



\*All Presentations are 10 minutes, unless noted.

<b>SUNDAY   March 29 (Paper No 108 - 187)</b>					
<b>Time</b>	<b>Podium</b>	<b>Podium</b>	<b>Podium</b>	<b>Podium</b>	<b>Podium</b>
	<b>Ballroom CD</b>	<b>Ballroom A</b>	<b>Ballroom B</b>	<b>E219 AB</b>	<b>E219 CD</b>
<b>8:00 AM-9:00 AM</b>	<b>Spotlight - Tendon Structure and Function (featuring Stephanie Cone)</b>	<b>Spotlight - How Next-Generation Implants Can Shift Orthopaedic Practice (featuring Valentin Antoci)</b>	<b>Molecular and Cellular Mechanisms Regulating Bone Remodeling, Disease and Repair</b>	<b>Clinical Research Methods</b>	<b>Injury and Healing Studies in Clinical Research</b>
	<b>Moderators - Brianne Connizzo and Spencer Szczesny</b>	<b>Moderators - Jessica Jennings and Ebru Oral</b>	<b>Moderators - Chia-Lung Wu and Chao Xie</b>	<b>Moderators - Jeff Bischoff and Yen-Sheng Lin</b>	<b>Moderators - Jaimo Ahn and Christos Mousoulis</b>
<b>8:00 AM</b>	<b>Paper 108 Paralysis Dysregulates Extracellular Matrix And Actin Cytoskeleton-associated Genes During Tendon Development</b>	<b>Paper 111 Extended Prophylactic Antibiotic Use Following Total Hip Arthroplasty Does Not Impact Patient-Reported Outcome Measures: Propensity-Matched Analysis</b>	<b>Paper 114 Recombinant Human Proteoglycan 4 Prevents Pathologic Bone Formation In A Murine Model Of Spondyloarthritis</b>	<b>Paper 120 Distance Weighted Matching In The Quantification Of Excess Morbidity In External Hemipelvectomy And Hip Disarticulation</b>	<b>Paper 126 Factors And Patient-reported Outcome Measures Associated With Stress Fracture After Periacetabular Osteotomy</b>
<b>8:10 AM</b>	<b>Paper 109 Static And Dynamic Tensile Strain Yield Distinct Ecm Remodeling And Signaling From Human Ligament Fibroblasts</b>	<b>Paper 112 Use Of An Ex Vivo Human Bone Organ Culture Model To Compare Wound Irrigation Solutions</b>	<b>Paper 115 SIRT3 Deacetylates PDHA1 To Activate Aerobic Metabolism And Promote Osteoclast Differentiation In Postmenopausal Osteoporosis</b>	<b>Paper 121 Validation Of Single-camera Pose Estimation For Orthopaedic Motion Analysis</b>	<b>Paper 127 Associations Between Obesity And Rotator Cuff Tears, And The Mediating Role Of Inflammation: Findings From The Uk Biobank And Clinical Cohort</b>

8:20 AM	Paper 110 <b>A Novel Measurement Of Altered Achilles Subtendon Load-sharing 6-12 Months Following Rupture</b>	Paper 113 <b>The Epigenetic Foundation Of Knee Arthrofibrosis</b>	Paper 116 <b>Therapeutic Use Of Runx3-targeting Micro-rna To Improve Bone Fracture Healing</b>	Paper 122 <b>Utilizing Deep Learning To Automatically Measure Radiographic Parameters For Individuals With Distal Radius Fractures</b>	Paper 128 <b>Imaging Mass Cytometry Reveals a Dynamic Synovial Cellular Landscape in Canine Cruciate Ligament Disease</b>
8:30 AM	<b>Stephanie Cone</b> - Improving individualized care through advanced structure-function analysis	<b>Valentin Antoci</b> - Smart Materials in Orthopaedics: From Infection Defense to Next-Generation Joint Replacement	Paper 117 <b>Rapamycin Rejuvenates Skeletal Stem Cells And Restores Youthful Bone Formation</b>	Paper 123 <b>Expiration Of Machine Learning Predictive Models In Healthcare</b>	Paper 129 <b>Non-tobacco Nicotine Dependence Is Associated With Worse Outcomes After Humeral Shaft Operative Fixation</b>
8:40 AM			Paper 118 <b>Cd14 Modulates Age- And Injury-induced Subchondral Bone Remodeling In Osteoarthritis (OA) Via Type I Interferon</b>	Paper 124 <b>Building An Automated Orthopedic Trauma Registry With NLP: A Pediatric And Young Adult Emergency Department Study</b>	Paper 130 <b>Differential Roles Of Inflammatory Mediators In Organ Dysfunction After Osseous Vs. Non-osseous Injury</b>
8:50 AM			Paper 119 <b>Quantitative PET-MR Imaging Of Bone Remodeling And Muscle Composition Across Age, Sex, And BMI</b>	Paper 125 <b>One-year Mortality Following Hip Fracture Surgery: Development And External Validation Of A Clinical Prediction Tool</b>	Paper 131 <b>Serial Thrombelastography Identifies Distinct Pathophysiologic Responses Based On Fracture Type</b>
<b>9:15 AM-10:15 AM</b>	<b>Spotlight - Biomechanics and Predictive Modeling of Skeletal Tissue Health (featuring Stefaan Verbruggen)</b>	<b>A Focus on Translational Research</b>	<b>NIRA - Arthritis and Sequelae (8 minutes)</b>	<b>Hip and Knee Arthroplasty - Kinematics and Computational Modeling</b>	<b>Scoliosis and Degenerative Spine Conditions: Predicting and Improving Outcomes</b>
	<b>Ballroom CD</b>	<b>Ballroom A</b>	<b>Ballroom B</b>	<b>E219 AB</b>	<b>E219 CD</b>

	Moderators - Hani Awad and Samantha Weaver	Moderators - Miguel Diaz and Bo Gao	Moderators - Heidi Reesink and Jennifer Woodell-May	Moderators -Roham Borazjani and Emily Hampp	Moderators - Nancy Hadley-Miller and Ganesh Swamy
9:15 AM	Paper 132 <b>A Novel Joint-on-a-chip Platform Integrated With A Multi-scale Vascular Network And Mechanical Loading Units</b>	Paper 135 <b>Effects Of Hydroxybisphosphate-conjugated Sitafloracin On Fracture Healing And Skeletal Growth In Mice</b>	(9:15 AM) Paper 141 <b>From Antioxidant To Blood Conservation: Ascorbic Acid Lowers Hidden Blood Loss And Enhances Recovery After Total Hip Arthroplasty</b>	Paper 148 <b>Does Theia3d Update Improve The Agreement In Hip Joint Kinematics Between Markerless And Marker-bed Motion Capture?</b>	Paper 154 <b>Outcome Prediction After Anterior Cervical Discectomy And Fusion With Machine Learning</b>
9:25 AM	Paper 133 <b>Low Senescent Burdens Rewire Osteocyte-ECM Micromechanics In 3D Co-culture</b>	Paper 136 <b>Bioactive Calcium Sulfate/hydroxyapatite Augmentation With Systemic Zoledronic Acid For Pedicle Screw Fixation In An Osteoporotic Minipig Model</b>	(9:23 AM) Paper 142 <b>Role Of ACC1 In Rewiring Chondrocytes Metabolism During Obesity And Injury Associated Osteoarthritis</b>	Paper 149 <b>Relationship Between Midflexion Knee Laxity, Isokinetic Strength, And Patient-reported Outcome Measures At 3-months After Cruciate-retaining Total Knee Arthroplasty</b>	Paper 155 <b>Spinal Alignment Device Enables Detection Of Sagittal Curvature Changes In A Mouse Disc Degeneration Model</b>
9:35 AM	Paper 134 <b>Aberrant BMP And Mechanosignaling Remodel Chromatin To Drive Heterotopic Ossification In FOP</b>	Paper 137 <b>Plugging The Medullary Canal To Reduce Bony Overgrowth, Heterotopic Ossification, and Stump Pain Following Amputation</b>	(9:31 AM) Paper 143 <b>TurboID Proximity Labelling Confirms The Role Of Fat-joint Crosstalk In Osteoarthritis And Aging</b>	Paper 150 <b>Improved Polyethylene And Design Enhances Wear Performance In Hinged TKA</b>	Paper 156 <b>Increased Collagen Accumulation And Enrichment Of Tgfb Pathways In The Mouse Caudal Intervertebral Disc Following Growth Rod Instrumentation</b>

9:45 AM	<b>Stefaan Verbruggen</b> - Predictive in vitro and in silico modeling of mechanical microenvironments	Paper 138 <b>Raman Spectroscopic Needle Probe Provides Real-time Biomarkers Of Temporomandibular Joint Cartilage Composition Predictive Of Tissue Function</b>	(9:39 AM) Paper 144 <b>Impaired Chondrogenesis Within Female Rat Osteochondral Defects Is Associated With Elevated Wnt, Pro-inflammatory Signaling</b>	Paper 151 <b>Surgeon Ergonomics During Total Knee Arthroplasty</b>	Paper 157 <b>Socioeconomic And Geographic Barriers To Postoperative Follow-up In Adolescent Idiopathic Scoliosis</b>
9:55 AM		Paper 139 <b>Sirt1-piezo1 Signaling As A Therapeutic Target For Bone Formation And Fracture Healing</b>	(9:47 AM) Paper 145 <b>Partial Releases Of The Pcl In Total Knee Arthroplasty Reduce Excessive Rollback During Passive Flexion Without Compromising Gait Kinematics And Implant Fixation</b>	Paper 152 <b>Modelling Total Knee Replacement Polyethelene Wear In Silico: Model Verification And Validation</b>	Paper 158 <b>Stratifying Progression Risk In Congenital Scoliosis: A Multicenter Decision Tree And Regression-based Predictive Model</b>
10:05 AM		Paper 140 <b>Real-world Outcomes Of Platelet-rich Plasma Versus Corticosteroid Injections Across Common Tendinopathies, Bursitis, And Knee Osteoarthritis: A Propensity-matched Trinetx Study</b>	(9:55 AM) Paper 146 <b>Joint Injury Generates Damage Associated Molecular Patterns That Activate Synovial Fibroblasts Towards A Fibrotic Phenotype</b>	Paper 153 <b>Dynamic Ct Of Patellofemoral And Tibiofemoral Kinematics Before And After Total Knee Arthroplasty: A Pilot Study</b>	Paper 159 <b>Glucagon-Like Peptide-1 Receptor Agonists And Postoperative Outcomes Following Laminectomy In Patients With Type 2 Diabetes: A Retrospective Cohort Study</b>
10:15 AM			(10:03 AM) Paper 147 <b>Unraveling The Synovial Contribution To Ankle Osteoarthritis And Pain</b>	Paper 153A <b>Functional Alignment Enhances Medial Pivot Motion Compared To Mechanical Alignment In Medial Pivot Total Knee Arthroplasty</b>	Paper 159A <b>Effect Of A1c Levels On 30-day Complications After Elective Anterior Cervical Discectomy And Fusion Post-traumatic Osteoarthritis</b>

4:15 PM-5:15 PM	<b>Spotlight - CRISPR Driven Strategies in Biomaterials and Regenerative Tissue Repair (featuring Tomas Gonzalez-Fernandez)</b>	<b>The Role of Synovium in the Development of Osteoarthritis</b>	<b>Advances in Knee Mechanics: Modeling, Morphology, and Joint Loading</b>	<b>NIRA - Development and Repair (8 minutes)</b>	<b>Resident and Fellow Research</b>
	<b>Ballroom CD</b>	<b>Ballroom A</b>	<b>Ballroom B</b>	<b>E219 AB</b>	<b>E219 CD</b>
	<b>Moderators - Derek Dashti and Brian Diekman</b>	<b>Moderators - Laurie Goodrich and Jarred Kaiser</b>	<b>Moderators - Ilse Jonkers and Reza Pourmodheji</b>	<b>Moderators - Mandi Lopez and Jeffry Nyman</b>	<b>Moderators - Kenneth Taylor and Donna Pacicca</b>
4:15 PM	Paper 160 <b>CRISPR Regulation Of Noggin For Growth-factor-free Vertebral Endplate Tissue Engineering</b>	Paper 163 <b>Synovial Fluid Delays Delamination Wear In Immature Bovine Cartilage Under Pure Cyclical Compressive Loading</b>	Paper 169 <b>Development And Evaluation Of Open-source, Multibody Models Of The Menisci To Enhance Musculoskeletal Modeling Of The Knee</b>	(4:15 PM) Paper 175 <b>Inducible Global Ablation Of Thrombospondin-2 Enhances Murine Fracture Bone Formation</b>	Paper 182 <b>Topical Metformin Therapy Mitigates Scar Formation After Achilles Tendon Injury</b>
4:25 PM	Paper 161 <b>CRISPR-functionalized 3d Printed Biomaterials For Spatiotemporal Gene Editing In Cartilage Repair</b>	Paper 164 <b>Serum Anti-microbial IgG Analysis Reveals Differential Host Immune Responses In OA Patients Compared To Healthy Controls</b>	Paper 170 <b>Elucidation Of The Meniscus-bone Healing Process Investigated With Pull-out Repair Model For Medial Meniscus Posterior Root Tear In Rats</b>	(4:23 PM) Paper 176 <b>Cortical- And Trabecular-specific Metabolomic Profiles Reflect Bone Loss During Weight Loss With Semaglutide Treatment</b>	Paper 183 <b>Discovery Of Telocytes Integrated Into Mast Cells Adjacent To Joint-draining Lymphatic Vessels And Their Potential Role In Synovial Lymphatic System</b>
4:35 PM	Paper 162 <b>CRISPR Epigenome Editing Abolishes Osteoarthritic Cartilage Induced Neuron Sensitization</b>	Paper 165 <b>Efferocytosis By Synovial Fibroblasts In PTOA Is Mediated By The Axl Receptor</b>	Paper 171 <b>The Effect Of Posterior Tibial Slope On Tibiofemoral Joint Biomechanics: An In-vitro Analysis</b>	(4:31 PM) Paper 177 <b>Human Apolipoprotein E4 Drives Disrupted Osteocyte Function And Bone Fragility</b>	Paper 184 <b>Osseointegration Potential Of Mg-based Implants: A Novel Bio-mechanical Comparison Of Zx00 To Piga And Titanium Screws In A Preclinical Ovine Model</b>

4:45 PM	<b>Tomas Gonzalez-Fernandez</b> - Enhancing CRISPR strategies for precision musculoskeletal regeneration via deep learning and biomaterials engineering	Paper 166 <b>The Wnt Of Change: Fracture-induced Synovial Pathways In Post-traumatic Ankle Osteoarthritis</b>	Paper 172 <b>The Influence Of Obesity And Frontal Plane Alignment On Tibiofemoral Compartmental Loading</b>	(4:39 PM) Paper 178 <b>Macrophage YAP/TAZ Signaling Mediates Mechanoregulation Of Bone Fracture Repair</b>	Paper 185 <b>Chronic Suppression Of A Multidrug-resistant Pseudomonas Aeruginosa In Prosthetic Joint Infection Using Personalized Bacteriophage Treatment</b>
4:55 PM		Paper 167 <b>A Single Instance Of Joint Overloading Results In Persistent Changes To The Synovial Cell Landscape</b>	Paper 173 <b>3d Anatomic Variations Associated With TT-TG And PTLTR In Patellofemoral Instability Patients - A Statistical Shape Modeling Study</b>	(4:47 PM) Paper 179 <b>Spatial Transcriptomics Reveals Regulators Of Mouse Joint Development</b>	Paper 186 <b>Functional Alignment Parameters In Total Hip Arthroplasty: A Comparative Analysis Of Seated And Standing Polar Axis Angles Across Anterior, Posterior, And Star Surgical Approaches</b>
5:05 PM		Paper 168 <b>The Fate Of Embryonically-derived Synovial Lining Macrophages During Development And Injury-induced OA Progression</b>	Paper 174 <b>Analysis Of Healthy Knee Kinematic Phenotypes Through K-means Clustering</b>	(4:55 PM) Paper 180 <b>Grk2 Is A Novel Major Regulator Of Chondrocyte Differentiation During Postnatal Skeletal Development</b>	Paper 187 <b>Controlling Anterior Tibial Translation: In Vivo Evidence For Anterior Closing-Wedge Osteotomy In Revision ACL Reconstruction</b>
				(5:03 PM) Paper 181 <b>Distinct Neutrophil Populations Support Regenerative Healing In Neonatal Mice</b>	