



STEADMAN PHILIPPON RESEARCH INSTITUTE

# SPRI NEWS

**SPECIAL EDITION:** VAIL SCIENTIFIC SUMMIT

## Dr. Johnny Huard: A Look Into the Future of Regenerative Sports Medicine

By Jim Brown, Executive Editor, SPRI News

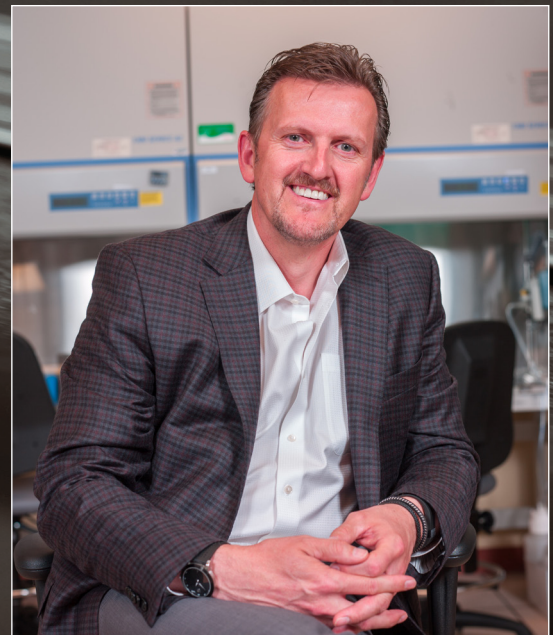
Imagine what orthopaedic sports medicine could be 25 years from now.

What if a person's own stem cells or platelet-rich plasma could be injected or combined with exercise to help patients delay or avoid joint replacement—or heal faster—or enable muscles to heal stronger—or minimize scarring following surgery?

You won't have to wait 25 years. The future of regenerative sports medicine is now. These advances are already in development, and the person who is leading SPRI's new Center for Regenerative Sports Medicine is Johnny Huard, Ph.D., Chief Scientific Officer.

Dr. Huard joined SPRI on May 1, 2015. Originally from Quebec, Canada, he is the former Vice Chair for Musculoskeletal Cellular Therapeutics at the University of Pittsburgh. He was also Director of the Stem Cell Research Center and the Henry J. Mankin Professor in the Department of Orthopaedic Surgery.

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He is a world-renowned expert in the field of stem cell research who has extensive expertise in gene therapy, tissue engineering, and regenerative medicine—all based on the use of muscle-derived adult stem cells.

Dr. Huard's appointment at SPRI is part of a unique partnership between the Research Institute and the University of Texas Health Sciences Center in Houston.

### DR. STEADMAN WAS THE PIONEER

Dr. Huard quickly acknowledges that SPRI's Dr. Richard Steadman was a pioneer in this field, although it wasn't called regenerative sports medicine at the time. "Dr. Steadman was well ahead of his time. He wanted his patients to be active immediately after surgery. He began to document how this approach was helpful, but no one knew then the science behind why it was working."

continuing Dr. Steadman's legacy by making tremendous advances in the field of hip surgery."

### RAPID BENCH-TO-BEDSIDE CAPABILITY

Dr. Huard adds that an important factor in his decision to join the staff at SPRI was its capacity to rapidly take an innovative technique or therapy from the research bench to the patient's bedside.

"The best example I can give you is that we are in clinical trials right now with an anti-fibrosis (anti-scarring) agent called losartan. Dr. Philippon was preparing to do surgery on one of his patients. I suggested that (with the patient's approval) he put the patient on losartan after the surgery. He did and the patient responded well to the therapy. That kind of bench-to-bedside speed might not have been possible at a larger institution."

### FOUR INVESTIGATIONS

Dr. Huard's initial research at SPRI will focus on four investigations. The first is to evaluate the effects of exercise and neuromuscular stimulation/massage on tissue repair after an injury.

The second looks at delaying joint degeneration through the injection of adult stem cells and other biologics (medical products made from a biological source). His team wants to find the answer to the question, "Can stem cells be the ultimate body repair kit?"

The third study will be a collaboration between Dr. Huard, Dr. Philippon, and Dr. Robert LaPrade, who have injected platelet-rich plasma into selected hip and knee patients to help them heal faster. The three researchers believe that combining PRP with the patient's own stem cells in an affected joint will significantly accelerate the healing process.

The fourth initiative will measure the effects of anti-fibrotic agents on tissue repair. Significantly reducing scarring in the injured tissue could create a dramatically more satisfying and faster recovery.

### TIMETABLES, GOALS

"It is very difficult to predict exact timetables in terms of research outcomes," says Dr. Huard, "but we may be within a year for some of the PRP applications. With stem cells, we have already seen positive results with 12 patients to repair cardiac tissue and 500 patients to reduce bladder dysfunctions. Because of advances we've made in other areas, we may be able to go faster in sports medicine."

Dr. Huard's timetable for the new Regenerative Sports Medicine Laboratory at SPRI is much more specific.

## Can stem cells be the ultimate body repair kit?

"Twenty-five years later, our research has shown that stem cells come from blood vessels, and that if you increase the number of blood vessels through exercise, you can increase the number of stem cells."

"At SPRI, we will test our premise that transplanting a person's own stem cells won't make that person younger, but that it will delay aging-related disease and conditions such as osteoarthritis and osteoporosis. In the process, we are learning how to make healing and recovery better."

### THE SPRI CONNECTION

"I became interested in the Steadman Clinic a long time ago because of Dr. Steadman's reputation and in SPRI because of its excellence in research. The Institute was already doing work with platelet-rich plasma (blood plasma enriched with growth factor platelets) and cell biology."

"The physicians who were joining the staff at SPRI were the premier orthopaedic surgeons in the world, and they were putting themselves on the edge because the things they were doing were new."

"Also, I knew Dr. Philippon when he was at the University of Pittsburgh and that he was

“By the end of the first year, we want the lab to be well funded, to be fully functional, and to have produced multiple publications to show people what we are doing.”

He is also explicit in his expectations of where he wants the SPRI Center for Regenerative Sports Medicine to be in terms of world leadership. “We want people around the world to know about viable treatment options for orthopaedic injuries and conditions. Based on our interaction with other departments at SPRI, we will be able to tell patients what works, what doesn’t work, and explain the reasons why. The Center will be a place where we make treatments better and safer for our patients.”

In the long term, Dr. Huard envisions every person having the opportunity to harvest his or her own stem cells, preferably at a young age. The cells could be frozen, stored, and then re-injected later to help those people age better, enjoy an active life, and get the best treatment when they need it. Although it may take 10 years to perfect, the procedure could literally slow down the aging process.

Dr. Huard brings an unparalleled record of achievements, publications, and awards to the Steadman Philippon Research Institute. With your support, there is every reason to believe that he, his team, and his colleagues at SPRI represent the future of regenerative sports medicine to the rest of the world.



Photos: John Kelly

# VAIL SCIENTIFIC SUMMIT FEATURED TOP RESEARCHERS, PHYSICIANS IN REGENERATIVE AND TRANSLATIONAL MEDICINE



Dr. Marc Philippon and Dr. Johnny Huard

Vail, Colo. — The Steadman Philippon Research Institute and the Vail Valley Medical Center hosted the first-ever Vail Scientific Summit on Friday and Saturday, August 21-22, at the Four Seasons Resort and Residences.

A select group of internationally known physicians and scientists collaborated for the symposium, subtitled Regenerative & Translational Medicine: A Collaborative Vision. A series of presentations focused on the latest regenerative medicine advances and how they can be translated to patient care. Universities and medical institutions from throughout the United States were represented.

## UNDERSTANDING REGENERATIVE MEDICINE

Regenerative medicine is a branch of research in tissue engineering and molecular biology that focuses on using the body’s own healing capabilities. This specialized discipline may soon offer a way to replace,

engineer, or regenerate human cells, tissues, or organs to restore or establish normal function.

“Regenerative medicine is the future of medicine,” says Dr. Marc Philippon, Managing Partner at The Steadman Clinic and Co-Chair of SPRI. “As surgeons, we perform and repair with every procedure, but we need to take the next step to figure out a safe and productive way of adding biologics to a procedure that will help the healing process, recovery, and keeping all of us active.”

## KEYNOTE SPEAKER

The Keynote Speaker at the Summit was Freddie Fu, M.D., Distinguished Service Professor at the University of Pittsburgh Medical School and Chairman of the Department of Orthopaedic Surgery. Dr. Fu has been honored with more than 250 professional awards and honors, made over 1100 national and international presentations, co-authored 173 books chapters, is

an author of over 550 peer-reviewed articles, and has edited 30 major orthopaedic textbooks.

In addition to Dr. Fu, Johnny Huard, Ph.D., Chief Scientific Officer and Director of SPRI's Center for Regenerative Sports Medicine, chaired a session on stem cells, gene therapy, and tissue engineering.

According to Dr. Huard, "While regenerative medicine is not a 'fountain of youth,' it has the hope, potential, and intention of helping people age in a healthy and more comfortable manner as they inevitably encounter injuries and diseases throughout life."

### OTHER SPEAKERS, PRESENTATIONS

Other speakers at Dr. Huard's session included Dr. Christopher Evans of Mayo Clinic, Dr. Paul Robbins of the Scripps Research Institute, and Dr. Laurie Goodrich of Colorado State University.

Dr. Philippon led presentations on ligament, tendon, and meniscus repair that included guest speakers from the University of Pittsburgh and the University of Rochester.

SPRI's Dr. William Rodkey and Colorado State's Dr. Wayne McIlwraith chaired a session on platelet-rich plasma. Guest speakers came from Colorado State and Cornell University, and included Dr. David Karli and Dr. Thomas Evans of The Steadman Clinic.

Dr. Huard concluded the Scientific Program with updates on the status of regenerative medicine clinical trials.

### LANDMARK EVENT

"Vail Valley Medical Center was honored to join the Steadman Philippon Research Institute as hosts for this significant event," said Doris Kirchner, President/CEO of VVMC. "Mike Shannon (Chairman, Vail Health Services Board) and Dr. Johnny Huard invited some of their most talented and respected colleagues to join us, and I commend them for their efforts in confirming Vail as a center of orthopaedic excellence."

"Mike Shannon deserves a tremendous amount of credit for his leadership and support in making this event possible," said Dr. Huard. "We brought together the best of the best in the field of research in regenerative and translational medicine. Their collaboration, which is based on patient-focused ideals and principles, addressed the endless possibilities that stem cell research and regenerative medicine have for all of us."

"This event brought some of the premiere visionaries and experts in the field of regenerative and translational medicine to Vail," said Dan Drawbaugh, CEO of SPRI and The Steadman Clinic.

"The Steadman Philippon Research Institute is proud to have collaborated with the Vail Valley Medical Center on this very special symposium. This was a landmark event and featured the very best researchers, doctors, and scientists the field has to offer."



On May 1, The Steadman Philippon Research Institute welcomed Dr. Johnny Huard as Chief Scientific Officer and Director of SPRI's Center for Regenerative Sports Medicine.

Dr. Huard's team left to right includes:

Xueqin Gao, M.D., Ph.D., Barbara Lipari, Kendra Sayles, Yong Li, M.D., Ph.D., Ping Guo, Ph.D., Sudheer Ravuri, Ph.D., Jeff Green, Aiping Lu, M.D., Jen Rogus, Andi Liebowitz, Gary Peterson, Bill Rodkey, D.V.M., Ryan Warth, M.D., Walter Lowe, M.D., Jeannie Zhong, Lizzie Morris, Alex Scibetta, Jim Cummins, Marc Philippon, M.D., Johnny Huard, Ph.D., Xiadong Mu, Ph.D.

# Vail Scientific Summit Speakers



## DR. FREDDIE FU

Dr. Fu is the David Silver Professor and Chairman of the Department of Orthopaedic Surgery, University of Pittsburgh School of Medicine. Dr. Fu specializes in sports medicine and holds secondary appointments as Professor of Physical Therapy, Health & Physical Activity, and Mechanical Engineering, and serves as the Head Team Physician for the University of Pittsburgh Athletic Department. In 1999, he was awarded an honorary Doctor of Science degree from Point Park University and an honorary Doctor of Public Service degree from Chatham University.



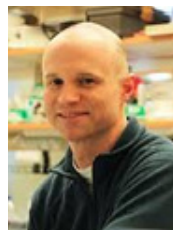
## DR. WALTER LOWE

Dr. Lowe is Chairman and Professor, Department of Orthopaedic Surgery, at the University of Texas Medical School at Houston. Dr. Lowe specializes in Sports Medicine with an emphasis on diagnosing and treating a wide range of knee, shoulder, and elbow injuries and disorders. He is certified by the American Board of Orthopaedic Surgery and also holds a Subspecialty Certification in Sports Medicine. Dr. Lowe serves as the Head Team Physician for the Houston Texans, Head Team Physician for the University of Houston Cougars, and Head Team Physician for the Houston Rockets.



## DR. SAMUEL STUPP

Dr. Stupp is Professor of Materials Science and Engineering, Chemistry, Medicine, and Biomedical Engineering at Northwestern University. Dr. Stupp joined the faculty at Northwestern in 1999. He is a member of the National Academy of Engineering, the American Academy of Arts and Sciences, and the Spanish Royal Academy. He is also a fellow of the American Physical Society, the Materials Research Society, the American Association for the Advancement of Science, the World Technology Network, and the World Biomaterials Congress.



## DR. WILLIAM MURPHY

Dr. Murphy is Professor of Biomedical Engineering, Professor of Orthopedics and Rehabilitation, and Co-Director of the Stem Cell and Regenerative Medicine Center at the University of Wisconsin. Dr. Murphy received his B.A. in physics from Illinois Wesleyan University, Ph.D. in biomedical engineering from the University of Michigan, and postdoctoral training in chemistry at the University of Chicago. His research interests focus on creating new biomaterials inspired by the materials found in nature. Dr. Murphy's research group is using new biomaterials to understand stem cell behavior and to induce tissue regeneration. He has published more than 120 scientific manuscripts, filed over 30 patents, and co-founded multiple start-up companies.



## DR. MARK WONG

Dr. Wong is Professor and Chairman of Oral and Maxillofacial Surgery at the University of Texas Health Science Center at Houston. Dr. Wong's dental studies were completed at the University of Singapore, while his post-graduate training and residency in oral and maxillofacial surgery were conducted in both the United Kingdom and the University of Miami. Dr. Wong is a past president of the American Board of Oral and Maxillofacial Surgery and the American Academy of Craniomaxillofacial Surgeons. He is also leading the effort to develop a certification process for oral and maxillofacial surgeons globally under the aegis of the International Board for the Certification of Specialists in Oral and Maxillofacial Surgery.



Dr. Walter Lowe presenting at the 2015 Vail Scientific Summit.



### DR. PHIL CAMPBELL

Dr. Campbell is Research Professor within the Institute for Complex Engineered Systems at the Carnegie Institute of Technology. Dr. Campbell has over 25 years' experience conducting interdisciplinary

biomedical engineering-related research encompassing the areas of endocrinology, bioimaging, microimplantable biosensors, bioresorbable electronics, and bioprinting-based biological patterning, with special interest in musculoskeletal tissue repair and regeneration. He has performed musculoskeletal research on cancer and tissue reconstruction/regeneration, was responsible for basic sciences instruction for orthopaedic residents and fellows, and worked closely with biomedical engineers and clinicians.



### DR. PAUL ROBBINS

Dr. Robbins is Professor of Metabolism and Aging at Scripps Florida. Previously, he was a Professor of Microbiology and Molecular Genetics, Director of Basic Research for the Molecular Medicine Institute, Co-

Director of the Paul Wellstone Cooperative Muscular Research Center at the University of Pittsburgh School of Medicine, and Interim Director of Molecular & Cellular Oncology. He has co-authored over 300 peer-reviewed manuscripts and 165 book chapters and reviews, and has edited four books. He was a member of the NIH PathB Study Section, Chair of the Italian Telethon Scientific Review Committee and a member of the Telethon Scientific Advisory Board.



### DR. CHRISTOPHER EVANS

Dr. Evans is Professor and Director of the Rehabilitation Medicine Research Center at Mayo Clinic. He also holds appointments at Harvard, Dartmouth, and Hampton University. Trained in Europe, he came as junior faculty

to the University of Pittsburgh Medical School, rising through the ranks to become the inaugural Henry Mankin Professor of Orthopaedic Surgery and Professor, Department of Molecular Genetics and Biochemistry. Dr. Evans' research focuses on the application of biological therapies, particularly gene therapy, to the treatment of disorders of bones and joints. He was principal investigator on the world's first arthritis gene therapy trial.



### DR. LAURIE GOODRICH

Dr. Goodrich is Associate Professor of Equine Surgery and Lameness at Colorado State University. She graduated from the University of Illinois College of Veterinary Medicine and completed an

internship at Virginia-Maryland Regional College of Veterinary Medicine in equine surgery and medicine. She then completed an equine surgical residency at Marion DuPont Equine Medical Center in Leesburg, Virginia, and earned a Master of Science in pharmacology. Following her residency, she became board certified in equine surgery and was a faculty surgeon at Cornell College of Veterinary Medicine. While at Cornell, she also earned her Ph.D. in cellular and molecular biology of cartilage repair. In 2005, she joined the faculty at Colorado State.



### DR. CHRISTOPHER HARNER

Dr. Harner is Professor of Orthopaedic Surgery at the University of Pittsburgh School of Medicine. He specializes in sports medicine and knee surgery. Dr. Harner is the Co-Director of the Sports Medicine

Biomechanics/Biodynamics Laboratory, a lab dedicated to studies of knee injury, healing, and surgical repair. He has educated over 100 undergraduate, graduate, and medical students, residents, and fellows. He has served on the education committees for both the American Orthopaedic Society for Sports Medicine and the Arthroscopy Association of North America.



### DR. SCOTT TASHMAN

Dr. Tashman is Director, Biodynamics Laboratory, and Associate Professor of Orthopaedic Surgery and Bioengineering at the University of Pittsburgh. His primary areas of expertise are dynamic assessment

of joint function and musculoskeletal modeling. His research focuses on the relationships between musculoskeletal function and the development, treatment, and prevention of orthopaedic injury/disease, including ligament/meniscus injury, osteoarthritis, disorders of the cervical and lumbar spine, and neuromuscular diseases. He works with orthopaedic surgeons, rehabilitation specialists, and other scientists to improve knowledge, diagnosis, and treatment of human musculoskeletal injury/disease.

## Vail Scientific Summit Speakers (cont'd)

**DR. CATHERINE KUO**

Dr. Kuo is Associate Professor, Department of Biomedical Engineering, at the University of Rochester. She was previously an Assistant Professor at Tufts University in the Biomedical Engineering Department and in the Cell, Molecular, and Developmental Biology Program of the medical school. She also held a visiting scientist position in chemical engineering at MIT. Her research aims to inform stem cell-based tissue engineering and regenerative medicine strategies by recapitulating aspects of embryonic tissue development and scarless healing, with an emphasis on tendon and ligament.

**DR. RON MOOMAW**

Dr. Moomaw has been a psychiatrist and flight surgeon for NASA in the Medical Operations Branch of the Johnson Space Center since 2009. He is responsible for the medical care of the Astronaut Corps and dependents, and for the mission support of NASA's space shuttle and International Space Station (ISS) programs. He is the lead psychiatrist for NASA outpatient behavioral health services, astronaut selection, and ISS Fatigue Management Team, with particular interest in fatigue and sleep associated with long duration space flight. Dr. Moomaw has provided support for shuttle launches and landings, and continuous support of astronauts aboard the international space station since 2009.

**DR. RICHARD LINNEHAN**

Dr. Linnehan is a U.S. Astronaut assigned to NASA's Johnson Space Center. He received his D.V.M. from The Ohio State University and later served a two-year internship in exotic animal medicine and comparative pathology at the Baltimore Zoo and The Johns Hopkins University School of Medicine. Dr. Linnehan is a veteran of four space shuttle missions, logging over 58 days in space, including six spacewalks totaling more than 42 hours. He received his Master's in Public Administration from the Harvard Kennedy School of Government and later completed a two-year Interagency Personnel Agreement at the Texas A&M Office of Strategic Initiatives. Dr. Linnehan is working on advanced biomedical countermeasures for future human deep space exploration initiatives, while supporting ongoing life sciences research on the International Space Station.

**DR. WAYNE MCILWRAITH**

Dr. McIlwraith is a University Distinguished Professor, Chair of Orthopaedic Research, and Director of the Orthopaedic Research Center at Colorado State University. Dr. McIlwraith received his veterinary degree from Massey University, New Zealand, practiced in New Zealand until 1973, did an internship at the University of Guelph followed by a surgical residency at Purdue University, and received M.S. and Ph.D. degrees from Purdue. He has published over 400 scientific papers and book chapters, and five textbooks. He has been a principal or co-principal investigator on 168 research grants totaling more than \$21,000,000. Dr. McIlwraith is a member of the Steadman Philippon Research Institute Scientific Advisory Committee.

**DR. DAVID FRISBIE**

Dr. Frisbie is Professor of Equine Surgery at Colorado State University. He earned an undergraduate biochemistry degree at the University of Wisconsin, as well as a Doctor of Veterinary Medicine. He completed a surgical internship at Cornell University and began his research in joint disease. Dr. Frisbie went to Colorado State University, where he completed a surgical residency in large animal surgery and a master's degree in joint pathobiology. He then began his work on a novel way to treat joint disease using gene therapy. Dr. Frisbie specializes in orthopaedic research, intra-articular therapeutics, new methods of cartilage repair, equine lameness, orthopaedic surgery, and gene therapy.



Dr. David Frisbie presenting at the 2015 Vail Scientific Summit.





**DR. LISA FORTIER**

Dr. Fortier is Professor of Surgery at Cornell University. She received her D.V.M. from Colorado State University and completed her Ph.D. at Cornell. She is a board certified equine surgeon with practices at

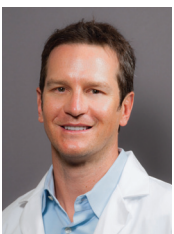
Cornell and the Ruffian Center in Elmont, New York. Her laboratory studies osteoarthritis, with emphasis on post-traumatic osteoarthritis and the clinical application of stem cells and biologics, such as platelet-rich plasma for cartilage repair, arthritis, and tendonosis. She has received the Jaques Lemans Award from the ICRS, the New Investigator Research Award from the ORS, and the Pfizer Research Award for Research Excellence from Cornell. She was the first veterinarian to be elected as President of the ICRS, and she is presently Vice President of the International Veterinary Regenerative Medicine Society and Director of the Equine Park at Cornell.



**DR. DAVID KARLI**

Dr. Karli is a Spine, Sports, Rehabilitation, and Regenerative Medicine Specialist at The Steadman Clinic. His expertise in interventional treatment of spinal and musculoskeletal disorders provides an

additional dimension to The Clinic. Dr. Karli's clinical interest in regenerative medicine and the development of non-surgical interventions for a variety of conditions has led to the development of platelet-rich plasma and bone marrow stem cell injection therapy programs for patients with acute and chronic musculoskeletal injuries. His research continues to focus on autologous blood and novel regenerative therapies that hold promise for the development of future treatment protocols for musculoskeletal and spine disorders.



**DR. THOMAS EVANS**

Dr. Evans is an Interventional Pain Specialist at The Steadman Clinic. He practices comprehensive pain management for a full spectrum of pain conditions, utilizing physical and psychological

therapy, as well as medication management when appropriate. His focus is primarily diagnostic, and he performs therapeutic procedures to reduce pain and restore function as necessary. Additionally, he uses regenerative medicine to optimize his patients' healing and recovery. Dr. Evans' specialty is treating spine-related pain of the low back and neck. After

completing an internship and an anesthesia residency at the University of Colorado in Denver, he practiced at the Vail Valley Medical Center as an anesthesiologist between 2004 and 2011. Between December 2011 and the present, he moved his practice to Denver and completed a one-year fellowship in Interventional Pain Management at the University of Colorado-Denver.



**DR. ANDRE TERZIC**

Dr. Terzic is Director, the Mayo Clinic Center for Regenerative Medicine. Dr. Terzic pioneered regenerative medicine at Mayo Clinic, authoring over 500 publications.

Recent works include development of first-in-class products for heart repair. He is a member of Steering Committees and Data and Safety Monitoring Boards, and has been nominated to the Food and Drug Administration Advisory Committee for Pharmaceutical Science and Clinical Pharmacology. Dr. Terzic was awarded the American Heart Association Basic Research Prize "for pioneering applications of emerging technologies to advance the diagnosis and treatment of cardiovascular disorders." He trained at Universities of Paris, Belgrade, and Illinois, followed by fellowships at the French National Institutes of Health, Thomas Jefferson University, and Mayo Clinic.



**DR. ATTA BEHFAR**

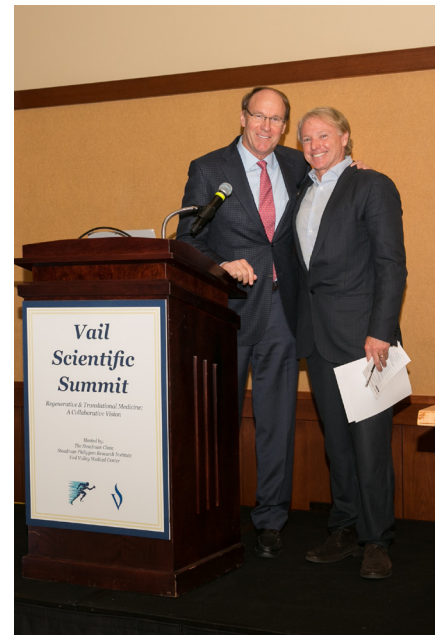
Dr. Behfar is Director of Cardiovascular Regenerative at Mayo Clinic. He grew up in Milwaukee, Wisconsin, and completed his undergraduate training at Marquette University. He attended Mayo Medical

School, earning an M.D./Ph.D. Dr. Behfar in 2006 joined the Clinician Investigator program and fellowship training in Cardiovascular Medicine and Heart Transplantation at the Mayo Graduate School of Medical Education. Dr. Behfar's research focuses on translational cardiovascular regenerative medicine. His laboratory team is working to understand the fundamental basis of heart disease and identify a new way to cure it by using cutting-edge regenerative tools. His focus is specifically the use of stem cells and non-cellular therapies to reverse injury caused by lack of blood flow to the heart.

# Vail Scientific Summit



L-R. Dr. Freddie Fu, Dan Drawbaugh, Dr. Richard Steadman, and Dr. Johnny Huard



Dr. Christopher Harner and Dr. Marc Philippon



L-R., Dan Drawbaugh, CEO of SPRI, and Mike Shannon, Chair of Vail Health Services Board, present Dr. Steadman with the commemorative plaque of the American Orthopaedic Society for Sports Medicine Hall of Fame.



Vail Scientific Summit attracts more than 120 participants.

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## KEEPING PEOPLE ACTIVE

Both The Steadman Clinic (TSC) physicians and Steadman Philippon Research Institute (SPRI) researchers and scientists are particularly well known for their belief that the body's innate healing powers can be harnessed to improve the healing process. They are committed to improving the outcomes of orthopaedic care, which in turn leads to improved overall health and enhanced quality of life. This perspective has led to pioneering advances in surgical and rehabilitation techniques involving the knee, hip, foot, ankle, shoulder, hand, wrist, and back, which have been adopted by the orthopaedics community worldwide.

The physicians at TSC and the researchers, scientists and board members of SPRI are not content to limit their dreams within the constraints of current resources. The research conducted at SPRI, which directly benefits patients around the world, is so important to the future of humankind that it warrants the attention and support of those who comprehend and value the significance of remaining physically active and living longer, better, and stronger.

We look forward to providing you with updates and especially to explaining in greater detail how this new research will help all of us stay active, stronger, and healthier, while reducing health care costs.

We express our appreciation to all of you who have been so generous and who have made it possible for the Steadman Philippon Research Institute to become a world leader. We look forward to your continued support as we pursue our mission of keeping people active through orthopaedic research and education.



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Steadman Philippon Research Institute is a tax-exempt 501 (c) (3) charitable organization dedicated to keeping people active.

*The Steadman Philippon Research Institute is dedicated to keeping people of all ages physically active through orthopaedic research and education in the areas of arthritis, healing, rehabilitation, and injury prevention.*

## IN FUTURE ISSUES:

- » Dr. Peter Millett's Career Guided by Family
- » General Pete Dawkins: A Lifetime of Service to Country
- » *The American Journal of Sports Medicine Study Examines Early Specialization in a Single Sport*
- » Meniscus Repair Study Wins International Award
- » Three Former European Visiting Scholars at SPRI Earn Ph.D. Degrees

***Your Legacy, Our Future. Please remember Steadman Philippon Research Institute in your will, trust, or other estate plan.***

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