9TH ANNUAL

VAIL SCIENTIFIC SUMMIT

ADVANCING HEALTHY AGING SCIENCE ON A GLOBAL SCALE

August 18-20, 2024

HYTHE, A LUXURY COLLECTION RESORT - VAIL, COLORADO

THE STEADMAN CLINIC AND STEADMAN PHILIPPON RESEARCH INSTITUTE

U.S. OLYMPIC & PARALYMPIC NATIONAL MEDICAL CENTER

WELCOME

Thank you for joining us for the 9th Annual Vail Scientific Summit hosted by Steadman Philippon Research Institute (SPRI). On behalf of the entire team at SPRI, it is our pleasure to extend you our warmest welcome to Vail. As we center our meeting on the latest regenerative and personalized medicine approaches; novel technologies and therapeutics; surgical and non-surgical interventions; and basic, clinical and translational science applications; we aim to inform our attendees about the state-of-the-art research that can keep people active and healthy.

At SPRI, we are committed to making a significant impact on local, national and international scientific and clinical communities, while enhancing patient care and clinical outcomes. That's why we've entitled this year's event, **Advancing Healthy Aging Science on a Global Scale.**

In our 9th edition of this conference, we've brought together some of the most distinguished speakers in a variety of fields of research within the scope of regenerative, healthy aging and personalized medicine, military medicine, neuromuscular and cancer therapeutics, nanotechnology, biomechanics and more. The program is designed to facilitate interactions between basic, clinical and translational science researchers and physicians in order to generate new collaborations that will accelerate bench-to-bedside translations, with the ultimate focus of enhancing patient care all over the world. Throughout this Summit, we aim to build on and inspire novel and cutting-edge research that will set the vision for the future of biologics, surgical & non-surgical interventions, diagnostics, therapeutics, technological innovations and translation to keep people active and healthy.

The Vail Scientific Summit would not be possible without the support from our generous family donors and corporate and industry sponsorships. Many inspiring individuals had a vision for this event and its ability to have an impact on enhancing people's lives through research, innovation, education and rapid clinical translation. Each year, we are amazed at how the Summit has grown and we are energized by the lineup of incredible speakers and presenters at this year's event.

Welcome to the 9th Annual Vail Scientific Summit!



Marc J. Philippon, MD
Chairman



Johnny Huard, PhD
Chief Scientific Officer

ABOUT US

STEADMAN PHILIPPON RESEARCH INSTITUTE www.sprivail.org

Steadman Philippon Research Institute (SPRI) is dedicated to keeping people of all ages physically active through orthopaedic research and education. With an enduring focus on applied clinical translation, SPRI is dedicated to discovering new therapies, treatments and cures that can be brought to patients in a clinical setting. We utilize the latest regenerative medicine techniques–basic science studies at the cellular level–to investigate the causes and effects of degenerative arthritis, techniques of musculoskeletal regeneration and healing processes. SPRI also utilizes state-of-the-art Biomotion and Robotics technologies, magnetic resonance imaging and over thirty years of patient outcomes data in its bench-to-bedside approach to research. The 501(c)(3) charitable organization is one of the most published organizations in sports medicine research and education.

THE STEADMAN CLINIC www.thesteadmanclinic.com

The Steadman Clinic is a world-renowned orthopaedic clinic with facilities located in Aspen, Basalt, Frisco, Edwards and Vail, Colorado. The clinic specializes in sports medicine including knee, hip, shoulder, elbow, hand, spine, foot and ankle injuries and joint replacement. Our experience and research have led to significant advances in the fields of orthopaedics and regenerative sports medicine. The Steadman Clinic treats patients from all walks of life, including recreational and professional athletes from all over the world.

FAMILY SPONSORS

MARY SUE & MIKE SHANNON

STEADMAN PHILIPPON RESEARCH INSTITUTE BOARD MEMBER, CO-FOUNDER AND LONGTIME SUPPORTER OF THE VAIL SCIENTIFIC SUMMIT



Mr. Shannon co-founded KSL Capital Partners, LLC in 2005 and co-founded its predecessor KSL Recreation Corporation in 1992, serving as its President and Chief Executive Officer.

Since 2005, KSL Capital Partners has raised over $7.4 billion in equity capital commitments and invests exclusively in travel and leisure businesses. Mr. Shannon co-founded and became Chief Executive Officer of KSL Resorts in 2004 following the sale of KSL Recreation. Prior to establishing KSL Recreation with Kohlberg Kravis Roberts, he served as President and CEO of Vail Associates, Inc. (owner of Vail and Beaver Creek Resorts) in Vail, Colorado, from 1986 to 1992.

Mr. Shannon currently serves on the Board of Trustees of Northwestern University, and as a Board Member of the University of Wisconsin Foundation, the Vail Valley Foundation, the United States Ski and Snowboard Team Foundation, the Eisenhower Medical Center, Steadman Philippon Research Institute and Vail Health Foundation. He also serves on the Mayo Clinic Global Advisory Council. Mr. Shannon is a member of the World Presidents' Organization.

FAMILY SPONSORS

THE BORGEN FAMILY

LONGTIME SUPPORTER OF VAIL SCIENTIFIC SUMMIT



Bjørn Erik and Kathy Borgen have made significant contributions to numerous educational, cultural, recreational and environmental programs here in the Vail Valley. Philanthropy and volunteerism are fundamental values that have been passed on to their children and grandchildren. Committed to family and touched by their own life experiences, they have quietly pursued their commitment to community.

The Borgens have long supported Steadman Philippon Research Institute. As a former research assistant at Harvard University and the University of Colorado, Kathy believes there is no better place to locate cutting-edge orthopaedic research than in an active community like Vail. For Bjørn, giving to education-based initiatives is a value cultivated during his childhood. Born in Norway, Bjørn emigrated to the United States with his family after World War II and credits his schooling with providing endless support and a roadmap for success. His commitment to education was solidified, and he eventually went on to earn an MBA from Harvard Business School and had a very successful career.

FAMILY SPONSORS

LINDA AND MITCH HART

KEYNOTE LECTURE: LINDSEY CRISWELL, MD, MPH, DSC , DIRECTOR OF NATIONAL INSTITUTE OF ARTHRITIS AND MUSCULOSKELETAL AND SKIN DISEASES (NIAMS), NATIONAL INSTITUTES OF HEALTH (NIH)



LINDA W. HART

Ms. Hart is Vice Chairman, President and CEO of Hart Group, Inc., a diversified group of companies. She is also Vice Chairman of CSIS, a Washington, D.C. nonpartisan public policy research institution. She has served in leadership positions on numerous corporate and charitable boards, including UTSW President's Advisory Board, Southwestern Medical Foundation's Board, the Board of Visitors for UTSW Hospitals & Clinics, Executive Boards of both SMU Schools of Law and Business, Hart Center for Engineering Leadership and SMU Hart Global Leaders Forum. She is the former Chairman of the NYSE Legal Advisory Board, has been a member of Duke University's Institute of Public Policy, is a member of the Dallas Symphony Association (former Chairman), and Dallas Opera Board. She is a graduate of the University of Pittsburgh and SMU School of Law and, for 25 years, was engaged in private practice as an attorney specializing in corporate finance matters. She served as outside consultant to the U.S. Securities and Exchange Commission and as a Visiting Professor at Stanford Law School.

FAMILY SPONSORS

LINDA AND MITCH HART

MILLEDGE A. "MITCH" HART, III

A graduate of the USNA, Mr. Hart—after service in the Marine Corps—began work at IBM. In 1962 he joined Ross Perot as one of the founders of EDS. He became President in 1970, a position he held until his retirement in 1977. Mr. Hart is one of the founders of The Home Depot, where he served on the board of directors and executive committee for more than 30 years. In 1983, Mr. Hart founded Hart Group, Inc., of which he remains Chairman. In 2017, Mr. Hart was awarded the USNA Distinguished Graduate Award, the highest honor the USNA awards to its graduates. Mr. Hart is Trustee Emeritus at both SMU and Duke University, where he started the Hart Leadership Program. He serves on various boards, including the SMU Hart Center for Engineering Leadership, SMU Hart Global Leaders Forum and Baylor Health Care System Foundation Board. Mr. Hart, together with Ms. Hart, founded the USNA Leadership Conference, an annual conference encompassing both military and civilian institutions.

FAMILY SPONSORS

SPRUANCE FOUNDATION II

SESSION 5: INNOVATIVE HEALTH & HEALTHY AGING



As a past resident of Vail, I love returning to this "gem" in the mountains. I first met Dr. Marc Philippon at the 3rd Annual Scientific Summit; he introduced me to Dr. Vinod Jaskula-Ranga, President of Hunterian Medicine, specializing in CRISPR gene editing technology. Having a daughter, Chelsea, with cystic fibrosis made this introduction very fortuitous. Thank you to Dr. Philippon and the team at SPRI!

FAMILY SPONSORS

DIERDRE AND RONNIE BAKER

SESSION 1: JOINT & MUSCULOSKELETAL REPAIR



After selling both of their companies in the Kansas City area and retiring to ski and play in the mountains, Dierdre and Ronnie Baker are now full-time residents in the Vail Valley. They have spent many years supporting several non-profit charities, both locally and nationally, and are committed to working with organizations that truly make a difference in the lives of people and animals. They feel honored and blessed to be able to help with Steadman Philippon Research Institute, having both benefited from the exceptional surgical skills, knowledge and cutting-edge research from the doctors within The Steadman Clinic. Special thanks go to Dr. Viola, Dr. Millett and Dr. Karli for their commitment to ensuring the Bakers 100% recoveries and helping them continue their very active lifestyles.

WELCOME ADDRESS



Johnny Huard, PhD
Steadman Philippon Research Institute



Marc J. Philippon, MD
The Steadman Clinic
Steadman Philippon Research Institute



Dan Drawbaugh
The Steadman Clinic
Steadman Philippon Research Institute

KEYNOTE SPECIAL ADDRESS



Lindsey A. Criswell, MD, MPH, DSc
National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS), National Institutes of Health (NIH)

Lindsey A. Criswell, MD, MPH, DSc, became director of the National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) in February 2021. Previously, she served as vice chancellor of research at the University of California, San Francisco (UCSF), as well as professor of rheumatology and professor of orofacial sciences. Her research focuses on the genetics and epidemiology of human autoimmune disease, particularly rheumatoid arthritis and systemic lupus erythematosus. She has mentored many students and junior faculty to independent research careers. Dr. Criswell earned a bachelor's degree in genetics and a master's degree in public health from the University of California, Berkeley; a D.Sc. in genetic epidemiology from the Netherlands Institute for Health Sciences, Rotterdam; and an M.D. from UCSF. Dr. Criswell is board certified in internal medicine and rheumatology.

FEATURED SPEAKERS



Cheryl Ackert-Bicknell, PhD
University of Colorado School of Medicine

Allelic Effects at the Cped1 *Locus Interact with Parathyroid Hormone to Impact Bone*



Dustin Anderson, MD
The Steadman Clinic & Steadman Philippon Research Institute

Data from the Fisetin Dosing Trial, Senescence and Associated Inflammatory Markers



Hani Awad, PhD
University of Rochester Medical Center

Raman Spectroscopy for Early Detection of Osteoporosis…Are we there yet?



Chelsea Bahney, PhD
University of California San Francisco

mRNA Therapeutic Modulation of Fracture Repair
Poster Session Co-Chair



Thomas Best, MD, PhD, FACSM
University of Miami

OA Molecular Phenotypes—Lost in Translation?



Constance Chu, MD
Stanford University

Inflammaging and Osteoarthritis



Calvin Cole, PhD
University of Rochester

The Role of Tumor-Specific IGFBP-3 in the Onset and Progression of Skeletal Muscle Wasting in a Murine Model of Pancreatic Cancer



Michael David, PhD
University of Colorado School of Medicine

Interpretable Machine Learning Approaches to Uncover the Biological Underpinnings of Orthopaedic Diseases

FEATURED SPEAKERS



Aaron Dingle, PhD
University of Wisconsin

PrC-210: Combating Life's Oxidative Stressors



Anthony Donato, PhD
University of Utah

The Secret Life of the Endothelium: Its Noncanonical Influence in Metabolic Function



Grant Dornan, MSc
Steadman Philippon Research Institute

Poster Session Co-Chair



Hicham Drissi, PhD
Emory University School of Medicine

Control of Intervertebral Disc Aging



Nicole Ehrhart, VMD
Colorado State University

The Timekeepers: Unveiling the Mysteries of Aging Through Comparative Research



Jennifer Elliott, PharmD
Duquesne University

Leveraging Integrative Health to Advance Health Equity



Thos Evans, MD
The Steadman Clinic & Steadman Philippon Research Institute

Exosome Theory and Applications



Denis Evseenko, MD, PhD
Keck Medicine of USC

Introducing a Phase 1-2a Clinical Trial for a Novel Small Molecule Candidate for Osteoarthritis of the Knee

FEATURED SPEAKERS



David Felson, MD, MPH
Boston University

Preventing Post-Traumatic Osteoarthritis: The PIKASO Trial



Lisa Ann Fortier, DVM, PhD
Cornell University

-6 And T Cell Effects on Chondroprotection in the Setting of Inflammation



Michael Gallizzi, MD, MS
The Steadman Clinic & Steadman Philippon Research Institute

Spinal Robotics Live



Ty Roy-Garland MD, FACS
Stays Medical Corporation

Platelet contractile force or 'Platelet Strength': a novel assessment of global platelet function



Chris Gignoux, PhD, MS
University of Colorado School of Medicine

Population Health Monitoring Across the Lifespan in Large Institutional Biobanks



Sonny Gill, MD
The Steadman Clinic & Steadman Philippon Research Institute

The Effect of Golf Shoe Design on Swing Biomechanics and Joint Loading



Alberto Gobbi, MD
O.A.S.I. BioResearch Foundation Onlus

Orthobiologics: Facts or Fiction?



Brian Goh, MD, PhD
Emory University

Activin Receptor Signaling in Bone Development and Regeneration

FEATURED SPEAKERS



Laurie Goodrich, DVM, PhD
Colorado State University

The Promise of Regenerating Osteochondral Defects with Cryopreserved Osteochondral Allografts

Poster Session Co-Chair



Anthony Griswold, PhD
University of Miami

Osteoarthritis Endophenotyping Using Deep Learning Models



Patricia Hardenbergh, MD
Shaw Cancer Center,
Vail Health

Can We Prevent Fibrosis from Cancer Treatment; Building on Sports Medicine Experience



Joshua Hare, MD, FACC, FAHA
University of Miami

Current State-of-the-Art Cell-Based Therapy for Aging Frailty and Neurocognitive Disorders



Francis Hornicek, Jr., MD, PhD
University of Miami

Frontiers of Osteosarcoma



Johnny Huard, PhD
Steadman Philippon
Research Institute

Debate: Regenerative Medicine Will Delay/Prevent Joint Replacement



Mohit Kapoor, PhD
University of Toronto

Omics and Osteoarthritis



David Karasik, PhD
University of Colorado
School of Medicine

Animal Modeling of the MSK Pleiotropy

FEATURED SPEAKERS



Herb Kasler, PhD
Buck Institute for
Research on Aging

New Insights From Deep Immunophenotyping of Human Synovial Fluid in Knee Injury



Raymond Kim, MD
The Steadman Clinic &
Steadman Philippon
Research Institute

Debate: Regenerative Medicine Will Delay/Prevent Joint Replacement



James Kirkland, MD, PhD
Cedars-Sinai Hospital,
Los Angeles

Gerotherapeutics: Translation From Bench to Bedside



Dimitrious Kouroupis, PhD
University of Miami

Modification of Mesenchymal Stem/Stromal Cell-Derived Extracellular Vesicles Cargo: Potential Implications for Inflammation and Pain Reversal



Brendan Lee, MD, PhD
Baylor College of Medicine

High-Capacity Adenoviral Gene Transfer to the Joint



Joshua Li, MD, PhD
University of Virginia

Intervertebral Disc-on-a-ChipMF: A New Model for Mouse Disc Culture



Wan-Ju Li, PhD
University of Wisconsin

Mesenchymal Stem Cell Rejuvenation for Enhanced Cell Therapy Potential



Rick Lieber, PhD
Shirley Ryan AbilityLab

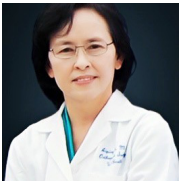
Intraoperative and Laboratory Studies of Human Muscle in Children with Cerebral Palsy

FEATURED SPEAKERS



Jeffrey Lotz, PhD
University of California San Francisco

NIH/HEAL Back Pain Consortium Research



Aiping Lu, MD
Steadman Philippon Research Institute

Muscle-Specific ERRγ Activation Mitigates Muscle Atrophy After ACL Injury and Promotes the Muscle Regeneration in Aged Mice



Bert Mandelbaum, MD
Cedars-Sinai Kerlan-Jobe Institute

Precision and Personalized Orthobiologics in the Athlete to Impact PlaySpan



Mark Markel, DVM, PhD
University of Wisconsin

Session Chair



Andrew Martin, DO
Duquesne University College of Osteopathic Medicine

The Role of Continuous Glucose Monitoring in Longevity Medicine



Wayne McIlwraith, BVSc (DVM), PhD, DSc
Colorado State University

Debate Co-Chair



Peter Millett, MD, MSc
The Steadman Clinic & Steadman Philippon Research Institute

Optimizing Healing in Rotator Cuff Surgery



Tom Minas, MD
Paley Orthopedic & Spine Institute

ACI: Its Role in Joint Preservation

FEATURED SPEAKERS



LCDR R. Geirid Morgan, PhD, MSC, USN
U.S. Navy Warfighter Performance

Military Medicine, Orthopaedic Surgery and Musculoskeletal Research Round Table



William Murphy, PhD
University of Wisconsin

Therapeutic mRNA Delivery for Musculoskeletal Regeneration



Naoki Nakayama, PhD
Steadman Philippon Research Institute

Chondrogenic Stem/Progenitor Cell Engineering for Improved Cartilage Repair



Ali Noorzad, MD
The Steadman Clinic & Steadman Philippon Research Institute

Revision Hip Arthroscopy: Assessing Prevalence of Psychiatric Disease by DSM Criteria



Marc Philippon, MD
The Steadman Clinic & Steadman Philippon Research Institute

Evidence-Based Medicine: How Research Contributes to Better Outcomes for the Patient

Debate Co-Chair



Samuel Poore, MD, PhD
University of Wisconsin

Regenerative Medicine Approaches to Augment Bone Healing



Matthew Provencher, MD, MBA, CAPT MC USNR (Ret.)
The Steadman Clinic & Steadman Philippon Research Institute

Military Medicine and Orthopaedic Surgery



Charles Raison, MD
University of Wisconsin and Director of Behavioral Health Innovation Center, Vail Health

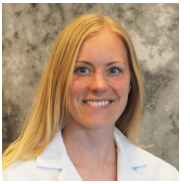
Biological Effects of Psychedelics Relevant to Wellbeing and Healthy Aging

FEATURED SPEAKERS



Michael Rizzo, MD
University of Miami

Predicting Patient Outcomes in Hip Arthroscopy Using AI Image Recognition



Kelly Santangelo, DVM, PhD
Colorado State University

Intra-Articular Equine Articular Chondroprogenitors (ACPs) Outperform Mesenchymal Stromal Cells (MSCs) for Disease Modification in a Mouse Model of Osteoarthritis



Richard Santore, MD
University of California, San Diego

Re-engineering the Hip Joint to Improve Function and Relieve Pain



Daniel Saris, MD, PhD
Mayo Clinic

Cell to Cell Communication for Improved Clinical Outcomes in Joint Repair



Slim Sassi, PhD
Harvard University

Novel Insights Into Brachyury Signaling and Therapeutic Strategies for Chordoma



Edward Schwarz, PhD
University of Rochester Medical Center

The Emerging Role of Telocytes in the Synovial Lymphatic System: Implications for Tissue Repair and Regeneration



Shane Shapiro, MD
Mayo Clinic

The Biologic Association 2024 Update



Jie Shen, PhD
Washington University in St. Louis

Inflammation and Fracture Nonunion

FEATURED SPEAKERS



Ashok Shetty, PhD
Texas A&M University

Psilocybin Improves Cognitive Function in a Model of Alzheimer's Disease



Colin Smith, PhD
Steadman Philippon Research Institute

Can Simulated Modifications to Surgical Technique or Rehabilitation Restore Knee Function After Anterior Cruciate Ligament (ACL) Reconstruction?



Evan Snyder, MD, PhD
Sanford Burnham Prebys

Viewing Aging-Related Cognitive Disorders, Like Alzheimer's Disease, as Neural "Network Opathies" That Are Druggable—a Stem Cell Approach



CDR Christopher Steele, PhD
US Navy Bureau of Medicine and Surgery

Military Medicine, Orthopaedic Surgery & Musculoskeletal Research Round Table



Martin Stoddart, PhD, FRSB, FIOR
AO Research Institute, Switzerland

The Role of Donor Variation and Mechanics on MSC Chondrogenesis



Sam Stupp, PhD
Northwestern University

The Transition of Regenerative Biomaterials from Devices to Drugs



Scott Tashman, PhD
Steadman Philippon Research Institute

Functional and Imaging Outcomes of a Randomized Clinical Trial Evaluating Fisetin for Treating Knee Osteoarthritis



William Wagner, PhD
University of Pittsburgh Medical Center

Designing a Biohybrid, Cellularized Construct to Generate an Innervated, Vascularized Muscle Flap In Situ

FEATURED SPEAKERS



Mei Wan, PhD
Johns Hopkins University

Senescence of Bone Marrow Adipocytes: A New Target for Glucocorticoid-Induced Bone Loss



Chengbiao Wu, PhD
University of California San Diego

Exploring a Novel Approach to NGF-Based Therapy



Manja Zec, PhD, MSc
University of Colorado School of Medicine

Sphingolipid Metabolism Marks Pathological Muscle Weight Loss in a Genetically Inducible Animal Model of Frailty



Michael Zuscik, PhD
University of Colorado School of Medicine

Teriparatide as a Chondroregenerative Treatment for Early Stage Human Osteoarthritis

9TH ANNUAL

VAIL SCIENTIFIC SUMMIT

SCHEDULE OF EVENTS

SUNDAY, AUGUST 18, 2024

WELCOME TO THE 9TH ANNUAL VAIL SCIENTIFIC SUMMIT AND KEYNOTE LECTURE

Sponsored by Linda and Mitch Hart

4:00 – 7:00 PM	Registration
6:00 – 7:00 PM	Welcome Reception
7:00 – 8:00 PM	Welcome Dinner
8:00 – 8:10 PM	Welcome Address: Marc Philippon, MD, Johnny Huard, PhD, Dan Drawbaugh
8:15 – 8:45 PM	**Keynote Lecture: Lindsey Criswell, MD, MPH, DSc, Director of the National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS), National Institutes of Health (NIH)**
8:45 – 9:00 PM	Q&A and Group Photo

MONDAY, AUGUST 19, 2024

7:00 – 8:00 AM	Breakfast
8:00 – 8:35 AM	**Keynote Speaker: Sam Stupp, PhD, Northwestern University**
8:35 – 8:40 AM	Q&A

SESSION 1: JOINT & MUSCULOSKELETAL REPAIR

Sponsored by Dierdre and Ronnie Baker

Session Chairs: Marc Philippon, MD and Peter Millett, MD, MSc

8:40 – 8:55 AM	**Spotlight Speaker:** Marc Philippon, MD, The Steadman Clinic & Steadman Philippon Research Institute
8:55 – 9:05 AM	Richard Santore, MD, University of California San Diego
9:05 – 9:15 AM	Thomas Best, MD, PhD, FACSM, University of Miami
9:15 – 9:25 AM	Peter Millett, MD, MSc, The Steadman Clinic & Steadman Philippon Research Institute
9:25 – 9:35 AM	Tom Minas, MD, Paley Orthopedic & Spine Institute
9:35 – 9:45 AM	Q&A

SESSION 2: STEM CELLS, EXOSOMES & BIOENGINEERING

Session Chairs: Joshua Hare, MD, FACC, FAHA and Constance Chu, MD

9:45 – 10:00 AM	**Spotlight Speaker:** Joshua Hare, MD, FACC, FAHA, University of Miami
10:00 – 10:10 AM	Wan-Ju Li, PhD, University of Wisconsin
10:10 – 10:20 AM	Dimitrios Kouroupis, PhD, University of Miami
10:20 – 10:30 AM	Thos Evans, MD, The Steadman Clinic & Steadman Philippon Research Institute
10:30 – 10:40 AM	William Wagner, PhD, University of Pittsburgh Medical Center
10:40 – 10:50 AM	Denis Evseenko, MD, PhD, Keck Medicine of USC
10:50 – 11:00 AM	Q&A
11:00 – 11:05 AM	Break

MONDAY, AUGUST 19, 2024 (CONT.)

SESSION 3: AGE-RELATED TISSUE DEGENERATION & REPAIR

Session Chairs: Chelsea Bahney, PhD and Martin Stoddart, PhD

11:05 – 11:20 AM	**Spotlight Speaker:** Martin Stoddart, PhD, FRSB, FIOR, AO Research Institute, Switzerland
11:20 – 11:30 AM	Jie Shen, PhD, Washington University in St. Louis
11:30 – 11:40 AM	Constance Chu, MD, Stanford University
11:40 – 11:50 AM	Mei Wan, PhD, Johns Hopkins University
11:50 – 12:00 PM	Brendan Lee, MD, PhD, Baylor College of Medicine
12:00 – 12:10 PM	Q&A
12:10 – 1:30 PM	Lunch & Networking

SESSION 4: REGENERATIVE MEDICINE FOR MUSCULOSKELETAL DISEASES & CONDITIONS

Session Chairs: Edward Schwarz, PhD and Hicham Drissi, PhD

1:35 – 1:50 PM	**Spotlight Speaker:** Edward Schwartz, University of Rochester Medical Center
1:50 – 2:00 PM	Hicham Drissi, PhD, Emory University School of Medicine
2:00 – 2:10 PM	Kelly Santangelo, DVM, PhD, Colorado State University
2:10 – 2:20 PM	Chelsea Bahney, PhD, University of California San Francisco
2:20 – 2:30 PM	Laurie Goodrich, DVM, PhD, Colorado State University
2:30 – 2:40 PM	Q&A

SESSION 5: INNOVATIVE HEALTH & HEALTHY AGING

Sponsored by Spruance Foundation II

Session Chairs: Johnny Huard, PhD and James Kirkland, MD, PhD

2:40 – 2:55 PM	**Spotlight Speaker:** Anthony Donato, PhD, University of Utah
2:55 – 3:05 PM	Herb Kasler, PhD, Buck Institute for Research on Aging

MONDAY, AUGUST 19, 2024 (CONT.)

3:05 – 3:15 PM	Anthony Griswold, PhD, University of Miami
3:15 – 3:25 PM	Michael David, PhD, University of Colorado School of Medicine
3:25 – 3:35 PM	Chris Gignoux, PhD, MS, University of Colorado School of Medicine
3:35 – 3:45 PM	Nicole Ehrhart, VMD, Colorado State University
3:45 – 3:55 PM	Jennifer Elliott, PharmD, Duquesne University
3:55 – 4:05 PM	Q&A

SESSION 6: MILITARY MEDICINE, ORTHOPAEDIC SURGERY & MUSCULOSKELETAL RESEARCH ROUND TABLE

Session Chairs: Matthew Provencher, MD, MBA, CAPT MC USNR (Ret.), LCDR R. Geirid Morgan, PhD, MSC, USN and CDR Christopher Steele, PhD

4:05 – 4:15 PM	Matthew Provencher, MD, MBA, CAPT MC USNR (Ret.), The Steadman Clinic & Steadman Philippon Research Institute
4:15 – 4:20 PM	Michael Rizzo, MD, University of Miami
4:20 – 4:25 PM	Ali Noorzad, MD, The Steadman Clinic
Moderator:	Matthew Provencher, MD, MBA, CAPT, MC, USNR (Ret.)
4:25 – 4:45 PM	**Panel Discussion** Panelists: CDR Christopher Steele, PhD, US Navy Bureau of Medicine and Surgery and LCDR R. Geirid Morgan, PhD, MSC, USN, U.S. Navy Warfighter Performance
4:45 – 4:55 PM	Q&A
4:55 – 5:00 PM	Break

DEBATE: REGENERATIVE MEDICINE WILL DELAY/ PREVENT JOINT REPLACEMENT

Debate Chairs: Marc Philippon, MD and C. Wayne McIlwraith, BVSc (DVM), PhD, DSc

5:00 – 5:15 PM	Raymond Kim, MD: Against the Motion
5:15 – 5:30 PM	Johnny Huard, PhD: For the Motion
5:30 – 5:45 PM	Q&A

POSTER SESSION

Chairs: Chelsea Bahney, PhD, Laurie Goodrich, DVM, PhD and Grant Dornan, MSc

5:45 – 7:00 PM	Poster Session & Reception

TUESDAY, AUGUST 20, 2024

7:00 – 8:00 AM	Breakfast
8:05 – 8:40 AM	**Keynote Speaker: James Kirkland, MD, PhD, Cedars-Sinai Hospital, Los Angeles**
8:40 – 8:45 AM	Q&A

SESSION 7: REGENERATIVE MEDICINE APPROACHES FOR BONE & CARTILAGE

Session Chairs: Michael Zuscik, PhD and Mohit Kapoor, PhD

8:50 – 9:05 AM	**Spotlight Speaker: Michael Zuscik, PhD, University of Colorado School of Medicine**
9:05 – 9:15 AM	Mohit Kapoor, PhD, University of Toronto
9:15 – 9:25 AM	Samuel Poore, MD, PhD, University of Wisconsin
9:25 – 9:35 AM	Cheryl Ackert-Bicknell, PhD, University of Colorado School of Medicine
9:35 – 9:45 AM	Chengbiao Wu, PhD, University of California San Diego
9:45 – 9:55 AM	Q&A

SESSION 8: NOVEL TECHNOLOGIES, BIOMEDICAL ENGINEERING & OSTEOARTHRITIS TREATMENTS

Session Chairs: Scott Tashman, PhD and William Murphy, PhD

9:55 – 10:10 AM	**Spotlight Speaker: William Murphy, PhD, University of Wisconsin**
10:10 – 10:20 AM	Scott Tashman, PhD, Steadman Philippon Research Institute
10:20 – 10:30 AM	Andrew Martin, DO, Duquesne University College of Osteopathic Medicine
10:30 – 10:40 AM	Colin Smith, PhD, Steadman Philippon Research Institute
10:40 – 10:50 AM	Naoki Nakayama, PhD, Steadman Philippon Research Institute
10:50 – 11:00 AM	David Felson, MD, MPH, Boston University
11:00 – 11:10 AM	Q&A
11:10 – 11:15 AM	Break

TUESDAY, AUGUST 20, 2024 (CONT.)

SESSION 9: INTERVENTIONAL STRATEGIES FOR AGING RELATED DISEASES: NEURODEGENERATION & CANCER

Session Chairs: Charles Raison, MD and Francis Hornicek Jr., MD, PhD

11:15 – 11:30 AM	**Spotlight Speaker 1:** Charles Raison, MD, University of Wisconsin and Director of Behavioral Health Innovation Center, Vail Health
11:30 – 11:40 AM	Ashok Shetty, PhD, Texas A&M University
11:40 – 11:50 AM	Evan Snyder, MD, PhD, Sanford Burnham Prebys
11:50 – 12:05 PM	**Spotlight Speaker 2:** Francis Hornicek, Jr., MD, PhD University of Miami
12:05 – 12:15 PM	Patricia Hardenbergh, MD, Shaw Cancer Center, Vail Health
12:15 – 12:25 PM	Slim Sassi, PhD, Harvard University
12:25 – 12:35 PM	Aaron Dingle, PhD, University of Wisconsin
12:35 – 12:45 AM	Q&A
12:45 – 1:45 PM	Lunch & Networking

SESSION 10: MUSCULOSKELETAL REPAIR, ORTHOBIOLOGICS & PAIN MANAGEMENT

Session Chairs: Alberto Gobbi, MD and Bert Mandelbaum, MD

1:50 – 2:05 PM	**Spotlight Speaker:** Alberto Gobbi, MD, O.A.S.I. BioResearch Foundation Onlus
2:05 – 2:15 PM	Daniel Saris, MD, PhD, Mayo Clinic
2:15 – 2:25 PM	Lisa Fortier, DVM, PhD, Cornell University
2:25 – 2:35 PM	Shane Shapiro, MD, Mayo Clinic
2:35 – 2:45 PM	Bert Mandelbaum, MD, Cedars-Sinai Kerlan-Jobe Institute
2:45 – 2:55 PM	Dustin Anderson, MD, The Steadman Clinic & Steadman Philippon Research Institute
2:55 – 3:05 PM	Q&A

TUESDAY, AUGUST 20, 2024 (CONT.)

SESSION 11: ORTHOBIOLOGICS, ROBOTIC SURGERY & SPINE RESEARCH

Session Chairs: Mark Markel, DVM, PhD and Sonny Gill, MD

3:05 – 3:20 PM	**Spotlight Speaker: Hani Awad, PhD, University of Rochester Medical Center**
3:20 – 3:30 PM	Brian Goh, MD, PhD, Emory University
3:30 – 3:40 PM	Jeffrey Lotz, PhD, University of California San Francisco
3:40 – 3:50 PM	Sonny Gill, MD, The Steadman Clinic & Steadman Philippon Research Institute
3:50 – 4:00 PM	Josh Li, MD, PhD, University of Virginia
4:00 – 4:10 PM	Ty Roy-Garland, MD, FACS, Stasys Medical Corporation
4:10 – 4:25 PM	Michael Gallizzi, MD, MS, The Steadman Clinic & Steadman Philippon Research Institute *Virtual Broadcast from the Operating Room*
4:25 – 4:35 PM	Q&A

SESSION 12: SKELETAL MUSCLE TISSUE ENGINEERING

Session Chairs: Rick Lieber, PhD and Johnny Huard, PhD

4:35 – 4:50 PM	**Spotlight Speaker: Rick Lieber, PhD, Shirley Ryan AbilityLab**
4:50 – 5:00 PM	Calvin Cole, PhD, University of Rochester
5:00 – 5:10 PM	Aiping Lu, MD, Steadman Philippon Research Institute
5:10 – 5:20 PM	David Karasik, PhD, University of Colorado School of Medicine
5:20 – 5:30 PM	Manja Zec, PhD, MSc, University of Colorado School of Medicine
5:30 – 5:40 PM	Q&A
5:45 – 8:00 PM	**Closing Reception**
8:00 PM	**Summit Adjourns**

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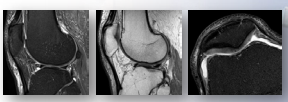


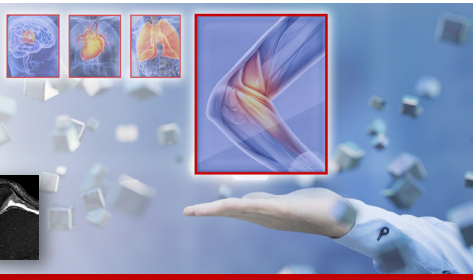
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