

Stan Pappelbaum, MD, MBA

Photo: Barry Eckhaus

INSTITUTE INSIGHT

Dr. Stan Pappelbaum Named Interim Chief Executive Officer

On January 1, 2012, Stanley Pappelbaum, MD, MBA, was named Interim Chief Executive Officer of the Steadman Philippon Research Institute (SPRI). Dr. Pappelbaum brings a national reputation as a leader in healthcare planning, financing, delivery, and management with a breadth of experience, including being CEO of a healthcare system, and long standing career as a physician, management consultant, and healthcare executive. He is expected to serve until January 2013. Dr. Pappelbaum served as a consultant to the Steadman Clinic and the SPRI before assuming his duties as CEO.

In his first *SPRI News* interview, Dr. Pappelbaum comments on the status of the Steadman Philippon Research Institute and its potential going forward.

"The productivity of both the Steadman Clinic and the Steadman Philippon Research Institute is amazing, both on an absolute and relative basis. Absolute in terms of sheer numbers; relative in terms of what the Clinic and the Research Institute accomplish compared to giant

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and international high-impact conferences.

- In a typical year, more than 150 young orthopaedic surgeons apply for six available one-year sports medicine fellowships offered by the Steadman Clinic and administered by SPRI.
- SPRI's Surgical Skills Laboratory, with its array of state-of-the-art equipment and research protocols, is regarded as without peer in the specialized arena of advanced physiokinetic medical and surgical research.
- Visiting international scholars who want to study sports medicine research come to observe, assist in research, and work in our Surgical Skills Laboratory.
- Medical students, interns, and physicians who haven't begun their residencies also come to Vail to work in our labs and to gain invaluable experience.
- Some of the best amateur and professional athletes in the world come to the Steadman Clinic for treatment enhanced by SPRI's continuous research.

"Because of the Research Institute, our physicians and scientists take pride in the fact that they can continuously validate their clinical practice. Alone in the

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institutions such as Harvard, Stanford, and the Hospital for Special Surgery. The volume and quality of work here is measured not only by stringent scientific standards, but also by the respect accorded to the Institute by the wider international medical and scientific communities."

- SPRI is consistently among the leaders in the number of high-impact articles published in peer-reviewed national and international journals.
- SPRI's physicians and scientists are regularly in demand to participate as lead speakers in national

The Gift That Won't Affect Your Cash Flow

What if we could describe a way to make a gift today that –

- wouldn't affect your cash flow,
- could let you breathe a little easier in these uncertain times, and
- could make you feel good knowing you would be able to continue your commitment to the SPRI's research, treatment, and education?

We can show you how to do that just by considering a charitable bequest to the Steadman Philippon Research Institute.

Without a doubt, your current gifts are vital to our research into the causes, prevention, and treatment of orthopaedic disorders, and we thank you. But if you cannot make

as significant a gift this year as you normally would, the solution may be to move forward with a bequest to the Institute in your will or revocable trust.

This is good planning that will allow you to design your lifestyle amid uncertain times, yet know that in taking these actions, you ensure our future as a world-class organization and our opportunity to change so many lives.

How to Make Your Gift Last

You can designate a specific bequest of a sum or an asset. Many people choose to specify a percentage of the balance of the remainder of their estate after they have arranged their bequests to loved ones.

world, SPRI has a unique one-of-a-kind orthopaedic outcomes-based database with tens of thousands of entries. If we discover a new technique or method of practicing sports medicine, we can present the results of supporting research to the rest of the world, and the world can then use the new information.”

“We are a health-delivery system, but we are also a research and educational institution. SPRI conducts translational research that moves directly from the laboratory to the operating room. Thousands of people around the world are being helped because of what is being discovered here.”

NEW PROGRAMS

“Building on these accomplishments, there are opportunities for SPRI to have an even greater impact, both in terms of the significance and quantity of research activities and the expanding international benefit of our work to the worldwide medical community. We plan to add new programs and departments (injury prevention, for example), bring in additional physicians and scientists, and sharpen our focus.

“We will be applying for designation by the International Olympic Committee as an IOC Research Center for preven-

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Your bequest can be directed to an area of particular interest to you, and we encourage you to call us as you work with your attorney so we can give you the proper language to ensure your gift is directed exactly as you want. When your plans are complete, we invite you to let us know so we can make you part of our Founders Legacy Society—a group of friends of the Institute who have demonstrated their commitment to our work by giving beyond their lifetimes.

Giving can take many forms. There are other ways to remember the Institute in your plans. You can name the Institute as a beneficiary of your retirement accounts or as beneficiary/owner of a life insurance policy you no longer need. Please contact John McMurtry, Vice President, Program Advancement, at mcmurtry@sprivail.org or 970-479-5781.

American Academy of Orthopaedic Surgeons Honors Drs. Philippon, LaPrade, Millett, and Clanton with 2012 AAOS Achievement Award

Orthopaedic surgeons from the Steadman Philippon Research Institute were honored during the American Academy of Orthopaedic Surgeons (AAOS) Annual Meeting in San Francisco this past winter. The annual meeting, which brought orthopaedic surgeons from around the world together to discuss and present the latest developments surrounding orthopaedic surgery and research, took place February 7-11 at the Moscone Center.

Aside from presenting on specific topics in their specialized area of orthopaedic surgery, the following orthopedic physicians were honored with the 2012 AAOS Achievement Award:

- Dr. Marc Philippon, Orthopaedic Hip Surgeon
- Dr. Robert LaPrade, Orthopaedic Knee Surgeon
- Dr. Peter Millett, Orthopaedic Shoulder Surgeon
- Dr. Robert Clanton, Orthopaedic Foot and Ankle Surgeon

The 2012 Achievement Award is given to specific members of AAOS to thank them for their many contributions to education, research, and advocacy in orthopaedics.

Drs. Philippon and Millett serve on the Board of Directors of the Steadman Philippon Research Institute. Dr. LaPrade is Chief Research Officer, and Dr. Clanton is also a vital part of the ongoing research studies and programs that take place at the Institute.

In addition to the 2012 AAOS Achievement Award, Dr. Peter Millett was also honored with the Distinguished Service Award for Best and Most Innovative Instructional Surgical Technique for his instructional video demonstrating arthroscopic axillary nerve release for the treatment of compressive axillary nerve injuries and quadrilateral space syndrome in the shoulder.

The Annual AAOS Meeting offered a variety of presentations, discussions, and information surrounding the latest clinical studies associated with orthopaedic research. The Academy provides education and practice management services for orthopaedic surgeons and allied health professionals. The Academy also serves as an advocate for improved patient care and informs the public about the science of orthopaedics.

Founded as a not-for-profit organization in 1933, the Academy has grown from a small organization serving less than 500 members to the world's largest medical association of musculoskeletal specialists. The Academy now serves more than 34,000 members internationally.

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tion of injury and protection of athlete health. At this time, there are none in the United States. We will be the first."

NEW FACILITIES

"The Clinic and the Research Institute have entered a partnership with the town of Vail, Vail Valley Medical Center, and Howard Head Sports Medicine to build a new facility, one in which we will occupy significant space. For the first time, SPRI and the Steadman Clinic will have their own building, which will be as modern as tomorrow. It will be a place

Stanley Pappelbaum, MD, MBA: An Ongoing Career of Achievements and Contributions

Dr. Pappelbaum's expertise as a physician, management consultant and healthcare executive spans almost four decades. As a newly minted pediatric cardiologist, he taught and practiced medicine at the University of California, San Diego School of Medicine and at San Diego Rady Children's Hospital, where he was the founding chief of Pediatric Cardiology. He led the creation of a comprehensive Children's Cardiac Center serving San Diego and Imperial counties.

Subsequently he was awarded a Fellowship by the Sloan School of Management at the Massachusetts Institute of Technology, where he earned a master's degree in Management (health option) from MIT. He then became managing partner of Professional Health Consulting Group in Del Mar, California, a national company of physician executives who analyzed and managed change for complex healthcare systems throughout the United States.

Dr. Pappelbaum was then affiliated with ScrippsHealth in San Diego, California. ScrippsHealth is a five-hospital not-for-profit system with 3,000 affiliated physicians where Dr. Pappelbaum served sequentially as Chief Transformational Officer, Chief Operating Officer, and Chief Executive Officer. He currently heads SP Consulting of La Jolla, California, which advises both U.S. and international healthcare organizations with an emphasis on large, complex medical groups and biomedical research entities.

Dr. Pappelbaum is a past chair of the Medical Quality Subcommittee of the California Public Employees Retirement System (CALPERS). He is a past chair of both the National Committee on Child Health Financing and the National Council on Pediatric Practice of the American Academy of Pediatrics. He was a consultant member of the non-partisan National Leadership Commission on Healthcare in the 1980s based in Washington, D.C., and chaired by then former Presidents Nixon, Ford, and Carter.

Presently, Dr. Pappelbaum serves on the boards of several public and private healthcare companies. In addition, he volunteers for two major not-for-profit entities in San Diego County, Seacrest Retirement Villages; San Diego Center for Children, where he is chair and vice chair, respectively.

that patients, doctors, scientists, and medical professionals from all over the world will utilize. The plan is to begin construction in 2013 and to move into the new facility in 2015."

UNLIMITED POTENTIAL

"The goal of our physicians/scientists/leaders is to become the number one orthopaedic clinic and sports medicine research institute in the world. The only constraints that can prevent this from happening are lack of funds and space. With funding from an increased emphasis on individual philanthropy combined with corporate sponsorships, federal contracts, and grants, our potential for fundraising is unlimited.

"We want to express our appreciation to all of our patients and friends who have been so generous and who have made it possible for the Steadman Clinic and 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."



RESEARCH UPDATE

Department of Bio-Medical Engineering: New Name, New Research, New Recognition

As the SPRI continues to evolve, the name of the Biomechanics Research Department has been changed to the Department of BioMedical Engineering.

"Due to our recent growth and the expansion of our subdisciplines and specialized methodologies, the change is very timely," says Coen Wijdicks, Ph.D., Director of the Department and Senior Staff Scientist. "We look forward to the opportunities this change will bring, and we believe it will allow SPRI to be more competitive for grants, industry relations, and overall recognition in this exciting field of research."

The newly named Department of BioMedical Engineering includes the subdisciplines of Biomechanics, Musculoskeletal Mechanics, BioMedical Imaging, and Orthopaedic Engineering.

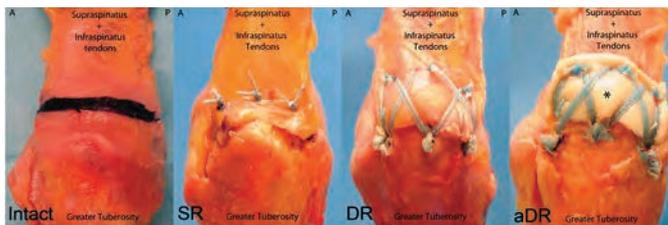
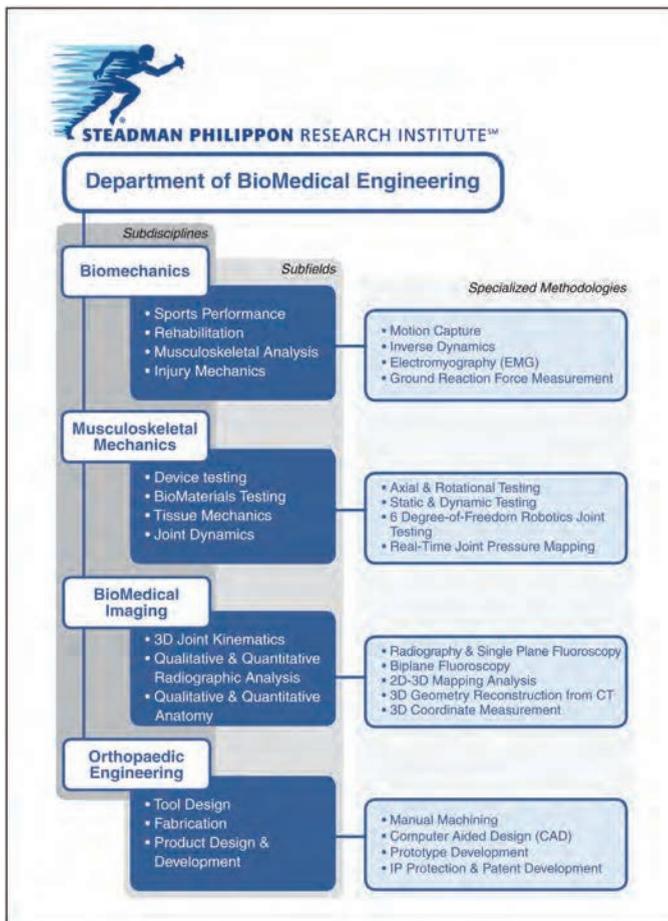
NEW ROTATOR CUFF RESEARCH

Researchers in SPRI's Department of BioMedical Engineering have recently completed its study on the best procedures for repairing massive rotator cuff tears. The results were presented at National and International Orthopaedic conferences this Spring. According to the Institute, a massive rotator cuff tear is defined as a tear greater than five cm in length or those that involve two or more rotator cuff tendons. The study concluded that double-row and augmented double-row surgical procedures yield stronger, longer lasting outcomes than traditional single-row approaches.

Rotator cuff injuries and tears are common causes of shoulder pain and weakness. Treatment for rotator cuff tears is why individuals will often see a shoulder surgeon. According to the American Academy of Orthopaedic Surgeons, more than two million people in the United States go to their primary care physician and specialty clinics because of a rotator cuff problem. Recent literature suggests that between 9 percent and 25 percent of these injuries were treated arthroscopically.

During the study, which was performed in the new biomechanical testing laboratory on the SPRI campus, 20 specimens were placed into one of four groups. Each had been treated using one of the following three rotator cuff repair procedures: a single-row rotator cuff repair, a double-row repair, or an augmented double-row repair that uses collagen bio-implants (patch) to help provide the healing tissue a secure scaffold to grow into. The fourth group consisted of examining the intact, or non-injured, condition.

In order to conclude what the best procedures for repairing massive rotator cuff tears are, scientists tested each massive rotator cuff tear repair using state-of-the-art biomechanical science



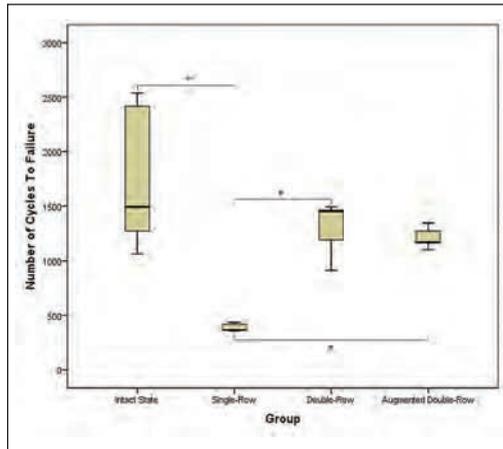
Four rotator cuff specimens, left to right: intact, single row rotator cuff repair, double row repair, and augmented double-row repair with collagen bio-implant.

technology that applies motion and pressure on each specimen. This specific testing method was used to see which technique was strongest and had the greatest long-term success. Scientists developed a unique testing protocol that simulates a typical rehabilitation regimen following massive rotator cuff tears.

According to Dr. Wijdicks, "The study sheds light on several theories surrounding the best procedures for repairing massive rotator cuff tears. Because the biomechanical tests were performed in

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Graphical representation of the testing data, showing how an intact rotator cuff compares to varying repair techniques. The double-row technique was significantly superior to the single-row technique when compared to the intact state.

real-time, we were able to visibly see how well each surgical technique performed during our testing procedure. What we found is that for massive rotator cuff tears where the double-row and the

augmented double-row techniques were used, repairs endured significantly more cycles to failure and had higher maximum load ranges than the single-row repairs and were actually as strong as healthy intact rotator cuffs."

Prior to the study, there were also concerns among orthopaedic specialists that augmentation of the repair with a collagen patch would negatively influence the overall repair quality. However, it was determined that augmentation with a collagen patch did not have any adverse biomechanical effects on the strength of the repair.

"The study offers hope for patients who suffer from massive rotator cuff injuries and will allow orthopaedic surgeons better insight and more precise surgical techniques to treat these injuries. This new information from our research efforts will ultimately translate to better outcomes for the patient," says Peter Millett, M.D., M.Sc., Director of Shoulder Surgery at the Steadman Clinic and a pioneer in the development of double-row arthroscopic rotator cuff repair surgery and rotator cuff augmentation with collagen patches.

NEW KNEE RESEARCH

Robert LaPrade, Ph.D., M.D., Chief Medical Research Officer at SPRI, and Coen Wijdicks, Ph.D., are among the co-authors of "Evaluation of a Simulated Pivot Shift Test: A Biomechanical Study," published online in the November 11, 2011, edition of *Knee Surgery, Sports Traumatology, Arthroscopy*.

Anterior cruciate ligament (ACL) reconstruction procedures have led to an increased interest in quantifying the knee's stability. The pivot shift test is a complicated, specific test of ACL deficiency. The purpose of this study was to compare different simulated pivot testing methods using 12 cadaver knees in a laboratory setting.

Dr. LaPrade, Dr. Wijdicks, and fellow researchers Lars Engebretsen and Colin Anderson concluded the combination of internal rotation (rotating the knee to-



Photo: John Kelly

The biomechanical tests were performed in real-time using the Instron ElectroPuls E1000, allowing researchers to visibly see how well each surgical technique performed during testing procedures.

Ed Reed: "Life Is More Important Than the Game I Play"

By Jim Brown, Executive Editor, *SPRI News*

When Baltimore Ravens All-Pro safety Ed Reed walked off the field after a season-ending loss to Pittsburgh in 2009, a reporter asked him if he was going to retire.

"I'm thinking about it," replied Reed. His answer sent shockwaves throughout Ravens nation, not to mention the team's front office. Reed had quietly become a superstar on a team with lots of big personalities (see Ray Lewis) and was considered one of the most feared defensive backs in the National Football League.

At every level, Ed's achievements are Hall of Fame quality. Born in St. Rose, Louisiana, near New Orleans, Reed lettered in four sports at Destrehan High

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ward the center of the body) and valgus torques (bending or twisting outward) best recreated the movement that occurs in the pivot shift test in a laboratory environment.

NEW AUDIENCE

Travelers who fly on Delta Airlines and who read Delta's in-flight magazine, *SKY*, recently got some helpful advice from a variety of sports science experts, including SPRI's Dr. Coen Wijdicks. Among the eight tips for avoiding injuries was one provided by Dr. Wijdicks: "Catch injuries the first time. A seemingly innocuous twist of the knee could require the usual RICE treatment (rest, ice, compression, elevation), or a lot more. An acute injury that's not treated properly can turn chronic and lead to joint instability and cartilage damage. The most common risk factor for injuries is a prior injury."



(AP photo/Gail Burton)

Baltimore Ravens free safety Ed Reed leaves New York Jets defensive back Isaiah Trufant on the ground as he carries the ball during the second half of an NFL football game in Baltimore, Sunday, Oct. 2, 2011.

Life After Football

Ed Reed was raised in south Louisiana, spent four years in Florida, plays football in Maryland, and lives in Georgia during the off-season. In Louisiana, the major topics of conversation when you go out to eat are: (1) restaurant meals that you have had in the past, and (2) restaurant meals that you plan to have in the future.

"Of all the places you have visited or lived, which has the best food?" we asked.

"South Louisiana, all day long," Ed responded, laughing and not hesitating.

Ed has taken his interest in a healthy lifestyle and Louisiana food—two terms that have never been used in the same sentence—to the consumer food market. He has teamed with Roma Gourmet Sausage of Baltimore (romagourmet.com) to produce Ed Reed's Chicken Sausage. It has 50 percent less sodium and 20 percent less fat, and it comes in four varieties.

In addition to his business interests, Ed has established the "Eye of the Hurricane" Foundation (Edreedfoundation.org). It is a nonprofit charity focused on helping, improving, and expanding the lives of young people. The foundation conducts charity events and football camps, and it provides scholarships, Christmas gifts, school supplies, and athletic equipment for children of lesser means.

"We want to share the life experiences I've had and point these children in the right direction," says Ed.

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School. He was an All-District pitcher in baseball, a star in basketball, a state champion in the javelin, and an All-State defensive back and kick returner in football. He has been inducted into the Destrehan High School Athletic Hall of Fame.

At the University of Miami, he was a two-time All American, Football News National Defensive Player of Year, and leader of a team that won the national championship in 2001. He was also All Big East in the javelin. A year earlier, he chose not to make himself available for the NFL draft and, instead, returned to

Miami to earn a degree in liberal arts. Ed was inducted into the University of Miami Sports Hall of Fame in March 2012.

Ed was a first round pick of the Baltimore Ravens in the 2002 draft. He was named the NFL's Defensive Player of the Year in 2004, and had begun what would become a string of eight Pro Bowl appearances.

Troy Polamalu, the rock star safety for Pittsburgh, told the *New York Times*, "We all learn from each other, but we learn the most from Ed Reed."

Ravens fans sometimes refer to Reed as "ballhawk" because of his uncanny

Arthroscopic Labral Reconstruction Procedure Shows Promise in Professional Athletes

Source: SPRI, The Center for Outcomes-based Orthopaedic Research

Femoroacetabular impingement (FAI) is an increasingly well-recognized cause of hip pain that results in damage to the acetabular labrum. The acetabular labrum is a ring of cartilage-like tissue that is attached to the outer edge of the hip socket. The labrum is essential for normal hip function, stability, and the life of the joint's cartilage.

Tears of the labrum in the hip are often associated with a traumatic injury, such as those commonly seen in contact sports such as football. FAI is caused by abnormal bony shape, such as in the cam and pincer lesions. The cam lesion is a bony overgrowth on the top of the hip bone and the pincer is extra bone on the pelvis; they frequently exist simultaneously in the same hip. Both lead to excessive rubbing and tearing of the labrum and cartilage during movement, and especially during the repetitive movements that elites must perform to reach the high levels of expertise of their sport. Athletes, therefore, have even higher requirements of their hip joints and truly need the labrum to be intact. Additionally, tears to this tissue can lead to earlier development of osteoarthritis, particularly in the athlete.

Most basic tears of the labrum can be repaired by anchoring it back to the rim of the hip socket. However, the patient with an irreparable labrum, one that is too small or degenerated from repetitive friction or trauma, presents a difficult clinical problem. Athletes with significant pain often present in this situation with severe labral damage.

Now, for these patients, Dr. Philippon has pioneered a new technique to reconstruct the labrum from a piece of tissue taken from the patient's own leg. There have been good results so far in a less active patient population, and there is interest in the success of this reconstruction procedure in a group of high-level and professional athletes. Clinical researchers collected both outcomes scores and the quality of play via pre- and postoperative statistics of these athletes who returned to play.

Out of this group, half had previous surgery on the same hip for their symptoms. After their reconstruction procedure, two of the older athletes eventually went on to total hip replacements due to arthritis. All of the outcomes scored measured improved, particularly the modified Harris Hip score and the Hip Outcome Score, Sports activity subsection. These increased by 17 and 21 points, respectively. Eighty-six percent of the players returned to professional sports, and all but one of these successfully returned to the same elite level of play. One other patient returned to the practice field with his professional team but did not get into any games.

Seventy-one percent of professional soccer players, 75 percent of American football players, and all of the ice hockey players returned to a similar level of play following surgery. Additionally, the majority of these patients expressed high satisfaction with the outcome of their procedure and their ability to participate in their sport.

Thus, the arthroscopic labral reconstruction procedure has had good results in both a regular and an elite athlete patient population. It can provide a new option to athletes experiencing limitations from their hip symptoms that allows them to continue their careers, and not to retire and undergo a hip replacement. This study was funded by a grant to the Institute from Smith & Nephew.

ability to manufacture turnovers with interceptions, forced fumbles, fumble recoveries, and even steals.

BACK TO 2009

So now we're back to 2009 and Ed Reed is thinking about retiring?

"I really wasn't thinking about quitting," remembers Reed. "Emotions were high after that game, and I was worn down. It was more a case of re-assessing my position, physically, mentally, and professionally. Life is more important than the game I play."

The 2009 season had been difficult for Reed. "On the first play of the season, I had a slight stinger on my left side. On the next play, I stopped the run and felt it again. I played the rest of the game, the rest of the regular season, and into the playoffs, and probably made it worse."

Reed got a diagnosis of the hip injury after the season but thought he needed a second opinion. His agent told him about an orthopaedic surgeon named Marc Philippon at the Steadman Clinic and Steadman Philippon Research Institute in Vail.

Reed didn't agree to schedule an appointment immediately. As he had done throughout his athletic career, he began to do his homework—this time on one of the world's foremost hip surgeons. One writer said of Reed's meticulous preparation, "He has extraordinary athletic gifts married with a gym rat's devotion to hours of film study."

"Once I did the research and talked with my doctor," says Reed, "I knew I was making the right decision. Dr. Philippon is a great man, very smart, and very cool to be around. He was clear on what needed to be done and I felt that he was recommending the best thing for my situation."

On May 3, 2010, Dr. Philippon performed surgery to repair a torn labrum in Reed's left hip. Dr. Philippon is internationally known for performing

joint preservation procedures utilizing arthroscopic techniques and for specializing in procedures to repair labral tears. He used techniques in Reed's procedure developed and refined through years of research conducted at the Steadman Philippon Research Institute.

Ed spent the next month in Vail at his own expense, staying in contact with Dr. Philippon and the Steadman Clinic staff and doing rehab at Howard Head Sports Medicine.

THE RIGHT PEOPLE

"I went into the experience with confidence, knowing that the people who were going to put their hands on me were the right people. That was something off my shoulders real fast. And they exceeded everything I thought would happen. I listened to them and did exactly what they told me to do. They even worked with my doctor back in Georgia after I returned from Vail. They still stay in touch."

Ed feels strongly about the work of the Steadman Clinic, the Steadman Philippon Research Institute, and physical therapists and trainers at Howard Head Sports Medicine. "If there was a league for treating sports injuries above the NFL level in football, Steadman Philippon would be it. They have the most elite group of doctors I've ever seen."

Following his surgery, he returned to play most of the 2010 season and all of the season in 2011. After the last game, he got the same question that had been asked in 2009, but from a different person.

"Are you going to retire?" asked Ravens' head coach John Harbaugh.

"I have one more year in me," answered Ed.

Watch for him when the 2012 NFL season opens in September. He's number 20 and he'll be the Ravens' safety for the 11th consecutive year. He's something to see.



“The most satisfying aspects of my job are being able to aid surgeons with a hands-on learning experience and to watch them work with Steadman Philippon Fellows on new techniques and devices.”

MEET OUR STAFF

Kelly Adair: Guiding the Vision of SPRI's Surgical Skills Laboratory

By Jim Brown, Executive Editor, *SPRI News*

They come to Vail, without fanfare, from all over the world, and they are not there to ski. They are surgeons, scientists, fellows, scholars, and medical professionals who disappear into the Steadman Philippon Research Institute's Surgical Skills Laboratory.

When they emerge a day or two later, or longer, they will have completed intensive courses that allow them to advance their knowledge of orthopaedic surgery, master their surgical skills, and test products that may change the course of treatment for millions of patients.

The person who coordinates these conferences from start to finish is Kelly

Adair, Director of the Surgical Skills Laboratory. He has been on track to assume a position of this magnitude since his college days, when he earned a degree in Integrative Physiology (pre-med) at the University of Colorado Boulder.

“I worked as a personal trainer while in school fulltime and had considered becoming a doctor or a physical therapist (DPT),” says Adair. “I changed my mind, but I was still passionate about health, wellness, and movement. I worked for a start-up before it was sold, then became a sales representative for a medical device company.”

Kelly spent 90 percent of his time in the operating room, working with doctors, nurses, and technicians. Then he was approached about a position to set up, market, and manage the day-to-day operations of a new surgical skills laboratory at SPRI. Kelly was very interested.

ON THE FRONTIER OF PREVENTIVE MEDICINE

“I was aware of Steadman Philippon and its reputation as an orthopaedic research center of excellence,” he says, “but what really caught my attention was the Institute's role in advancing the prevention of sports injuries. SPRI was already on the edge of that new frontier, and I am extremely fortunate to get the opportunity to be a part of the process.”

The Surgical Skills Laboratory opened in February 2011 and has been described as one of the most advanced facilities of its kind in North America. It houses 10 state-of-the-art arthroscopic wet-lab stations and drop-down panels for each station that contain water, suction, electricity, and audio-visual systems. The system makes it possible for participants to view demonstrations on monitors within the lab, conference rooms, and dissection area. There are 10 video towers, freezer storage space, a steam generator for instrument cleaning, fume hoods for ventilation, handheld instruments, teleconference capabilities, and three conference rooms.

“The lab gives physicians the unique opportunity to practice both arthroscopic and open sports medicine procedures



Kelly Adair

Photo: Barry Eckhaus

on cadaveric specimens," explains Adair. "The most satisfying aspects of my job are being able to aid surgeons with a hands-on learning experience and to watch them work with Steadman Philippon Fellows on new techniques and devices."

As many as 60-80 surgeons have rotated through the lab's 1,500-square-foot facilities at one time, some listening to lectures, others in the lab practicing new techniques. Among the first companies to take advantage of the Surgical Skills Laboratory are Smith & Nephew, Arthrex, Conmed/Linvatec, Small Bone Innovations, Stryker, KFx, Memometal, Wright Medical, Sonoma Orthopedics, and BioMet Sports Medicine.

"Each session is a challenge for me," he adds. "Instrumentation and surgical procedures are always changing, always evolving. To do the best job I can, I need to be familiar with those changes."

Adair is also charged with marketing the services of the SPRI Surgical Skills Laboratory to the rest of the world. He produces print, video, and online presentations (<http://www.sprivail.org/surgical-skills-laboratory>), and he uses his experience in medical sales to communicate with national and international medical groups, associations, and companies.

ABOVE AND BEYOND

"At SPRI, we want to go above and beyond the services provided by other labs. With the help of my colleagues, surgeons can walk in and start practicing immediately. Everything has been set up for them in advance, which gives them more practice time and a more productive lab experience. It's a feature that sets our lab apart from others. The more surgeons get to fine-tune their skills with new products, techniques, and procedures, the more they will be able to serve the medical community and its patients," says Adair.

On his role as the first Director of the Surgical Skills Laboratory: "It's an honor and an opportunity of a lifetime to be part of such a unique and talented team."



Frank Martetschläger, M.D.

EDUCATION

German Physician Frank Martetschläger Named 2011-2012 Arthrex European Visiting Scholar

By Jim Brown, Executive Editor, *SPRI News*

After six years of medical school at the University of Würzburg in Germany and six more years as a resident at hospitals in Mannheim, Heidelberg, and Munich, Dr. Frank Martetschläger was on schedule to begin his career as a physician. Then a series of events occurred that changed the direction of his medical education.

Early in 2011, he was in Vail to ski with friends, but he was also able to visit the Steadman Clinic and the Steadman Philippon Research Institute. "I knew about the Clinic and the Research Institute because many of the European soccer players who had been injured were sent to Vail for treatment. I also knew two physicians in Germany who had spent time at Steadman Philippon, and they had nothing but good things to say about it."

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Photo: John Kelly

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DEVELOPING CLINICAL SKILLS AND RESEARCH CAPABILITIES

“When I saw the facilities and met Dr. Peter Millett and others at the Institute, I was really impressed with the people, the facilities, and the opportunities for developing clinical skills, as well as engaging in research.”

By the time Dr. Martetschläger returned to Germany, the AGA-Society for Arthroscopy and Joint Surgery and SPRI were in the process of selecting the next Arthrex European Visiting Scholar. Arthrex, Inc., is an orthopaedic medical

device company committed to research and advancing knowledge of the world’s medical community.

Dr. Martetschläger applied for the Visiting Scholar position and in May 2011 was notified by the Society that he had been selected as the recipient over other orthopaedic surgeons from throughout Europe.

“I was very excited going there for a year, working with Dr. Millett, who is one of the most famous and best shoulder surgeons in the world,” he remembers. Four months later, he began his one-year term at Steadman Philippon.

FIRST IMPRESSIONS

“My first impressions of the Clinic, the Research Institute, and Vail were very positive,” says Dr. Martetschläger. “I was given a warm welcome by Dr. Millett and his wife Sarah, as well as the whole Steadman Clinic and SPRI team, and felt at home very quickly. I could not have imagined that Vail was such a great place to be in the summer. I’m a passionate skier, but in August and September I enjoyed hiking in the mountains and using my mountain bike.”

Weekdays at SPRI, however, are not about skiing, hiking, and mountain biking. Like other visiting scholars, he is usually at work by 7a.m., ready to put in a day that might last 10-12 hours. Assisting Dr. Millett, he sees patients, observes and assists in the operating room, conducts clinical and biomechanical research, and writes scientific papers.

Dr. Martetschläger and Dr. Millett are conducting research to determine the best technique for stabilizing a shoulder that has been injured. He hopes to complete the research before he returns to Germany and, with others on the SPRI research team, to submit it for publication.

“We at SPRI are looking forward to the excellent research that Dr. Martetschläger has proposed to complete during his scholarship year. Early results have shown some promising

results that pertain to labral repairs of the shoulder,” says Coen Wijdicks, Ph.D., Director of the Biomechanics Research Department.

“It’s a perfect situation here,” says Dr. Martetschläger. “We have the Clinic, Howard Head Sports Medicine, and the Research Institute all in the same place. At home, we have to do our research separately from our regular duties, and that makes it much more difficult.”

MONDAY MORNING MEETINGS

“All of the physicians, fellows, and visiting scholars, including Dr. Steadman, attend Monday morning to discuss their work and ongoing research. You’ve grown up hearing about Dr. Steadman and his knowledge of surgery and biomechanics, then one day you are in the same room talking with him.”

“Dr. Steadman, Dr. Millett, and the other physicians and scientists are always available to talk with you and answer any questions. They are the same way with patients. Whether they have the time or not, they take time to sit down and talk with each person.”

LIFE-CHANGING EXPERIENCE

“The time that I am spending here will change my personal and professional life,” says Dr. Martetschläger. “It is one of the special years in my life and I am grateful to the Institute and to Dr. Millett for making it possible.

“I would tell anyone who suffers an injury or who has an orthopaedic condition that requires medical attention to consider coming here. Trust these men and women. They really know what they are doing, based on the latest research.

“For those who might consider supporting the work of the Research Institute,” Dr. Martetschläger concludes, “I can tell them that their money is not wasted. It is used for research that makes surgical outcomes better and that helps keeping people active. It would be a great investment.”



Youth Sports Injuries on the Rise, Warns Institute Physician Peter J. Millett

By Kristy Theis

According to Dr. Peter J. Millett, pushing your child in sports too young and too hard may cause injuries that last a lifetime.

If you saw the movie “Black Swan” in theaters, then you may have felt sorry for Natalie Portman’s character, “Nina,” a world-class ballerina who was chosen for the perfect role. While beautiful, graceful, and outstandingly flexible, she was an astonishing example of just how far the human body can go and how much one will endure to win.

While this example may seem extreme, it is not uncommon. From football to soccer, swimming to hockey, baseball to ballet, sports—and the young athletes who train hard to win at them—have taken the word “compete” to an all-new level.

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Photo: John Kelly



Photo: John Kelly

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HOW DOES IT GET TO THAT EXTREME LEVEL?

For the most part, parents are typically happy enough to have their kids running around in the sunshine having fun with their friends and getting some physical activity. This is the reason millions of parents sign their kids up for sports each year.

Let's face it, sports are excellent vehicles for kids to develop coordination and healthy lifestyle habits and to learn teamwork. The U.S. Centers for Disease Control and Prevention states that nearly 30 million children and adolescents participate in youth sports in the United States each year. However, orthopaedic specialists are heeding some serious warnings about youth sports injuries for all die-hards.

Dr. Peter J. Millett, who serves on the Board of SPRI says, "The children who exhibit special talents and who excel at certain sports are the ones who will be in for a long ride. While winning is a principal goal for all athletes, staying healthy ultimately becomes more important. Unfortunately, the harder and more intense

the competition, the longer the hours and the more time spent training, the greater the risk for significant injury—particularly from overuse injuries!"

SPORTS INJURIES AMONG OUR YOUTH

According to the Sports Trauma Overuse and Prevention (STOP) campaign, youth sports injuries have reached epidemic heights. It is estimated that more than 3.5 million kids under the age of 14 receive medical treatment for sports injuries each year, a large majority of which are caused by overuse.

"There are many reasons why our young athletes sustain injuries," says Dr. Millett. "For one, children aren't completely finished growing until after puberty. Until that time, their tendons, ligaments, muscles, and bones are still growing and changing and are therefore vulnerable to injury."

As an internationally known sports medicine doctor, Dr. Millett routinely treats professional athletes and Olympians, as well as weekend warriors, who come to Colorado from around the world to be treated for acute injuries sustained during competition. Many

chronic conditions that he sees are the result of old sports injuries sustained many years earlier.

Some young athletes show signs of joint damage from years of training, overuse, and wear and tear, particularly those who have not had adequate rest between seasons. The orthopaedic specialists at the Steadman Clinic see overuse and traumatic injuries to the knee, spine, hip, hand and ankle, as well.

SPORTS WITH THE MOST RISK

While no sport is spared from overuse injuries, baseball is a prime example of how childhood injuries can lead to problems later in life. According to Medco Sports Medicine, a supplier of sports-related medical products, injuries in professional and collegiate baseball players frequently result from years of overuse and repetitive motion. Elbow and shoulder injuries are at the top of the list.

A recent study of collegiate males in the United States reported that 15 percent of the athletes who had pitched in youth baseball had pain, tenderness, or limited motion that compromised their ability to throw.

Similar stories can be associated with the hip. Alex Rodriguez, third baseman for the New York Yankees, suffered from a damaged hip in 2009, a condition that was most likely the result of years of strenuous twisting, rotating and overuse, starting very early in youth sports.

Aside from baseball, other examples of sports injuries suffered by our youth include:

- Football players risk injury to almost every body part from dislocated shoulders and collarbones to torn ACLs and fractures.
- Gymnasts place the spine, wrists and ankles at incredible risk.
- Basketball players are susceptible to overhead injuries involving the shoulder that can lead to shoulder instability as well as foot and ankle problems such as chronic ankle sprains.

It is crucial that all athletes understand how to protect themselves while playing sports and follow the recommended safety guidelines when it comes to stretching, therapy, and wearing protective devices and guards.

- Golfers commonly have injuries involving hip rotation and tear in the rotator cuff tendons of the shoulder.
- Soccer players most often experience knee injuries involving the ACL, MCL, and/or meniscus.

According to Dr. Millett, acute traumatic youth sports injuries are also common. "Two-thirds of these injuries occur in practice, not in games," he explained, "because only one-third of parents and coaches employ the same set of safety regulations for a practice setting. This is a perfect opportunity for us to intervene and make practice safer."

Sprains, ligament tears, and fractures are some of the more common traumatic injuries. "Later in life, degenerative conditions associated with injury and years of training become a large burden on many athletes who are long past their sporting careers. I've seen the early stages of arthritis in many of my young patients, and it only gets worse with age. It is crucial that all athletes understand how to protect themselves while playing sports and follow the recommended safety guidelines when it comes to stretching, therapy, and wearing protective devices and guards.

"But most importantly," says Dr. Millett, "knowing when to take a break and when to rest seems to be one of the most overlooked points of all. Rest is an important factor that, in and of itself, can help save the joints of many of our young athletes for years and years to come."



(Steadman Philippon Update, continued from page 3)

Institute Designated as International Teaching Center

The International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine (ISAKOS) and the International Cartilage Repair Society (ICRS) recently designated the Institute as a center for teaching excellence.

An ICRS teaching center is recommended for unique one-on-one learning experiences and practical advice from the world's leading experts on current state-of-the-art cartilage repair surgical techniques, patient evaluation, and non-operative treatment of cartilage injury. These sites also serve as outstanding professional development experiences for fellows, residents, and students interested in improving their practical skills in this field.

ISAKOS teaching centers have been approved to host physicians who request further training and/or exposure to arthroscopy, knee surgery, and orthopaedic sports medicine.

ISAKOS is an international society of surgeons established to advance the worldwide exchange and dissemination of education, research, and patient care in arthroscopy, knee surgery, and orthopaedic sports medicine.

ICRS is a forum for international collaboration in cartilage tissue research by bringing together basic scientists and clinical researchers engaged or interested in the field of cartilage biology and tissue engineering.



Arthroscopy Journal Recognizes Study on Femoroacetabular Impingement by Dr. Marc Philippon

Dr. Marc Philippon, Todd Johnston, Karen Briggs and Mara Schenker recently received a certificate of commendation from *Arthroscopy — The Journal of Arthroscopic and Related Surgery* for their research study on femoroacetabular impingement. According to *Arthroscopy*, Dr. Philippon's orthopaedic research, "Relationship Between Offset Angle Alpha and Hip Chondral Injury in Femoroacetabular Impingement," was one of the top ten most-cited articles for 2008-2011.

"The editors wish to thank the authors and extend their appreciation for this outstanding scientific work that is among the top ten recent articles in number of citations."

Arthroscopy is the leading peer-reviewed journal in the field. Every issue enables the reader to put into perspective the usefulness of the various emerging arthroscopic techniques. *Arthroscopy* is ranked 3rd of 61 journals in Orthopaedics category on the 2010 Journal Citation Reports®, published by Thomson Reuters, and has an Impact Factor of 3.317.



Dr. Marc Philippon's "Hip Arthroscopy for Femoroacetabular Impingement in Patients Aged 50 Years or Older" Tops Week's January 3 – January 10 Best Articles

According to MD Linx Orthopedics, Dr. Marc Philippon's study, "Hip Arthroscopy for Femoroacetabular Impingement in Patients Aged 50 Years or Older," was at the top of the list of the week's best articles published in *Arthroscopy* for January 3 - January 10.



Journal Ranks Dr. LaPrade's Research on Posterolateral Knee Injuries "Top 10" in 2011

The lead editor, Vernon Tulo, M.D., for the *Journal of Bone and Joint Surgery (JBJS)*, considered the premier orthopaedic surgery journal, has chosen the "Top Ten" Editor's choice peer-reviewed publications for 2011. Of these ten high-level articles, only one was a sports medicine publication, and it was ranked #9. The article was by Andrew Geeslin MD and Robert F. LaPrade MD, PhD, in the September 21, 2011 JBJS issue on "**Outcomes of Treatment of Acute Grade-III Isolated and Combined Posterolateral Knee Injuries: A Prospective Case Series and Surgical Technique.**"

This article was chosen from several hundred peer-reviewed publications in the *Journal of Bone and Joint Surgery* for 2011.





Photo: John Kelly

Dr. Marc Philippon (left) and Dr. Richard Steadman.

Orthopaedic Surgeons Meet in Vail to Learn the Latest Advancements Surrounding Arthroscopic Hip Surgery

The SPRI host worldwide symposium

The 7th Annual Vail Hip Arthroscopy Symposium took place March 15-17 at the Vail Cascade Resort in Vail, Colorado. Dr. Marc Philippon served as the course chairman. More than 200 orthopaedic surgeons and medical professionals from the U.S., China, and around the globe, along with faculty from five different countries, gathered for the conference to hear lectures from world leaders in hip arthroscopy and to learn the latest techniques associated with arthroscopic hip surgery.

Keynote speakers during the event included Dr. Richard Villar from London, who presented on the history of hip arthroscopy, and Dr. Richard Steadman from Vail who discussed the development and validation of the microfracture technique. Dr. Steadman initially developed the microfracture technique for the knee and it is now being performed in the elbow, shoulder, foot, ankle, and hip joints. Dr. Martin Beck of Switzerland gave a keynote lecture on the history of femoroacetabular impingement in the hip.

Dr. Philippon and faculty members gave over 40 presentations during the two-day meeting. At the top of the agenda were presentations on selecting which patients would benefit best from hip arthroscopy. In addition, Dr. Philippon, who is a pioneer in arthroscopic hip surgery, addressed the group on surgical techniques for treating labral tears, impingement, and labral reconstruction. He provided infor-

mation on patient outcomes and highlighted how the advancement of arthroscopy is creating positive results in athletes who sustain serious hip injuries. Karen Briggs, Director of The Center for Outcomes-based Orthopaedic Research at SPRI, presented the Vail Hip Score—a system of measuring patient outcomes following arthroscopic hip surgery. Many other topics, including new techniques for complicated injuries in the hip such as hip dislocation, and injuries to the tendons surrounding the hip, were discussed.

Representatives from Smith & Nephew, a global medical technology company dedicated to helping improve people's lives through advanced products developed for orthopaedic surgery, wound management, and sports medicine, were on hand to participate in the event.

"At Smith & Nephew, we have a strong surgeon training heritage and focus. A cornerstone of this focus has been the opportunity to work with world-renowned surgeons such as Dr. Philippon, and leading institutions such as Steadman Philippon Research Institute, to provide surgeons with state-of-the-art training, tools, and techniques needed to support their continued learning," said John Mahoney, Group Director of Medical Education for Smith & Nephew.

"If surgeons are to meet the demands created by new standards and technologies such as those used in hip arthroscopy, their professional development must be ongoing and substantive. That is what makes this hip course so valuable for the participants from around the world who came to the Institute to learn the latest techniques and concepts in treatment of hip pathologies," Mahoney continued.

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According to Dr. Philippon, "Science continues to progress and the results of these studies greatly impact how we repair serious and degenerative hip-related injuries. The insights gained from the meeting will continue to lead us into new areas of research initiatives as we strive to continue to find new techniques that will ultimately improve patient outcomes."



Orthopaedic Researchers From Around the World Meet in Vail to Discuss the Latest Advancements in Stem Cell, PRP and Growth Factor Therapy, and Biologic Scaffolds for the Treatment of Sports-Related Injuries

SPRI leads new initiatives into ongoing research studies associated with platelet-rich plasma therapy to stimulate healing

Orthopaedic surgeons and research scientists from the Steadman Philippon Research Institute in Vail recently met with various leaders in the field to discuss how their medical community is advancing

the use of platelet-rich plasma therapy (PRP), growth factors, and stem cells to heal sports-related injuries.

The "Biologic Treatments for Sports Injuries" Symposium took place March 3-4 in Vail. Dr. Robert LaPrade, orthopaedic knee surgeon with the Steadman Clinic and the Chief Medical Research officer for the Steadman Philippon Research Institute, served as the Co-Chair and local host to more than 30 orthopaedic and sports medicine professionals from Cornell, Colorado State University, Harvard, Pittsburgh, Duke, and Stanford, as well as abroad from Canada, the U.K., and Norway.

The purpose of the symposium, which was the first ever of its kind among orthopaedic surgeons, was to discuss the present state of tissue healing through the use of stem cells and applied growth factors such as PRP. While researchers agree that the science behind PRP offers a natural healing process for biologically compromised tissues, the group also presented valid obstacles in research and discussed areas that needed to be improved so that critical advancements could be made in order to make this treatment a more realistic option at the clinical level to treat patients with injury.

Throughout the weekend, researchers presented topics on a variety of issues relating to PRP and concluded that while the orthopaedic industry believes the use of these growth factors can improve the repair process and possibly shorten the healing and recovery period, there is still an overall lack of research that has been concluded to offer this treatment on a higher, more mainstream level.





According to Dr. Robert LaPrade, “While science has progressed greatly in the past decade offering significant promise in the area of PRP, stem cells, and growth factors, future studies and additional research are needed so that we can take what we are learning at the scientific level and turn these into realistic, credible treatment recommendations for patients who are under the care of their orthopaedic physician.”

The meeting ended with a new agenda in the area of PRP exploration, including a collective effort to expand ongoing studies through new grants and research initiatives in order to solve the questions presented during the symposium.



Institute Scientists Meet Leading International Hip Authorities in Paris to Discuss the Latest Advancements and Techniques.

Researchers from the Steadman Philippon Research Institute (SPRI) joined more than 40 hip experts last fall for the 3rd Annual International Society for

Hip Arthroscopy (ISHA) Scientific Meeting in Paris, France. The two-day meeting, which took place mid-October, was sponsored by ISHA and included a variety of symposia, lectures, debates, and paper presentations specifically related to advancements in hip arthroscopic surgery.

Dr. Marc Philippon, Director of Hip Research at SPRI, is a founding member of ISHA. He participated in two debates, one on advanced hip arthroscopy and labral reconstruction, and another on treatment of the iliopsoas. The labrum is what makes a seal between the pelvis and the femur at the hip. The iliopsoas is an area within the hip consisting of a combination of three muscles that control hip flexion.

A variety of other hip-related topics took place during the weekend. Karen Briggs, Director of The Center for Outcomes-based Orthopaedic Research at SPRI, presented studies on patient outcomes following hip arthroscopy in the adult dysplastic hip, as well as the prevalence of abnormal hip findings in subjects with no hip pain. She also participated in a panel discussion detailing patient outcomes and presented data on the Vail Hip Score.

Dr. William Rodkey, SPRI’s Director for Translational and Regenerative Medicine Research, presented

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(Steadman Philippon Update, continued from page 19)

his paper, *Bone Marrow-Derived Culture-Expanded Mesenchymal Stem Cells in Conjunction with Microfracture to Treat Chondral Lesions in an Equine Model*.

Dr. Philippon joined 11 other orthopaedic surgeons to formally establish ISHA in Paris in May 2008. The society's role is to be the premier international society for education and research in arthroscopic hip surgery. ISHA's Founding Members represent the many individuals around the world who are interested in this evolving area of hip surgery and research. Dr. Philippon serves on the executive committee as research secretary.



SPRI Scientists Mentor Students to Top Honors in Regional Science Fair

Provided guidance and support during their journey from the classroom to the laboratory

Vail, Colorado seventh-grader Sydney Sappenfield, a student at Vail Mountain School, recently took home the gold medal in the regional state science fair. The Annual Meeting of the Colorado Wyoming Junior Academy of Science was held Friday, April 27, at the University of Northern Colorado in Greeley. After receiving special guidance from scientists at the Steadman Philippon Research Institute, Sappenfield, along with several other classmates, won prizes for Most Scientific and Best Overall at their school science fair in February, and were among more than 100 seventh- and eighth-grade students from across the state chosen to compete in Greeley.

In February, Coen A. Wijdicks, Ph.D., Director of the Department of BioMedical Engineering and Senior Staff Scientist at SPRI, visited Vail Mountain School and attended the science fair with Kyle Jansson and Mary Goldsmith. During their visit, they offered suggestions to students on how to create experiments that would yield the most meaningful data and provide applicable conclusions. Just prior to the science fair, a self-selected group of students traveled to the Institute, where they had the opportunity to observe how researchers there use the scientific method in their work.

SPRI is known worldwide for the research and development of new procedures and techniques in the advancement of orthopaedic medicine. Similar to real scientific laboratories on the SPRI campus, students who participated in the science fair provided a hypothesis, performed experiments, analyzed data, and drew conclusions.

Winners included Sappenfield for her work on tendon graft strength commonly used for ACL reconstruction, as well as Nicholas Charles and Paco Holguin (silver medals), and Dylan Cunningham (bronze medal). The team of students met regularly

following the February fair to create a slideshow presentation and prepare themselves for the regional competition. Each student walked away with various awards and honors during that competition.

Mr. Falk, who accompanied the students to Greeley, along with Mr. Ross Sappenfield, Science Department Chair and Upper School Science Teacher for VMS, commented, "The students did a terrific job presenting their projects at this high level of competition. They were wonderful ambassadors for Vail Mountain School and are congratulated on their fine efforts."

For students who have a passion for science, the annual science fair provides an opportunity to be creative and resourceful, and it unleashes the hidden

talents that help produce original and imaginative projects.

According to Coen Wijdicks, "Our young scientists hold the key to the future. Science fairs across the country allow students to exercise the resources they learn in their science classes and apply these methods and techniques to various topics and experiments. It was very rewarding mentoring the students and working with them on ways to better understand the dynamics behind producing an authentic experiment."

If your school is interested in taking a tour of the SPRI science laboratories, or if you would like to coordinate a speaker, visit the Steadman Philippon Research Institute for more information: <http://sprivail.org>.



From left to right: Kyle Jansson, B.S., Senior Mechanical Engineer (SPRI); Sydney Sappenfield, Student at Vail Mountain School, Gold Medal Winner; Coen Wijdicks, Ph.D., Director of the Department of BioMedical Engineering and Senior Staff Scientist (SPRI).



Students from Vail Mountain School posed with their science fair award certificates.

FREQUENTLY ASKED QUESTIONS

WHAT IS AN EXAMPLE OF A LEADING ADVANCEMENT MADE BY THE INSTITUTE?

Microfracture – Developed by Dr. Richard Steadman, the procedure repairs articular cartilage by creating tiny fractures in the underlying bone, causing new cartilage to develop from a so-called “super-clot.” If Dr. Steadman had never published his findings, it is estimated that he would have had an effect on 3,500 patients. But because SPRI collected the data, published the results that were further validated by a third party, and continues to conduct extensive Basic Science research, it is estimated that more than 500,000 patients around the world are treated annually with microfracture to repair chondral defects. It has also evolved into a treatment for other joints such as the shoulder, hip, and ankle.



Steadman Philippon Golf Tournament

**THE VAIL VALLEY MEDICAL CENTER
2012 STEADMAN PHILIPPON RESEARCH
INSTITUTE GOLF CLASSIC PRESENTED
BY RE/MAX INTERNATIONAL SET FOR
AUGUST 16, 2012**

Proceeds will support the orthopaedic research and educational programs of the Steadman Philippon Research Institute.

The team event will include a shotgun start with a modified scramble. The tournament is open to the public. Sanctuary organizes and hosts charitable events to support organizations devoted to the arts, children, health care, and crisis management.

Since 2004, the Institute has raised more than \$1,100,000 from this golf tournament to support its research programs. Renowned course architect Jim Engh, Golf Digest’s first-ever “Architect of the Year” in 2003, designed the course that protects a private oasis of 220 acres,



effectively complementing the 40,000 surrounding acres of dedicated open space.

Golf Digest listed Sanctuary as the best new private course in 1997. Gary McCord, CBS golf analyst and senior PGA tour professional, has said, “Sanctuary is simply the most spectacular golf course I have ever seen.”

The Steadman Philippon Research Institute is grateful to Dave and Gail Linger, owners and co-founders of RE/MAX, LLC, who built this course and created this unique fundraising opportunity for the Institute to develop and enhance relationships with those who support our mission.

The Institute is also very grateful for the support from the Vail Valley Medical Center, which for the third year in a row is our title sponsor.

Sponsorship opportunities and team slots are available now. Get more information by visiting our website (sprivail.org) under “Upcoming Events,” or by calling the Development office at (970) 479-5781.

To request an invitation or for more information on other upcoming events, please contact John McMurtry at the Steadman Philippon Research Institute, (970) 479-5781.



Darius Rucker Headlines Summer Benefit Concert, "Rock the Research"

Capitol recording artist and country star Darius Rucker — a former patient of the Steadman Clinic — will show his support for the Steadman Philippon Research Institute (SPRI) as he returns to headline the Institute's annual summer fundraising concert for a third time.

This year's event, "Rock the Research," presented by Vail Valley Pharmacy, the Yates and Nisonoff Families, will take place Thursday, July 5th at the Gerald R. Ford Amphitheater in Vail, Colorado. All proceeds from the concert will fund new research into treatments for orthopaedic injuries and conditions—most notably in the areas of joint preservation, joint restoration and osteoarthritis research, along with some new initiatives in youth sports injury prevention.

As a follow-up to last year's sold-out event, Rucker will return to Ford Amphitheater for a live concert. Attendees may purchase lawn or pavilion seats. Those

who purchase VIP tickets will also enjoy pre-concert hors d'oeuvres and a sit-down dinner with a live auction under a canopy in the beautiful Betty Ford Garden immediately following the concert.

Last year's event was extremely successful in attracting Darius' fans from all of Vail's surrounding communities and the Denver area who were anxious for the rare opportunity to see this superstar in such an intimate venue. We are grateful to have him join us again for the third year. As a former patient of Dr. Steadman, Darius understands the important role that the Steadman Philippon Research Institute plays in validating the leading-edge treatments developed by the scientists and physicians.

To purchase tickets, please call the Gerald R. Ford Amphitheater box office at 888-920-2787 or visit www.RockTheResearch.com. Event Information will be updated on the Steadman Philippon Research Institute's website, www.sprivail.org, or you can follow them on Facebook at www.facebook.com/steadmanphilippon.

For information on the dinner and auction (includes pavilion seating for concert), please call (970) 479-5809 or e-mail info@RockTheResearch.com. Tickets for the "Rock the Research" concert and VIP event are currently on sale.



Darius Rucker

Photo: Jim Wright



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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.

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Research Associate, Lower Extremity
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Spine Research Coordinator
Mackenzie Herzog
Research Assistant
Theodore Fagrelus
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Hannah Jarvis
Intern
Diana Patterson
Intern
Casey Pierce
Intern

BIOMEDICAL ENGINEERING

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Director
J. Erik Giphart, Ph.D.
Senior Staff Scientist
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Robotics Engineer
Kyle Jansson, B.S.,
Senior Mechanical Engineer
Frank Martetschläger, M.D.
European Visiting Scholar
Lourenco Peixoto, M.D.
Brazilian Visiting Scholar
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Sean Smith
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IMAGING RESEARCH

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Director
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Rachel Surowiec
Intern

EDUCATION

Kelly Stoycheff
Coordinator

OFFICE OF INFORMATION SERVICES

Barry Eckhaus
Coordinator
Joe Kania
Coordinator

Mark Your Calendar:

JULY 5, 2012

“Rock The Research,” presented by Vail Valley Pharmacy, the Yates and Nisonoff Families Darius Rucker in Concert Gerald R. Ford Amphitheater Vail, Colo.

For more information, contact Lynda Sampson at (970) 479-5809; lsampson@sprivail.org.

AUGUST 16, 2012

Vail Valley Medical Center 2012 Steadman Philippon Research Institute Golf Classic, presented by RE/MAX International at Sanctuary, Sedalia, Colo.

For more information, contact John McMurtry at (970) 479-5781 or mcmurtry@sprivail.org.

Executive Editor:

Jim Brown, Ph.D.

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



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