



AUGUST  
23-26  
2017

THIRD ANNUAL

# VAIL SCIENTIFIC SUMMIT

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Engaging the Greatest Minds in  
Regenerative Medicine and Science

# Welcome

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On behalf of the organizing committee, it is our pleasure to extend a warm welcome to you as we celebrate hosting our third Vail Scientific Summit: Engaging the Greatest Minds in Regenerative Medicine and Science. Many of you have traveled long distances and it serves to remind us just how important our work is, and even more importantly, to share it with our colleagues and those primary voices in the scientific and clinical communities.

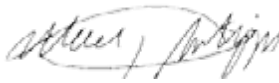
The goal of our program is to enlighten and inform those in attendance about our vision for the future of regenerative medicine. We have the most distinguished speakers in a variety of fields within the scope of regenerative medicine. With programs such as this, we will optimize and improve the communications between basic and clinical research, in order to bring the science from bench to bedside.

We would like to take this opportunity to thank the organizing committee for their support and guidance. In addition, we would like to thank you all for taking the time to be here to support the Vail Scientific Summit.

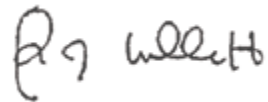
This event would not be possible without the backing of our host Steadman Philippon Research Institute for their continued support of this effort. Many inspirational people had a vision for this event and we are working to continue the momentum started two years ago at our inaugural Summit. We are delighted that you will be joining us in our collaborative efforts in sharing SCIENCE.



**Johnny Huard, PhD**  
VSS Chairman



**Marc J. Philippon, MD**  
VSS Co-Chairman



**Peter J. Millett, MD, MSc**  
VSS Co-Chairman

# Organizing Committee

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**Dr. Johnny Huard**

Steadman Philippon Research Institute  
University of Texas Health Science Center at Houston  
Chair - Organizing Committee



**Dr. Marc Philippon**

The Steadman Clinic  
Steadman Philippon Research Institute  
Co-Chair - Organizing Committee



**Dr. Peter Millett**

The Steadman Clinic  
Co-Chair - Organizing Committee

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**Dr. Christopher Evans**

Mayo Clinic



**Dr. Walter Lowe**

University of Texas Health  
Science Center at Houston



**Dr. William Murphy**

University of Wisconsin



**Dr. Samuel Stupp**

Northwestern University

# *Family Sponsorships*

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## *Ronnie and Dierdre Baker*

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Dierdre and Ronnie Baker are full time residents in the Vail Valley after selling both their companies in the Kansas City area and retiring to ski and play in the mountains. They have spent the years supporting many 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 the Steadman Philippon Research Institute, having both benefitted from the exceptional surgical skills, knowledge and cutting edge research from the doctors within the Steadman group. Special thanks go to Dr. Viola, Dr. Millett and Dr. Karli for their commitment to ensuring us 100% recoveries and allowing us to be able to continue our very active lifestyles.

# *Family Sponsorships*

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## *Linda and Mitch Hart*

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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 both SMU Schools of Law and Business, Hart Center for Engineering Leadership and SMU Hart Global Leaders Forum. She is former Chairman of the NYSE Legal Advisory Board, has been of 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.

MILLEDDGE 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 Sponsorships*

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## *Shu-Tung & Alice Li Foundation*

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FOUNDER, CHIEF SCIENTIFIC OFFICER AND A BOARD MEMBER

Dr. Li founded Collagen Matrix in 1997. He has over 40 years of experience in connective tissue research and collagen- and mineral-based implant development, which includes 10 years of basic science research experience at the University

of Connecticut Health Center related to the structure and function of collagen fibrils in mineralized and non-mineralized tissues and over 30 years of experience in collagen-based and mineral-based implants development in the medical and dental industry.

He was awarded 11 NIH grants (SBIR and R01) from 1997-2003—totaling \$8 million. He has authored over 100 publications in basic and applied sciences in collagen- and mineral-based materials. He has been awarded 35 U.S. patents, and in 2012 was inducted into the New Jersey Inventors Hall of Fame.

Dr. Li was the President and CEO of Collagen Matrix from 1997–September, 2015. During this period he was awarded Executive of the Year in 2009 by NJBIZ and CEO of the Year-Private Company by the New Jersey Technology Council in 2014. Prior to founding Collagen Matrix, he was the Co-Founder, Executive Vice President of Research and Development and a Board Member at ReGen Biologics, Inc., an orthopaedic company specializing in the development of meniscus repair devices. He was awarded the German-Austrian-Swiss Society for Orthopaedic-Traumatology Sports Medicine (GOTS) Biersdorf Research Award for the Collagen Meniscus Implant in 2000. In April of 2016 Dr. Li was inducted to the American Institute for Medical and Biological Engineering (AIMBE) College of Fellows. In June of 2016 he was selected as a finalist for the New Jersey EY Entrepreneur Of The Year.

In his career, Dr. Li also held management positions at Colla-Tec/Integra Lifesciences and Meadox Medicals/Boston Scientific. He received his Ph.D. in Physical Chemistry from the University of Connecticut.

# *Family Sponsorships*

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## *Monica and Daniel Porter*

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Our family is thrilled to attend this world-class summit. We are proud to support the research community assembled by our friends in the Vail Valley. These are the efforts and breakthroughs which will shape the future of medicine.

# *Family Sponsorships*

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## *Steven and Mary Read*

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Read attended boarding school in Switzerland during 1958-64. After skiing for the University of Utah in 1965-67, he attended the University of San Francisco, and in 1970 received his undergraduate degrees in International Finance and French. He served in the Special Forces for the United States Army from 1970-1974.

### Business:

Co-Founder and Co-CEO of Grocery Outlet -260 store chain in eight western states, 3rd generation business, and currently on the Board of Directors.

Owner/Partner of Read Investments. A Real Estate Development Company and Family Office in Berkeley.

Read is a current member of the Board of Directors of the Steadman Philippon Research Institute (Vail, CO), UCSF Board of Overseers, USSA Ski Team, and the United States Olympic Committee. He is a past Trustee of the Fine Arts Museums of San Francisco, Oakland Museum of California, San Francisco Opera, Duke University, University of San Francisco, Head-Royce School (Oakland, CA), and YPO Nor-Cal Chapter Chair.

Read is a member of the Bohemian Club (San Francisco, CA), Pacific Union Club (San Francisco, CA), Claremont Country Club (Oakland, CA), and the Orinda Country Club (Orinda, CA).

Read skies, races cars, golfs, fly fishes and bikes.

Read's family is 5th generation Northern Californian and resides in Lafayette, Ca. He is married and has three children and eight grandchildren.



# *Family Sponsorships*

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## *Mary Sue and Mike Shannon*

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CHAIRMAN - KSL CAPITAL  
PARTNERS, LLC

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 is the recipient of the 2016 Horatio Alger Award of Distinguished Americans, the University of Wisconsin's Distinguished Alumni Award and Northwestern University's Kellogg Schaffner Award. In February of 2017 Mike and Mary Sue Shannon were named the Vail Valley Foundation's Citizens of the Year.

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 and the Steadman Philippon Research Institute and as the Chairman of the Board of Vail Health Services. He also serves on the Mayo Clinic Global Advisory Council. He is a past Director of Safeway, Inc., ING Direct, Conseco, Inc., TCA Cable TV, Inc., Startek, Inc., ING Americas Holdings and ClubCorp Holdings, Inc. Mr. Shannon is a member of the World Presidents' Organization.

# Keynote Speakers

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*Dr. Gang Bao*



**Foyt Family Chair Professor, Department of Bioengineering  
CPRIT Senior Scholar  
Director of Nanomedicine Center for Nucleoprotein Machines  
Rice University**

*Dr. Giuseppe Colasurdo*



**President and Alkek-Williams Distinguished Chair,  
The University of Texas Health Science Center at Houston**

*Dr. Holger Eltzschig*



**John P. and Kathrine G. McGovern Distinguished Chair  
Professor and Tenure  
Chairman ad Interim Professor  
Associate Vice President for Translational Medicine  
Director, Center for Perioperative Medicine  
Department of Anesthesiology  
McGovern Medical School  
The University of Texas Health Science Center at Houston**

*Dr. James Kirkland*



**Director of the Robert and Arlene Kogod Center on Aging,  
Mayo Clinic  
Noaber Foundation Professor of Aging Research**

*Dr. Paul Robbins*



**Professor and Director, TSRI Center on Aging, Department of  
Molecular Medicine, The Scripps Research Institute - Florida**

# Welcome Address

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## *Dr. Johnny Huard*



**Chief Scientific Officer (CSO), Director, Center for Regenerative Sports Medicine, Steadman Philippon Research Institute, Vail, Colorado**  
**Distinguished Professor and Vice Chair for Research Department of Orthopaedic Surgery, McGovern Medical School; University of Texas Health Science Center at Houston**  
**Director, Center for Tissue Engineering and Aging Research at the Institute for Molecular Medicine, Houston, Texas**

## *Dr. Marc Philippon*



**Managing Partner, The Steadman Clinic, Vail, Colorado**  
**Co-Chairman, Director of Sports Medicine Fellowship and Director of Hip Research, Steadman Philippon Research Institute, Vail, Colorado**  
**Adjunct Associate Professor of Orthopaedic Surgery, Department of Orthopaedic Surgery, University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania**

## *Dr. Peter Millett*



**Partner at The Steadman Clinic, Vail, Colorado**  
**Director Shoulder Surgery at The Steadman Clinic, Vail, Colorado**  
**Co-Chair Vail Scientific Summit, Vail, Colorado**  
**Board Member Steadman Philippon Research Institute, Vail, Colorado**  
**Research Advisory Committee Member Steadman Philippon Research Institute, Vail, Colorado**  
**Medical Director Ski Snowboard Club Vail, Vail, Colorado**  
**Honorary Member of the German Society Shoulder and Elbow Surgery**

# Speakers

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**Dr. Matt Allen**

**University of Cambridge**

*Tissue Engineering of the Periosteum*



**Dr. Tamara Alliston**

**UCSF**

*Multiscale Mechanobiology of TGF-beta Signaling in the Skeleton*



**Dr. Hani Awad**

**University of Rochester**

*Exploration of the transcriptomics of tendon healing towards regenerative repair*



**Dr. Chelsea Bahney**

**UCSF**

*The Brain behind Bone Healing: Neuronal Influences on Fracture Repair*



**Dr. John Cooke**

**Houston Methodist Research Institute**

*The Major Cause of Age-Related Morbidity and Mortality, and its Reversal*



**Dr. Donald Corenman**

**The Steadman Clinic**

*Lumbar Spine Fusion Rates Influenced by Bone Morphogenic Protein-2*



# Speakers

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## Dr. Elizabeth Cosgriff-Hernandez

**University of Texas at Austin**

*Advancing Biomaterial Design in Tissue Engineering*



## Dr. Radbod Darabi

**IMM, University of Texas Health Science Center at Houston**

*Mapping the Road of Skeletal Myogenesis in Human Pluripotent Stem Cells Using a PAX7/MYF5 Double Reporter Human ES Cell line*



## Dr. George Dodge

**University of Pennsylvania**

*PTOA model for screening therapeutics and a new approach to drug delivery*



## Dr. Nicole Ehrhart

**Colorado State University**

*Addressing Challenges in Limb Salvage Through Translational Cross Fit*



## Dr. John Elfar

**University of Rochester**

*Pharmaco-adjuvant therapy for Immediate Diagnosis and Treatment of Nerve Injury*



## Dr. Christopher Evans

**Mayo Clinic**

*Use of chemically-modified RNA for bone healing*



# Speakers

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## Dr. Thos Evans

### The Steadman Clinic

*Clinical and Translational Applications of BMC and PRP: Where Are We Now?*



## Dr. Braden Fleming

### Brown University

*An MR-based approach to assess the integrity of healing ligaments and grafts*



## Dr. BJ Fregly

### Rice University

*Estimating Functional Loading of Musculoskeletal Tissues: Challenges and Opportunities*



## Dr. David Frisbie

### Colorado State University

*Prospective Randomized Controlled Study in Horses with Ligamentous injury using either Autologous Conditioned Plasma or Extracorporeal Shockwave Therapy*



## Dr. Veronica Galvan

### University of Texas Health Science Center at San Antonio

*Mechanisms linking aging to Alzheimer's disease*



## Dr. Laurie Goodrich

### Colorado State University

*Allogeneic Use of Bone Marrow Derived Mesenchymal Stem Cells: Are We Closer to Their Clinical Use?*



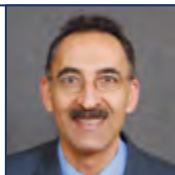
# Speakers

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## Dr. Farshid Guilak

**Washington University in St. Louis**

*Engineering new biologic therapies for joint disease*



## Dr. Stephano Gustincich

**Italian Institute of Technology**

*A new class of natural and synthetic antisense long non-coding RNAs that activate translation*



## Dr. Tom Hackett

**The Steadman Clinic**

*Biologics in the Elbow*



## Dr. Kurt Hankenson

**University of Michigan**

*The cellular basis for reduced geriatric bone healing*



## Dr. Christopher Harner

**University of Texas Health Science Center at Houston**

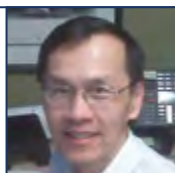
*Can We Improve Meniscal Healing in the Avascular Zone?: Fibrin Clot Augmentation with Stem Cells*



## Dr. Charles Ho

**The Steadman Clinic, Steadman Philippon Research Institute**

*Quantitative MRI evaluation of tissue health*



# Speakers

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## Dr. Johnny Huard

**Steadman Philippon Research Institute, University of Texas Health Science Center at Houston**

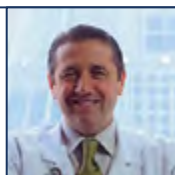
*Are Stem Cells Always Good? Implications for Stem Cell Therapy.*



## Dr. Clemente Ibarra

**National Institute of Rehabilitation Luis Guillermo Ibarra Ibarra, Mexico City**

*Use of autologous bone marrow mobilized MSC to improve meniscal regeneration using synthetic scaffolds after extensive partial meniscectomy?*



## Dr. Vinod Jaskula-Ranga

**Johns Hopkins University**

*A CRISPR View to the Clinic; Eyeing Gene-Editing Therapeutics for Muscle Disease*



## Dr. David Karli

**The Steadman Clinic**

*Autologous Biologics: Hemoanalysis and Quality Control – Tools for the Clinician*



## Dr. Raymond Kim

**The Steadman Clinic**

*Enhancing recovery after total knee replacement: tourniquet-less surgery*



## Dr. Mikhail Kolonin

**University of Texas Health Science Center at Houston**

*Dichotomous roles of adipose stromal cells in health and degenerative disease*





# Speakers

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**Dr. Barbara Krutchkoff**

**Institute of Regenerative and Cellular Medicine**

*Overview on regulations regarding stem cell therapeutic use.*



**Dr. Catherine Kuo**

**University of Rochester**

*Stem Cell-Based Tendon Tissue Engineering Guided by Embryonic Development*



**Dr. Robert LaPrade**

**The Steadman Clinic, Steadman Philippon  
Research Institute**

*Cabaud Memorial Award: Use of Platelet-Rich Plasma  
Immediately Post-Injury to Accelerate Ligament Healing was Not  
Successful in an In Vivo Animal Model*



**Dr. Nathan LeBasseur**

**Mayo Clinic**

*Cellular Senescence and the Pursuit of Healthspan*



**Dr. Richard Lieber**

**Northwestern University**

*Intraoperative and Laboratory Studies of Muscle Contractures*



**Dr. Helen Lu**

**Columbia University**

*Guided Scaffold Design for Engineering Tissue Connectivity*



# Speakers

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**Dr. Mark Markel**

**University of Wisconsin**

*Session Chair*



**Dr. Joel Matta**

**The Steadman Clinic**

*Anterior Approach Hip Replacement: A New Standard of Muscle Preservation and Hip Biomechanics*



**Dr. Todd McDevitt**

**UCSF, Gladstone Institute**

*Engineering morphogenic models and regenerative therapeutics from pluripotent stem cells*



**Dr. Wayne McIlwraith**

**Colorado State University**

*Equine Clinical and Pre-Clinical Studies with Bone Marrow-derived MSCs Translatable to Human Sports Medicine*



**Dr. Peter Millett**

**The Steadman Clinic**

*Joint preservation surgery for osteoarthritis of the shoulder*



**Dr. William Murphy**

**University of Wisconsin**

*Stabilization and delivery of biologics for tissue regeneration*



# Speakers

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## Dr. Martha Murray

**Harvard University**

*Bridge-Enhanced ACL Repair: From Concept to Clinical Trial*



## Dr. Naoki Nakayama

**University of Texas Health Science Center at Houston**

*Pluripotent stem cells for cartilage tissue engineering and cellular therapy: Promise and challenges*



## Dr. Vihang Narkar

**IMM, University of Texas Health Science Center at Houston**

*Transcriptional Co-Regulator PGC1-BETA: Linking Vascular Rarefaction and Muscle Wasting*



## Dr. Laura Niedernhofer

**The Scripps Research Institute**

*Novel mouse models of accelerated aging and age-related diseases*



## Dr. Bruno Péault

**UCLA**

*Identification of progenitor cells responsible for myogenic repair and fibro-adipogenic degeneration in chronic muscle injury*



## Dr. Gadi Pelled

**Cedars-Sinai Medical Center**

*Translational Ultrasound-mediated Gene Delivery Activates Endogenous Stem Cells in Bone and Ligament Reconstruction Models*



# Speakers

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## Dr. Marc Philippon

**The Steadman Clinic, Steadman Philippon  
Research Institute**

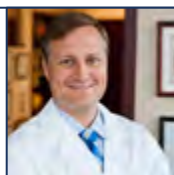
*The use of PRP in the Athlete with Hip Pathology*



## Dr. Matt Provencher

**The Steadman Clinic**

*Surgeons perspective on shoulder instability*



## Dr. William Rodkey

**Steadman Philippon Research Institute**

*Session Chair*



## Dr. Linda Sandell

**Washington University in St Louis**

*Lessons for Humans from Genetic Mouse Models*



## Dr. Evan Snyder

**Sanford Children's Health Research Center**

*A realistic look at stem cells & their potential for neurological  
disease*



## Dr. Claudette St. Croix

**University of Pittsburgh School of Medicine**

*Advanced probes and quantitative optical imaging approaches  
for studying aging: Part I*



# Speakers

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## Dr. Samuel Stupp

**Northwestern University**

*The Regenerative Power of Supramolecular Biomaterials*



## Dr. Scott Tashman

**Steadman Philippon Research Institute, University of Texas Health Science Center at Houston**

*Characterizing soft tissue function using dynamic radiographic imaging*



## Dr. Meng Wang

**Baylor College of Medicine**

*Metabolic Drivers in Longevity Regulation*



## Dr. Simon Watkins

**University of Pittsburgh**

*Advanced probes and quantitative optical imaging approaches for studying aging: Part II*



## Dr. Vonda Wright

**University of Pittsburgh Medical Center**

*Masterful Care of the Aging Athlete: harnessing the biologic fountain of youth*



## Dr. Nathan Yates

**University of Pittsburgh**

*Differential Mass Spectrometry Reveals Markers of Biological Age*



# Wednesday, August 23, 2017

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*Vail Marriott Mountain Resort*

715 West Lionshead Circle, Vail, CO 81657

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2:00 pm **Event Registration Opens** *Grand Ballroom Registration Desk*

5:00 - 6:30 pm **Welcome Reception and Cocktail Hour** *Mountain View Patio*

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6:30 - 6:40 pm **Welcome** *Grand Ballroom Salons F-J*

**Dr. Johnny Huard**

Chief Scientific Officer (CSO), Director, Center for Regenerative Sports Medicine, Steadman Philippon Research Institute, Vail, Colorado, Distinguished Professor and Vice Chair for Research, Department of Orthopaedic Surgery, McGovern Medical School; University of Texas Health Science Center at Houston

Director, Center for Tissue Engineering and Aging Research at the Institute for Molecular Medicine, Houston, Texas

**Dr. Marc Philippon**

Managing Partner, The Steadman Clinic, Vail, Colorado  
Co-Chairman, Director of Sports Medicine Fellowship and Director of Hip Research, Steadman Philippon Research Institute, Vail, Colorado  
Adjunct Associate Professor of Orthopaedic Surgery, Department of Orthopaedic Surgery,  
University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania

**Dr. Peter Millett**

Partner at The Steadman Clinic, Vail, Colorado  
Director Shoulder Surgery at The Steadman Clinic, Vail, Colorado  
Co-Chair Vail Scientific Summit, Vail, Colorado  
Board Member Steadman Philippon Research Institute, Vail, Colorado  
Research Advisory Committee Member Steadman Philippon Research Institute, Vail, Colorado  
Medical Director Ski Snowboard Club Vail, Vail, Colorado  
Honorary Member of the German Society Shoulder and Elbow Surgery

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6:40 - 7:40 pm **Dinner Buffet and Bar Open**

7:40 - 8:25 pm **KEYNOTE ADDRESS**

**Dr. James Kirkland**, Mayo Clinic

*Senolytics, Chronic Disease, and Aging*

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8:25 - 10:00 pm **Dessert Stations, Bar and Coffee Service**  
*Grand Ballroom Foyer*

# Thursday, August 24, 2017

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7:00 - 8:00 am **Breakfast** *Grand Ballroom Foyer / Salons F-J*

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8:00 - 8:45 am **KEYNOTE ADDRESS** *Grand Ballroom Salons A-E*  
**Dr. Holger Eltzschig**, University of Texas Health Science Center at Houston  
*The Hypoxia - Inflammation Link*

8:45 - 10:30 am **SESSION A**  
**PRP / BMAC / PROGENITORS / STEM CELLS**  
Chairs: **Dr. Bruno Péault**, UCLA  
**Dr. Laurie Goodrich**, Colorado State University

8:50 - 9:05 am **Dr. Bruno Péault**  
UCLA

9:10 - 9:25 am **Dr. Laurie Goodrich**  
Colorado State University

9:30 - 9:45 am **Dr. Evan Snyder**  
Sanford Children's Health Research Center

9:50 - 10:05 am **Dr. Todd McDevitt**  
UCSF, Gladstone Institute

10:10 - 10:25 am **Dr. Mikhail Kolonin**  
University of Texas Health Science Center at Houston

10:30 - 10:45 am **Dr. Johnny Huard**  
Steadman Philippon Research Institute, University of Texas Health Science Center at Houston

10:45 - 11:00 am **Break** *Grand Ballroom Foyer*

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11:00 - 1:05 pm **SESSION B** | *Sponsored by Linda and Mitch Hart*  
**BIOMOTION / BIOMECHANICS / IMAGING**  
Chairs: **Dr. William Rodkey**, Steadman Philippon Research Institute  
**Dr. Scott Tashman**, Steadman Philippon Research Institute, University of Texas Health Science Center at Houston

11:05 - 11:20 am **Dr. Scott Tashman**  
Steadman Philippon Research Institute, University of Texas Health Science Center at Houston

11:25 - 11:40 am **Dr. BJ Fregly**  
Rice University

11:45 - 12:00 pm **Dr. Charles Ho**  
The Steadman Clinic, Steadman Philippon Research Institute

# Thursday, August 24, 2017 cont'd.

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12:05 - 12:20 pm **Dr. Claudette St. Croix**  
University of Pittsburgh School of Medicine

12:25 - 12:40 pm **Dr. Simon Watkins**  
University of Pittsburgh

12:45 - 1:00 pm **Dr. Braden Fleming**  
Brown University

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1:05 - 4:30 pm **Grab-a-Box Lunch**, free time for outside activities  
and networking

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4:30 - 6:00 pm **POSTER SESSION** *Grand Ballroom Salons F-J*

6:00 - 7:00 pm **Buffet Dinner** *Grand Ballroom Foyer / Salons F-J*

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7:00 - 8:10 pm **SURGEON PERSPECTIVE FOR ORTHO-BIOLOGIC**  
*Grand Ballroom Salons A-E*

Chairs: **Dr. Matthew Provencher**, The Steadman Clinic  
**Dr. Robert LaPrade**, The Steadman Clinic, Steadman  
Philippon Research Institute

7:00 - 7:10 pm **Dr. Matthew Provencher**, The Steadman Clinic

7:15 - 7:25 pm **Dr. Peter Millett**, The Steadman Clinic

7:30 - 7:40 pm **Dr. Donald Corenman**, The Steadman Clinic

7:45 - 7:55 pm **Dr. David Karli**, The Steadman Clinic

8:00 - 8:10 pm **Dr. Robert LaPrade**, The Steadman Clinic, Steadman Philippon  
Research Institute

8:15 - 10:00 pm **SESSION C**  
**ARTICULAR CARTILAGE REPAIR**

Chairs: **Dr. Farshid Guilak**, Washington University in St. Louis  
**Dr. Linda Sandell**, Washington University in St. Louis

8:20 - 8:35 pm **Dr. Farshid Guilak**  
Washington University in St. Louis

8:40 - 8:55 pm **Dr. George Dodge**  
University of Pennsylvania

9:00 - 9:15 pm **Dr. Wayne McIlwraith**  
Colorado State University

9:20 - 9:35 pm **Dr. Naoki Nakayama**  
University of Texas Health Science Center at Houston

9:40 - 9:55 pm **Dr. Linda Sandell**  
Washington University in St. Louis

10:00 pm **Adjourn Day #1**



# Friday, August 25, 2017

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7:00 - 8:00 am **Breakfast** *Grand Ballroom Foyer / Salons F-J*

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8:00 - 8:45 am **KEYNOTE ADDRESS** *Grand Ballroom Salons A-E*

**Dr. Paul Robbins**, The Scripps Research Institute

*Clinically relevant approaches to extend health span*

8:45 - 10:50 am **SESSION D** | *Sponsored by Dierdre and Ronnie Baker*  
**AGING**

Chairs: **Dr. Paul Robbins**, The Scripps Research Institute

**Dr. Laura Niedernhofer**, The Scripps Research Institute

8:50 - 9:05 am **Dr. Laura Niedernhofer**

The Scripps Research Institute

9:10 - 9:25 am **Dr. Meng Wang**

Baylor College of Medicine

9:30 - 9:45 am **Dr. Nathan LeBrasseur**

Mayo Clinic

9:50 - 10:05 am **Dr. Nathan Yates**

University of Pittsburgh

10:10 - 10:25 am **Dr. John Cooke**

Houston Methodist Research Institute

10:30 - 10:45 am **Dr. Kurt Hankenson**

University of Michigan

10:50 - 11:05 am **Break** *Grand Ballroom Foyer*

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11:10 - 1:15 pm **SESSION E** | *Sponsored by Monica and Daniel Porter*

**MUSCLE – NERVE – BRAIN**

Chairs: **Dr. Richard Lieber**, Northwestern University

**Dr. Johnny Huard**, Steadman Philippon Research  
Institute, University of Texas Health Science Center  
at Houston

11:15 - 11:30 am **Dr. Richard Lieber**

Northwestern University

11:35 - 11:50 am **Dr. Vihang Narkar**

IMM, University of Texas Health Science Center at Houston

11:55 - 12:10 pm **Dr. Stephano Gustincich**

Italian Institute of Technology

12:15 - 12:30 pm **Dr. Radbod Darabi**

IMM, University of Texas Health Science Center at Houston

# Friday, August 25, 2017 cont'd.

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12:35 - 12:50 pm **Dr. John Elfar**  
University of Rochester

12:55 - 1:10 pm **Dr. Veronica Galvan**  
University of Texas Health Science Center at San Antonio

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1:15 - 4:30 pm **Grab-a-Box Lunch**, free time for outside activities  
and networking

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2:15 pm **SPRI Labs Tour** Group to meet at Town of Vail bus stop in  
front of Marriott

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4:30 - 5:30 pm **POSTER SESSION** Grand Ballroom Salons F-J

5:30 - 6:30 pm **Buffet Dinner** Grand Ballroom Foyer / Salons F-J

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6:30 - 7:00 pm **KEYNOTE ADDRESS** Grand Ballroom Salons A-E

**Dr. Giuseppe Colasurdo**, University of Texas Health Science Center  
at Houston

*The Future of Academic Medicine*

7:00 - 8:00 pm **SURGEON PERSPECTIVE FOR ORTHO-BIOLOGIC**

Chairs: **Dr. Joel Matta**, The Steadman Clinic

**Dr. Tom Hackett**, The Steadman Clinic

7:00 - 7:10 pm **Dr. Joel Matta**, The Steadman Clinic

7:15 - 7:25 pm **Dr. Raymond Kim**, The Steadman Clinic

7:30 - 7:40 pm **Dr. Tom Hackett**, The Steadman Clinic

7:45 - 7:55 pm **Dr. Thos Evans**, The Steadman Clinic

8:00 - 10:00 pm **SESSION F** | *Sponsored by Shu-Tung & Alice Li Foundation*  
**TENDON / LIGAMENT / MENISCUS**

Chairs: **Dr. Mark Markel**, University of Wisconsin

**Dr. Wayne McIlwraith**, Colorado State University

8:05 - 8:20 pm **Dr. Catherine Kuo**  
University of Rochester

8:25 - 8:40 pm **Dr. Martha Murray**  
Harvard University

8:45 - 9:00 pm **Dr. Hani Awad**  
University of Rochester

## ***Friday, August 25, 2017 cont'd.***

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- 9:05 - 9:20 pm **Dr. Clemente Ibarra**  
National Institute of Rehabilitation Luis Guillermo Ibarra Ibarra,  
Mexico City, Mexico
- 9:25 - 9:40 pm **Dr. Christopher Harner**  
University of Texas Health Science Center at Houston
- 9:45 pm **Adjourn Day #2**
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## ***Saturday, August 26, 2017***

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- 7:00 - 8:00 am **Breakfast** *Grand Ballroom Foyer / Salons F-J*
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- 8:00 - 8:45 am **KEYNOTE ADDRESS** *Grand Ballroom Salons A-E*  
**Dr. Gang Bao**, Rice University  
*Engineering Multifunctional Nanoparticles for Disease Treatment*
- 8:45 - 10:30 am **SESSION G** | *Sponsored by Steven and Mary Read*  
**BONE**  
Chairs: **Dr. Christopher Evans**, Mayo Clinic  
**Dr. Tamara Alliston**, UCSF
- 8:50 - 9:05 am **Dr. Christopher Evans**  
Mayo Clinic
- 9:10 - 9:25 am **Dr. Tamara Alliston**  
UCSF
- 9:30 - 9:45 am **Dr. Gadi Pelled**  
Cedars-Sinai Medical Center
- 9:50 - 10:05 am **Dr. Chelsea Bahney**  
UCSF
- 10:10 - 10:25 am **Dr. Matt Allen**  
University of Cambridge
- 10:30 - 10:45 am **Break** *Grand Ballroom Foyer*
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- 10:50 - 1:00 pm **SESSION H** *Grand Ballroom Salons A-E*  
**CLINICAL, PRE-CLINICAL AND TRANSLATIONAL STUDIES**  
Chairs: **Dr. Marc Philippon**, The Steadman Clinic,  
Steadman Philippon Research Institute  
**Dr. David Frisbie**, Colorado State University

# ***Saturday, August 26, 2017 cont'd.***

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- 10:55 - 11:10 am **Dr. Marc Philippon**  
The Steadman Clinic, Steadman Philippon Research Institute
- 11:15 - 11:30 am **Dr. Vonda Wright**  
University of Pittsburgh Medical Center
- 11:35 - 11:50 am **Dr. David Frisbie**  
Colorado State University
- 11:55 - 12:10 pm **Dr. Nicole Ehrhart**  
Colorado State University
- 12:15 - 12:30 pm **Dr. Vinod Jaskula-Ranga**  
Johns Hopkins University
- 12:35 - 12:50 pm **Dr. Barbara Krutchkoff**  
Institute of Regenerative and Cellular Medicine, Santa Monica, CA
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12:55 - 4:30 pm **Grab-a-Box Lunch**, free time for outside activities  
and networking

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4:30 - 6:00 pm **SESSION I** | *Sponsored by Mary Sue and Mike Shannon*  
*Grand Ballroom Salons A-E*  
**BIOMATERIAL / NANOTECHNOLOGY**  
Chairs: **Dr. William Murphy**, University of Wisconsin  
**Dr. Samuel Stupp**, Northwestern University

4:35 - 4:50 pm **Dr. Samuel Stupp**  
Northwestern University

4:55 - 5:10 pm **Dr. William Murphy**  
University of Wisconsin

5:15 - 5:30 pm **Dr. Elizabeth Cosgriff-Hernandez**  
University of Texas at Austin

5:35 - 5:50 pm **Dr. Helen Lu**  
Columbia University

5:55 - 6:00 pm **Closing Remarks and Award for Best Poster**

**Dr. Johnny Huard**, Steadman Philippon Research Institute,  
University of Texas Health Science Center at Houston

**Dr. Marc Philippon**, The Steadman Clinic, Steadman Philippon  
Research Institute

6:00 pm **Adjourn Day #3**

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7:30 - 10:00 pm **Farewell Cocktail Party** *Mountain View Patio*  
*Live entertainment by John Vincent*

# About Us

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## *Steadman Philippon Research Institute*

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The Steadman Philippon Research Institute (SPRI) is dedicated to keeping people of all ages physically active through orthopaedic research and education in arthritis, healing, rehabilitation, and injury prevention. We utilize the latest regenerative medicine techniques – biological studies at the cellular level – to investigate the causes and effects of degenerative arthritis, techniques of cartilage regeneration, and basic biological healing processes. Founded in 1988 by orthopaedic surgeon Dr. Richard Steadman as the Steadman Sports Medicine Foundation, the 501(c)(3) charitable organization has influenced the practice of orthopaedics throughout the world. Based in Vail, Colorado, it has become one of the most published organizations in sports medicine research and education.

## *The Steadman Clinic*

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The Steadman Clinic is a world-renowned orthopaedic clinic with facilities located in Vail, Frisco and Edwards, Colorado. Specializing 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. Our clinic treats patients from all walks of life, including recreational and professional athletes from all over the world.

## *Vail Valley Medical Center*

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From modest beginnings in 1965, Vail Valley Medical Center has grown into one of the world's most advanced mountain hospitals. VVMC provides Olympic-quality sports medicine, leading evidence-based research, modern cancer care, extensive cardiology services, 24-hour emergency care, urgent care facilities in Avon and Gypsum, endocrinology, internal medicine, general surgery, 3D breast imaging, aesthetic and reconstructive surgery, childbirth and more. An independent, nonprofit medical center, VVMC keeps hundreds of jobs and resources local, better serving our community and visitors. Providing superior health services with compassion and exceptional outcomes, VVMC offers expanding services, low infection rates, free community services and top-rated patient satisfaction scores.

# ***Participating Academic Collaborators***

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**Baylor College of Medicine**  
**Brown University**  
**Cedars-Sinai Medical Center**  
**Colorado State University**  
**Columbia University**  
**Harvard University**  
**Houston Methodist Research Institute**  
**Institute of Regenerative and Cellular Medicine**  
**Italian Institute of Technology**  
**Johns Hopkins University**  
**Mayo Clinic**  
**Northwestern University**  
**National Institute of Rehabilitation Luis Guillermo Ibarra Ibarra,  
Mexico City**  
**Rice University**  
**Sanford Children’s Health Research Center**  
**The Scripps Research Institute**  
**The Steadman Clinic**  
**Steadman Philippon Research Institute**  
**UCLA**  
**UCSF**  
**UCSF Gladstone**  
**University of Cambridge**  
**University of Michigan**  
**University of Pennsylvania**  
**University of Pittsburgh**  
**University of Pittsburgh Medical Center**  
**University of Rochester**  
**University of Texas at Austin**  
**University of Texas Health Science Center at Houston**  
**University of Texas Health Science Center at San Antonio**  
**University of Wisconsin**  
**Washington University in St. Louis**

# Thank You To Our Sponsors

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Special recognition to our Research Partner  
Vail Valley Medical Center



## Silver Sponsors

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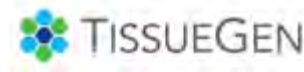


## Bronze Sponsors

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# SAMSUNG



## In-Kind Sponsor

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# ***Suggested Local Activities***

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*Requiring no pre-reservations (visit concierge desk for more information on each)*

## **Walk/ Shop:**

In Lionshead and/or Vail Village on foot or via the free in-town shuttle (stops directly in front of hotel in 10 minute intervals approximately)

## **Alpine Gardens:**

Visit the Betty Ford Alpine Gardens—the world’s highest botanical garden (no entrance fee)

## **Gondola Rides:**

\$36 for adults (\$46 = “lift and lunch”...the extra \$10 gets them a \$15 voucher good towards on mountain food and beverage)

## **Adventure Ridge:**

Scenic (45 minute) mountain-top open-air Jeep tours leave hourly from Adventure Ridge for \$39 (on top of lift ticket price) & finally, Miniature golf (no lift ticket required) \$14

## **Unguided Hiking:**

Berrypicker (free) up to top of mountain (2 hrs. approx.)—can ride lift down for free; or cross to Vail Berrypicker to Strawberry Lane —approx. 1 hr.); or along the Valley floor on Gore Creek Trail

## **Bike Rentals:**

Available through Charter Sports (on-property / phone (970) 479-6971) Rent for 2 or 4 hours for road or mountain biking

*Reservations Recommended: (space may be available last minute—  
but could not be guaranteed)*

## **Vail Pass Bike Tour:**

Through Charter Sports (on property / phone (970) 479-6971)—2pm departure (2-2.5 hour trip) \$59pp unguided or \$79 guided

## **Spa Appointments:**

Services available either on-property at Golden Leaf Spa (970) 479-5004, close by at the Arrabelle Spa (970) 754-7754, or in-room through the Vail Valley Massage Co-op (970) 845-4242(pricing varies)

*Requiring pre-reservations*

## **Fly Fishing:**

Minturn Anglers - (timing is flexible) – best to book online: <http://www.minturnanglers.com/vail-fly-fishing-trips-in-colorado/walk-and-wade-trips>

***Book your activities in advance by calling the Concierge at (970) 477-5600  
or emailing [vailconcierge@marriott.com](mailto:vailconcierge@marriott.com)***



## *Thank you*

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to all our speakers, session sponsors, and our corporate sponsors for making this event possible and to all our guests for sharing in our vision to advance Regenerative and Transitional Medicine.



Hosted by Steadman Philippon Research Institute  
with The Steadman Clinic and  
Vail Valley Medical Center



**THE STEADMAN CLINIC**  
**AND**  
**STEADMAN PHILIPPON**  
**RESEARCH INSTITUTE**