



## Visiting Professor Lecture Series



**Guest Lecturer: Dr. Bruce Reider**

**July 2, 2015**

James M Friedman MD

The University of Pennsylvania Department of Orthopedic surgery was honored to welcome Dr. Bruce Reider, Professor of Orthopaedic Surgery, Emeritus, of the University of Chicago as a visiting professor this past July. A New York native, he completed his undergraduate degree at Yale University, and received his medical degree from Harvard Medical School. He subsequently completed a general surgery internship at Columbia Presbyterian Hospital and an orthopedic residency at the Hospital for special Surgery (HSS), followed by multiple fellowships at HSS, the University of Wisconsin, and Kantonspital Bruderholz. Thereafter, Dr. Reider arrived at the University of Chicago (UC) in 1981.

With over 20 book chapters, and over 40 peer-reviewed articles Dr. Reider has contributed greatly to sports medicine. In addition, he has held a number of leadership positions and has received many prestigious awards for his work. At UC he continues to serve as the head team physician for the athletic programs and was the Director of Sports Medicine for over thirty years. He is also credited with founding the sports medicine fellowship program and in 2013 received the Starkey Duncan award for his care for varsity athletes. As an active member of the AOSSM, he held the position of program chair from 1999-2000, and was president of the Herodicus Society from 2004-2005. He has also participated in multiple committees including research, education, traveling fellowship, nominating and program. In 2014 he was nominated to the AOSSM hall of fame for his invaluable contribution to sports

medicine. He continues to work as the editor-in-chief of the American Journal of Sports Medicine and as the Executive Editor of the Medical Publishing Group for the AOSSM.

Dr. Reider delivered two lectures during his visit. His first lecture focused on current philosophies of ACL repair from a historical perspective. He described the initial controversy regarding the importance of the ACL compared to other knee structures and detailed the evolution of the diagnosis of an ACL tear including physical exam and usage of MRI. He then focused on the recent increased interest in the ACL and the ongoing development of fixation strategies. He finished his talk with the conclusion that in the future better outcomes will be found in a compromise between ACL fixation and fixation of surrounding soft tissue, lending to the title of his talk: *Swings of the Pendulum*.

Dr. Reider's second talk, pulled from his experience as an editor-in-chief to discuss strategies for getting research published. He described how to organize a paper and stressed the importance of on-topic, organized paragraphs that lead to a logical conclusion. He also discussed the importance of format. Finally he discussed reasons for rejection of papers and gave great insight into both how the rejection process works and on how authors can best respond to rejection.

The University of Pennsylvania Department of Orthopedics was honored to have Dr. Bruce Reider as a visiting professor on July 2<sup>nd</sup>, 2015.

# Guest Lecturer: Dr. Stephen Kates

## July 22, 2015

James M Friedman MD

The University of Pennsylvania Department of Orthopedic surgery was honored to welcome Dr. Stephen Kates, Professor of Orthopaedics and Rehabilitation, Director of the Geriatric Fracture Center, Chief of Oncology, Metabolic Bone and Geriatric Division of the University of Rochester Medical Center. A native of the Philadelphia area, he earned his undergraduate and medical degrees at Northwestern University, where he also completed his internship before completing an orthopaedic surgery residency at the University of Rochester Medical Center.

Dr. Kates has practiced at the University of Rochester since 1989, making significant contributions to the care of geriatric hip fracture patients. As the director of the Geriatric Fracture Center, he has developed an internationally recognized hip fracture program, and published over 40 peer-reviewed publications, with focus on the management of geriatric fractures. Dr. Kates is the Editor of Geriatric Orthopaedic Surgery and Rehabilitation and an International Program Editor for AOTrauma. He has lectured extensively across North America, Europe and Asia promoting system improvement and management of geriatric fractures, infections and osteoporosis. He is past president of the International Geriatric Fracture Society, dedicated to collaboration on the delivery of evidenced-based, patient-centered care for the treatment of geriatric or fragility fractures.

Dr. Kates delivered a lecture titled “Geriatric Fracture Center—A Holistic Model Care” during his visit. To begin his talk, he presented the future impact of fragility fracture

treatment to the cost of medical care and how a collaborative effort can maximize efficiency of health care spending. He described the model of a geriatric fracture center, which focuses on decreasing morbidity and mortality, reducing lengths of stay and time to surgery while improving quality of care. Dr. Kates established a protocol driven system for co-management of geriatric fractures between orthopaedists and geriatricians. The center has developed processes to support achievement of quality and cost goals, such standardized order sets for ED providers to fast track fragility fracture patients and evidence-based pre-operative consultation checklists to quickly facilitate optimizing and risk stratifying patients for surgery. Dr. Kates also described implementing treatment algorithms, which reduced peri-operative errors and facilitates cost effective implant decisions. Furthermore, the goals of care extend beyond hospital care to post-discharge recover. In this continuum model of treatment, the Geriatric Fracture Center has developed partnerships with rehabilitation facilities to promote efficient post-operative recovery and reduce unnecessary extended stays in skilled nursing facilities. Dr. Kates delivered strong evidence that standardized care and co-management not only provided better quality care and outcomes for patients, but is effective at controlling expense for this important component of an aging health care population. The University of Pennsylvania Department of Orthopedics was honored to have Dr. Stephen Kates as a visiting professor on July 23rd, 2015



# Guest Lecturer: Dr. Jo A. Hannafin

## October 15, 2015

James M Friedman MD

The University of Pennsylvania Department of Orthopedic Surgery had the privilege of welcoming Dr. Jo A. Hannafin as a guest lecturer this past October. Dr. Hannafin is an attending orthopedic surgeon at the Hospital for Special Surgery in Manhattan and recipient of the 2014 HSS Lifetime Achievement Award. She also serves as director of the HSS Women's Sports Medicine Center and as a professor in the Department of Orthopedic Surgery at Weill Cornell Medical College. She has been listed as one of the "Best Doctors in America" multiple times over the course of her career, and has been voted president of the Herodicus Society and AOSSM, as well as serving on the board of the OREF. Herself a former silver medalist in the 1984 World Rowing Championships and three-time gold medalist at the US National Rowing Championships, she has served as a team physician at multiple Olympics, as well as the team physician of the US Rowing team since 1994. Dr. Hannafin has published nearly 100 peer-reviewed journal articles and over 20 book chapters, and has been the recipient of numerous research grants, including NIH RO1 funding. She has been recognized as a national and regional leader in patient care, resident education, and high-caliber research, and it was a true honor to host her as a guest lecturer and visiting professor.

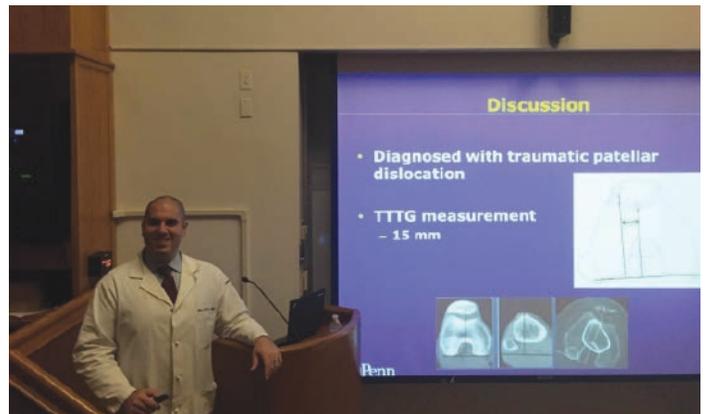
Dr. Hannafin began her visit with a lecture detailing her experience with Adhesive Capsulitis and current treatment regimens, "*Adhesive Capsulitis from Bench to Bedside and Back.*" With a deft mixture of clinical anecdotes and evidence based medicine, she proved her expertise and familiarity with the care of patients suffering from the disease. With an emphasis on her own practice, which specializes in disorders of the shoulder as well as the treatment of the athletic population, she was able to showcase how innovative her practice model truly is.

In her second hour of lectures, Dr. Hannafin delineated her thoughts on ACL reconstruction in a talk entitled, "*The 'Anatomic' ACL Reconstruction: Myth or Misnomer?*" In her talk, she spoke about the history and evolution of the ACL reconstruction, from both a personal perspective as well as from the field itself. Emphasizing clinical outcomes and evidence based measurements, she gave a detailed description of the challenges facing ACL-deficient patients and the surgeon attempting to help them. In particular, she emphasized a thorough, in-depth understanding of the biomechanics of the knee and how anatomy guides function.

Dr. Hannafin and our own Dr. Miltiadis Zgonis then held court over the residency during several "interesting case presentations" by a number of the residents and fellows. During the session, cases were presented highlighted unusual and informative cases seen by members of the sports services. Dr. Hannafin lent her vast experience in highlighting the

approaches she takes in patient diagnosis and care, as well as common pitfalls that can affect outcomes following surgical intervention. She was able to highlight important considerations in delineating operative and non-operative courses for several common injury patterns, and even learned a few things about the TTTG interval from Orthopaedic PGY-1 intern Mark Hasenauer!

The morning Dr. Hannafin spent with the residency program was invaluable in its rich exchange of ideas and approaches to patient care. The lectures and case presentations were able to highlight common problems and areas of interest seen in the world of orthopaedic sport medicine, and hopefully represent a rich collaboration between our departments for many years to come.



# Guest Lecturer: Dr. Robert D. Fitch

## November 15, 2015

James M Friedman MD

The University of Pennsylvania, Department of Orthopedics was pleased to host Dr. Robert Fitch, Professor of Orthopaedics at Duke University and Director of the Section of Pediatric Orthopaedic Surgery at Duke Children's Hospital and Health Center, as a visiting lecturer. Dr. Fitch completed his medical school and residency training at Duke University in 1976, followed by a pediatric orthopedic fellowship at the Texas Scottish Rite Hospital for Children in Dallas, Texas, before returning to Duke. Dr. Fitch maintains both a highly successful clinical practice and proliferative research program with particular focus on congenital and developmental deformities of the spine, hip, and extremities.

Dr. Fitch delivered two talks. His first talk focused on pediatric tibia pseudoarthroses, a difficult problem to treat with scant literature to help guide practicing orthopedists. In his talk he described 12 cases of his own with short, medium, and long term followups. He described a relatively high success rate with careful debridement, intramedullary nailing, and bone grafting. However, he also stressed that

pseudoarthrosis is not a local problem confined to the fracture site and that complications, especially refracture, should be carefully monitored for. The second talk described cases of severe developmental dysplasia of the hip. Multiple cases were presented and a discussion was held regarding surgical approaches, and various osteotomies used to locate and stabilize the hip. Mid-term outcomes were also presented.

The remainder of Dr. Fitch's time was spent with the residents in the human tissue lab. Sawbones were used to demonstrate and practice the application of Ilizarov frames to reduce and correct a fractured tibia. Concepts included how to assemble the frame, how to fix the frame to bone, and how to use computer models to determine the correct sequence of pin modification to correctly align the fracture.

The University of Pennsylvania of Orthopedics was honored to have Dr. Fitch as a visiting professor. His honesty regarding outcomes, and his willingness to share his experience with the residents was invaluable.



# **June C. Wapner Memorial Lectureship**

## **December 3, 2015**

### **Guest Lecturer: Sigvard T. Hansen, MD**

Cody D. Hillin, MD MS

This past December, the University of Pennsylvania Department of Orthopedic surgery was honored to welcome Dr. Sigvard T. Hansen, Professor Emeritus of Orthopaedics and Sports Medicine at the University of Washington School of Medicine and Director of the Sigvard T. Hansen Foot and Ankle Institute at the University of Washington Medical Center. Dr. Hansen attended medical school at the University of Washington School of Medicine, and completed residency at University of Washington Medical Center. He began his career as an Assistant Professor at the University of Washington in 1971.

Known as the “father of modern traumatology”, his innovations of aggressive and expeditious orthopaedic care of polytrauma patients has revolutionized the field. Moreover, he is recognized as a leading expert on complex foot and ankle reconstruction after trauma as well as the treatment of congenital conditions and deformities of disease. He is also continues to be involved with research, as an editorial board member of *Clinical Orthopedics and Related Research*, and is on the AO International Board of Directors and Maurice E. Müller Foundation of North America Board of Directors. Additionally, he is on the Hansen Chair Committee, and a member of the Board of Directors for Prosthetics Research Study in Seattle, and Director of Special Teams for Amputations, Mobility, Prosthetics/Orthotics (STAMP) in Seattle.

Dr. Hansen delivered two thought provoking lectures during his visit. The first lecture focused on current principles

of muscle balancing and tendon transfer. Focusing on the foot, he discussed the importance of understanding the normal biomechanics before developing an operative plan to treat a disorder. The eventual division of treatment normally involves fusion of stability joints while performing soft tissue procedures for mobility joints.

Following a short break, Dr. Keith L. Wapner introduced the lectureship, which is dedicated to his late wife. Delivering a moving speech about his wife, her tenacious spirit and devotion to their two sons, he discussed the establishment of the June C. Wapner Memorial lecture.

After Dr. Wapner's remarks, Dr. Hansen discussed the role of shear strain in fixation with examples from the foot and ankle. He noted that compression is not the only important factor for producing a bony union but rather a construct that adequate limits movement in a stable fashion. These treatment principles can be difficult with small short bones in the foot, but he gave examples to demonstrate techniques to overcome these challenges.

The remaining two hours of Grand Rounds was spent discussing case presentations presented by residents and fellows. The University of Pennsylvania Department of Orthopedics was honored to have Dr. Sigvard T. Hansen as the June C. Wapner Memorial Lectureship Visiting Professor on December 3<sup>rd</sup>, 2015.

# Guest Lecturer: Dr. Andrew J. Weiland

## January 28, 2016

Cody D. Hillin, MD MS

The University of Pennsylvania Department of Orthopedic surgery was honored to welcome Dr. Andrew J. Weiland, Professor of Orthopaedic Surgery and Plastic Surgery at the Weill Cornell Medical College. Dr. Weiland attended medical school at the Bowman Gray School of Medicine of Wake Forest University, and completed residency in orthopaedic surgery at the Johns Hopkins Hospital. He subsequently completed ASIF fellowship training in fracture internal fixation in Switzerland, and in upper extremity surgery at the Christine Kleinert Institute.

Clinically, he focuses on disorders of the hand, wrist, and elbow, including reconstructive microsurgery. His leadership ability is shown by his numerous positions including past President of the American Society for Reconstructive Microsurgery (1991), the American Society for Surgery of the Hand (1995), the American Orthopaedic Association (1998-1999), and the American Board of Orthopaedic Surgery (1998-1999). He has also served as the Treasurer of AAOS (2000-2003) and has authored over 250 papers dealing with the hand, wrist, and elbow. Currently he is on the Board of Trustees of the Journal of Bone and Joint Surgery.

Dr. Weiland delivered two thought provoking lectures, followed by a cadaver dissection in the Human Tissue Lab during his visit. The first lecture focused on the approach to scaphoid fracture management. He discussed the treatment algorithm and commonly encountered problems related to scaphoid fractures, which were demonstrated by case examples. For the second talk, he discussed the current trends in distal radius fracture treatment, covering common and new techniques.

Following the first two lectures, attendees moved to the Human Tissue Lab. In the laboratory, Dr. Weiland gave a short talk on basal joint arthritis of the hand. He discussed the importance of identifying the location of disability and pain in order to determine the best treatment. Moving to the cadaver, he demonstrated his preferred techniques for stabilizing the CMC joint, as well as performing prosections of the forearm.

The University of Pennsylvania Department of Orthopedics was honored to have Dr. Andrew J. Weiland as a visiting professor on January 28<sup>th</sup>, 2016.



# Guest Lecturer: Robert Turcotte, MD, FRCS(C)

## February 11th 2016

Russell Stitzlein, MD

The University of Pennsylvania Department of Orthopaedics was privileged to host Dr. Robert Turcotte as a guest lecturer on February 11, 2016. Dr. Turcotte came to us from McGill University, where he practices orthopaedic oncology and serves as the Maurice E. & Marthe Muller Chair for the Division of Orthopaedic Surgery and as the Medical Director for the Supraregional Sarcoma Program. Additionally, he holds the position of International Professor of the Orthopaedic Research Chair in the Department of Orthopaedics at King Khalid University Hospital in Riyadh, Saudi Arabia.

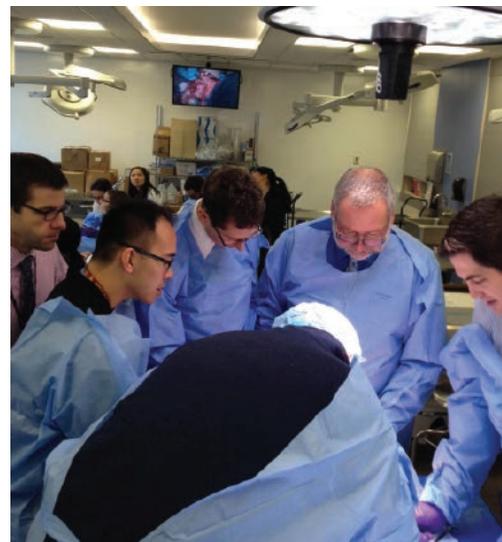
Dr. Turcotte attended Université de Montréal for medical school and then furthered his training in the Édouard-Samson Orthopaedic Program at Université de Montréal. He then had the opportunity to train in orthopaedic oncology and adult reconstructive surgery of the lower limb at the prestigious Hôpital Cochin in Paris, France. He followed that with a fellowship in orthopaedic oncology at Mayo Clinic, under the direction of master clinician, Dr. Franklin Sim. While at McGill, Dr. Turcotte has become a leader in the field of musculoskeletal oncology and limb salvage. His dedication to training the next generation of surgeons led to the establishment of a fellowship program in 2000, training fellows in orthopaedic and general surgical oncology. Dr. Turcotte is also a dedicated clinical researcher, holding numerous active externally-funded research grants and authoring several basic science and clinical research peer-reviewed publications.

Dr. Kristy Weber provided a welcoming opening introduction befitting of a friend and colleague, having also trained under Dr. Frank Sim for her orthopaedic oncology fellowship. Dr. Turcotte then lectured to a mixed audience of Penn medical students, residents and faculty on his more than 25 years experience with endoprosthetic stem fixation. Dr. Turcotte explained that tumor surgeons face much different scenarios than in standard joint replacement surgery. For hip and knee replacements, minimal bone is resected, leaving the metaphysis intact and the traditional teachings of cementless and cemented fixation likely hold true. In tumor surgery, quite often the metaphyseal bone is also resected along with a varying portion of diaphyseal bone, leaving a “tube” of bone within which to obtain fixation. He argued that the traditional teaching of leaving a 2mm cement mantle means that a smaller implant must be used or more strong cortical bone must be removed to allow for a larger implant. Both of these weaken the construct and lead to failures. He showed excellent long-term results for a “line-to-line” reaming with cemented fixation, noting that often the cement mantle is discontinuous in this technique. Dr. Turcotte’s talk was very well received and led to engaging discussion among the audience.

After a brief interlude, Dr. Turcotte’s second talk was preceded by a nostalgic introduction by Dr. Scott Levin, reflecting on their time together travelling as a part of the 1995 ABC Travelling Fellowship. Dr. Turcotte then gave an excellent lecture geared towards resident education on the management of Giant Cell Tumors (GCT) of bone. Dr. Turcotte described how the classification and location of GCTs determines whether curettage and void filling techniques are adequate or whether more extensive resection +/- reconstruction is required. He also discussed newer targeted therapies for GCT, including denosumab, can be utilized as an adjunct or as definitive treatment. He did, however, warn against indiscriminate use of these agents as they can complicate the surgical management in some instances.

Upon completion of the second lecture, Dr. Turcotte led a cadaveric session in the Penn Human Tissue Lab on lower extremity amputations. Dr. Turcotte progressively took the residents through the Chopart, Symes, transtibial (below knee), knee disarticulation and transfemoral (above knee) amputations, providing “tips and tricks” for each of the amputation levels. The session was well received by the residents, many of whom have not yet had the opportunity to perform many of these levels of amputation.

The University of Pennsylvania Department of Orthopaedic Surgery was honored to host Dr. Robert Turcotte as a visiting professor on February 11, 2016. Dr. Turcotte’s passion for his work and dedication to resident/fellow education were evident in his time spent with our department. We hope his visit inspires our residents and medical students to be lifelong learners and to show such commitment to their chosen fields of specialty.



# Guest Lecturer: Dr. Fred Sweet, MD

## February 18, 2016

Chase Woodward MD MPH



The University of Pennsylvania Department of Orthopaedic Surgery was honored to welcome spine surgeon Dr. Fred Sweet, a co-founder of the Rockford Spine Institute and clinical assistant professor at the University of Illinois College of Medicine, as a visiting professor this past February. The educational visit was generously supported by AOSpine North America. Dr. Sweet attended Rush

University Medical School in Chicago and completed an internship at the Naval Medical Center in San Diego. He subsequently completed his residency in orthopaedic surgery at Washington University in St. Louis and then stayed to complete their prestigious spinal deformity fellowship. He is a member of the American Academy of Orthopaedic Surgeons, North American Spine Society, and the Scoliosis Research Society. Notably Dr. Sweet served in the United States Navy as a medical officer aboard the U.S.S. Coronado during the first Gulf War.

After arriving in Philadelphia Dr. Sweet was welcomed at the home of Dr. Vincent Arlet, faculty host of his visit and chief of orthopaedic spine surgery at the University of Pennsylvania. Thereafter he was escorted to a nearby restaurant where he met many of the spine surgery staff members, clinical and research residents, and their significant others. Dr. Sweet shared many stories about his career including the rigorous nature of his spine deformity fellowship, founding and managing a successful private practice, and maintaining his interest in basic science research. He specifically mentored residents interested in spine surgery about what they should seek in a fellowship program and how it will benefit their future practice. There was also a rich discussion about new concepts in spinal surgery and the changing landscape of orthopaedics in general, and the residents enjoyed hearing Dr. Sweet's perspective as a private practice surgeon. We were pleased to learn about his aviation hobby and that he had actually flown himself from Illinois to a Philadelphia regional airport earlier that day.

On the second day of his visit Dr. Sweet lectured at the department's Grand Rounds meeting where he was

introduced by Dr. Arlet to the large gathering of faculty, residents, and medical students. Dr. Sweet's first lecture was on the transforaminal anterior release (TFAR) technique that he developed and published. The technique involves a circumferential soft tissue release of the annulus of an intervertebral disc at a strategically chosen level allowing for significant coronal and sagittal deformity correction in a setting typically necessitating an osteotomy. Dr. Sweet has series of more than 50 adult deformity patients who have undergone this technique with good results, specifically with low blood loss and low rate of neurologic complication compared to traditional multiple column osteotomies. The second lecture was an overview of his experience applying vancomycin powder to surgical wounds. This lecture was particularly interactive, for example he asked residents to list common techniques employed to lower the risk of surgical site infections, and often times Dr. Sweet challenged the effectiveness of certain techniques we historically believe lower infection rates. He presented very provocative animal research he has personally conducted showing the efficacy of intra-wound local antibiotic delivery compared to intravenous administration. The residents left the auditorium with a critical new outlook regarding perioperative antibiotic use.

After the morning lecture Dr. Sweet was escorted to the department's state of the art Human Tissue Lab to demonstrate the transforaminal anterior release he presented earlier in the morning. Residents took turns assisting Dr. Sweet as he exposed the posterior spine of a cadaver, placed thoracic and lumbar pedicle screws, performed the transforaminal soft tissue release, and finally realigned the spinal column and fixed with an instrumentation system. The residents asked to see Dr. Sweet's technique for placing sacral screws and he gladly demonstrated his preferred method and carefully explained his rationale. Several residents commented on the high quality of the dissection and how it was one of the most instructive cadaver sessions of the academic year.

To conclude his visit Dr. Sweet had a chance to visit and tour the department's prized McKay Orthopaedic Research Laboratory under the direction of Drs. Louis Soslowky and Robert Mauck. Thereafter the residents transported him across town to Pennsylvania Hospital for the remainder of the day so he could observe the surgical practice of Dr. Arlet. The University of Pennsylvania Department of Orthopaedic Surgery was truly fortunate to have Dr. Sweet as a visiting professor, and pleased to start what we hope to be is a successful and mutually beneficial relationship.

# Guest Lecturer: Dr. Andrea Ferretti, MD

## March 10, 2016

James M Friedman MD

On March 3, 2016 The University of Pennsylvania, Department of Orthopedics was pleased to welcome Dr. Andrea Ferretti, MD from La Sapienza University, Rome, Italy. Dr. Ferretti serves as the chairman of orthopaedics and traumatology at La Sapienza University as well as the director of the orthopaedic postgraduate school. He also serves as the orthopaedic department chief of the Sant'Andrea Hospital. Dr. Ferretti specializes in sports related trauma and has authored or co-authored over 200 articles related to athletic injuries.

Dr. Ferretti delivered two lectures, both focused on his work regarding the anterolateral ligament (ALL) of the knee. In his first lecture he described the ALL as a potential secondary stabilizer of the ACL. He first described the anatomy of the ALL, and showed that anatomically it should provide protection from tibial internal rotation. Using cadaver models as well as human case studies, Dr. Ferretti showed that high grade pivot shifts following known ACL tears correlate with damaged ALL structures. Alternatively an intact ALL following ACL injury is associated with low grade pivot shift. His conclusion is that the ALL acts a secondary rotary stabilizer to the ACL.

In his second lecture Dr. Ferretti expounded on his findings to surgical management of the unstable knee following ACL injury. He offered that a pivot shift should be performed under anesthesia for every ACL deficient knee. In knees with a high grade pivot shift the ALL should be examined and repaired in addition to the ACL reconstruction. To back up his philosophy Dr. Ferretti included pictures of recent surgeries where significant ALL damage was discovered following high grade pivot shifts.

Following his lectures Dr. Ferretti led a human cadaver session. The ALL was dissected out and the anatomy explained. Techniques for ALL reconstruction was then discussed.

Dr. Ferretti delivered a series of outstanding lectures and led a comprehensive cadaver course. His ability to explain his findings, supported by both data and personal experience, proved an invaluable learning experience surrounding a controversial topic.



# Leo Leung Memorial Lectureship

## March 17, 2016

### Guest Lecturer: James Chang, MD

Cody D. Hillin, MD MS

This March, the University of Pennsylvania Department of Orthopedic surgery was honored to welcome Dr. James Chang as the 10<sup>th</sup> annual Leo Leung endowed lectureship. Dr. Chang is a Johnson & Johnson Distinguished Professor and Chief of the Division of Plastic and Reconstructive Surgery at Stanford University. Dr. Chang was an undergraduate at Stanford University, then attended Yale Medical School, and was subsequently a Sarnoff Laboratory Research Fellow at UCSE. He then completed a residency in plastic and reconstructive surgery at Stanford University Medical Center, and a fellowship in hand & microsurgery at UCLA. He is currently professor of both plastic and orthopaedic surgery with primary clinical interests in microsurgical extremity reconstruction, pediatric hand, and post-oncologic head and neck reconstruction.

Dr. Chang's basic science research interests include modulation of TGF- $\beta$  in scarless flexor tendon wound healing and tissue engineered flexor tendon grafts for hand reconstruction. He is the recipient of numerous grants and has been federally-funded for his research since 1998. Dr. Chang continues his passion for research as an Associate Editor for Journal of Hand Surgery, Annals of Plastic Surgery, Hand, and Microsurgery. His leadership abilities are clear as he is in the presidential line for the ASSH, currently serving as vice-president and previously as treasurer and research director. Dr. Chang is dedicated to education and is vice-chair of the ACGME Plastic Surgery Residency Review Committee and the secretary/treasurer of the American Board of Plastic Surgery.

Dr. Chang started by giving an inspiring lecture on the use of art to teach anatomy. He discussed his inspiration from Rodin's collection of hand artwork, which always seemed to mesmerize him. Seeking more knowledge about them he developed relationships with the museum staff, eventually leading to the development of an installation at the museum. The exhibit he helped teach the underlying anatomy of the hand and demonstrate disease processes well illustrated by Rodin. This lecture emphasized the importance of observation, and dedication to dissemination of knowledge to others.

After a brief intermission, Dr. Bozentka introduced the lectureship, which was established in memory of Dr. Leo Leung, an orthopaedic surgery resident at University of Pennsylvania from 1998-2002. Dr. Leung passed away suddenly during his chief year of residency in 2002. His mentors and



colleagues founded the lectureship to honor his commitment and dedication to hand surgery, education, patient care, and research. He was affectionately known as "Leo the Lion" and "The Iron Leung" for his extraordinary work ethic and unrelenting commitment to the residency program.

Following Dr. Bozentka's remarks, Dr. Chang discussed the various ways to address the absence of a thumb. Physical exam and knowledge of anatomy are vital to understand what components are available to restore both structure and function. Case examples were utilized and discussion with the audience provided additional perspective to this important problem.

Following these lectures, the attendees moved to the Human Tissue Lab. After a brief lecture by Dr. Chang, he led a cadaveric dissection of commonly used forearm flaps. He was assisted by several residents, and provided valuable pearls and pitfalls to performing these varied procedures. The University of Pennsylvania Department of Orthopedics was honored to have Dr. Chang as the Leo Leung Memorial Lectureship Visiting Professor on March 17th, 2016.