



ANNUAL MEETING PROGRAM

Saturday, February 8, 2025

9:15 AM - 10:15 AM

Room #: West 301 A

1 Spotlight - Meniscus Injuries and Healing (featuring Andreas Seitz)

9:15 AM

Paper No. 1

Patient Outcomes 10 Years After Observation Versus Debridement Of Unstable Chondral Lesions During Partial Meniscectomy: Results From A Randomized Controlled Trial

Leslie Bisson; Kyle Flikkema; Paul Myers; Jacob Geiger; Nomi Weiss-Laxer; Zehua Zhou; William Wind

9:25 AM

Paper No. 2

Combination Effect Of Mechanical Stimulation And Inflammation In Engineered Healing Of Avascular Meniscus Tears Under Multi-tissue Interaction

Hun Jin Jeong; Elen Zhu; Min Seo Kang; Chang Lee

9:35 AM

Paper No. 3

Zone-dependent Epigenetic And Transcriptomic Dynamics In Meniscus Cell Migration And Inflammation

Catherine Cheung; Yize Zhang; Ellen Zhang; Bat-Ider Tumenbayar; Yuna Heo; Se-Hwan Lee; Yongho Bae; Su Chin Heo



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Saturday, February 8, 2025

9:15 AM - 10:15 AM

Room #: West 301 BC

2 Synovial Inflammation in Arthritis

9:15 AM

Paper No. 4

Monocyte-derived Macrophage Trafficking, Retention, And Phenotyping During Obesity-induced Osteoarthritis

Isabella YZ Goh; Nikola N. Jaworska; Nurlatifa ZM Fuad; Baifeng Yu; Natalia S. Harasymowicz

9:25 AM

Paper No. 5

Targeted Inhibition Of Pathogenic Tgf- β In Synovial Fluid Via Non-cartilage-permeating Antagonists

Sedat Dogru; Bor-Lin Huang; Enkhjargal Budbazar; Alex B. Fudenna; Manish Bais; Brian Snyder; Mark Grinstaff; Michael Albro

9:35 AM

Paper No. 6

Synergistic Effect Of Inhibiting Tnf α /tnfr And C5a/c5ar1 Signaling With Two Progranulin Derivatives Atsttrin And Nc5 In The Treatment Of Rheumatoid Arthritis

Guiwu Huang; Wenyu Fu; Chaopeng He; Chuan-ju Liu

9:45 AM

Paper No. 7

PIEZO1 Promotes Synovial Fibrosis And Inflammation

Easton Farrell; Alexandra Kahn; Hunter Stabile; Morgan Whitaker; Lindsey Lammlin; Scarlet Howser; Isabelle Smith; Alexander Knights; Christina Capobianco; Bonnie Huynh; Danny Nguyen; Helen Tran; Sofia Gonzales-Nolde; Kurt Hankenson; Tristan Maerz

9:55 AM

Paper No. 8

Human Marrow-isolated Adult Multilineage Inducible (miami) Cell-derived Extracellular Vesicles Possess Immunomodulatory And Anabolic Mirnas Cargo That Modulate Pro-inflammatory Macrophage Polarization

Michelle Ley; H. Thomas Temple; Alicia R. Jackson; Tom Best; Gianluca D'Ippolito; Dimitrios Kouroupis



ANNUAL MEETING PROGRAM

10:05 AM

Paper No. 9

Macrophage-derived Wnt5a Promotes Joint Inflammation And Pain In Osteoarthritis

Sihan Liu; Wenhui Li; Jingshu Liu; Anjali Mamidwar; Keren Chen; Elyse Blank; Matthew Gordon; Daniel Sun; Li Zeng



ANNUAL MEETING PROGRAM

Saturday, February 8, 2025

9:15 AM - 10:15 AM

Room #: West 301 D

3 Hip and Knee Arthroplasty - Complications and Unique Patient Populations

9:15 AM

Paper No. 10

Does A Simple Needle Stick From A Preoperative Knee Aspiration Or Non-steroidal Injection Influence Total Knee Arthroplasty Infection Risk? A Retrospective Database Analysis

Hania Shahzad; Christopher Krajcir; Shannon Tse; J.B. Smith; David Dallas-Orr; John Meehan; Mauro Giordani; Safdar Khan; Zachary Lum

9:25 AM

Paper No. 11

Medically Treated Rheumatoid Arthritis In A Mouse Model Did Not Correlate With Periprosthetic Joint Infection Risk

Rishi Trikha; Troy Sekimura; Nicolas Cevallos; Nicole Hung; Alexandra Stavrakis; Nicholas Bernthal

9:35 AM

Paper No. 12

Defining The Transcriptional Fingerprint Of Human Knee Arthrofibrosis Through A Comprehensive Multi-tissue Comparison

Zachary T. Ryan; Ashley N. Payne; Mason F. Carstens; Mark E. Morrey; Joaquin Sanchez-Sotelo; Daniel J. Berry; Roman Thaler; Matthew P. Abdel

9:45 AM

Paper No. 13

Post-operative Complications In HIV Patients Undergoing Total Knee Arthroplasty: A Comparative Analysis

Wilmer Rodriguez; Ajay Panda

9:55 AM

Paper No. 14

Survivorship And Outcomes Of Hip Arthroplasty For Elective Care Versus Fracture In Patients With Solid Organ Transplant: Lung Transplant Patients Do Worse

Timothy S. Brown; Austin E. Winingar; Justin O. Aflatooni; Thomas C. Sullivan; Terry Clyburn



ANNUAL MEETING PROGRAM

10:05 AM

Paper No. 15

Inflammatory Responses To Fine Wear Particles From Conventional And Highly Crosslinked Polyethylene Inserts

Michael Godoy; Songyun Liu; Devin Asher; Joshua Jacobs; Brett Levine; Hannah Lundberg; Deborah Hall; Robin Pourzal



ANNUAL MEETING PROGRAM

Saturday, February 8, 2025

9:15 AM - 10:15 AM

Room #: North 221

4 Bone Health and Healing

9:15 AM

Paper No. 16

Time-restricted Feeding Restructures The Gut Microbiota And Prevents Age-related Bone Loss

Joseph L. Roberts; Michael K. Jakiche; Graham N. Collis; Daniel A. Oesterle; Kelley Chau

9:25 AM

Paper No. 17

Radiation-induced Acute P21+ Senescent Myeloid Cells And Neutrophils Mediate Chronic Bone Loss

David Achudhan; Madison Doolittle; Ritika Sharma; Sundeep Khosla; Robert J. Pignolo; Abhishek Chandra

9:35 AM

Paper No. 18

Intermittent Fasting Enhances Bone Density And Microstructure In Obese Mice Potentially Through Modulation Of Gut Microbiome And Metabolites

Honey Hendsi; Ana Ferreira Ruble; Douglas Adams; Abhirupa Gosh; Janani Ravi; Michael J. Zuscik

9:45 AM

Paper No. 19

Tracing Senescence In Bone: Irradiated Osteocytes Exhibit Time-dependent Biophysical Changes

Junhan Liao; Maryam Tilton

9:55 AM

Paper No. 20

Bone Fracture Induces Local Erythropoiesis, Preventing Fracture Site Hypoxia

Annemarie Lang; Joseph M. Collins; Madhura Nijsure; Joel Boerckel

10:05 AM

Paper No. 21

The Wnt1^{G177C/G177C} Mutation Impairs Fracture Healing In Mice



2025 ANNUAL MEETING

SCIENCE IS OUR CORE

February 7 – 11, 2025 | Phoenix, Arizona



ANNUAL MEETING PROGRAM

Mubashir Ahmad; Humma Sarwar; Oliver Küppers; Jasmin Bülow; Christoph Kölbl; Sandra Dieterich; Melanie Haffner-Luntzer; Astrid Schoppa; Timur Alexander Yorgan; Michael Amling; Thorsten Schinke; Anita Ignatius



ANNUAL MEETING PROGRAM

Saturday, February 8, 2025

9:15 AM - 10:15 AM

Room #: North 222

5 Clinical Research Potpourri

9:15 AM

Paper No. 22

A Novel Molecular Subtyping Based On Proteomics Analysis For Prognosis Predicting In Periprosthetic Joint Infection

Chenghan Chu; Xiaoyu Wu; Zhi Cheng; Puyi Sheng

9:25 AM

Paper No. 23

Deriving The AO/OTA Fracture Classification From Routinely Collected Radiology Report Using A Large Language Model

Stephanie Hu; Timothy Keeley; Ryan Halvorson; Meir Marmor

9:35 AM

Paper No. 24

Identifying Predictors Of Repeat Hip Preservation Procedures In Pediatric And Young Adult Patients: insights From A Large-scale Analysis At A Tertiary-care Children's Hospital

Nazgol Tavabi; timothy williamson; andre weiss; yi-meng yen; travis matheney; michael millis; young-jo kim; eduardo novais; Ata M. Kiapour

9:45 AM

Paper No. 25

Technological Advancements In 3d Segmentation-based Image Guidance For Percutaneous Cancer Ablation And Stabilization Of Sacral Metastases: A 5-year Institutional Experience

Will Jiang; Donghao Gan; Gongwei Wang; Dieter Lindskog; Gary Friedlaender; Michele Johnson; Francis Lee

9:55 AM

Paper No. 26

The Association Between Osteoporosis And Rotator Cuff Tears: Insights Froma Prospective Cohort Study And Bioinformatics Analyses

Yibin Liu; Rong Zhao; Jinjin Ma



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10:05 AM

Paper No. 27

Identification Of Risk Factors For Glenohumeral Osteoarthritis Requiring Shoulder Arthroplasty

Abigail G. Carey-Ewend; Xiaoyi Xu; Vy Pham; Jay D. Keener; Elizabeth L. Yanik



ANNUAL MEETING PROGRAM

Saturday, February 8, 2025

10:45 AM - 11:45 AM

Room #: West 301 A

6 Spotlight - Cartilage Regenerative Medicine (featuring Karin Payne)

10:45 AM

Paper No. 28

Hydrogels With Enhanced Oxygen Control And Tissue Integration Properties For Biofabrication Of Cartilage Implants

Gabriella C.J. Lindberg; Axel Norberg; Laura Veenendaal; Malley Gautreaux; Tim Wheeler; Tim Woodfield; Nick Willett

10:55 AM

Paper No. 29

Freezing Bone Marrow Aspirate Concentrate Does Not Reduce Their Regenerative Potential For Cartilage Repair

Jacob Singer; Haruki Nishimura; Zuokui Xiao; Laura Chubb; Xueqin Gao; Ping Guo; Aiping Lu; Marc Philippon; Johnny Huard

11:05 AM

Paper No. 30

Kartogenin Enhances Chondrogenic Differentiation Of iPSCs Derived MSCs (iMSCs), Promotes Cartilage Repair, Inhibits Pain Behavior, And Improves Joint Function In An Osteochondral Defect Model In Rats

Mohd Nazir Khan; Samir Chihab; Tracy Eng; Thanh Doan; Jarred Kaiser; Hicham Drissi



ANNUAL MEETING PROGRAM

Saturday, February 8, 2025

10:45 AM - 11:45 AM

Room #: West 301 BC

7 Understanding Changes in the Spine with Age, Sex, and Pain

10:45 AM

Paper No. 31

Aging Alters The Infiltrating Immune Cell Profile And Exacerbates IVD Degeneration Following Injury

Sade W. Clayton; Remy E. Walk; Laura Mpofu; Simon Tang

10:55 AM

Paper No. 32

Sex-based Differences In Intervertebral Disc Composition, Vertebral Bone Marrow Adiposity, And Paraspinal Muscle Adiposity In Patients With Chronic Low Back Pain

Noah Bonnheim; Zehra Akkaya; Jiamin Zhou; Po-Hung Wu; Misung Han; Julia Barylak; Conor O'Neill; Jeffrey Lotz; Aaron Fields

11:05 AM

Paper No. 33

Intravital Multiphoton Imaging Of The Murine Intervertebral Disc Reveals Matrix Organization At The Micrometer Scale

Rebecca M. Irwin; Kawasi M. Lett; Nozomi Nishimura; Schaffer B. Chris

11:15 AM

Paper No. 34

Ultrastructural Analysis Of The Bone-cartilage Endplate Interface In The Human Lumbar Spine: Insights And Associations With Elemental Composition, Vascular Patterns, And Degeneration

Uruj Zehra

11:25 AM

Paper No. 35

Gene Expression Correlates Of Pain-like Behavior And Nerve Innervation In A Rat Model Of Chronic Low Back Pain

Sydney M. Caparaso; Ishwarya Sankaranarayanan; David J. Lillyman; Evie C. Barnett; Theodore J. Price; Rebecca A. Wachs

11:35 AM



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Paper No. 36

Bony Lumbar Neural Foramen Area Is Associated With Age But Not Radicular Pain In Patients With Chronic Low Back Pain

C. James Kim; Clarissa M. LeVasseur; Tom Gale; Sabreen Megherhi; Joseph Shoemaker; Caroline Pellegrini; E. Cate Gray; Patrick Smith; Gina McKernan; William Donaldson; Joon Lee; William Anderst



ANNUAL MEETING PROGRAM

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Room #: West 301 A

8 Advanced Pre-clinical and Clinical MR Imaging

10:45 AM

Paper No. 37

Quantitative Ultrashort Time Echo (qUTE) MRI Imaging Of Peripheral Nerve Repairs In Rat Sciatic Nerve Model

Yuanshan Wu; Yajun Ma; Sameer Shah; Kaixin Pan; Elisabeth Orozco; Xin Cheng; Eric Chang; Jiang Du

10:55 AM

Paper No. 38

A 7T 3D MRI Pilot Knee Study To Quantitatively Assess Healing Of Osteochondritis Dissecans Using T2* Mapping

Saumith Bachigari; Rohan Raikar; Abdul Wahed Kajabi; Marc Tompkins; Jutta Ellermann; Eisa Hedayati

11:05 AM

Paper No. 39

Preoperative Knee Cartilage Condition In The Patellofemoral Joint Results In Worse Clinical Outcome Scores 2 Years After Inverted V-shaped High Tibial Osteotomy

JO YEONSEOK; Dai Sato; Taku Ebata; Yoshiaki Hosokawa; Koji Iwasaki; Masatake Matsuoka; Tomohiro Onodera; Eiji Kondo; Norimasa Iwasaki

11:15 AM

Paper No. 40

Automated Quantitation Of Perfusion Mri In Legg-calve-perthes Disease: A Deep-learning Approach To Quantify Femoral Head Hypoperfusion

John D. Carter; Joonoh Lee; Michael Wilde; Salar Sanati; Vishal Gokani; Harikrushnaa Srikanth; Venkata Repaka; David Chong; Harry Kim

11:25 AM

Paper No. 41

Physicochemical Diagnostic Markers Of Human Osteoarthritic Temporomandibular Joint

Zhiyuan Yang; Erin Argentieri; Brandon Lee; Haochen Ci; Michael Hoff; Stephen Connelly; Misung Han; Joshua Levy; Samuel Webb; Peder Larson; Sunita Ho



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11:35 AM

Paper No. 42

Temporal Changes In MRI Relaxation Times Following Acute Ischemic Injury To The Femoral Head In A Piglet Model Of Legg-Calvé-Perthes Disease

Casey P. Johnson; Ashton A. Amann; Erick O. Buko; Nicole R. Nelson; Suhail P. Parvaze; Alexandra R. Armstrong; Ferenc Toth



ANNUAL MEETING PROGRAM

Saturday, February 8, 2025

10:45 AM - 11:45 AM

Room #: North 221

9 Knee, Injury & Cartilage Health

10:45 AM

Paper No. 43

Non-weight Bearing Following Injury Can Preserve Tissue Health But Not Correct Joint Kinematics In A Preclinical Model Of Post-traumatic Osteoarthritis

Jarred Kaiser; Seyed Mohammadali Rahmati; William Owusu; Daniel F. Cottmeyer; Sydni V. Whitten; Brian P. Hazelwood; Marin Plemmons; Rachel Watermeier; Young-Hui Chang; Liang-Ching Tsai

10:55 AM

Paper No. 44

Patients Reporting The Largest Functional Improvements Over 2 Years Following ACL Reconstruction Showed Greater MRI Knee Cartilage Compositional Changes

Ashley A. Williams; Constance R. Chu

11:05 AM

Paper No. 45

The Impact Of Weight Loss On Tibiofemoral Cartilage Composition

Xingqi Su; Amber T. Collins; Jessica T. Wallis; Karl N. Thomas; Chris C. Otap; Stephanie T. Danyluk; Andrzej S. Kosinski; Charles E. Spritzer; Kathryn N. Starr; Connie W. Bales; Louis E. DeFrate

11:15 AM

Paper No. 46

The Impact Of Genetic Variant In A GDF5 Knee Enhancer On Knee Soft Tissue Structures: Implications For Knee Osteoarthritis Risk

Mohammadreza Movahhedi; Benedikt L. Proffen; Clarissa Coveney; Terence Capellini; Ata M. Kiapour

11:25 AM

Paper No. 47

Tibiofemoral Pose Changes Seen On Flexed Vs. Extended Weight Bearing CT After ACL Reconstruction

Tyce C. Marquez; Shelby Hulsebus; Shannon Ortiz; Brian R. Wolf; Don D. Anderson

11:35 AM

Paper No. 48



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Factors Associated With The Occurrence Of Posttraumatic Osteoarthritis 15 Years After Anterior Cruciate Ligament Reconstruction

Padmini Karamchedu; Anika N. Breker; Meggin Q. Costa; Gary J. Badger; Paul D. Faddale; Michael J. Hulstyn; Robert M. Shalvoy; Holly C. Gil; Tannin Schmidt; Braden C. Fleming



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Saturday, February 8, 2025

10:45 AM - 11:45 AM

Room #: North 222

10 Muscle Injury and Regeneration

10:45 AM

Paper No. 49

Transient Activation Of Integrated Stress Response Induces Adult And Aged Murine Muscle Stem Cell Activation And Contributes To Muscle Regeneration In Vivo

Hanzhi Zhang; Annarita Scaramozza; Takeshi Tsusaka; Alex Brown; Gardner Rees; Xuhui Liu; Brian Feeley; Andrew Brack

10:55 AM

Paper No. 50

The Role Of Dysregulated Dna Methylation And Gene Expression In Impaired Longitudinal Muscle Growth And Neuromuscular Contractures

Geethika C. Velaga; Kritton Shay-Winkler; Qingnian Goh; Roger Cornwall

11:05 AM

Paper No. 51

Syngeneic Myoblasts In Injectable Agrin/IGF-1 Nanoparticle Loaded Hydrogel Drives Functional And Histological Reversal Of Chronic Denervation Atrophy

Shaquielle Dias; William Padovano; Chenhu Qui; Emma Rowley; Thomas Harris; Erica Lee; Eszter Mihaly; Xiaoya J. Lu; Dallas Altamirano; Hai-Quan Mao; Warren Grayson; Sami Tuffaha

11:15 AM

Paper No. 52

Aberrant Fibro-Adipogenic Progenitor Subpopulation Drives Volumetric Muscle Loss-Induced Fibrosis

Hongmanlin Zhang; Shannon E. Anderson; Lauren A. Hymel; Jay M. McKinney; Thomas C. Turner; Mahir Mohiuddin; Woojin M. Han; Nan Hee Lee; Jeongmoon J. Choi; Gunjae Jeong; Levi B. Wood; Edward A. Botchwey; Nick J. Willett; Young C. Jang

11:25 AM

Paper No. 53

Muscle-specific Erry Activation Reduced Muscle Fibrosis And Fatty Infiltration After Rotator Cuff Injury

Aiping Lu; Ping Guo; Kohei Yamaura Yamaura; Matthieu Huard; Ashley Groesbeck; Johnny Huard



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11:35 AM

Paper No. 54

Investigating Rotator Cuff Pain And Neuropathic Pain Connection In A Mouse Model: Insights For Mechanistic Pathways

Aboubacar Wague; Alex Youn; Jarret Weinrich; Sankalp Sharma; Anusha Koshe; Nesa Milan; Brian Feeley; Xuhui Liu



ANNUAL MEETING PROGRAM

Saturday, February 8, 2025

3:45 PM - 4:45 PM

Room #: West 301 A

11 Spotlight - Intervertebral Disc Degeneration - Treatment and Therapeutics (featuring Dmitriy Sheyn)

3:45 PM

Paper No. 55

Using Mesendoderm Progenitor Cells Seeded In Hydrogel Biomaterial As A Strategy To Regenerate The Intervertebral Disc

Claudia Cicione; Rebecca Williams; Joseph Snuggs; Julie Warin; Chris Sammon; Benjamin Gatenbein; Daniele Noel; Jean-Marc LeMaitre; Anne Camus; Marianna Tryfonidou; Gianluca Vadala; Christine L. Le Maitre

3:55 PM

Paper No. 56

Ezh2 Regulates The Npmc Senescence Via Cgas/sting Signaling Pathway Through H3k27me3 And Alleviates Intervertebral Disc Degeneration

Zhen Tan; Jianrui Zheng; Zetao Ma; Deli Wang

4:05 PM

Paper No. 57

Protective Effects Of PDGF-AB/BB Against Cellular Senescence In Human Intervertebral Disc

Changli Zhang; Takanori Fukunaga; Martha Elena Diaz Hernandez; Sangwook Yoon; Lisbet Haglund; Hicham Drissi



ANNUAL MEETING PROGRAM

Saturday, February 8, 2025

3:45 PM - 4:45 PM

Room #: West 301 BC

12 NIRA - Trauma and Sequelae

3:45 PM

Paper No. 58

Mild Cold Exposure Rejuvenates Aged Muscle Repair In Mice

Alex D. Brown; Takeshi Tsusaka; Hanzhi Zhang; Xuhui Liu; Brian Feeley; Andrew Brack

3:53 PM

Paper No. 59

The Race Between Osteogenesis And Fibrosis: The Role Of Bmp And Wnt Pathways

Anastasia Oktarina; Vincentius Suhardi; Matthew Greenblatt; Lionel Ivashkiv; Mathias Bostrom; Xu Yang

4:01 PM

Paper No. 60

Dysregulated Inflammatory Response And Poor Fracture Healing In Polytrauma

Augustine Saiz; Maryam Rahmati; Robert Gresham; Tony Baldini; Jane Burgan; Mark Lee; Kent Leach

4:09 PM

Paper No. 61

Lymphatic platelet thrombosis limits bone repair by precluding lymphatic transporting DAMPs

Yangkang Zheng; Lin Cong; Li Zhao; Pengyu Wang; Lianping Xing; Yongjian Zhao; Qianqian Liang; Yongjun Wang

4:17 PM

Paper No. 62

Suppression Of Heterotopic Ossification By Peptide-based Nanoparticle Delivery Of MiR-138

Hongjun Zheng; Victor G. B. Brito; Jin Liu; Hua Pan; Audrey McAlinden

4:25 PM

Paper No. 63

Establishment Of An Ankle Posttraumatic Osteoarthritis Model In Rats And Evaluation Of Associated Pain

Shotaro Kamijo; MaCalus Hogan; Hang Lin



ANNUAL MEETING PROGRAM

4:33 PM

Paper No. 64

Activation Of Hedgehog Signaling In Fibroadipogenic Progenitors Causes Pseudoarthrosis

Ezgi Aydin; Mark Bubnovich; Ugur Ayturk



ANNUAL MEETING PROGRAM

Saturday, February 8, 2025

3:45 PM - 4:45 PM

Room #: West 301 D

13 Hip and Knee Arthroplasty - Outcomes and Implant Materials

3:45 PM

Paper No. 65

Comparison Of Post-operative Range Of Motion In Total Knee Arthroplasty Between Patients Prescribed Eliquis Vs Aspirin

Kate Kirwood; Grant J. Dornan; Alexa N. Dietrich; Jasmine Hartman; Bret Hatzinger; David A. Kuppersmith; Raymond H. Kim

3:55 PM

Paper No. 66

Dislocated Dual-mobility Hip Implants Are Unlikely To Be Successfully Closed Reduced And Are More Likely To Require Revision Than Standard Articulation Implants

Kendall M. Schwartz; Janyne Mallender; Christian Leber; Paulo Castaneda; Tony Huynh; Joseph B. Walker

4:05 PM

Paper No. 67

Comparison Between Monoblock And Modular Dual Mobility Components: Analysis Of Serum Metal Ion Levels

David Mayman; Allina Nocon; Henry Somerby; Eoin Devoy; Thomas Sculco; Peter Sculco

4:15 PM

Paper No. 68

Accurately Identifying Opioid Impact On Joint Arthroplasty Patient Reported Outcomes

Davin Fertitta; Allyson Pfeil; Corey Hryc; Ugonna Ihekweazu

4:25 PM

Paper No. 69

Are Modern TKA Biomaterials Good Enough?

Deborah J. Hall; Shabnam Aslani; Michael A. Kurtz; Robin Pourzal; Nicolas S Piuze; William M. Mihalko; Jeremy L. Gilbert; Steven M. Kurtz

4:35 PM



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Paper No. 70

In-vitro Oxidation Resistance Of A Chemically Crosslinked UHMWPE/vitamin-e Blend For Total Joint Arthroplasty Implants

Luis Alvarez; Chris Gigliotti; Ilana Zarour; Bo Gao; Keith Wannomae; Matheus Ferreira; Satveer Jagwani; Ebru Oral; Orhun Muratoglu



ANNUAL MEETING PROGRAM

Saturday, February 8, 2025

3:45 PM - 4:45 PM

Room #: North 221

14 Bone Mechanobiology

3:45 PM

Paper No. 71

Gpr161 As A Novel Osteocyte Mechanosensor And Regulator Of Osteoclastogenesis

Morgan Cobban; Mimma Maggio; Hadi Hajiali; Alicia J. El Haj; David Hoey

3:55 PM

Paper No. 72

Differential Expression Of Four Mechanobiologically Regulated Genes Is Associated With Higher Dilatational Strain Gradients

Meghana Machireddy; Sydney Geist; Sara Cole; Lucas DeBiase; Jun Li; Sarah Nano; Glen Niebur

4:05 PM

Paper No. 73

Obesity And Subsequent Weight Loss Negatively Affect The Skeleton And Shift The Cortical Bone Metabolome

Carolyn Chlebek; Casey McAndrews; Benjamin Aaronson; Hope Welhaven; Samantha N. Costa; Kanglun Yu; Joseph C. Shaver; Sophia Silvia; Victoria E. DeMambro; Meghan E. McGee-Lawrence; Ron K. June; Clifford J. Rosen

4:15 PM

Paper No. 74

Effects Of Chemically Induced Piezo1 Activation And Mechanical Loading In Old Mouse Bone Adaptation

Quentin A. Meslier; Robert Oehrlein; James R. Monaghan; Sandra J. Shefelbine

4:25 PM

Paper No. 75

Mapping Sub-micrometer Viscoelasticity Near Canaliculi Using Liquid Contact Resonance Atomic Force Microscopy

Kenna Brown; Ghazal Vahidi; Mark Jankauski; Jason P. Killgore; Chelsea M. Heveran; Lewis M. Cox

4:35 PM



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Paper No. 76

The Synergizing Effect Of Mechanical Loading And Wnt-agonist Molecules As A Combined Strategy For Stimulating Bone Formation In Mice

Chenming Wei; Lisa Y. Lawson; Stephane Angers; Matthew J. Silva



ANNUAL MEETING PROGRAM

Saturday, February 8, 2025

3:45 PM - 4:45 PM

Room #: North 222

15 Shoulder Arthroplasty

3:45 PM

Paper No. 77

The Impact Of Deltoid Radiomic Features On Pre-operative Range Of Motion In Patients Undergoing Total Shoulder Arthroplasty

Josie Elwell; Hamidreza Rajabzadeh-Oghaz; William Aibinder; Bradley Schoch; Vikas Kumar; Christopher Roche

3:55 PM

Paper No. 78

Robotic Assessment Of Rtsa Lateralization And Inferiorization On Range Of Motion

Alex W. Brady; Max Hinz; Wyatt H. Buchalter; Natalie Cortes; Rony Dey-Hazra; Peter J. Millett; Matthew T. Provencher

4:05 PM

Paper No. 79

Contributions Of Muscle Forces To Stability And Mobility In Patient-specific Modeling Of Total Shoulder Arthroplasty

Brendan M. Curran; Casey A. Myers; Kevin B. Shelburne

4:15 PM

Paper No. 80

The Impact Of Scapula Morphology On Extra-articular Impingement In Reverse Shoulder Arthroplasty

Benjamin Wesorick; Andreas Kontaxis; Joel Peterson; Amirhossein Jahandar; Carl Cirino; Jonathan D. Glenday; David M. Dines; Michael C. Fu; Samuel A. Taylor; Lawrence V. Gulotta

4:25 PM

Paper No. 81

Speed Of Return To Normalcy After Total Shoulder Arthroplasty

Albert D. Mousad; Casey M. Beleckas; Daniel F. Schodlbauer; Jonathan C. Levy

4:35 PM

Paper No. 82



ANNUAL MEETING PROGRAM

Does Pre-operative Planning Software Predict The Post-operative Ranges Of Motion In The Glenohumeral Joint After Reverse Shoulder Arthroplasty: A Biplanar Video Radiography Study

Alonso Figueroa; Tomasz Bugajski; James M. Gregory; Payam Zandiyeh



ANNUAL MEETING PROGRAM

Saturday, February 8, 2025

5:00 PM - 6:00 PM

Room #: West 301 A

16 Spotlight - Cartilage Matrix and Mechanobiology (featuring Lin Han)

5:00 PM

Paper No. 83

Defining The Ideal Characteristics Of Stable Human Articular Cartilage

Rosanne M. Raftery; Steven K. Pregizer; Divya Venkatasubramanian; April M. Craft

5:10 PM

Paper No. 84

Aging-associated Increase Of Gata4 Levels In Articular Cartilage Is Linked To Impaired Regenerative Capacity Of Chondrocytes And Osteoarthritis

Meagan Makarczyk; Zhang Yiqian; Sophie Hines; Hang Lin

5:20 PM

Paper No. 85

Spontaneous Calcium Signaling And Extracellular Matrix Synthesis In Osteoarthritis Cartilage

Ying Peng; Annie Porter; Michael Axe; Zugui Zhang; X. Lucas Lu



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Saturday, February 8, 2025

5:00 PM - 6:00 PM

Room #: West 301 BC

17 NIRA - Knee

5:00 PM

Paper No. 86

Cxcr4 Overexpression Is Required For Hcpcs To Promote Meniscus Repair And Prevent Cartilage Erosion

Jay Trivedi; Salomi Desai; Janine Molino; Brett Owens; Chathuraka Jayasuriya

5:08 PM

Paper No. 87

Effect Of Partial And Complete Posterior Cruciate Ligament Sectioning On Femoral Rollback And Posterior Sag In Medial Congruent Total Knee Arthroplasty: A Computational Study

Reza Pourmodheji; Cynthia Kahlenberg; Brian Chalmers; Eytan Debbi; William Long; Geoffrey Westrich; Timothy M Wright; David Mayman; Peter Sculco; Carl Imhauser

5:16 PM

Paper No. 88

The Role Of Follistatin-like 1: A Key Factor In Meniscal Degeneration In Knee Osteoarthritis

Shunya Otani; Takashi Kanamoto; Ken Nakata; Seiji Okada

5:24 PM

Paper No. 89

Vagus Nerve Stimulation Reduces Pain Induced By ACL-Rupture In A Gender-dependent Manner

Shivmurat Yadav; Lysie Morris; Gabby Dyson; Montana Barrett; Pratibha Dube; Stavros Stavrakis; Matlock A. Jeffries; Timothy M. Griffin; Mary Beth Humphrey

5:32 PM

Paper No. 90

Clearing-enabled Light Sheet Microscopy Imaging And Analysis Of Human And Murine Knee Joint Tissues

Robin Vroman; Frank C. Ko; Spencer Fullam; Hoomin Lee; Kelly Chan; Dana E. Orange; Mehta Bella; Miguel Otero; Richard J. Miller; Anne-Marie Malfait; Rachel Miller

5:40 PM



ANNUAL MEETING PROGRAM

Paper No. 91

Difference In Knee Articular Cartilage Thickness During Skeletal Growth And Maturation: a 3D MRI Analysis Of 3,111 Children And Young Adults

Nazgol Tavabi; Mohammadreza Movahhedi; Brian Tao; Mahdi Aghaalikhani; Ata M. Kiapour

5:48 PM

Paper No. 92

Lateral Tibial Slope And Medial Tibial Spine Geometries Have Similar Effects On Anterior Cruciate Ligament Force In Response Pivoting Loads: A Sex-specific Computational Modeling Study In 168 Young High-risk Athletes

Andrew E. Pechstein; Mitchell Wheatley; Mark Amirtharaj; David Shamritsky; Danyal Nawabi; Thomas Wickiewicz; Michael Parides; Andrew Pearle; Bruce Beynnon; Carl Imhauser



ANNUAL MEETING PROGRAM

Saturday, February 8, 2025

5:00 PM - 6:00 PM

Room #: West 301 D

18 Biomaterials - Controlled Release for All Tissues

5:00 PM

Paper No. 93

Sustained Release Of Neosaxitoxin Via Cationic Alginate-plga Microparticles For Long-term Osteoarthritis Pain Relief

Hengli Zhang; Helna Mary Baby; Shingo Ishihara; Chenzhen Zhang; Jun Li; Ezra M. Cohen; Rachel Miller; Ambika G. Bajpayee

5:10 PM

Paper No. 94

Deferoxamine-loaded Microneedle Patch Treats Radiation-induced Skin Injury By Inhibiting Ferroptosis

Lijun Wu; Kai Tian; pingfan Wu; Lei Sheng; Shuwang Wu; xiaozhong Zhou

5:20 PM

Paper No. 95

Metformin Lotion - An Effective Transdermal Drug Delivery Method

Jianying Zhang; Vasyil Pastukh; Soichi Hattori; Derek Maloney; MaCalus Hogan; James Wang

5:30 PM

Paper No. 96

Elastin Collagen Nanovesicles - A Novel Platform For Targeted And Controlled Drug Delivery

Ann Thomas; Sanjna Rao; Kristi Kiick; Christopher Price

5:40 PM

Paper No. 97

Advanced Citrate-based BMP-7-loaded Biphasic Scaffold For Effective Osteochondral Repair

Zizhao Li; Andrew House; Ruqiang Lu; Angelina Mauriello; Se-Hwan Lee; Lin Xu; Richard Tran; Su Chin Heo

5:50 PM

Paper No. 98



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ANNUAL MEETING PROGRAM

Cationic Interleukin-1 Receptor Antagonist (catIL-1RA) Outperforms Anakinra At Preventing IL-1-induced Cartilage Inflammation Ex Vivo

Timothy L. Boyer; Bill Hakim; Ryan M. Porter; Ambika G. Bajpayee



ANNUAL MEETING PROGRAM

Saturday, February 8, 2025

5:00 PM - 6:00 PM

Room #: North 221

19 Spotlight - Improving Pre-operative Planning (featuring David Bennett)

5:00 PM

Paper No. 99

A Deep Learning Model To Predict Surgical Recommendation Of Distal Radius Fractures

Omar Shareef; Hailey Huddleston; Seong Jang; Duretti Fufa

5:10 PM

Paper No. 100

Identification Of Surgical And Non-Surgical Spines Using A 3-D Statistical Shape Model

Paul P.N. Kemper; Paul Steinmetz; Saba Pasha

5:20 PM

Paper No. 101

Deep Learning For Gunshot Wound Bullet Fragment Detection In Emergency Orthopaedic Care

Yi-An Hsieh; Rashad Madi; Winnie Xu; Min-Keun Song; Enrie Gan; Yuanyuan Chen; Elena Taratuta; Jeremy Cannon; Kristen Chreiman; Hannah Rosenblatt; Rasleen Grewal; Christiana Cottrell; Olivia Rosen; Autumn Tyler; Chamith Rajapakse



ANNUAL MEETING PROGRAM

Saturday, February 8, 2025

5:00 PM - 6:00 PM

Room #: North 222

20 Tendon Growth and Development

5:00 PM

Paper No. 102

Tendon-targeted Type III Collagen Reduction Impairs Development Of Mouse Tendon Mechanical Properties

Margaret K. Tamburro; Miranda K. Doro; Stephanie N. Weiss; Susan W. Volk; Lou J. Soslowsky

5:10 PM

Paper No. 103

Sustained Paralysis Dysregulates Gene Expression And Inhibits Mechanical Properties Of Achilles Tendon

Ivy Vien; Aniket Jana; Chia-Lung Wu; Catherine K Kuo

5:20 PM

Paper No. 104

Ddr2 Is Required For Achilles Tendon-to-bone Organization And Function In Mice

Megan L. Killian; Chunxi Ge; Tessa Phillips; Rajay Kamath; Yuanyuan Han; LeeAnn Hold; Micah Johnson; Nicole Migotsky; Adam Abraham; Renny Franceschi

5:30 PM

Paper No. 105

MRTF/SRF Signaling Regulates Tendon And Fibrocartilage Differentiation Via Rho Signaling

Emily R. King; Brendon Baker; Alice Huang

5:40 PM

Paper No. 106

Characterizing Human Enthesis Development

Angel Moonilall; Saswati Kar; Dylan Gordon; Damien Laudier; Fei Fang

5:50 PM

Paper No. 107

Differential Roles Of Non-muscle Myosin Isoforms In Deltoid Tuberosity Initiation And Maturation



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ANNUAL MEETING PROGRAM

Ngoc Hoang; Mary Kate Evans; Tonia Tsinman; Ellie Ferguson; Xi Jiang; Joel Boerckel; Lin Han; Eiki Koyama; Robert Mauck; Nathaniel Dymont



ANNUAL MEETING PROGRAM

Sunday, February 9, 2025

9:45 AM - 10:45 AM

Room #: West 301 A

21 Spotlight - Novel Bone Cells in Regeneration and Remodeling (featuring Matthew Greenblatt)

9:45 AM

Paper No. 108

Tissue Engineered Periosteum Expedites Allograft Healing, Resorption, And Restoration Of Bone Morphology

Alyson March; Regine Choe; Danielle Benoit

9:55 AM

Paper No. 109

Spatially-derived Single Cell Transcriptomics Reveal Osteocyte Populations Differentiate From Two Distinct Msc-based Lineages Associated With Periosteal And Endosteal Bone

Cesar Morfin; Aimy Sebastian; Nick Hum; Deepa Muruges; Gabriela Loots

10:05 AM

Paper No. 110

Distinct Crosstalk, Mechanosensitization, And Transcription Factors Define Synovial Macrophage Identity In The DMM Model Of Osteoarthritis

Easton Farrell; Sung Yeon Kim; Alexander Knights; Tristan Maerz; Robert Mauck; Carla Scanzello



ANNUAL MEETING PROGRAM

Sunday, February 9, 2025

9:45 AM - 10:45 AM

Room #: West 301 BC

22 NIRA - Cartilage and Arthritis

9:45 AM

Paper No. 111

Scalable And Versatile 3D Whole Joint Mapping In Musculoskeletal Systems: Unveiling Neurovascular Spatial Organization After Joint Injury And Degeneration

Peng Chen; Jiaxin Chai; Abirami Soundararajan; R. Glenn Hepfer; Brooke Damon; Shangping Wang; Man-Kyo Chung; Mildred Embree; Janice S. Lee; Tong Ye; Hai Yao

9:53 AM

Paper No. 112

Advancing The Understanding Of Synovial Fluid Dynamics And Cartilage Degradation In Post-traumatic Osteoarthritis: A Refined In Vitro Model

Nataliia Shchotkina; Matthew Hofmann; Tim Wheeler; Sanique South; Yan Pacheco; Malley Gautreaux; Nick Willett; Gabriella Lindberg

10:01 AM

Paper No. 113

Integrated Analysis Of Human Synovium Transcriptomics Data Implicates Macrophage-Driven Neuro-Immune Signaling Mediated By STAT1 In Osteoarthritis

Michael D. Newton; Hannah Swahn; Dana E. Orange; Anne-Marie Malfait; Rachel E. Miller; Martin K. Lotz; Tristan Maerz

10:09 AM

Paper No. 114

Targeting The Constitutive Activity Of Histamine H1 Receptor To Control Multiple Osteoarthritis Pathogenesis Pathways Via Modulation Of Intracellular Calcium Dynamics

Ichiro Kurakazu; Merissa Olmer; Chelsea Kenvisay; Yukio Akasaki; Yasuharu Nakashima; Martin Lotz

10:17 AM

Paper No. 115

Imaging Mass Cytometry Reveals Distinct Synovial Cell Immunophenotypes In Overloading And Surgical Oa Models



ANNUAL MEETING PROGRAM

Kevin G. Burt; Vu Nguyen; Yasaman Moharrer; Joel Boerckel; Narine Hakobyan; Rachel Miller; Robert Mauck; Carla Scanzello

10:25 AM

Paper No. 116

Morphological, Physiological, And Ultrastructural Analysis Of Articular Chondrocytes Under Normoxic And Hypoxic Conditions

Priyanka P. Brahmachary; Avery H. Welfley; Hope D. Welhaven; Susan Brumfield; Ronald K. June

10:33 AM

Paper No. 117

Sustained Pharmacological Inhibition Of Canonical Wnt Signaling To Mitigate PTOA

Carlisle DeJulius; Alexander Knights; Lindsey Lammlin; Michael Newton; Easton Farrell; Patricia Poley; Craig Duvall; Tristan Maerz



ANNUAL MEETING PROGRAM

Sunday, February 9, 2025

9:45 AM - 10:45 AM

Room #: West 301 D

23 Hip and Knee Arthroplasty - Kinematics and Computational Modeling

9:45 AM

Paper No. 118

The KNEEHUB Project - A Resource For End-to-end Modeling & Simulation Workflows In Computational Knee Biomechanics

Jason Halloran; Nancy Kim; Kate Moyle; Maryam Nazem; Peter Laz; Kevin Shelburne; Carl Imhauser; Thor Besier; Snehal Chokhandre; Ahmet Erdemir

9:55 AM

Paper No. 119

Midflexion Laxity Measurements In Multiple Planes At 3-months Post-total Knee Arthroplasty And Their Relationship With Patient Reported Outcome Measures

David Shamritsky; Swaneet Jha; Claude Regis; Timothy M Wright; Michael Parides; Stephen Lyman; Cynthia Kahlenberg; Eytan Debbi; William Long; Geoffrey Westrich; Peter Sculco; David Mayman; Brian Chalmers; Carl Imhauser

10:05 AM

Paper No. 120

Evaluation Of Machine Learning Techniques For Real-time Prediction Of Tka-implanted Lower Limb Mechanics

Chase Maag; Clare K. Fitzpatrick; Paul Rullkoetter

10:15 AM

Paper No. 121

Differences In Knee Kinematics And Symmetry After Total Knee Arthroplasty Compared To Age-Matched Asymptomatic Controls

Emelia Krakora; Elizabeth Copp; Yuuka Tanabe; Tom Gale; Kenneth Urish; William Anderst

10:25 AM

Paper No. 122

CPAK Type III Valgus Knees Exhibit Lateral Pivot Motion During Squatting

Lennart Scheys; Orçun Taylan; Junya Itou; Johan Bellemans; Geert Peersman



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10:35 AM

Paper No. 123

Dynamic Knee Deformity Classification: Unsupervised Machine Learning Clustering Of TKA Cases With A Computer Assisted Surgery System

Prudhvi Tej Chinimilli; Laurent Angibaud; Amaury Jung; François Boux de Casson; James Huddleston



ANNUAL MEETING PROGRAM

Sunday, February 9, 2025

9:45 AM - 10:45 AM

Room #: North 221

24 Trends in Education and Outreach

9:45 AM

Paper No. 124

Early Middle School Students Are Highly Impressionable To Diversity-, General Stem-, And Msk Research-related Awareness And Interests: Survey Outcomes From The 2024 Ors Open Door Event

Jessica Ackerman; Sade Clayton; Rodolfo de la Vega; John Drazan; Hugo Giambini; Paula Hernandez; Amy Loya; Jason Marvin; Meghan McGee-Lawrence; Ryan Tomlinson; Bonnie Walton; Hope Welhaven

9:55 AM

Paper No. 125

Longitudinal Evaluation Of Learning On A Limb: An Outreach Module To Engage High School Students In Orthopaedics

Christopher Panebianco; Tala Azar; Michael Duffy; Madhura Nijasure; Emily Sharp; Margaret Tamburro; Michael Hast; Eileen Shore; Robert Mauck; Lou Soslowsky; Jamie Shuda; Sarah Gullbrand

10:05 AM

Paper No. 126

A Quantitative Analysis Of The Dissemination Of Orthopedic Information On Social Media

Saman Andalib; Ryan Andalib; Aidin Spina; Bryce Picton; John Scolaro; Ariana Nelson

10:15 AM

Paper No. 127

Oocyte Cryopreservation Experiences And Attitudes Among Female Orthopaedic Surgeons

Grace Q. Chen; Alexandra H. Seidenstein; Dawn LaPorte

10:25 AM

Paper No. 128

Racial Disparities In Debt Burden Among Underrepresented Medical Students Matched To Orthopaedic Surgery Residency

Bianca A. Duah; Lancelot Benn; Addisu Mesfin

10:35 AM

Paper No. 129



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Trends In Industry Research Funding To Orthopedic Surgeons: 2017-2023

Justin S. King; Abdullah H. Salama; Amanda G. Spraggs-Hughes; Archana Sanjay; Isaac L. Moss



ANNUAL MEETING PROGRAM

Sunday, February 9, 2025

9:45 AM - 10:45 AM

Room #: North 222

25 Shoulder Kinematics and Movement

9:45 AM

Paper No. 130

A Model To Predict Kinematics That Result In Shoulder Instability In Patients With Glenohumeral Defects

Clarissa LeVasseur; Zhaoyi Fang; Ryan Kelly; Nathan Hyre; Devon Scott; Jill Brockhoff; Jonathan Hughes; Albert Lin; William Anderst

9:55 AM

Paper No. 131

Sensitivity Of Humeral Head Translation And Rotator Cuff Muscle Force To Glenoid Tilt.

Morgan Dalman; Katherine Saul

10:05 AM

Paper No. 132

Muscle Compensation Strategies To Maintain Glenohumeral Joint Stability With Rotator Cuff Tears

Kyosuke Hoshikawa; Manuela Dominguez; Rebekah Lawrence; Philip Jacobs; Takuma Yuri; Nariyuki Mura; Hugo Giambini

10:15 AM

Paper No. 133

Physiological Anterior And Posterior Supraspinatus Loads Do Not Produce Mutual Compensation

Gabriel Stay; Joshua Frantz; Mark Carl Miller; Bethany Ricci; Justin Badon; Christopher Schmidt; Patrick Smolinski

10:25 AM

Paper No. 134

The Effect Of Muscle Imbalance On Anterior And Posterior Glenohumeral Translations In A Cadaveric Model Of Bankart Lesions

Hiroaki Ishikawa; Heath B. Henninger; Jared L. Zitnay; Robert Z. Tashjian; Peter N. Chalmers

10:35 AM

Paper No. 135



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Biomechanical Evaluation Of Novel Compliant Fracture Fixation Plates For Diaphyseal Fractures

Connor Huxman; Lewis Gregory; April Armstrong; Gary Updegrave; Zachary Koroneos; Jared Butler



ANNUAL MEETING PROGRAM

Sunday, February 9, 2025

11:15 AM - 12:15 PM

Room #: West 301 A

26 Spotlight - Emerging Technologies in Bone Research (featuring Hannah Dailey)

11:15 AM

Paper No. 136

Single-cell Analysis Prioritizes Candidate MSC Markers For Personalized Orthopedic Applications

Justin S. King; Jordan A. Bauer; Olga Solovyova; Adam D. Lindsay; Archana Sanjay

11:25 AM

Paper No. 137

Nanostring GeoMx Digital Spatial Profiling Of Structural Auto And Allo Bone Graft Healing In A Murine Segmental Femoral Bone Defect Model

Xiaojie Xing; Tianfeng Miao; Samantha Mill; Xinping Zhang

11:35 AM

Paper No. 138

Osteochondral Development-on-a-chip: Functional Growth Factor Patterning In Microfluidic Systems

Timothy Hopkins; Swati Midha; Georgios Ziakas; Simon Grosseemy; Theana Johnson; Angus Wann; Martin Knight



ANNUAL MEETING PROGRAM

Sunday, February 9, 2025

11:15 AM - 12:15 PM

Room #: West 301 BC

27 NIRA - Pediatric Orthopaedics and Development

11:15 AM

Paper No. 139

Initial Evaluation Of Quantitative MRI Techniques To Characterize Early-stage Legg-Calvé-Perthes Disease In Children

Erick O. Buko; Susan A. Novotny; Jennifer C. Laine; Casey P. Johnson

11:23 AM

Paper No. 140

Inhibition Of Trka+ Sensory Neurons Reduces Bony Bar Formation In Injured Growth Plates

Zhao Li; Xin Xing; Myles Zhou; Mary Archer; Qizhi Qin; Manyu Zhu; Sowmya Ramesh; Mingxin Xu; Thomas Clemens; Aaron James

11:31 AM

Paper No. 141

Sex Differences In Hip Morphology Asymmetry During Skeletal Growth And Maturation: A 3D-CT Study Of 19,830 Hips

Mohammadreza Movahhedi; Nazgol Tavabi; Eduardo N. Novais; Young-Jo Kim; Ata M. Kiapour

11:39 AM

Paper No. 142

A Novel Model Of Neuromuscular Contracture Reveals Pathological Smad4 Signaling In Myotendon Drives Contracture Formation

Varun Arvind; Hui Zhang; Peter Shyu; X Edward Guo; Joshua Hyman; Alice Huang

11:47 AM

Paper No. 143

Maternal Exercise Rescues Fetal Akinesia-impaired Bone And Joint Development

Christopher Panebianco; Yuming Huang; Nidal Khatib; Devin Gottlieb; Nathaniel Dyment; Joel Boerckel; Niamh Nowlan

11:55 AM

Paper No. 144



ANNUAL MEETING PROGRAM

Morphogenesis And Mechano-response Of The Developing Porcine Meniscus

Meghan E. Kupratis; Yuqi Zhang; Jiaqi Xiang; Bryan Kwok; Nathaniel A. Dymant; Lin Han; Eiki Koyama; Robert L. Mauck

12:03 PM

Paper No. 145

Lipocalin 2 Regulation Of Cellular Iron And Ferroptosis In Osteocytes Is Crucial For Maintaining Bone Mass

Vivek Khanal; Jayden Carter; Madeline Carroll; Anisha Neupane; Wankhade Umesh; Ryan M. Allen; Amy Sato; Neha Dole



ANNUAL MEETING PROGRAM

Sunday, February 9, 2025

11:15 AM - 12:15 PM

Room #: West 301 D

28 Emerging Therapeutic Interventions to Improve Knee Health

11:15 AM

Paper No. 146

Metformin's Effects On Chondrocyte Metabolic Activity

Annie Porter; Ying Peng; Rachel Perry; Chloe Kappen; Julie Nguyen; Naod Asres; Rebecca Wang; Michael Axe; X Lucas Lu

11:25 AM

Paper No. 147

Local And Systemic Immunologic Response To Osteochondral Allografts: A Prospective Study With One-year Follow-up

Camila Carballo; Claire Eliasberg; Tyler Khilnani; Audrey Wimberly; Thomas Li; Brett Croen; Daniel Nemirov; Samuel Green; UPNEET SOKHI; Miguel Otero; Matthew Koff; Hollis Potter; Theresa Lu; Scott Rodeo

11:35 AM

Paper No. 148

Comparison Of Platelet-rich Plasma With And Without Hyaluronic Acid For Knee Osteoarthritis: A Retrospective Cohort Study

Evangelia Constantine; Charles Nolte; Kaitie Whitney; Soha Khadem; Jason Dragoo

11:45 AM

Paper No. 149

Impact Of Long-term Rapamycin Treatment On Age-related Osteoarthritis In Non-human Primates

Adam R. Konopka; Dennis M. Minton; Aditya R. Ailiani; Michael DK Focht; Mariana Kersh; Angela J. Marolf; Kelly Santangelo; Adam B. Salmon

11:55 AM

Paper No. 150

Intra-articular Injection Of Matrix-bound Nanovesicles Attenuates Development Of Post-traumatic Osteoarthritis In A Mouse Model.

Amelia Hurley-Novatny; Fang Guo; Ling Wang; Stephen Badylak; Hongshuai Li



ANNUAL MEETING PROGRAM

12:05 PM

Paper No. 151

Tendon-bone Interface Healing Improvement By Moderate Treadmill Exercise Combined With Knee Brace Immobilization Following An Anterior Cruciate Ligament Reconstruction In A Murine Model

Yuki Okazaki; Yuki Suzuki; Leonardo Albertini Sanchez; Julia Retzky; Lauren Simonian; Alexander Piacentini; Wataru Morita; Yasushi Takata; Tony Chen; Laura Moore; Scott Rodeo; Camila Carballo



ANNUAL MEETING PROGRAM

Sunday, February 9, 2025

11:15 AM - 12:15 PM

Room #: North 221

29 Targets and Limitations to Treating Musculoskeletal Tumors

11:15 AM

Paper No. 152

Time To Treatment Initiation Analysis In Patients With Localized Extremity Soft Tissue Sarcoma

Sakurako Takahashi; Masatake Matsuoka; Tomohiro Onodera; Koji Iwasaki; Dai Sato; Taku Ebata; Yoshiaki Hosokawa; Eiji Kondo; Norimasa Iwasaki

11:25 AM

Paper No. 153

Unplanned Excision Of Soft Tissue Sarcoma - The Impact Of Residual Disease In Re-excision Specimen

Eric Kholodovsky; Julien Montreuil; Moses Markowitz; Sergio Torralbas Fitz; H Thomas Temple

11:35 AM

Paper No. 154

Pharmacokinetics And Safety Of Locally Delivered Doxorubicin From A Ceramic Biomaterial: An Intraosseous Implantation Study In Sheep

Mathias Lidgren; Vetra Markeviciute; Lauren V. Marsault; Tova Corbascio; Hadis Alidadi; Jintian Huang; Jacob Engellau; Lars Lidgren; Magnus Tägil; Deepak Raina

11:45 AM

Paper No. 155

Engineered Extracellular Vesicles Loaded With Cgmm Perform Dual Therapeutic Functions For Postsurgical Osteosarcoma Treatment

Naping XIONG

11:55 AM

Paper No. 156

Evaluation Of Telomerase-specific Oncolytic Adenovirus Infection To Spinal Tumors For Therapeutic Use

Ryo Takatori; Uotani Koji; Aki Yoshida; Tomohiro Fujiwara; Kensuke Shinohara; Yoshiaki Oda; Hisakazu Shitozawa; Masataka Ueda; Kazutaka Yamashita; Yasuo Urata; Hiroshi Tazawa; Toshifumi Ozaki

12:05 PM



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Paper No. 157

Treating Metastatic Spine Disease By Targeting Senescent Breast Cancer Cells Using Senolytics

Eleane C.B. Hamburger; Mansoureh Mohseni Garakani; Lisbet Haglund; Derek Rosenzweig



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Sunday, February 9, 2025

11:15 AM - 12:15 PM

Room #: North 222

30 Surgical and Treatment Outcomes of the Hip

11:15 AM

Paper No. 158

Osteochondral Transplantation For Hip Femoral Head Defects: A Multicenter Study With A Mean 5-year Follow-up

Christopher V. Nagelli; Sean Clark; Anthony C. DeNovio; Kostas J. Economopoulos; Mario Hevesi; Rafael J. Sierra; Aaron J. Krych

11:25 AM

Paper No. 159

Comparison Of Biologic Hip Preservation Versus Total Hip Arthroplasty In A Preclinical Canine Model

Brent Prenger; James Cook; Chantelle Bozynski; Cristi Cook; Aaron Stoker; Keiichi Kuroki; Steven DeFroda; Brett Crist

11:35 AM

Paper No. 160

Mid-term Functional Outcomes Following Arthroscopic Acetabular Labral Repair With Versus Without Bone Marrow Aspirate Concentrate Application

Scott D. Martin; Kieran S. Dowley; Michael M. Dean; Bilal S. Siddiq; Stephen M. Gillinov; Jonathan S. Lee; Nathan J. Cherian; Chris T. Eberlin; Michael P. Kucharik; Jeffrey S. Mun; Rachel Poutre; Brandon J. Allen; Rachel Poutre

11:45 AM

Paper No. 161

Assessing Early Recovery In Hip Dysplasia: The Relationship Between Perceived And Objective Outcomes Following Periacetabular Osteotomy

Christina A. Bourantas; Molly C. Shepherd; Madison M. Wissman; John C. Clohisy; Chenyang Lu; Chet Hammill; Michael D. Harris

11:55 AM

Paper No. 162

Indications And Outcomes Of Total Hip Arthroplasty In Patients Aged 15-45



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Philip P. Ratnasamy; Michael J. Gouzoulis; Stephanie V. Kaszuba; Katelyn E. Rudisill; Rajiv S. Vasudevan;
Jonathan N. Grauer; Lee E. Rubin

12:05 PM

Paper No. 163

**Internal Fixation Versus Total Hip Arthroplasty For Displaced Femoral Neck Fractures In Patients Aged
60 To 80 Years: Patient-reported Outcomes And Complications**

Ryo Mitsutake; Hiromasa Tanino; Hiroshi Ito



ANNUAL MEETING PROGRAM

Sunday, February 9, 2025

4:15 PM - 5:15 PM

Room #: West 301 A

31 Spotlight - Disruptive Technologies and Innovative Approaches for Soft Tissue Knee Injuries (featuring Martha Murray)

4:15 PM

Paper No. 164

A Multi-functional Small Molecule To Enhance Healing Of Avascular Meniscus Tears

Meng Feng; David Pellei; HunJin Jeong; Vyshnavi Tallapaneni; Elen Zhu; Ting Li; Christopher Ricupero; Chang Lee

4:25 PM

Paper No. 165

3D-Printed Growth Plate Mimetic Composite Mitigates Early Growth Deformities In A Rabbit Model

Pochih Shen; Ana Ferreira Ruble; Laurel Stefani; Boyuan Liu; Kristine Fischnich; Bianca Guillester; Nancy Hadley-Miller; Virginia Ferguson; Stephanie Bryant; Karin Payne

4:35 PM

Paper No. 166

A Pilot Canine Clinical Trial Of Intraarticular Anti-inflammatory Microcapsules Following Cruciate Ligament Injury

Elisabeth Lemmon; Lorie Laforest; Elizabeth Bernstein; Robert Mauck; Kimberly Agnello



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Sunday, February 9, 2025

4:15 PM - 5:15 PM

Room #: West 301 BC

32 NIRA - Regeneration and Remodeling

4:15 PM

Paper No. 167

Detection Of Lumbar Spinal Stenosis Using Deep Learning-Powered Gait Computer Vision

Junichi Kushioka; Noriko Takemura; Satoru Tada; Yasuyoshi Takada; Hajime Nagahara; Takenori Oda; Issei Ogasawara; Ken Nakata; Seiji Okada; Yu Moriguchi

4:23 PM

Paper No. 168

Exploring Cilia-Targeted Therapeutics For Enhancing Rotator Cuff Healing

Enhao Zhang; Julia Robbins; Andryus Planutis; Fei Fang

4:31 PM

Paper No. 169

Dynamic Tensile Loading Improves Neotendon Formation

Thomas L. Jenkins; Kylee Darden; Behnam Pourdeyhimi; Dianne Little

4:39 PM

Paper No. 170

Comorbid Hypertension And Osteoarthritis Exacerbates Joint Remodeling And Gait Compensations In Female Rats, With Milder Effects Observed In Males

Carlos J. Cruz; Folly M. Patterson; Janak Gaire; Julianna Gonzalez; Jacob L. Griffith; Angela Philistin; Kyle D. Allen

4:47 PM

Paper No. 171

A Biomimetic Mechanically Reinforced 3D Printed Collagen Type I/II-Hyaluronic Acid (CI/II-HyA) Scaffold Promotes The Repair Of Large Load-bearing Articular Cartilage Defects In Goats

Claudio Intini; Michael Joyce; Michela Uberti; Margot C. Labberté; Becky Hackett; Tom Hodgkinson; John M. O'Byrne; Pieter AJ. Brama; Fergal O'Brien

4:55 PM

Paper No. 172



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Discovery Of A Novel Articular Cartilage Skeletal Stem Cell

Seoyeon Bok; Alisha Yallowitz; Ting Cong; Yuzhe Niu; Michelle Cung; Ren Xu; Shawon Debnath; Jason McCormick; Jun Sun; Lingling Hu; Matthew Greenblatt

5:03 PM

Paper No. 173

Wnk2 Mutations Associated With Familial Osteoarthritis Modulate Bone Remodeling In A Ptoa Mouse Model

Shivakumar Rayavara Veerabhadraiah; Mick Juryneec



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Sunday, February 9, 2025

4:15 PM - 5:15 PM

Room #: West 301 D

33 Crosstalk among Musculoskeletal Tissues and Beyond

4:15 PM

Paper No. 174

Post-traumatic Osteoarthritis Alters Gait Patterns And Motor-related Brain Regions In Aged Female Rats

Jacob L. Griffith; Shane H. Priester; Pedro Valdes-Hernandez; Marceo Febo; Yenisel Cruz-Almeida; Kyle Allen

4:25 PM

Paper No. 175

Synovial Fibroblasts Support Vascular Function In Both Health And Inflammatory Disease

Hannah M. Zlotnick; Abhishek P. Dhand; Matthew D. Davidson; Christopher J. Calo; Aina Solsona Pujol; Declan N. Goddard; Carla R. Scanzello; Laurel E. Hind; Jason A. Burdick

4:35 PM

Paper No. 176

Inflammatory Crosstalk Between Rotator Cuff Tissues Is Altered With Age And Biological Sex

Hana Kalco

4:45 PM

Paper No. 177

Microbe-gut-cartilage Axis-on-a-chip To Reveal The Effect Of Gut Microbes On Osteoarthritis

Zhong (Alan) Li; Jessie (Jun) Liu

4:55 PM

Paper No. 178

Tet2-mutant Clonal Hematopoiesis Exacerbates Rheumatoid Arthritis

Takaya Sugiura; Kenya Terabe; Shiro Imagama

5:05 PM

Paper No. 179

Bone Marrow Late Mesenchymal Progenitors Regulate Bone Remodeling, Hematopoiesis, And Vasculature



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Qi He; Hanli Guo; Yuewei Lin; Qiushi Liang; Kyu Sang Joeng; Ernestina Schipani; Nathaniel Dymont; Ivo Kajazic; LING QIN



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Sunday, February 9, 2025

4:15 PM - 5:15 PM

Room #: North 221

34 Resident and Fellow Research

4:15 PM

Paper No. 180

Revision Risk Following Elbow Ulnar Collateral Ligament Surgery: Comparing Repair Versus Reconstruction In A National Sample Of 1,820 Patients

Nathan Varady; Suhas Parise; Kyle Kunze; Christopher Brusalis; Riley Williams; David Altchek; Joshua Dines

4:25 PM

Paper No. 181

Patellofemoral Pain Syndrome Movement Profiles And Clinical Correlation: An Unsupervised Machine Learning Approach

Felipe F. Gonzalez; Leonardo F. Metsavaht; Eliane C. Guadagnin; Jonathan Gustafson; Lucas Pallone; Enzo Mameri; Adam Yanke; Marcus Luzo; Jorge Chahla; Gustavo Leporace

4:35 PM

Paper No. 182

Early Anterior Cruciate Ligament Reconstruction Mitigates The Development Of Post-traumatic Osteoarthritis In A Murine Non-invasive Anterior Cruciate Ligament Rupture Model

Julia S. Retzky; Camila Carballo; Lauren Simonian; Thomas Li; Yuki Suzuki; Yuki Okazaki; Alexander Piacentini; Mohammed Hammad; Claire Eliasberg; Theres Lu; Scott Rodeo

4:45 PM

Paper No. 183

Multi-parametric Profiling Of Circulating Immune Cells Identifies An Expansion Of Switched Memory B Cells In Osteoarthritis

Yudhishtar S. Bedi; Neety Sahu; Fiorella Grandi; William Maloney; Constance Chu; Nidhi Bhutani

4:55 PM

Paper No. 184

Bone Microarchitecture And Extracellular Matrix Quality In Patients With Abdominal Aortic Calcification Undergoing Lumbar Fusion Surgery



ANNUAL MEETING PROGRAM

Paul C. Köhli; Jan Hambrecht; Ranqing Lan; Erika Chiapparelli; Koki Tsuchiya; Ali E. Guven; Lukas Schönnagel; Shue Jennifer; Marco Burkhard; Eve Donnelly; Andrew Sama; Federico P. Girardi; Frank P. Cammisa; Alexander Hughes

5:05 PM

Paper No. 185

Patellar Constraint Within The Trochlear Groove Is Correlated With Cartilage Degradation At 10 Years Following ACL Reconstruction Based On T1ρ And T2 Relaxation Times

Timothy R. Guthrie; Kurt P Spindler; Xiaojuan Li; Richard Lartey; Lutul D. Farrow; John J. Elias; MOON Group



ANNUAL MEETING PROGRAM

Sunday, February 9, 2025

4:15 PM - 5:15 PM

Room #: North 222

35 Tendon Mechanobiology

4:15 PM

Paper No. 186

Differential Response Of Neonatal And Adult Limbs To Reduced Loading From Sciatic Nerve Resection

Talayah Johnson; Natalie Fogarty; Alisia Lin; Bryan Kwok; Xi Jiang; Lin Han; Josh Baxter; Robert Mauck; Nathaniel Dymant

4:25 PM

Paper No. 187

Local Tensional Microenvironment Rather Than Tissue-Scale Mechanics Dominates The Proteo-Transcriptional Landscape Of Tendon Fibroblast Wound Healing

Alina Dintheer; Patrick Jaeger; Maja Wolleb; Amro A. Hussien; Asma Mechakra; Maja Bollhalder; Barbara Niederoest; Michael Stumpe; Joern Dengjel; Jess G. Snedeker

4:35 PM

Paper No. 188

Exercise And Disuse Initiate Adaptive ECM Remodeling To Shift Tendon Mechanohomeostasis

Emma J. Stowe; Yashvi Grover; Brianne K. Connizzo

4:45 PM

Paper No. 189

Distinct Purinergic Receptors Mediate Exogenous Nucleotide-induced Calcium Signalling And Gene Expression Changes In Tenocytes

Ryan Armstrong; Mayeesha Khan; Matthew Grol

4:55 PM

Paper No. 190

Male And Female Diversity Outbred Mice Respond To Disuse Of The Achilles Tendon Via Different Mechanisms

Kelly Ott; Michael Friedman; Jessica Williamson; Henry Donahue; Jenny Puetzer

5:05 PM

Paper No. 191



ANNUAL MEETING PROGRAM

Muscle Contraction Induce Postnatal Tendon Maturation

Yuna Usami; Riku Saito; Koyo Nogji; Takanori Ito; Kei Takahata; Yano Tetsuya; Takanori Kokubun



ANNUAL MEETING PROGRAM

Monday, February 10, 2025

9:15 AM - 10:15 AM

Room #: West 301 A

36 Spotlight - Osteoarthritis as a Disease of the Whole Person (featuring Kharma Foucher)

9:15 AM

Paper No. 192

Deep Immunophenotyping Of Knee Osteoarthritis Patients Reveals Alterations In T-cell, Regulatory-t, And Monocyte Subpopulations.

Montana Barrett; Gabby Dyson; Nicholas Hanebutt; Aleksander Szymczak; Cindy Brawner; Matlock A. Jeffries

9:25 AM

Paper No. 193

Margin Of Stability During Single Limb Support Differs Based On The Lower Extremity Joint With End-stage Arthritis

Robin Queen; Sara Arena

9:35 AM

Paper No. 194

Autonomic Dysfunction In Patients With Late-stage Osteoarthritis Recovered One Year After Total Knee Arthroplasty

Rebecca Sohn; Tina Assar; Isabelle Kaufhold; Marco Brenneis; Sebastian Braun; Marius Junker; Frank Zaucke; Georg Pongratz; Zsuzsa Jenei-Lanzl



ANNUAL MEETING PROGRAM

Monday, February 10, 2025

9:15 AM - 10:15 AM

Room #: West 301 BC

37 Spinal Deformities and Cervical Spine Injuries

9:15 AM

Paper No. 195

Correction Of Spinal Deformities Via Growth Promoting Surgical Procedures: A Computational And In Vivo Analysis.

Matthew A. Halanski; Jakub Kronek; Yousuf Abubakar; Minhao Zhou; Cameron Jeffers; Max Twedt; Brittney Kokinos; Crenshaw Thomas; Grace O'Connell; Hani Haider

9:25 AM

Paper No. 196

Cervical Paraspinal Muscle Parameters Are Associated With Bone Mineral Density As Measured By Quantitative Computed Tomography And Vertebral Bone Quality In Preoperative Patients

Bruno Verna; Artine Arzani; Thomas Caffard; Lukas Schönnagel; Krizia Amoroso; Erika Chiapparelli; Jiaqi Zhu; John Carrino; Jennifer Shue; Andrew A. Sama; Cammisa P. Frank; Federico P. Girardi; Alexander P. Hughes

9:35 AM

Paper No. 197

Increased Rates Of Dysphagia, Longer Length Of Stay, Non-routine Discharge, And Higher Hospital Costs In Patients Over 65 Undergoing Single-level Cervical Disc Arthroplasty: A Propensity Score-matched Analysis

Paul G. Mastrokostas; Leonidas E. Mastrokostas; Ahmed K. Emara; Ian J. Wellington; Elizabeth Ginalis; Jonathan F. Dalton; Amrit S. Khalsa; Afshin E. Razi; Mitchell K. Ng

9:45 AM

Paper No. 198

Spinal Pathoanatomy Associated With Spinal Muscular Atrophy In The Era Of Disease Modifying Therapies

Hiroko Matsumoto; Taylor-Marie Adams; Lennert Plasschaert; Brian Snyder

9:55 AM

Paper No. 199

Concomitant Injuries With Cervical Spine Fractures



ANNUAL MEETING PROGRAM

Allen Zou; Emily Adams; Leila Erbay; Andrew Li; Antonio Lobao; Daniel Chen; Mohamed Yousef; Robert Shepard; Raj Gala; Michael Stauff

10:05 AM

Paper No. 200

Generation Of A Normative Healthy Spinal Growth Atlas Using Ai-based Longitudinal Modeling Building

Beatriz Paniagua; Ye Han; Addison Liefer; Blake K. Montgomery; Simon Tang



ANNUAL MEETING PROGRAM

Monday, February 10, 2025

9:15 AM - 10:15 AM

Room #: West 301 D

38 Hip Biomechanics across Multiple Populations

9:15 AM

Paper No. 201

Does Residual Femur Motion Influence Dynamic Balance In Individuals With Transfemoral Amputations?

Paige Paulus; Tom Gale; Rishabh Shetty; Yulia Yatsenko; Justin Elder; Kelly Mroz; Drew Buffat; Goeran Fiedler; William Anderst

9:25 AM

Paper No. 202

Medial Iliofemoral Ligament Strain Correlates To Its Contribution To Hip Stability Following THA

Clarisse Zigan; Jennifer Bido; Kate Meyers; Jose Rodriguez; Timothy M Wright; Fernando Quevedo Gonzalez

9:35 AM

Paper No. 203

Altered Abductor Mechanism In FAI Patients During Walking And Squatting

Mohamad EF Shatila; Etienne Joulin; Suhwan Park; Trevor B. Birmingham; Ryan M. Degen; Geoffrey Ng

9:45 AM

Paper No. 204

Improved Estimation Of The Infant Hip Joint Center

Abby R. Brittain; John Collins; Michael D. Harris; Christine L. Farnsworth; Vidyadhar V. Upasani; Erin M. Mannen

9:55 AM

Paper No. 205

Predicting Patient Outcomes In Hip Arthroscopy Using Artificial Intelligence Image Recognition

Michael Rizzo; Nicholas A. Felan; Alyson Speshock; Daniel Lind; Benjamin Kuhns; Grant J. Dornan; Jonathan Godin; Marc J. Philippon

10:05 AM

Paper No. 206



2025 ANNUAL MEETING

SCIENCE IS OUR CORE

February 7 – 11, 2025 | Phoenix, Arizona



ANNUAL MEETING PROGRAM

Bony Hip Congruency Varies By Acetabular Region And Activity In Asymptomatic Young Adults

Camille C. Johnson; Ethan Ruh; Naomi Frankston; Shaquille Charles; Craig Mauro; Michael McClincy; William Anderst



ANNUAL MEETING PROGRAM

Monday, February 10, 2025

9:15 AM - 10:15 AM

Room #: North 221

39 A Focus on Translational Research

9:15 AM

Paper No. 207

Elucidating The Efficacy Of Prp Therapy In Knee Osteoarthritis: A Comprehensive Analysis Of Cellular And Protein Biomarkers

Lea Zila; Julia Sheyn; Juliane Glaeser; Giselle Kaneda; Jasmine Galloway; Victoria Yu; Dmitriy Sheyn; Clive Svendsen; Wafa Tawackoli; Bert Mandelbaum; Pablo Avalos; Salehi Khosrowdad

9:25 AM

Paper No. 208

Combined Senolytics And 11-week Treadmill Running Reversed The Declining Of Bone Tissue Mineral Density In Aged Mice With Parkinson Disease

Tiankuo Chu; Maya Collado; Samantha Izquierdo; Ella Cooper; Krish Shajpaul; Crystal P. James; Sharee McGriff; Darice Wheeler; Kwadwo Ofori; Ho Ming Chow; Hwan Y Kim; Liyun Wang

9:35 AM

Paper No. 209

Controlled Release Of Rbmp2 From Biomimetic Bone Graft Promotes Fusion In Rat Spinal Injury Model

Naboneeta Sarkar; Mahnoor Shafi; Timothy Witham

9:45 AM

Paper No. 210

Six-month, 1 Year And Average 5.5 Years Follow-up Evaluation Of Meniscus Repair With Novel Atelocollagen Meniscus Substitute (ACMS) For Meniscal Defect In The First-in-human Study

Seira Sato; Hiroyuki Yokoi; Takashi Kanamoto; Tomoki Ohori; Akira Tsujii; Kazunori Shimomura; Yasuhiro Take; Yasukazu Yonetani; Tatsuo Mae; Kosuke Ebina; Seiji Okada; Ken Nakata

9:55 AM

Paper No. 211

Rotator Cuff Repair With Purified Exosome Product (PEP) In A Canine Model.

Ichiro Tsukamoto; Naoya Iida; Kai-Lan Hsu; Weihong Zhu; Po-Yen Ko; Weizhe Zhang; Chunfeng Zhao



ANNUAL MEETING PROGRAM

10:05 AM

Paper No. 212

Azimplacel Attenuates Synovial Inflammation In Vitro And Improves Pain And Function In A Rat Osteoarthritis Model

Katrina A. Harmon; Kelly A. Kimmerling; Katie C. Mowry



ANNUAL MEETING PROGRAM

Monday, February 10, 2025

9:15 AM - 10:15 AM

Room #: North 222

40 Biomaterials for 3D and MIS

9:15 AM

Paper No. 213

Injectable Bioadhesive To Promote Endogenous Stem Cell-mediated Regeneration Of Partial Rotator Cuff Tear

Bhavya Vaish; Feabie Mendiaz; Nathan Gray; Le Hoang; Samira Izuagbe; Tam Nguyen; Joseph Borrelli; Liping Tang

9:25 AM

Paper No. 214

Enhanced Hemostasis Using A Mechanically Tough Bioadhesive

Benjamin R. Freedman; Daniel Kent; Phoebe Kwon; Kyle Wu; Matthew Torre; David J. Mooney

9:35 AM

Paper No. 215

Injectable Antimicrobial Hydrogel For Early Treatment Of Extremity Bone Wounds

Gabrielle Lorenz; Daniel Zamith Miranda; Ingrid McNamara; Clay Tucker; Andrew Draganski; Alejandro Almarza; Joshua Nosanchuk; Juan Taboas

9:45 AM

Paper No. 216

A Multiphasic ECM Scaffold System For Rotator Cuff Repair With Tailored Stiffness And Structure For Enhanced Regeneration

Zizhao Li; Se-Hwan Lee; Ellen Zhang; Marina Santos; Lin Xu; Ruqiang Lu; Dong Hwa Kim; Jaeun Jung; Jayden Shin; Richard Tran; Nathaniel Dymont; Thomas Schaer; Su Chin Heo

9:55 AM

Paper No. 217

Advanced Collagen Scaffold As An Effective Carrier For Complementary Orthobiologics In Soft Tissue Repair

Michael Valentine; Amanda Pomposini; Austin Johnson; Davorka Softic; Xiaofei Qin

10:05 AM



ANNUAL MEETING PROGRAM

Paper No. 218

3d Printing Polycaprolactone-gelatin For Musculoskeletal Tissue Engineering

Elaine Lui; Masanori Kobayashi; Hirotsugu Maekawa; Jiannan Li; Charu Jain; Seyedsina Moeinzadeh; Anthony A.D. Chen; Weston Allen-Hicks; Weston Allen-Hicks; Shuichi Matsuda; Toshiyuki Kawai; Yunzhi Yang



ANNUAL MEETING PROGRAM

Monday, February 10, 2025

10:45 AM - 11:45 AM

Room #: West 301 A

41 Spotlight - Translational Approaches for Arthritis (featuring Chuan-ju Liu)

10:45 AM

Paper No. 219

Programmable Chronogenetic Circuits For Self-Regulated Daily Drug Delivery In Arthritis

Amanda Cimino; Fiona Pat; Omolabake Oyebamiji; Maria F. Gonzalez-Aponte; Kristin Lenz; Christine T. N. Pham; Erik D. Herzog; Farshid Guilak

10:55 AM

Paper No. 220

Dna Methylation Patterns Predicts Therapeutic Human Mesenchymal Stromal Cell Potency In Posttraumatic Osteoarthritis Microenvironment

Sanique M. South; Yan Carlos Pacheco; Levi Wood; Nicholas Hannebut; Cindy Brawner; Matlock Jeffries; Nick Willett

11:05 AM

Paper No. 221

Intraarticular Delivery Of Recombinant Interleukin-1 Receptor Antagonist Protein (anakinra) Enhances Graft Function In A Porcine Model Of Osteochondral Repair

Brendan D. Stoeckl; Rachel Flaugh; Akbar Syed; Elisabeth Lemmon; Kendall Masada; Lorie Laforest; Natalie Fogarty; Bijan Deghani; Robert Mauck; David Steinberg



ANNUAL MEETING PROGRAM

Monday, February 10, 2025

10:45 AM - 11:45 AM

Room #: West 301 BC

42 Intervertebral Disc Injury and Healing

10:45 AM

Paper No. 222

Imaging Mass Cytometry Reveals Rapid And Profound Changes In The Cellular Landscape Of Both Injured And Adjacent Intervertebral Discs

Kevin G. Burt; Venise C. Martinez; Sarah Gullbrand; Robert Mauck; Carla Scanzello

10:55 AM

Paper No. 223

Investigating Sleep Quality In A Rodent Model Of Chronic Low Back Pain

Lydia Saltz; Ariel Ammentorp; Evie Barnett; Anjeza Erickson; Heidi Kloefkorn; Rebecca Wachs

11:05 AM

Paper No. 224

Resident Intervertebral Disc Neutrophils Are Lost With Age And Implicated In Neonatal Regeneration In Mice

Timothy Jacobsen; James Hong; Timothy Hoang; Levon Rodriguez; Danielle D'Erminio; James Iatridis

11:15 AM

Paper No. 225

Discogenic Pain Mechanisms In A Porcine Model: Insights From MRI, Biobehavioral Testing, And Multi-omic Analysis

Giselle Kaneda; Melissa Chavez; Jacob T. Wechsler; Chushu Shen; Karandeep Cheema; Julia Sheyn; Patricia Del Rio; Oksana Shelest; Pablo Avalos; Yibin Xie; Debiao Li; Wafa Tawackoli; Candace Floyd; Dmitriy Sheyn

11:25 AM

Paper No. 226

Targeted Multiplex CRISPRa Upregulation Of Novel Gene, ZNF865, Enhances Cell Infiltration, Cartilage Deposition And Mechanical Properties Of Human-sized Engineered Discs

Hunter Levis; Matthew Fainor; Sarah Gullbrand; Robert Bowles

11:35 AM



ANNUAL MEETING PROGRAM

Paper No. 227

Annulus Repair Via Interpenetrated Non-woven Scaffold Supports Tissue Integration And Prevents Herniation

Esteban D. Ongini; Mohammed Abdullah; Julie Engiles; Brianna Orozco; Andrea Moehl; Ana Peredo; Sonal Mahindroo; Rachel Hilliard; Thomas Schaer; Robert Mauck; Harvey Smith; Mazda Farshad; Jess Snedeker; Sarah Gullbrand



ANNUAL MEETING PROGRAM

Monday, February 10, 2025

10:45 AM - 11:45 AM

Room #: West 301 D

43 Clinical Research - Fractures and Obesity

10:45 AM

Paper No. 228

Predicting The Risk Of Catastrophic Cardiac Events After Total Hip And Total Knee Periprosthetic Fracture Procedures Using Machine Learning Algorithms: A National Cohort Analysis

Oh-Jak Kwon; Pengwei Xiao; Michelle R. Shimizu; Marium Raza; MohammadAmin RezazadehSaatlou; Zhijun Li; Anisha E. Gemmy; William T. Sampson; Anirudh Buddhiraju; Tony Lin-Wei Chen; Isaiah Freeman; Sina Afzal; Young-Min Kwon

10:55 AM

Paper No. 229

Comparison Of Two Fisetin Dosing Regimens For Their Effects On Mrna Expression Of Senescence Related Genes In Peripheral Blood Mononuclear Cells In Elderly Humans

Xueqin Gao; Joanna Roder; Lucas Minas; Grant J. Dornan; Jonathan E. Layne; Jacob Singer; Chloe Barton; Luz Thede; Jasmine Hartman; Molly Czachor; Sara Robinson; Greta Gohring; Aiping Lu; Ping Guo; Dustin Anderson; Marc Philippon; Scott Tashman; Johnny Huard

11:05 AM

Paper No. 230

Association Between Bone Mineral Density By Whole-Body Densitometry And Hip Fractures In Adults Aged 45 To 64

Amber Lan; Rashad Madi; Chamith Rajapakse

11:15 AM

Paper No. 231

Glp-1 Receptor Agonists Increase Fracture Risk In Non-diabetic Patients With Obesity

Evangelia Constantine; Luke Enthoven; Riley Kahan; Emily Pflug; Alexander Lauder

11:25 AM

Paper No. 232

Trends In Bariatric Surgery Versus Glucagon-like Peptide-1 Receptor Agonists For Weight Loss Prior To Total Joint Arthroplasty



ANNUAL MEETING PROGRAM

Yuan-Hsin Chen; Andrew Grant; Ya-Wen Chen; Darren Z. Nin; Hannah I. Travers; Carl T. Talmo; Brian L. Hollenbeck; Ruijia Niu; David C. Chang; Eric Smith

11:35 AM

Paper No. 233

**Investigating The Inflammatory Proteins-mediated Causal Pathway Of Obesity And Rotator Cuff Tears:
A Mediation Mendelian Randomization Study**

Rong Zhao; Yibin Liu; Jinjin Ma



ANNUAL MEETING PROGRAM

Monday, February 10, 2025

10:45 AM - 11:45 AM

Room #: North 221

44 Tendon and Ligament Healing

10:45 AM

Paper No. 234

Investigating Crosstalk In ACL Injury: Potential Role Of RBC Secretome

Howard J. Nicholson; Gerard A. Ateshian; Nadeen O. Chahine; Roshan P. Shah; Clark T. Hung

10:55 AM

Paper No. 235

Prostaglandin E2 Signaling Potentiates Innate Immunity To Regulate Enthesis Regeneration In Adult Zebrafish

Jason C. Marvin; Ella Kim; Sara Silarszka; Marie-Therese Nödl; Stephanie L. Tsai; Samuel J. Wattrus; Jenna L. Galloway

11:05 AM

Paper No. 236

Design And Fabrication Of A Bi-directional And Bi-temporal Delivery System For Enhancing Intrasynovial Tendon Repair

Yidan Chen; Hua Shen; Richard Gelberman; Stavros Thomopoulos; Younan Xia

11:15 AM

Paper No. 237

Stable Expression Of Hypoxia-inducible Factor 1a (hif1a) Leads To Increased Markers Of Angiogenesis And Proliferation In Injured Mouse Achilles Tendons And In Primary Tendon Cells In Vitro

Stephanie S. Steltzer; Nicole Migotsky; LeeAnn Hold; Tessa Phillips; Yatrik Shah; Adam Abraham; Megan Killian

11:25 AM

Paper No. 238

Multiparametric Spatial Profiling Of Flexor Tendon Pathologic Niches: Insights From A Preclinical Avian Model Of Zone II Tendon Repair

Omar A. Selim; Margaret Brosig; Steven Moran; Chunfeng Zhao

11:35 AM



ANNUAL MEETING PROGRAM

Paper No. 239

Regeneration Of Ligament And Synovial Joint Tissue And Function In Adult Zebrafish

Everett S. Weinstein; Maria Blumenkrantz; Joanna Smeeton



ANNUAL MEETING PROGRAM

Monday, February 10, 2025

10:45 AM - 11:45 AM

Room #: North 222

45 Surgical & Biomechanical Studies of the Carpus

10:45 AM

Paper No. 240

Effect Of Component Alignment On Total Wrist Arthroplasty

Frederick W. Werner; Teresa Li; Mark A. Miller; Brian J. Harley

10:55 AM

Paper No. 241

Accuracy Of Implant Placement Using Augmented Reality-assisted Technique In Total Wrist Arthroplasty

Shimpei Watanabe; Takuji Iwamoto; Atsushi Tanji; Yasuhiro Kiyota; Taku Suzuki; Noboru Matsumura; Takeo Nagura; Masaya Nakamura

11:05 AM

Paper No. 242

Scapholunate Interosseous Ligament Injuries: Assessing Carpal Contact Biomechanics Under Load Using Weight-Bearing Computed Tomography

Justen Saini; Brodie Ritchie; Michael T. Kuczynski; Charley Hasselaar; Neil J. White; Koren E. Roach; Sarah L. Manske

11:15 AM

Paper No. 243

Characteristics Of Elasticity Of Thenar Muscles In Carpal Tunnel Syndrome

Naoya Iida; Hicham El Hor; Larson Dirk; Marianne Luetmer; Ruple Laughlin; Ramona Reisdorf; Peter C Amadio

11:25 AM

Paper No. 244

Adaptation Of Carpal Tunnel Components To Pinching At Different Wrist Postures

Trevour Greene; Zong-Ming Li

11:35 AM

Paper No. 245



ANNUAL MEETING PROGRAM

**Comparing The Effects Of Ligament Reconstruction And Tendon Interposition Versus Suspensionplasty
On Dynamic Trapezial Height And Thumb Strength**

Edward Godbold; Eva Heidinger; Sanah Handu; Maria Munsch; John Fowler; William Anderst



ANNUAL MEETING PROGRAM

Monday, February 10, 2025

3:15 PM - 4:15 PM

Room #: West 301 A

46 Spotlight - Orthopaedic Infection - Imaging and Biomarkers (featuring Chao Xie)

3:15 PM

Paper No. 246

Histological Analysis Of Cortical Bone Following Standard And Novel Treatments Against Biofilms

Dustin Williams; Richard T. Epperson; Brooke Kawaguchi; Nicholas Ashton

3:25 PM

Paper No. 247

Alkaline PH Of Post-operative Wound And Synovial Fluid Affects S. Aureus Virulence And Antibiotic Tolerance

Asia Winslow; Caroline Purtill; Eva M. Kierstead; Megan Seraydarian; Rachel M. Butler; Caleb R. Durst; Antonia F. Chen; Christopher M. Snyder; Thomas P. Schaer; Noreen J. Hickok

3:35 PM

Paper No. 248

Cysteine Depletion In Bacterial Infection A Diagnostic Biomarker For FRI

Claudia Siverino; Theresa Schiemer; Jingzhi Fan; Nikoka-Gabriela Matusevica; Kristaps Klavins; Thomas Fintan Moriarty



ANNUAL MEETING PROGRAM

Monday, February 10, 2025

3:15 PM - 4:15 PM

Room #: West 301 BC

47 Knee Function following Injury and Surgery

3:15 PM

Paper No. 249

Increasing Posterior Tibial Slope Reduces The Resultant Force In Lateral Meniscus In Acl Deficient Knees At Low Flexion Angles

Tianyu Chen; Enes Kayaalp; Jumpei Inoue; Luke Mattar; Richard Debski; Volker Musahl

3:25 PM

Paper No. 250

Comparative Analysis Of Btb And Qt Autografts: Preliminary Results On Post-aclr Strength And Laxity

Tomasz Bugajski; Alonso Figueroa; Walter Lowe; Payam Zandiyeh

3:35 PM

Paper No. 251

Asymmetries In Muscle Strength And Knee Kinematics Are Correlated After ACL Reconstruction

Austin Carcia; Kristen Seballos; Armando Vidal; Jonathan Godin; Thomas Hackett; Matthew T. Provencher; Peter J. Millett; Johnny Huard; Scott Tashman; Colin R. Smith

3:45 PM

Paper No. 252

Tibiofemoral Contact Mechanics Are Related To ACL Force In Young Female Athletes During Pivoting Maneuvers: An In Silico Study

Isabella Gomez Hjerthen; David Shamritsky; Arian Alhosseini; Reza Pourmodheji; Mitchell Wheatley; Andrew Pechstein; Danyal Nawabi; Thomas Wickiewicz; Andrew Pearle; Carl Imhauser

3:55 PM

Paper No. 253

Inertial Measurement Unit Accelerations At The Knee Can Differentiate Anterior Cruciate Ligament Rupture Onset During Landing

Nathaniel A. Bates; Luana Niewelt; Victor Maldonado; Aaron Krych; Nathan D. Schilaty

4:05 PM

Paper No. 254



ANNUAL MEETING PROGRAM

Dynamic Knee Kinematics During Downhill Running At 10+ Years After Anatomic ACL Reconstruction

Anja M. Wackerle; Tom Gale; Koji Nukuto; Stephen J. Rabuck; James J. Irrgang; Volker Musahl; William Anderst

Monday, February 10, 2025

3:05 PM - 4:15 PM

Room # North 222

48 Late Breaking Podium

3:05 PM

Paper No. 2123

Rab001d—A Novel Peptide-small Molecule Conjugate (pdc) For The Treatment Of Osteoarthritis-Results From The Pre-clinical Efficacy And Randomized Phase I Studies

Wei Yao; Jiwei Chen; Mengmeng Chen; Min Jiang; Nancy Lane

3:15 PM

Paper No. 2124

Identification And Targeted Selection Of Matrix-Synthetic Cell Subpopulations For Meniscus Regeneration

Susana P. Simmonds Bohorquez; John C. Bradford; Ronald Young Kwon; Jenny L. Robinson

3:25 PM

Paper No. 2125

HIF1a Orchestrates Tendon Response To Overload And Drives Tendinopathy

Greta Moschini; Archana G. Mohanan; Patrick Jaeger; Amro Hussien; Maja Wolleb; Guillermo R. Turiel; Stefania Wunderli; Fabian Passini; Dirk Elewaut; Jonathan Clark; Katrien De Bock; Jess Snedeker

3:35 PM

Paper No. 2126

An Uncertainty-aware Deep Learning Classifier To Identify Total Knee Arthroplasty Implants

Sami Saniei; Kellen L. Mulford; Elizabeth Kaji; Austin F. Grove; Miguel Girod; Pouria Rouzrokh; Matthew Abdel; Michael J. Taunton; Cody Wyles

3:45 PM

Paper No. 2127

4-aminopyridine Enhances Orai1-BMP2 Signaling In Osteoblasts To Promote Fracture Healing And Improve Bone Strength



ANNUAL MEETING PROGRAM

Govindaraj Ellur; Prem Kumar Govindappa; Gerardo Figueroa Romero; David Margolis; John Elfar

3:55 PM

Paper No. 2128

Targeting Early-stage Synovial Lymphatics Dysfunction To Attenuate Post-traumatic Osteoarthritis Progression

Mingde Cao; Xiaobo Zhu; Xueyou Zhang; Michael Tim-Yun Ong; Patrick Shu-Hang Yung; Yangzi Jiang

4:05 PM

Paper No. 2129

Fibroblast Growth Factor Receptor 3 (Fgfr3) In Tendon Progenitors Is Necessary For Aligned Growth Of The Mouse Humerus

Nicole Migotsky; Michael Andres; Allison Risha; Debabrata Patra; David M. Ornitz; Adam C. Abraham; Megan L. Killian



ANNUAL MEETING PROGRAM

Monday, February 10, 2025

3:15 PM - 4:15 PM

Room #: North 221

49 Chondrocytes and Synovial Fibroblasts

3:15 PM

Paper No. 255

Spatial Omics Reveals The Landscape Of Growth Plate Cells And The Role Of Adgrg6 In Regulating Skeletal Progenitors At The Osteochondral Junctions

Jingyu He; Fangzhou Bian; Hong C. Feng; Yanshi Chen; Chia-Lung Wu; Zhaoyang Liu

3:25 PM

Paper No. 256

Thrombospondin-2 Mediates The Neuro-Angiogenic Transcriptome In Post-Traumatic Osteoarthritic Synovium

Lindsey Lammlin; Adrienne Giannone; Michael Newton; Henry Dai; Andrea Alford; Kurt Hankenson; Tristan Maerz

3:35 PM

Paper No. 257

Chondrocyte-secreted Angiogenin, Negatively Regulated By Pgrn, Mediates Subchondral Bone Angiogenesis And Dysregulated Chondrocyte Metabolism In Osteoarthritis

Renpeng Zhou; Weirong Hu; Wenyu Fu; Chuan-ju Liu

3:45 PM

Paper No. 258

A Multiomic Analysis Of Extracellular Matrix Genes In Healthy Human Cartilage Identifies Klf4 As A Novel Regulator In Chondrocyte Subpopulations

Hannah Swahn; Merissa Olmer; Martin Lotz

3:55 PM

Paper No. 259

Inhibition Of Fibroblast Activation Protein Restores The Homeostatic Phenotype Of Mechano-activated Synovial Fibroblasts

Elizabeth R. Bernstein; Brendan Stoeckl; Rachel Flaugh; Robert Mauck; Liane Miller

4:05 PM



ANNUAL MEETING PROGRAM

Paper No. 260

A Role For Chromosomal Sex In Dimorphic Control Of Osteocyte Signaling, Osteoarthritis, And Joint Function

Andres Betancourt-Torres; Bethany Andoko; Reyna E. Villa; Tiffany Pham; Tamara Alliston; Kelsey Collins



ANNUAL MEETING PROGRAM

Monday, February 10, 2025

3:15 PM - 4:15 PM

Room #: North 222

50 Clinical Research - Women's Health and Gait Analysis

3:15 PM

Paper No. 261

Systemic Hormonal Contraceptives Increase The Risk Of Soft Tissue Pathology In The Knee: A Nationwide Epidemiological Analysis Of 1,294,435 Patients

Aakash Shah; Robert Burkhart; Isha Shah; Bhargavi Maheshwer; Amanda Weiss-Kelly; Michael Salata; James Voos; Jacob Calcei

3:25 PM

Paper No. 262

Hormonal Contraceptives Reduce Ligament Laxity And Protect Against Injuries In Female Athletes

Natasha Trentacosta; Natasha Schimmoeller; Dave T. Huang; Jasmine Galloway; Marilee Fischer; Giselle Kaneda; Christian Blough; Dmitriy Sheyn; Melodie F. Metzger

3:35 PM

Paper No. 263

Ultrasonography And Magnetic Resonance Imaging Revealed Female-specific Joint Structural Abnormalities In Early Knee Osteoarthritis

Atsushi Hoki; Ella D'Amico; Fabrisia Ambrosio; Tsubasa Iwasaki; Yoshikazu Matsuda; Hirotaka Iijima

3:45 PM

Paper No. 264

Pregnancy Gait Biomechanics Using Markerless Motion Capture

Michelle Meyers; Afua Nkansah-Andoh; Devyn Russo; Ke Song; Celeste Durnwald; Casey Humbyrd; Josh Baxter

3:55 PM

Paper No. 265

Explainable Deep Clustering Of Instrumented Gait Data From Children With Unilateral Cerebral Palsy Compared To Clinical Classification

Troy Krupinsky; Renugopal Sivaprakasam; Lakhisha Balaji; Joe Krzak; Adam Graf; Anita Bagley; Jeremy Bauer; Jonathan Davids; Susan Sienko; Haluk Altiok; Mark Albert; Karen Kruger; Kevin Dibbern



ANNUAL MEETING PROGRAM

4:05 PM

Paper No. 266

Association Between Pivot-shift Phenomenon In The Contralateral Uninjured Knee And Residual Pivot-shift Phenomenon After Anterior Cruciate Ligament Reconstruction

Naosuke Nagata; Kanto Nagai; Kyohei Nishida; Yuichi Hoshino; Yuta Nakanishi; Tetsuya Yamamoto;
Noriyuki Kanzaki; Takehiko Matsushita; Ryosuke Kuroda



ANNUAL MEETING PROGRAM

Monday, February 10, 2025

4:30 PM - 5:30 PM

Room #: West 301 A

51 Spotlight - More about BMPs (featuring Magnus Tagil)

4:30 PM

Paper No. 267

Low Dose Bmp-2 Promotes Fracture Healing In A Femur Segmental Defect Model In Rats Without Inducing Excessive And Prolonged Inflammation

Maria Schröder; Lena Gens; Arens Daniel; Nico Giger; Laura Bernhard; Gehweiler Dominic; Ivan Zderic; Dirk Nehrbass; Stephan Zeiter; Martin Stoddart; Wehrle Esther

4:40 PM

Paper No. 268

Systemic Immune Response Following BMP-2 Treated Bone Injury Is Time And Dose Dependent

Lia K. Strait; Kelly Leguineche; Kylie Williams; Auveen Hajarizadeh; Dylan Gill; Robert E. Guldberg

4:50 PM

Paper No. 269

The Effect Of Anti-csf1r On Osteoclasts And Bone Lesions In A Murine Model Of Fibrous Dysplasia

Yongxing Zhang; Renee Ormsby; Kelly Tsang; Julia F. Charles



ANNUAL MEETING PROGRAM

Monday, February 10, 2025

4:30 PM - 5:30 PM

Room #: West 301 BC

52 Biomaterials for Soft and Hard Tissue Repair/Replacement

4:30 PM

Paper No. 270

Precision Repair Of Zone-specific Meniscal Injuries Using A Tunable Meniscus ECM-based Hydrogel System

Se-Hwan Lee; Ellen Zhang; Zizhao Li; Dong Hwa Kim; Sang Jin Lee; Jason A. Burdick; Robert Mauck; Su Chin Heo

4:40 PM

Paper No. 271

Nucleus Pulposus Cells Encapsulated In Microgels For The Treatment Of Intervertebral Disc Degeneration

Namdev More; Sarah Mohyeddinipour; Julia Sheyn; Jia-Wei Yang; Mehmet Dokmeci; Ali Khademhosseini; Dror Seliktar; Wafa Tawackoli; Dmitriy Sheyn

4:50 PM

Paper No. 272

Fibronectin Peptides Reinforce Fibrotic And Inflammatory Signaling In Nucleus Pulposus Cells And Disc Explants

Ananya Naha; John Sorensen; Tristan Driscoll

5:00 PM

Paper No. 273

The Chondro-inducing Ability Of Heparin Requires Auxiliary Bioactivity

Sven Schmidt; Safak Chasan; Richter Wiltrud; Solvig Diederichs

5:10 PM

Paper No. 274

Optimization Of A 3D-Printed Growth Plate Mimetic Composite For The Treatment Of Growth Plate Injuries

Ana Ferreira Ruble; Pochih Shen; Boyuan Liu; Laurel Stefani; Bianca Guillester; Kristine Fischenich; Nancy Hadley-Miller; Virginia Ferguson; Stephanie J. Bryant; Karin A. Payne



ANNUAL MEETING PROGRAM

5:20 PM

Paper No. 275

Evaluating A Novel Polyether-ether-ketone (peek) Femoral Component For Total Knee Arthroplasty:acceptable Wear Characteristics And Uncomplicated First-in-human Trials

Vinod Dasa; Ryan Shah; Robert W. Eberle



ANNUAL MEETING PROGRAM

Monday, February 10, 2025

4:30 PM - 5:30 PM

Room #: West 301 D

53 Markers and Mechanisms of Cartilage Disease

4:30 PM

Paper No. 276

Crucial Non-Redundant Roles Of Sox5 And Sox6 In Synovial Fibroblast Function And Activity

Adrienne A. Giannone; Easton Farrell; Scarlet Howser; Lindsey Lammlin; Véronique Lefebvre; Alexander Knights; Tristan Maerz

4:40 PM

Paper No. 277

Synovial Fluid Biopsy From Osteoarthritis Knee Joint: Individualization And Screening Of The Progression Of Disease

Dongjin Ryu; DongJun Shin; Jung Hyun Choi; Jiyoung Bu; Samuel Jaeyoon Won

4:50 PM

Paper No. 278

Role Of Acetyl CoA Carboxylase 1 (ACC1) In Obesity And Aging-associated Osteoarthritis Development

Anupama Binoy; Huanhuan Liu; Shadi Moradi; Siqi Ren; Abhijit Sukul; Anna Miller; Tom Martino; Shouan Zhu

5:00 PM

Paper No. 279

Identifying Key Molecular Factors In Chondrocyte Dedifferentiation Through Single-nuclei Multiome Sequencing

Ellen Zhang; Sang Hyun Lee; Yuna Heo; Melike Lakadamyali; Robert Mauck; Inkyung Jung; Su Chin Heo

5:10 PM

Paper No. 280

Proton Sensing Receptor Gpr68 As A Novel Modulator Of OA Progression

William N. Martin; Samir Chihab; Colette Hyde; Bhakti Patel; Hicham Drissi; Mohd Nazir Khan

5:20 PM

Paper No. 281



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ANNUAL MEETING PROGRAM

Integrative Lineage Tracing Reveals Multipotency Of Synovial α SMA+ Cells In Post Traumatic Osteoarthritis

Aanya Mohan; Seth Kahan; Danny Nguyen; Rida Pervez; Sofia Gonzalez-Nolde; Tristan Maerz; Alexander Knights



ANNUAL MEETING PROGRAM

Monday, February 10, 2025

4:30 PM - 5:30 PM

Room #: North 221

54 Sex as a Biological Variable in Knee Function

4:30 PM

Paper No. 282

Sex Differences In The Physiological Response To An Acute Anterior Cruciate Ligament Overuse Injury

Steve Schlecht; Adam Carter; Ben Loflin; Allison Willimans

4:40 PM

Paper No. 283

Sex Differences In Femoral Bone Shape And Opposite Associations With Knee Flexion Moment 2 Years After Anterior Cruciate Ligament Reconstruction

Jade He; Ashley Williams; Constance R. Chu

4:50 PM

Paper No. 284

Tissue-specific And Spatially-dependent Metabolic Signatures Are Perturbed By Injury In Male And Female C57bl/6j Mouse Joints

Hope Welhaven; Avery Welfley; Priyanka Brahmachary; Don Smith; Brian Bothner; Ron June

5:00 PM

Paper No. 285

Knee Pathomechanics And Anterior Cruciate Ligament Anatomy Of Females Compared To Males: In-silico Analysis Of Matched Anterior Cruciate Ligament-injured And Healthy Cohorts

Andrew E. Pechstein; Mitchell Wheatley; David Shamritsky; Mark Amirtharaj; Danyal Nawabi; Thomas Wickiewicz; Michael Parides; Andrew Pearle; Bruce Beynnon; Carl Imhauser

5:10 PM

Paper No. 286

Rapamycin Enhances Intra-articular Calcification And Post-Traumatic OA Pathology In Female Mice.

Dennis M. Minton; Aditya R. Ailiani; Adam R. Konopka

5:20 PM

Paper No. 287



2025 ANNUAL MEETING

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ANNUAL MEETING PROGRAM

Strain, Age, And Activity Relationships Between ACL Injury Anatomical Risk Factors During Musculoskeletal Growth

Riley Ables; Jon Vore; Youngjun Woo; Adam Carter; Ben Loflin; Steve Schlecht



ANNUAL MEETING PROGRAM

Monday, February 10, 2025

4:30 PM - 5:30 PM

Room #: North 222

55 Foot and Ankle - In Vivo Function and Repair

4:30 PM

Paper No. 288

Poetry In Motion: Ankle Biomechanics In Ballet Dance

Emily Luo; Katherine Kutzer; KEPLER CARVALHO; Grayson Talaski; Madeline Ungs; Erik Huanuco Casas; Antoine Acker; Albert Anastasio; Cesar de Cesar Netto

4:40 PM

Paper No. 289

Three-dimensional Assessment Of Deformities In Charcot Neuroarthropathy And Comparisons To Current Clinical Measurements

Avani A. Chopra; Zachary Koroneos; Michaela D. Pitcher; Christian Benedict; Peter Tortora; Taylor Lan; Michael Levidy; Allen Kunselman; Michael Aynardi

4:50 PM

Paper No. 290

3d Distance Maps From Weightbearing Ct Identify Early Joint-space Narrowing After Tibial Pilon And Trimalleolar Fracture Reconstruction And Correlate With Pain

Justin York; Jonathan Kraus; Gerald Harris; Karen Kruger; Kevin Dibbern

5:00 PM

Paper No. 291

How Intersegmental Foot And Ankle Motion Differs In Patients With Varus And Valgus Ankle Osteoarthritis

Min Gyu Kyung; Jahyung Kim; Joonhee Kim; Dong Yeon Lee

5:10 PM

Paper No. 292

A Computational Modeling Framework To Assess The Influence Of Custom Dynamic Orthoses Bracing On Ankle Joint Contact Mechanics

Lucinda A. Williamson; Sara Magdziarz; Jason Wilken; Don Anderson

5:20 PM



ANNUAL MEETING PROGRAM

Paper No. 293

Accuracy And Precision Of Computer-assisted Surgery Compared With Conventional Instrumentation For Total Ankle Arthroplasty

Matthew Rueff; Matthew Hamilton; Zachary Tupper; Scott Gulbransen; Laurent Angibaud; Phong Diep; Cole Herbel; Edward Haupt



ANNUAL MEETING PROGRAM

Tuesday, February 11, 2025

8:00 AM - 9:00 AM

Room #: West 301 A

56 Clinical Research - Osteoarthritis

8:00 AM

Paper No. 294

Preclinical Knee OA Can Be Defined By Peripheral Blood Epigenetic Patterns

Cindy Brawner; Nicholas Hanebutt; Gabby Dyson; Montana Barrett; Aleksander Szymczak; Matlock A. Jeffries

8:10 AM

Paper No. 295

Functional Epigenomics On Human Fetal Knees And Hips Reveal Distinct Developmental Regulatory Patterns Underlying Joint-specific Disease Risk

Terence D. Capellini; Gayani Senevirathne; Alexander Okamoto; Clarissa Coveney; Daniel Richard; April Craft

8:20 AM

Paper No. 296

“Fairness” In Machine Learning Readmission Prediction In Primary Total Knee Arthroplasty

Marium Raza; Michelle R. Shimizu; Pengwei Xiao; Sina Afzal; Anisha Gemmy; Zhijun Li; Oh-Jak Kwon; MohammadAmin RezazadehSaatlou; William Sampson; Tony Lin-Wei Chen; Anirudh Buddhiraju; Isaiah Freeman; Young-Min Kwon

8:30 AM

Paper No. 297

Randomized Trials Evaluating Treatments For Carpometacarpal (CMC) Arthritis Are Statistically Fragile: A Systematic Review

Niklas H. Koehne; Auston R. Locke; Christoph A. Schroen; Jamie Kator; Christian E. Awah; Michael R. Hausman

8:40 AM

Paper No. 298

In-vivo Upright Standing Glenohumeral Kinematic Measurements For Patients With Shoulder Osteoarthritis In Functional Arm Positions

Nazanin Daneshvarhashjin; Philippe Debeer; Michael Skipper Andersen; Filip Verhaegen; Lennart Schey



ANNUAL MEETING PROGRAM

8:50 AM

Paper No. 299

Risk Factors For New-Onset Depression Following Total Shoulder Arthroplasty

Wesley Day; Gwyneth Maloy; Rahul Jayaram; Rushabh Doshi; Xiuyi A. Yang; Jeremy K. Ansah-Twum;
Jonathan N. Grauer



ANNUAL MEETING PROGRAM

Tuesday, February 11, 2025

8:00 AM - 9:00 AM

Room #: West 301 BC

57 Cartilage Pain and Models

8:00 AM

Paper No. 300

Multi-model Evaluation Of The Impact Of CD14 On Synovial Inflammation And Pain During Ptoa

Kevin G. Burt; Natalie Adamczyk; Shingo Ishihara; Sanique South; Vu Nguyen; Robert Mauck; Timothy M. Griffin; Anne-Marie Malfait; Rachel Miller; Carla Scanzello

8:10 AM

Paper No. 301

Investigation Of The Molecular Mechanisms Regulating Early OA Pain Induced By Synovial Lining Fibroblasts

Surabhi Gautam; Sergio Ramirez-Perez; Rushi Vekariya; Hicham Drissi; Pallavi Bhattaram

8:20 AM

Paper No. 302

An Innervated Synovium-cartilage Chip For Modeling Knee Joint Inflammation And Associated Pain

Meagan J. Makarczyk; Matias Preissegger; Qi Gao; Bruce Bunnell; Stuart Goodman; Douglas Weber; Gold Michael; Hang Lin

8:30 AM

Paper No. 303

Sex-dependent Mechanisms Of Temporomandibular Joint Osteoarthritis

Dimitri Sokolowski; Aaron W. James; Cong-Qiu Chu; Robert J. Tower; Ginny Ching-Yun Hsu

8:40 AM

Paper No. 304

Intra-articular Delivery Of Human Ghrelin-mRNA Ameliorates Osteoarthritis Progression And Pain In Mouse PTOA

Anjali Mamidwar; Mahima Dewani; Miraj Rawal; Jingshu Liu; Elyse Blank; Nutanben Bhingaradiya; Nishkal Pisal; Christopher Jiang; Arpita Banerjee; Keren Chen; Judy Xia; Jingjing Gao; Nitin Joshi; Li Zeng

8:50 AM

Paper No. 305



ANNUAL MEETING PROGRAM

A Subset Of Non-peptidergic Nociceptive C-fibers, NP1, Expresses The Mas-related G-protein Coupled Receptor-d (mrgrp-d), And Is Essential For Weightbearing Pain In Experimental Osteoarthritis

Anne-Marie Malfait; Alia Obeidat; Shingo Ishihara; Natalie Adamczyk; Robin Vroman; Merissa Olmer; Martin Lotz; Richard J. Miller; Rachel Miller



ANNUAL MEETING PROGRAM

Tuesday, February 11, 2025

8:00 AM - 9:00 AM

Room #: West 301 D

58 Biomechanics and Fall Risk in Spine Patients

8:00 AM

Paper No. 306

Differences In Posterior Ligamentous Complex Biomechanics In Patients With Adult Spinal Deformity Undergoing Primary Versus Revision Spinal Fusion Surgery

Ryan Lebens; Pearce Haldeman; Camille Nosewicz; Robert K. Eastlack; Greg M. Mundis; Bahar Shahidi

8:10 AM

Paper No. 307

Improved Axial Stability Associated With Bilateral Compared To Unilateral Pedicle Screw Fixation In Transforaminal Lumbar Interbody Fusion (TLIF): An In-vitro Human Cadaveric Spondylolysis Model

Layla Dawit; Theodore Joaquin; Jonathan Day; Daina Brooks; Zan Naseer; Mesfin Lemma; Bryan W. Cunningham

8:20 AM

Paper No. 308

Transforming Spinal Fusion Surgery: A New Paradigm In The Biology Of Spinal Fusion

Duby Okonkwo; Rachel McKee; Takuya Oyaizu; Atsuyuki Kawabata; Stephanie Moore-Lotridge; Jonathan Schoenecker

8:30 AM

Paper No. 309

Perioperative Antidepressant Use Is Associated With Symptomatic Pseudarthrosis After Lumbar Fusion

Jonathan Dalton; Rajkishen Narayanan; Michael McCurdy; Chloe Herczeg; Alex Dawes; Justin Wright; Manuel Melendez; Marco Goldberg; Jose Canseco; Alan S. Hilibrand; Alexander Vaccaro; Gregory Schroeder; Christopher Kepler

8:40 AM

Paper No. 310

Sexual Differentiation In Pathomechanisms Of Sacroiliac Joint Dysfunction: Centers And Axes Of Rotation

Oluwatodimu R. Raji; Joshua Tandio; Sarah Mayer; Jeremi Leasure



ANNUAL MEETING PROGRAM

8:50 AM

Paper No. 311

Which Spine Patient Is At Greater Risk Of Falling? An Analysis Of The Effects Of Vision, Support Surface, And Patient Adaptation

Ram Haddas; Paul Rubery; Yair Barzilay; Ashley Lynn Rogerson; Varun Puvanesarajah; Andrew Megas



ANNUAL MEETING PROGRAM

Tuesday, February 11, 2025

8:00 AM - 9:00 AM

Room #: North 221

59 Tendon Disease and Treatment

8:00 AM

Paper No. 312

Development Of A Novel Classification System For Peroneal Tendon Disease Reveals Key Transcriptomic And Cellular Differences Across Disease Stages

Julia Matthias; Michael David; Sara Buckley; Daniel Ross; Nathaniel Zona; Joshua Metz; Daniel Moon; Courtney Grimsrud; Michael Zuscik; Kenneth Hunt

8:10 AM

Paper No. 313

Cellular Senescence And Macrophage Dysfunction In Connective Tissue Pathology

Penn Sagedahl; Ken Nishimura; Claire Desrochers; Sandra Passe; Peter C Amadio; Megan Weivoda; Anne Gingery

8:20 AM

Paper No. 314

Adiponectin As A Potential Target For The Treatment Of Tendinopathy

Pauline Po Yee Luj; Yuk Wa Lee

8:30 AM

Paper No. 315

Ca²⁺ Signaling Through Ca_v1.2 Ca²⁺ Channel Regulates Achilles Tendinopathy Development

Haiyin Li; David J. Ciuffo; Brendan Boyce; Chike Cao

8:40 AM

Paper No. 316

Immunophenotyping And Transcriptional Profiling Of A Clinically-relevant Tendon Injury Model Identifies Novel Anti-fibrosis Therapeutic Targets

Sushmitha Durgam; Alexis Sauer; Keeley Schwann; Garrett Hoffman

8:50 AM

Paper No. 317



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ANNUAL MEETING PROGRAM

Sensor-measured Achilles Tendon Load Is Associated With Plantarflexor Dynamic Function In Achilles Tendinopathy

Ke Song; Michelle P. Kwon; Andy K. Smith; Ryan T. Pohlig; Karin M Grävare Silbernagel; Josh R. Baxter



ANNUAL MEETING PROGRAM

Tuesday, February 11, 2025

8:00 AM - 9:00 AM

Room #: North 222

60 Structure, Function and Mechanics of the Shoulder

8:00 AM

Paper No. 318

Defining The Role Of Hif-2 In Muscle Fatty Infiltration After Rotator Cuff Tears Using Knockout Mice And Ai-generated Human Cell Knockout Model

Zachary Liu; Aboubacar Wague; Sankalp Sharma; Justin Lau; Alex Youn; Ashley Fang; Sanvi Sharma; Leila Hennessy; Brian Feeley; Xuhui Liu

8:10 AM

Paper No. 319

A Biomechanical Comparison Of Superior Capsular Reconstruction And Lower Trapezius Tendon Transfer For Massive Rotator Cuff Tears Using A Novel Shoulder Testing System

Nirav Mungalpara; Sunjung Kim; Kevin Chen; Ashish Shakya; Hayden Baker; Cody Lee; Aravind Athiviraham; Jason Koh; Bassem Elhassan; Nicholas Maassen; Farid Amirouche

8:20 AM

Paper No. 320

The Subacromial Fat Pad Is A Novel Source For Therapeutic Adipose Stromal Cells In The Shoulder

Dakota R. Kamm; Akash Shaji; Kathryn Bohnert; Jay D. Keener; Amit Pathak; Gretchen Meyer

8:30 AM

Paper No. 321

Glenoid Labrum Morphology In Young Adults: Regional Differences And Effects On Radius Of Curvature

Ryan J. Kelly; Clarissa LeVasseur; Jonathan Hughes; Albert Lin; William Anderst

8:40 AM

Paper No. 322

Magnetic Resonance Markers Of Rotator Cuff Muscle Microvascular Function And Energetics Following Rotator Cuff Tears

Kinyata J. Cooper; Sean Forbes; Glenn Walters; Scott Banks; Tyler LaMonica; Bryce Gambino; Kevin W. Farmer; Federico Pozzi



ANNUAL MEETING PROGRAM

8:50 AM

Paper No. 323

Identifying Different Debris Causing Inflammatory Response In Shoulder Arthroplasties

Songyun Liu; Leigh Kinsler; Julia Hochstatter; Jennifer Wright; Grant E. Garrigues; Deborah Hall; Robin Pourzal



ANNUAL MEETING PROGRAM

Tuesday, February 11, 2025

9:15 AM - 10:15 AM

Room #: West 301 A

61 Foot and Ankle - Impact of Bone Morphology and Reconstruction

9:15 AM

Paper No. 324

Statistical Density Analysis Of The Tibia And Talus And The Relation Between Them

Jordan Stolle; Christine Harper; Kristyn Voegelé; Ahmad R. Najafi; Sorin Siegler

9:25 AM

Paper No. 325

Impact Of Ankle Foot Orthosis Use On Standing Foot Morphology In Individuals With Charcot-marie-tooth Disease

Melissa R. Requist; Eliana D. Moreno; Brian Keller; Lauren Crowe; Jason Wilken; Bopha Chrea; Amy Lenz

9:35 AM

Paper No. 326

Charcot-Marie-Tooth Disease Vs Idiopathic: A Comparison Of Pes Cavovarus Using Known And Novel Measurements

Nolan Schonhorst; Eli Schmidt; Natalie Glass; Grayson Talaski; Andrew Behrens; Don Anderson; Bopha Chrea

9:45 AM

Paper No. 327

Optimal Tightrope Positioning For Adequate Syndesmotic Reduction And Stabilization In Simulated Ankle Fractures

Mark A. Goss; Alex T. Burton; Jonathan C. Kraus; Linda M. McGrady; Mei Wang

9:55 AM

Paper No. 328

Small Molecule Enhancement Of Bone Formation In A Rabbit Ankle Fusion Model

Amogh Magesh; Nicholas Huffman; Hanna Solomon; Caroline Dingler; Sreedhara Sangadala; Jay M. Patel; Jason Bariteau

10:05 AM

Paper No. 329



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ANNUAL MEETING PROGRAM

Serum Metal Levels Following Total Ankle Arthroplasty

William B. Cohen; Edward S. Hur; Laura Quigley; Anastasia K. Skipor; Johnny L. Lin; Simon Lee; Joshua J. Jacobs; Daniel D. Bohl



ANNUAL MEETING PROGRAM

Tuesday, February 11, 2025

9:15 AM - 10:15 AM

Room #: West 301 BC

62 Muscle Disease, Development and Aging

9:15 AM

Paper No. 330

The Role Of Satellite Cell-derived FGF21 In Skeletal Muscle In Duchenne Muscular Dystrophy

Hongshuai Li; Eric Sillaste; Silvana Velasquez-Marin; fang Guo; Ling Wang

9:25 AM

Paper No. 331

Ablation Of Tumor-derived Igfbp-3 Attenuates Tgf β -associated Muscle Catabolism In Two Independent Murine Models

Zachary Sechrist; Edward Schwarz; Calvin Cole

9:35 AM

Paper No. 332

Identification And In Vitro Characterization Of Adipogenesis Regulatory Cells In Human Skeletal Muscle

Severin Ruoss; Alis Balayan; Tiana Mack-Miller; Marie de Boutray; Andrew Wong; William T. Kent; Catherine M. Robertson; Adam J. Engler; Samuel R. Ward

9:45 AM

Paper No. 333

Skeletal 11 β -hydroxysteroid Dehydrogenase Type Contributes To Bone-muscle Crosstalk In Mice

Husam Eldin Bensreti; Dima Alhamad; Colby Gross; Caihong Dai; Alok Tripathi; C. Lucas Yearwood; Kanglun Yu; Eric Belin de Chantemele; Kate Kosmac; Wendy Bollag; Mark Hamrick; Carlos Isales; Meghan E. McGee Lawrence

9:55 AM

Paper No. 334

Blood Flow Restriction Therapy Upregulates Promyogenic Mitochondrial Transfer, Improves Shoulder Function And Reduces Pain After Rotator Cuff Injury

Nesa Milan; Aboubacar Wague; Alex Youn; Luke Sang; miguel Lizarraga; Cristhian Montenegro; Ryan Sadjadi; Brian Feeley; Xuhui Liu



ANNUAL MEETING PROGRAM

10:05 AM

Paper No. 335

Age Related Changes In Response To Volumetric Muscle Loss And Treatment

Dallas E. Altamirano; Carlos Villapudua; Shaquille Dias; Eszter Mihaly; Warren Grayson



ANNUAL MEETING PROGRAM

Tuesday, February 11, 2025

9:15 AM - 10:15 AM

Room #: West 301 D

63 Hip and Knee Arthroplasty - Kinematics and Clinical Outcomes

9:15 AM

Paper No. 336

A Fully Automated Pipeline For Medical Image Reconstruction, Surgical Planning And Simulation Of Post-operative Joint Function Following Revision Hip Arthroplasty Involving Acetabular Defects

Daniel Hopkins; Stuart Callary; L. Bogdan Solomon; Peter Lee; David Ackland

9:25 AM

Paper No. 337

Pre-operative Factors Associated With Falls Following Total Hip Replacement

Craig P. Hensley; Abel N. Kho; Andrew Kritselis; Jing Song; Jungwha Lee; Alison H. Chang

9:35 AM

Paper No. 338

Coronal Tilt Of The Tibial Component Of Kinematic- And Mechanical-alignment TKA During Stair Ascending

Takahiro Arakawa; Kenichi Kono; Tetsuya Tomita; Takaharu Yamazaki; Masashi Tamaki; Shoji Konda; Teruya Ishibashi; Ryota Yamagami; Kohei Kawaguchi; Tomofumi Kage; Ryo Murakami; Takashi Kobayashi; Tomoki Murakami; Hiroshi Inui; Shuji Taketomi; Sakae Tanaka

9:45 AM

Paper No. 339

Utilizing Wearable Devices To Track Recovery Rates Following Total Knee Arthroplasty

Jonathan M. Stern; Natalia Cruz-Ossa; Antonio Fernandez-Perez; Victor H. Hernandez; Richard Bolander

9:55 AM

Paper No. 340

Accounting For Peripheral Osteophytes During Pre-Resection Balancing A Total Knee Arthroplasty Helps To Mitigate The Risk Of Mid-Flexion Laxity

Matthew Blomquist; Joshua Roth

10:05 AM

Paper No. 341



ANNUAL MEETING PROGRAM

The Location Of Periprosthetic Femoral Fracture Corresponds To Areas Of High Strain: A Finite Element And Cadaveric Experimental Study

Ryan T. Helbock; Clarisse Zigan; Andrew Hughes; Joseph Lipman; Timothy M Wright; Peter Sculco; Elizabeth Gausden; Sony Manandhar; Jeff Bischoff; Fernando Quevedo Gonzalez



ANNUAL MEETING PROGRAM

Tuesday, February 11, 2025

9:15 AM - 10:15 AM

Room #: North 221

64 X-ray, PET, Raman, and Ultrasound Imaging

9:15 AM

Paper No. 342

Molecular Imaging Assessment Of Early Inflammation In Rheumatoid Arthritis

Maria Isabel Menendez Montes; Hannah Luehmann; Rajiu Venkatesan; Kristin Lenz; Luke Springer; Yongjian Liu; Christine Pham; Farshid Guilak

9:25 AM

Paper No. 343

Three-dimensional Evaluation Of Lower Extremity Alignment During Gait And Standing In Healthy Elderly Individuals: A Comparative Study Using Fluoroscopy And 3d To 2d Image Matching

TATSUYA SOENO; Ryota Katsumi; Otani Kazutaka; Koichi Kobayashi; Takashi Sato

9:35 AM

Paper No. 344

Reconstruction Of High-precision Lumbar Spine 3d Surface Model From Biplanar X-ray Images

Wanxin Yu; Cong Wang; Zhemin Zhu; Yan Yu; Tsung-Yuan Tsai

9:45 AM

Paper No. 345

Automatic Segmentation For Measuring Vastus Lateralis Muscle Quality And Size From B-mode Ultrasound

Arimitsu Horikawa-Strakovsky; McKenzie S. White; Maria N. Arenas Florez; Luke W. Jones; Brian Noehren; Yuan Wen

9:55 AM

Paper No. 346

Analysis Of Global Sagittal Alignment Parameters In Spinal Fusion Patients With Full-body Biplanar X-rays

Alexander Yu; Ryan Hoang; Mark Kurapatti; Kareem Mohamed; Yash Lahoti; Akiro Duey; Timothy Hoang; Albert Li; Justin Tiao; Jun Kim; Samuel K. Cho

10:05 AM



ANNUAL MEETING PROGRAM

Paper No. 347

In-vivo Raman Spectroscopy Can Assess Microfracture Neocartilage Formation And Maturation Longitudinally By Serial Optical “Biopsy” Measurements In The Equine Stifle Joint

Erik Ersland; Thomas Schaer; Madeline Boyes; Marina Santos; Li-Hsin Han; John T. Lawrence; Mark Grinstaff; Mads Bergholt; Brian Snyder; Michael Albro



ANNUAL MEETING PROGRAM

Tuesday, February 11, 2025

9:15 AM - 10:15 AM

Room #: North 222

65 Therapeutic Targets in Bone Healing and Osteoporosis

9:15 AM

Paper No. 348

Tau As A Low-affinity Glucocorticoid Receptor And A Novel Therapeutic Target For Mitigating Glucocorticoid-induced Osteoporosis

Wenyu Fu; Meng Chen; Kaidi Wang; Yujianan Chen; Yazhou Cui; Guiwu Huang; Chaopeng He; Jackie Fretz; Daniel Wiznia; Chuan-ju Liu

9:25 AM

Paper No. 349

Macrophages Secrete Thbs1 To Induce Col2a1-expressing Cells In The Early Phase Of Fracture Healing

Xinyi Ma; Ergang Wang; Puvindran Nadesan; Choiselle Marius; Puvindran Vijitha; Bridgette Furman; Xiaoxi Liu; Benjamin Alman

9:35 AM

Paper No. 350

Spatial Transcriptomics Reveal Distinct Gene Expression Patterns And Treatment Targets During Fracture Healing In (non)-union Models In Mice

Maria Schröder; Nico Giger; Jan Barcik; Lena Gens; Daniel Arens; Dominic Gehweiler; Peter Varga; Stephan Zeiter; Martin Stoddart; Esther Wehrle

9:45 AM

Paper No. 351

A Multi-omic Profiling Reveals Macrophage-driven Fibrosis In Delayed Healing Fractures

Matthew D. Patrick; Jiaying Liu; Jaimo Ahn; Kurt Hankenson; Peter L. Elkin; Ramkumar T. Annamalai

9:55 AM

Paper No. 352

Local Macrophage Modulatory Therapy Prevents Early Bone Resorption In A Pig Model Of Legg Calve Perthes Disease

Chi Ma; Francesco Boschetto; Zhuo Deng; Yinshi Ren; Vishal Gokani; Harry Kim

10:05 AM



ANNUAL MEETING PROGRAM

Paper No. 353

A Randomized, Double-blind, International Multicenter, Parallel-controlled Phase III Clinical Study To Evaluate Recombinant Anti-RANKL Human Monoclonal Antibody Injection (HLX14) Versus Denosumab Injection (Prolia®) In Postmenopausal Women With Osteoporosis At High Risk Of Fracture

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