau, MS
14:05	Effect of Tripeptide Copper Complex GHK-CU on Cultured Healing Cells Derived from Tendon Graft in Anterior Cruciate Ligament Reconstruction	Yuk-Wa Lee, MPhil
14:10	<i>Discussion</i>	

14:20	The Effect of Mesenchymal Stromal Cell Sheets on the Proliferative Stage of Flexor Tendon Healing	Hua Shen, PhD
14:30	<i>Discussion</i>	
14:35	Identity and Tenogenesis of TSPC	Hong Wei Ouyang, MD, PhD
14:40	Mkx Deficiency Leads to Heterotopic Ossification of Tendon Through Regulation of Angiogenesis	Junxin Lin
14:45	Development of Novel Collagen Scaffold Sheet and Rope for Guided Tendon Regeneration	Minghao Zheng, PhD
14:50	In Vivo Regenerative Potential of various Soft Polymeric Scaffolds in Osteochondral TMJ Defects	Alejandro Almarza, PhD
14:55	<i>Discussion</i>	
15:05	Coffee Break/Poster Session II (odd numbers)	
	Podium Session VI: Tendinopathy and Tendinosis	Moderators:
15:30	Scleraxis is Essential for Tenocyte Recruitment to Enable Tendon Growth	Deepanwita Pal, PhD
15:35	Rapamycin Decreases Tendon Stem Cell Senescence - A Potential Approach to Treat Aging Induced Tendinopathy	Daibang Nie, PhD
15:40	Statin Treatment is Associated with Trigger Finger and Tendinosis	Per Aspenberg, PhD
15:45	Cited2-Reprogrammed Stem Cells Mitigate Tendinopathy Pathogenesis	Daniel J. Leong, PhD
15:50	<i>Discussion</i>	
	Podium Session VII: Tendon and Ligament Stem Cells	Moderators:
16:00	Cryopreservation and Reactivation of Human Tendon Derived Stem Cells (hTDSC) Sheet	Sai-Chuen Fu, PhD
16:10	<i>Discussion</i>	
16:15	Human Plantar Fascia Contains Two Populations of Stem Cells Exhibiting Differential Properties	Jiaying Zhang, PhD

16:20	Diabetes Mellitus and Calcific Tendinopathy: Hyperglycemia Induces Osteogenic Differentiation of Tendon Derived Mesenchymal Stem Cells	Alessio Gai Via, MD
16:25	Combination Application of TNF- α and TGF-B1 Facilitate Tenogenic/Osteogenic Differentiation of Tendon-Derived Stem Cells in Vitro	Zhaozhu Li, PhD
16:30	Famotidine, a Histamine-2-Receptor Antagonist, Suppressed Osteogenic Differentiation of Mesenchymal Stem Cells Derived from Patients with Ossification of the Posterior Longitudinal Ligament	Xizhe Liu, MD
16:35	Tenogenic Differentiation of Human Tendon Derived Stem Cells Was Suppressed by MIR124 Through Targeting EGR1	Gang Li, MD, PhD
16:40	<i>Discussion</i>	
	Podium Session VIII: Rotator Cuff Repair and Healing	Moderators: Scott Rodeo, MD
16:55	A Pilot Study Examining the Feasibility and Safety of Using bone Marrow Aspirate Concentrate I Improving Rotator cuff tendon Healing Following Arthroscopic Rotator Cuff Repair	Camila B. Carballo, MSc
17:05	<i>Discussion</i>	
17:10	PARP-1 Inhibition Improves Healing in a Rat Model of Acute Rotator Cuff Repair	Michael B. Kuenzler, MD
17:15	Effect of the Allogenic Dermal Fibroblast to Enhance Rotator Cuff Healing in a Rabbit Model of Chronic Rotator Cuff Tear	Sung Min Rhee, MS
17:20	<i>Discussion</i>	
17:25	Closing Remarks for ISL&T - XVI	
17:35	<i>Proceed to Banquet Venue (Transportation Provided)</i>	
18:30	Banquet and Award Ceremony	

Poster Presentations

Moderators:

<u>Poster Number</u>	<u>Title</u>	<u>Presenting Author</u>
1	Comparison of Enlargement and Migration of the Femoral Tunnel Aperture after Anatomic Anterior Cruciate Ligament (ACL) Reconstruction Between Bone-Patella Tendon-Bone (BTB) Grafts and Hamstring Tendon (HT) Grafts	Hiroshi Amano
2	Bioengineered 3D Scaffold for the Controlled Delivery of Cyclic Strain and hGDF-5 to Address hBMSK into Tenogenic Lineage	Nicola Maffulli, MD, PhD
3	Characterization of Tendon Tissue Used as Autograft in Reconstructive Knee Injuries: What Causes the High Failure Rate in Younger Patients?	David Musson, PhD
4	Systematic Reconstructing Lineage Hierarchies of Mous Limb Connective Tissue Delelopment by Using Single Cell RNA-SEQ	Zi Yin, PhD
5	The Effects of an Adipose-Derived Stem Cell Treatment on Chondrometaplasia of Rats' Rotator Cuff Tendons	Saho Tsuchiya
6	Does Sustain Release of Growth Factor Enhance the Healing of Repaired Rotator Cuff Tendon?	Jong Pil Yoon, MD
7	Comparison of the Femoral Tunnel Enlargement After Knee Ligament Reconstruction Surgery Using Hamstring Autograft-Intra-(ACL) vs Extra - (MPFL) Articular Reconstructions	Keisuke Kita, MD, PhD
8	Biomimetic Tendon Extracellular Matrix Composite Gradients for the Ligament-to-Bone Junction Reconstruction	Long Yang, BS
9	A Novel Three-Phased Multilayered Decellularized "Book" Scaffold Provide an Inductile Microenvironment for the Proliferation and Differentiation of Bone Marrow Mesenchymal Stem Cells	Xiaoning Li, MD
10	Bridging Suture Makes Consistent and Secure Fixation in Double-Row Rotator Cuff Repair	Teruhisa Mihata, MD, PhD
11	The Expression of NOD1 and IL-1B In Achilles Tendon Rupture Samples: A Pilot Study	Yuk-Wa Lee, MPhil

12	Assessment of the Anterolateral Aspect of the Sus Scrofa Knee	Gary Ulrich
13	Single Cell RNA Sequencing Analyses Cell Sub-Population of Muscle-Tendon-Junction	Xiao Chen, PhD
14	Mobile Plantar Pressure Loading Assessment in Patients with Achilles Tendon Rupture	Sanna Aufwerber, MSc
15	Assessment of a Novel Method using Ultrasound for Measuring Cross-Sectional Area Along the Length of Oline Biceps and Infraspinatus Tendons	Sidney J. Perkins
16	Xenografts as an Alternative to Autografts for ACL Reconstruction: 12 Year Results	Kevin R. Stone, MD
17	mTOR Regulates Differentiation of Tendon Stem/Progenitor Cels (TSCs) - Implication in PreIenting the Development of Tendinopathy	Jianying Zhang, PhD
18	Effect of LIPUS on the Temporal and Spatial Expression of Tissue Regeneration Related Factors After Rabbit Bone-Tendon Junction Injury	Hongbin Lu, MD, PhD
19	Development and Validation of a 3-D Finite Element Model of a Goat Stifle Joint	Huizhi Wang, BS