

**DEPARTMENT OF ORTHOPAEDIC SURGERY
2005 ANNUAL REPORT**



HOSPITAL FOR SPECIAL SURGERY

**HOSPITAL FOR SPECIAL SURGERY
DEPARTMENT OF ORTHOPAEDIC SURGERY
CHIEFS OF SERVICE**



Dr. David Altchek, Dr. Scott Rodeo, Dr. Oheneba Boachie-Adjei, Dr. David Helfet, Dr. Jonathan Deland, Dr. Eduardo Salvati, Dr. Robert Rozbruch, Dr. Roger Widmann,



Dr. Richard Laskin, Dr. Scott Wolfe, Dr. Mark Figgie, Dr. Joseph Lane, Dr. Frank Cammisa, Dr. Russell Windsor, Dr. Paul Pellicci and Dr. Thomas Sculco



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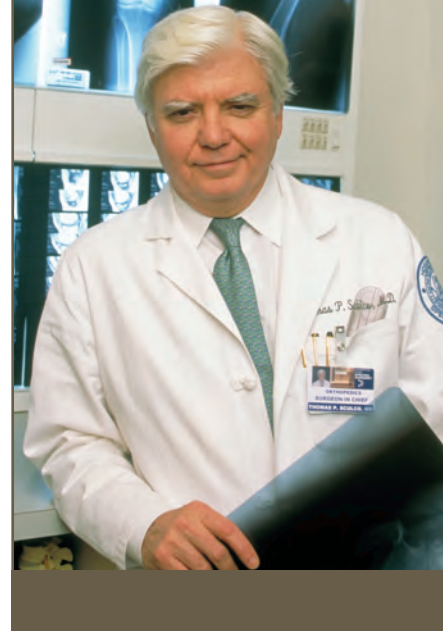
28 DEPARTMENT OF ORTHOPAEDIC SURGERY 2005-2006 GRADUATING RESIDENTS AND FELLOWS

OUR MISSION IS THREE-FOLD.

It all begins with our patients. In our efforts to restore mobility and improve quality of life for the thousands of individuals who come to us each year for care, the Department of Orthopaedic Surgery at Hospital for Special Surgery develops **clinical innovations** that seek to transform treatment for some of the most challenging musculoskeletal disorders; pursues **advances in research** that may one day translate into groundbreaking therapies; and continues to be at the forefront of **educational excellence** that will inspire new generations of outstanding physicians. Staying true to this mission will help ensure that our patients receive the best musculoskeletal care possible now and for years to come.

A MESSAGE FROM THE SURGEON-IN-CHIEF

THOMAS P. SCULCO, MD



In 2005, the Department of Orthopaedic Surgery marked a year of significant accomplishments and launched new initiatives on a number of fronts. With a rich legacy spanning 142 years and the tenures of 10 surgeons-in-chief before me, our Department of Orthopaedic Surgery continues its tradition of enlisting the finest orthopaedic talent in the nation; embracing new techniques and technologies to better patient care; providing an infrastructure that supports collaborative research and fosters an environment of critical thinking; and nurturing young physicians who will go on to practice at the forefront of their profession in any part of the world.

As a global center for musculoskeletal care, HSS is widely recognized for its pursuit of excellence in clinical care, research and medical education. For the 16th consecutive year, the Hospital ranked first in the Northeast in orthopaedics and second nationally in the 2006 *U.S. News & World Report's* "America's Best Hospitals" survey.

The ability to carry out our mission has been strengthened through the shared vision and commitment of our faculty and the excellent leadership of the Department's Executive Council: Dr. Charles Cornell, Clinical Director; Dr. Mathias Bostrom, Academic Director; Dr. Jo Hannafin, Orthopaedic Research Director; and Dr. Scott Wolfe, Faculty Development Director.

We continue to attract patients from here and abroad and, with more than 17,000 surgeries per year, the Hospital's 20 operating rooms are now functioning at virtually full capacity. In order to meet growing demand for our orthopaedic services, in 2005 HSS embarked on a major expansion project that will add nine operating rooms, a new ambulatory surgery center, as well as additional inpatient units. Plans also call for a new physician office building, an ambulatory center, a sports medicine facility and a new pediatric pavilion.

We are developing an international consortium to foster a collaboration of research studies and an exchange of faculty, fellows and medical students. We currently have affiliations with orthopaedic programs in the United Kingdom, Italy, Greece, South America and Asia, and we will continue to develop global relationships through which we can share ideas and best clinical practices that will ultimately benefit patients around the world.

Orthopaedic surgery at HSS is not an island unto itself, but is inextricably linked with the Hospital's other disciplines, namely rheumatology, physiatry, neurology, pathology, anesthesiology and radiology. Together, we have forged a multidisciplinary alliance that has led to an unparalleled understanding of bone, joint and soft tissue diseases and has dramatically influenced the practice of musculoskeletal medicine.

(continued on page 4)

SURGEONS-IN-CHIEF: A LEGACY OF EXCELLENCE

1863

James Knight, MD

When Dr. Knight opened the Hospital on May 1, 1863, his goal was to treat the lame, mainly with braces, exercise, static electricity and prayer. He considered surgery "adventurous medicine," a philosophy that was not shared by his successor, Dr. Virgil P. Gibney.

1877

Virgil P. Gibney, MD

Surgery as a method for curing the ruptured and crippled grew into a modern science under the strong voice of Dr. Gibney. He was also a great proponent of medical education and stated, "there is no reason why a medical student should not be trained in early (orthopaedic) diagnosis."

1925

William B. Coley, MD

Dr. Coley was a pioneer in the operative treatment of hernia, but his chief interest was the study of bone tumors, a subject on which he was a worldwide authority.

1933

Eugene H. Pool, MD

An interim Surgeon-in-Chief for one year, Dr. Pool's mandate by the Hospital's board of managers was to obtain the best possible candidate in the country to become full-time director of the medical staff. He selected Dr. Philip D. Wilson, Sr.

1934

Philip D. Wilson, Sr., MD

An expert surgeon and administrator, Dr. Wilson was also a skilled teacher. Under his direction, the Hospital was renamed The Hospital for Special Surgery and entered an age of renewed enlightenment of clinical and surgical growth and experimental research.

1955

T. Campbell Thompson, MD

During his tenure, Dr. Thompson established the course of teaching in orthopaedics offered to medical students from Cornell Medical College and initiated the policy of rotation through HSS for New York Hospital residents and interns.

1963

Robert Lee Patterson, Jr., MD

Dr. Patterson's reign as Surgeon-in-Chief was highlighted by the creation of the department of bioengineering, launching HSS on its path to international stature for joint replacement surgery.

1972

Philip D. Wilson, Jr., MD

Dr. Wilson brought HSS to new heights with milestones that included the construction of eight modern operating rooms and the launch of biomechanics into the computer age with the establishment of the CAPS/CAD/CAM system to custom design and manufacture joint prostheses. Under his tenure, laboratory and clinical research flourished and the residency program became one of the most highly sought after in the nation.

1990

Andrew J. Weiland, MD

Dr. Weiland further strengthened the Hospital's foundation for growth, guiding significant progress in the development of the medical staff, particularly in the fields of hand, trauma and foot/ankle surgery and helping to bring a major modernization project to fruition.

1993

Russell F. Warren, MD

During his decade of service as Surgeon-in-Chief, Dr. Warren led the effort to make soft tissue research one of the Hospital's highest priorities, worked tirelessly to mentor and train young surgeons, oversaw a dramatic increase in the number of orthopaedic fellows and initiated the concept of orthopaedic surgeon as clinician-scientist.

2003

Thomas P. Sculco, MD

As the Hospital's eleventh Surgeon-in-Chief, Dr. Sculco continues the tradition of innovation and progress in musculoskeletal medicine established by his predecessors with the development of new clinical programs, a new structure for facilitating collaborative research and a new building program that will expand HSS's ability to meet the increasing demand for its musculoskeletal expertise.

A PREMIER CENTER FOR MUSCULOSKELETAL



In recent years, our orthopaedic surgeons have been encouraging new perspectives on treatment with the goal of improving surgical interventions for disabling arthritis, career-threatening sports injuries, congenital anomalies and countless other musculoskeletal problems. Their pacesetter work has generated great interest in less invasive methods to correct, repair or replace defects and deformities. At the same time, they closely monitor quality assurance issues, including postoperative complication rates, and implement policies and procedures that maximize patient safety and help us to achieve the highest standards of care. We have also strengthened our relationships with NewYork-Presbyterian Hospital—a major New York academic medical center adjacent to our facility—to be able to draw on medical services as needed and provide trauma care to its patients. Our affiliation with several New York area hospitals, including New York Hospital Queens, enables us to offer the same high quality care available at HSS to communities that are relatively underserved in terms of orthopaedics. These relationships also provide residents and fellows with exposure to a broader range of musculoskeletal conditions, particularly Level I

trauma and pediatric orthopaedic pathology.

A major challenge of any academic

medical center is to create an environment that enables clinicians to pursue bench, translational or clinical research with the ultimate goal of altering patient care. Our Department wholly supports the concept of the clinician-scientist, with a goal to increase the research and add at least one clinical researcher to each clinical service. These clinician-scientists develop and conduct long-term research relevant to the problems they observe in their clinical practice. The Hospital's clinician-scientist program provides the intellectual, physical and financial resources to facilitate these endeavors.

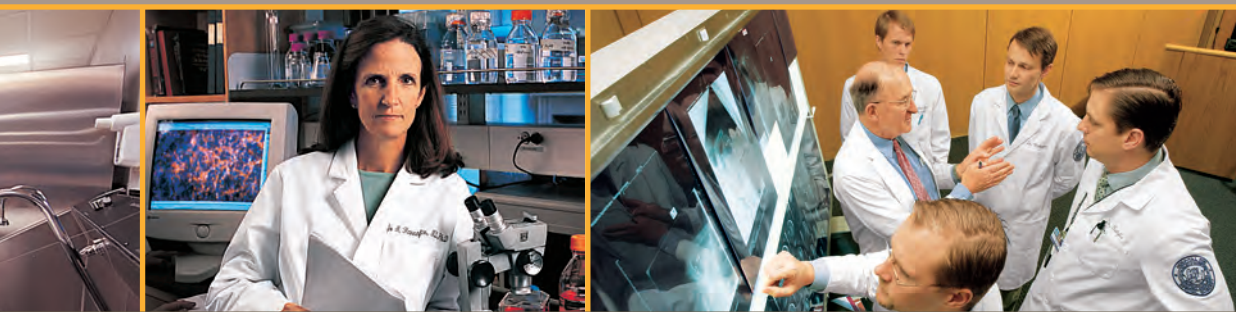
Orthopaedic research at HSS has been further enhanced by a peer review clinical research panel that evaluates new projects and presents recommendations intended to raise the level and quality of the Department's research. A major effort underway to improve outcomes research is the establishment of patient registries for each orthopaedic service. Our goal is to enroll and collect data on every patient, assembling an enormous and valuable reservoir of information that will allow us to conduct longitudinal research.

The Leon Root, MD, Motion Analysis Laboratory of the Department of Rehabilitation uses state-of-the-art technology to determine gait characteristics, functional ability, muscle strength and muscle activation patterns of patients with musculoskeletal disorders. Directed by Howard J. Hillstrom, PhD, the Laboratory is an active clinical and research facility now located in spacious new quarters that allow for expansion of studies in upper extremity, pediatrics, joint replacement and foot and ankle.



The Executive Council: Dr. Jo Hannafin, Dr. Mathias Bostrom, Dr. Charles Cornell and Dr. Scott Wolfe

CARE, RESEARCH AND MEDICAL EDUCATION



The Laboratory also works closely with the Sports Medicine and Shoulder Service and physical therapists to evaluate injury and kinematics in runners and throwers.

Our academic affiliation with Weill Medical College of Cornell University has never been stronger. With all faculty holding Cornell academic appointments, we continue to actively be involved in basic science, orthopaedics and trauma, anatomy, as well as teach over 35 medical students each year.

Last year, we inaugurated a summer medical student research program, establishing a process via the Hospital's website for interested students to apply to work with a mentor on one of some 20 projects. Students are required to submit a proposal to the potential mentor for consideration.

Our orthopaedic surgeons are dedicated to teaching, and each year we welcome an incredibly talented group of eight orthopaedic residents from major medical schools throughout the country, as well as some 25 orthopaedic fellows. Our residency program offers a comprehensive five-year experience designed to educate physicians to become thought leaders in orthopaedics. Residents are exposed to multiple educational venues, including inpatient and outpatient clinical teaching, operative instruction, an in-depth didactic and interactive conference schedule and research opportunities, beginning with a research methodology course. A psychomotor skills education lab, equipped with four workstations and various surgical instrumentation, provides hands-on instruction in basic

motor skills. Here residents practice a multitude of surgical techniques during their various rotations, including arthroplasty and robotic spinal procedures on cadavers and sawbones. As part of the new construction, this facility will be enlarged by 300 percent.

2005 was a momentous year for HSS orthopaedic residents, who achieved the Hospital's highest scores ever on the Orthopaedic In-Training Examination. Our program ranked in the 90th percentile nationally, and three of our residents performed at the 99th percentile. Two residents were among only 12 selected nationally for the Clinician-Scientist Development Program by the American Academy of Orthopaedic Surgeons. In 2005, we received more than 450 applications for the orthopaedic residency program; 57 outstanding candidates interviewed for eight positions.

We were particularly proud to debut the *HSS Journal: The Musculoskeletal Journal of Hospital for Special Surgery*. This peer-reviewed, multidisciplinary publication features articles by our faculty and alumni on basic and clinical research, innovative surgical procedures, topical pieces on musculoskeletal medicine and science, as well as articles on clinical practice algorithms at HSS.



In this report, you will learn about recent accomplishments and activities of each of our 11 orthopaedic services. While our chiefs of service guide the development of their specific specialty, their daily interactions in conferences and consultations contribute to a cohesive and dynamic Department of Orthopaedic Surgery.

FOOT AND ANKLE SERVICE

JONATHAN T. DELAND, MD, CHIEF



The Foot and Ankle Service at HSS is among the largest clinical services of its kind in the United States, with seven orthopaedic surgeons and three fellows who treat the full range of deformities and conditions. Our specialists have particular expertise in:

- collapsed foot and arch conditions
- forefoot problems
- posterior tibial tendon insufficiency
- osteochondral lesions of the talus
- trauma and sports injuries
- the diabetic foot

HSS orthopaedic surgeons are pioneering a number of treatments for a variety of foot and ankle conditions, including osteochondral lesions of the talus.

Treatments for this condition include stimulating the bone arthroscopically to produce tissue to grow in; transplanting cartilage and bone from another area to implant in the ankle; and retrograde drilling, which involves drilling up to the lesion without disturbing the cartilage and implanting bone grafts or magnesium sulfate and other stimulants to heal the area without violating healthy cartilage.

For collapsed foot problems, we are perfecting treatments that avoid fusions and allow patients to retain maximum function and motion in their foot. When the posterior tibial tendon is involved, treatment is designed to preserve function by correcting the alignment of the bones in the foot to help support the arch. New

instruments are being developed to correct the alignment in the most precise manner possible.

Our surgeons are also exploring minimally invasive approaches to the treatment of Achilles tendon ruptures using devices developed to guide the needles through a small incision for suture repair of the tendon. Surgeons are also researching more effective approaches for reconstructing the tendons and ligaments of the ankle. And, for metatarsalgia (pain from the bones on the ball of the foot), as well as severe foot deformities, we are developing the ability to take precise pressure measurements before, during and after surgery to determine the correction needed. In addition, our work continues on total ankle replacements.

This past year, the Foot and Ankle Service created an Outcomes Center with the initial goal of evaluating surgical outcomes for patients with cartilage lesions of the ankle, arthritis in the ankle and posterior tibial tendon insufficiency. The Outcomes Center has begun registering patients and collecting data that will enable us to follow patient progress and improve treatments.

In 2006, we have expanded our fellowship program with the addition of a newly accredited position and inaugurated a guest lectureship and course.



HAND SERVICE

SCOTT W. WOLFE, MD, CHIEF

The Hand Service offers an unparalleled depth of specialty expertise in peripheral nerve compression and injury; congenital anomalies; traumatic injuries; musculoskeletal oncology; as well as routine and complex injuries of the elbow, wrist and brachial plexus. Seven attending orthopaedic surgeons work collaboratively to provide a broad base of treatment that includes:

- reconstruction of nerve injury and compression about the shoulder, elbow, wrist and hand
- arthroscopic repair of triangular fibrocartilage complex tears and radius fractures
- minimally invasive surgery of the wrist and scaphoid
- fracture fixation of the wrist, hand and upper limb
- release and reconstruction of complex elbow injuries
- congenital hand disorders
- brachial plexus nerve repair and re-innervation
- microsurgical vascular and nerve repair
- limb-sparing surgery and tumor reconstruction

In 2005, HSS established the multidisciplinary Children and Adolescent Hand and Arm Center to help youngsters who have limited use of their upper extremities.

The Hand Service integrates research and patient care to improve clinical outcomes. Two full-time research coordinators administer registries in basal joint arthritis, distal radius fracture, elbow injury, carpal tunnel syndrome, brachial plexus injuries and upper extremity tumors. Our database

registries have provided rich pilot data for a successful National Institutes of Health (NIH) application of an open-label trial of hyaluronic acid injection.

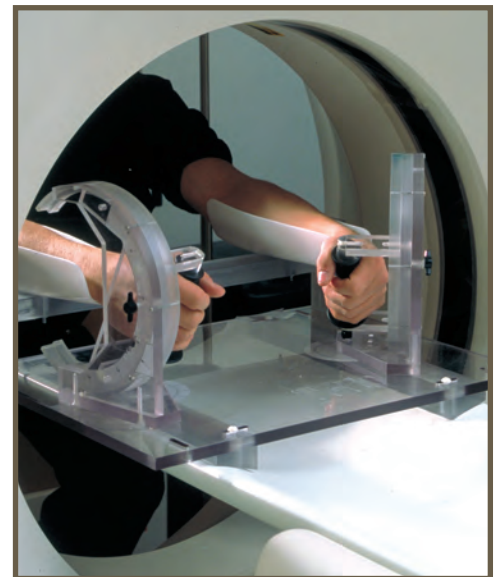
Additional research efforts include a collaborative NIH grant with Brown University to better understand normal and injured kinematics of the wrists. A subsequent NIH-funded study of in-vivo scapholunate kinematics for scaphoid malunions and scapholunate dissociation generated provocative new data leading to a joint effort with our motion analysis laboratory and anthropology colleagues at the University of Arizona to better understand patterns of human wrist evolution. Basic research efforts seek to understand the genetic basis of hand disease in collaboration with colleagues at Rockefeller University and Memorial Sloan-Kettering Cancer Center. Multicenter clinical trials in Dupuytren's disease, wrist fracture healing and basal joint arthritis are in various stages.

We are also pursuing stronger fixation methods through a better understanding of the biology of fracture and tendon healing; animal laboratory efforts to help unravel the complexities of nerve regeneration following repair; and the development of robotic-targeting software for placement of internal fixation devices with image-guided minimally invasive surgery.

In 2005, the Accreditation Council for Graduate Medical Education awarded the HSS hand fellowship a full five-year accreditation with commendation.



Scott W. Wolfe, MD

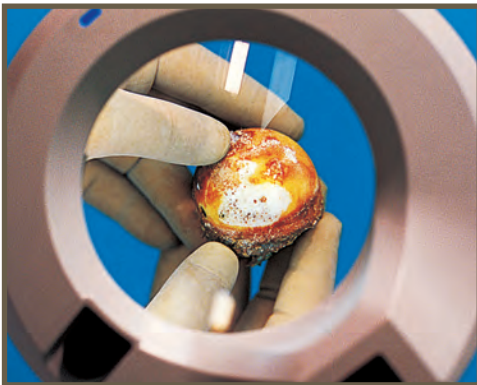


HIP AND KNEE SERVICE

EDUARDO A. SALVATI, MD, DIRECTOR AND PAUL M. PELLICCI, MD, CHIEF, HIP



Eduardo A. Salvati, MD



Paul M. Pellicci, MD

With nearly 5,000 hip and knee replacements performed annually at HSS, our orthopaedic surgeons continue to set the pace for new developments in the field. Our surgeons, collaborating with biologists and bioengineers, draw from their expertise and vast experience to improve surgical techniques and refine methods of restoration and repair. This includes developing and applying less invasive approaches to arthroplasty procedures that will facilitate a patient's recovery without compromising prosthetic alignment and surgical outcome.

To this end, our surgeons have pioneered the mini-incision hip replacement technique that realizes the same, if not better, post-operative results than the traditional approach. In addition to developing this modified technique for hip arthroplasty, we customized the instrumentation for the procedure. These devices include an angled reamer that can be inserted with minimal tension to the skin and a hemisphere that makes it easier to carve out a new hip socket. A follow-up study of more than 2,000 patients who underwent the mini-incision procedure reported the same success rate as with conventional hip replacement.

Most recently, our surgeons and bioengineers have designed a cementless hip replacement that has become available on the commercial market. They have also completed two new hip stem designs that are now in clinical use, and

work proceeds on a multicenter study of a hip resurfacing implant.

Osteolysis is a subject of great research interest by HSS orthopaedic surgeons and scientists alike. Major projects are underway in the Hospital's Osteolysis Lab to identify potential markers for early osteolysis and to learn why some patients develop the complication and others do not.

Our research is also furthering the understanding of the role of genetic predisposition in patients who develop a thromboembolism after total hip replacement. A pilot study conducted by HSS surgeons demonstrated that three major genetic risk factors are associated with thromboembolism. This study has now been expanded to better define the relative contribution of genetic predisposition. The results of this investigation may allow postoperative care to be tailored according to the genetic make-up of the patient in order to prevent the risk of thromboembolism.

We routinely use hip arthroscopy to treat a number of conditions, including labrum tears, instability and synovial disorders, as well as to remove debris. In addition, our surgeons were among the first to apply arthroscopy to treat femur-acetabular impingement in young adults, and HSS remains one of the few centers in the country where this minimally invasive procedure is performed.

HIP AND KNEE SERVICE

RICHARD S. LASKIN, MD, CO-CHIEF AND RUSSELL E. WINDSOR, MD, CO-CHIEF, KNEE

Modern knee replacement had its origins at HSS in the 1970s, and early implants produced here set the benchmark standards that are followed to this day. In the three decades since, our surgeons and bioengineers have worked side by side to design implants that last longer; allow more function and accommodate the lifestyle demands of younger patients. Each year, we perform more than 1,500 standard knee replacement surgeries and another 300 that address more complex problems of the knee. With one of the largest volumes of knee replacements in the United States, our current areas of focus include:

- modifications of surgical techniques, including new instrumentation that makes less invasive procedures possible
- use of alternative weight-bearing surfaces
- improvement of flexibility of the prosthetic knee joint
- modifications of clinical pathways to facilitate patient recovery and reduce length of stay
- methods of decreasing postoperative morbidity, including blood loss through the use of blood-clotting products and sealing off bone ends
- improvement of pain management techniques following knee replacement
- application of computer navigation to enhance surgical accuracy, particularly in complicated or revision replacements

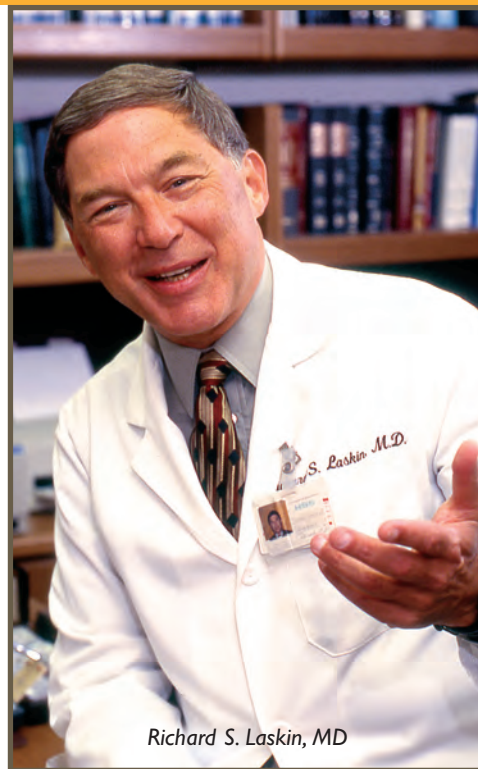
Our cadaver lab enables us to trial clinical innovations using both surgical navigation techniques and standard approaches

before bringing them into the operating room.

We have also been involved in the design and evaluation of the partial or unicompartamental knee replacement. Performed through a smaller incision, it promotes faster recovery by removing only the most damaged areas of cartilage and replacing these surfaces with excellent results.

The universal knee instrument—invented at HSS—allows the surgeon to use a single instrument to remove damaged cartilage and bone, thereby increasing surgical accuracy and decreasing time in the OR.

We continue to refine joint implants and replacement techniques to restore knees mechanically, and we are evaluating variations of knee implants, including the use of a ceramic surface to increase the lifespan of the prosthesis by decreasing wear on its plastic component. Our basic research studies explore how biomaterials can affect fixation in different clinical situations. We also seek to define what occurs at the cellular level that promotes implant loosening to see if we can alter the cellular pathway in order to extend the life of the implant, and we are pursuing methods to stop cartilage degeneration before it affects the underlying bone resulting in the need for knee replacement. While we develop methods to replace cartilage biologically, we will continue to refine methods for replacing joint surfaces artificially.



Richard S. Laskin, MD



*Russell E. Windsor, MD
(center)*

SURGICAL ARTHRITIS SERVICE

MARK P. FIGGIE, MD, CHIEF



The Surgical Arthritis Service is one of the few programs in the country where orthopaedic surgeons and rheumatologists come together to provide comprehensive care for patients with severe inflammatory arthritis. Also known as the Comprehensive Arthritis Program, the multidisciplinary service was established more than 35 years ago and has helped tens of thousands of patients.

This innovative program addresses a patient's multiple medical and surgical needs in a single setting, thus facilitating diagnosis and a coordinated, more focused treatment plan without the need for numerous consultations and return visits to various departments. In addition to physicians, a dedicated team of nurses, physical and occupational therapists and social workers implement the treatment plan and provide resources and support.

The Surgical Arthritis Service sees patients primarily with rheumatoid arthritis and other autoimmune diseases, including:

- juvenile rheumatoid arthritis
- systemic lupus erythematosus
- psoriatic arthritis
- ankylosing spondylitis
- Paget's disease

We also treat patients with aggressive, multi-joint osteoarthritis, patients who require revision surgery as well as those who have diseases in which arthritis may develop as a secondary problem, including

hemophilia and inflammatory bowel disease.

The Surgical Arthritis Service provides residents and fellows with exposure to the wide range of medical and surgical options available, from newly released medications and agents, including those in clinical trials, to arthroplasty for nearly every joint in the body. Orthopaedic conferences are combined with rheumatology enabling rheumatology fellows to have the same exposure as the orthopaedic residents and arthroplasty fellows.

The Surgical Arthritis Service complements, and is integrally linked with, the Hip and Knee Service. Research is moving forward on several fronts, including the establishment of a joint replacement registry for outcomes research and projects involving osteolysis, hip arthroscopy, pelvis and femoral osteotomies, hip resurfacing and elbow replacement design and failure mechanisms.

HSS draws a large population of patients with elbow pathology that has enabled our surgeons to identify patterns of elbow-related problems and solutions that work in an area where successful treatments are difficult to achieve. Our surgeons just completed a 10-year follow-up of non-cemented total elbow arthroplasty in inflammatory arthritis.



ADULT LIMB LENGTHENING AND RECONSTRUCTION

S. ROBERT ROZBRUCH, MD, CHIEF

In 2005, HSS established the Adult Limb Lengthening and Reconstruction Service—a relatively new field in the United States but pioneered by Professor Gavriil Ilizarov in Russia in the 1950s. Today, Professor Ilizarov's daughter, Svetlana Ilizarov, MD, is one of three physicians who comprise HSS's adult limb lengthening program—one of only two in the country with a dedicated service to address these complex and challenging cases.

With few surgeons in this field, the HSS team—with its vast experience and high volume of cases—is creating practice patterns and establishing guidelines for many of these treatments.

Caring for adults and children, our surgeons treat the following conditions:

- post-traumatic injuries, including bone healing/nonunion problems
- congenital conditions, including dwarfism, hemiatrophy and short stature
- growth disturbance from trauma or infection
- severe bone defects and deformity of the hip, femur, knee, tibia, ankle and foot

Limb lengthening and reconstruction techniques are used to replace missing bone and correct deformed bone segments in both the lower and upper extremities, or for limb salvaging as an alternative to amputation. HSS surgeons use innovative and minimally invasive techniques to cut and gradually distract the bone and

enable new bone to grow without injecting or inserting any synthetic material or performing bone grafts.

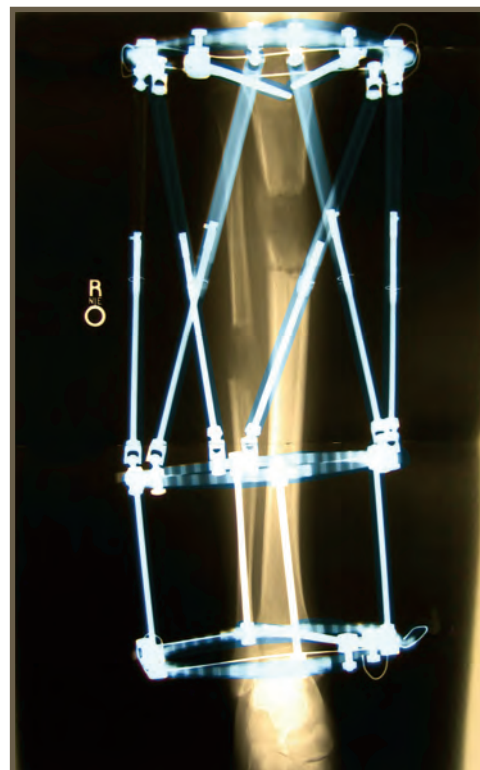
A new technique developed at HSS that has drawn national recognition is the LATN (lengthening and then nailing) procedure. With this approach, an intramedullary rod is inserted into the bone marrow cavity and serves as a stabilizing mechanism while the bone heals. This dramatically decreases the time necessary for an external apparatus.

Our experience with the use of an external apparatus to provide joint distraction to preserve the ankle joint and prevent arthritis has led to the development of an ankle distraction frame that will be brought to market.

At the forefront of developing and refining techniques and devices, our surgeons are conducting a range of research projects that evaluate the outcomes of their procedures. Current projects include an evaluation of the biomechanics of external versus internal fixation for complex ankle arthrodesis; assessment of the Ilizarov/Taylor Spatial Frame for complex ankle arthrodesis, nonunions and bone defects, and tibial deformity; and an evaluation of lengthening and reconstruction of congenital amputation to optimize prosthetic wear.



S. Robert Rozbruch, MD

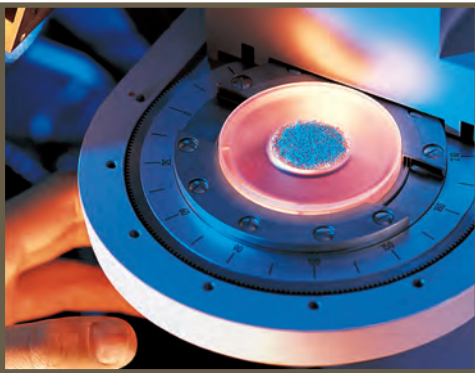


METABOLIC BONE DISEASE SERVICE

JOSEPH M. LANE, MD, CHIEF



Joseph M. Lane, MD



The Metabolic Bone Disease Service at HSS brings together a diverse group of physicians with clinical expertise in orthopaedic surgery, adult and pediatric endocrinology and nephrology. Our comprehensive program offers an extensive diagnostic work-up and therapeutic interventions for common and uncommon bone disorders, including:

- osteoporosis
- osteomalacia
- osteogenesis imperfecta
- Paget's disease
- osteosarcoma
- hyperparathyroidism
- tumor and marrow diseases of bone

Our major focus on clinical research enables us to provide an array of medical managements, many of which have been investigated in clinical trials led by HSS physicians. These include the use of parathyroid hormone (PTH) for fragility fractures and a unique approach to kyphoplasty using new agents, particularly bio-glasses, for local vertebral augmentation.

The Hospital has a major research program, funded by the National Institutes of Health and other grant sources, which analyzes bone properties to help predict the risk of developing bone disorders such as osteoporosis. Using advanced techniques, including FTIR analysis, micro CT and X-ray diffraction, our scientists are making headway in determining the microarchitecture, mineral density and

mineral and matrix quality of bone and their predictive role in the ability of bone to resist load.

Other research studies involve examining the role of PTH in spine fusion. Clinical trials with bisphosphonates for fracture healing are underway. Our extensive investigation in vertebroplasty and kyphoplasty has demonstrated that kyphoplasty leads to better restoration of the vertebrae. In collaboration with oncologists, we have conducted research that has compared patients with myeloma versus those with osteoporosis, identifying markers that will indicate if the myeloma is active or responding to treatment.

Working in cell cultures, we have demonstrated that PTH will stimulate bone morphogenetic proteins—a major factor in bone healing—while the bisphosphonates do not. Our goal is to determine how PTH can affect bone healing in the setting of osteoporosis.

Going forward, the Metabolic Bone Disease Service is developing a genetic approach to characterizing risk factors for osteoporosis in order to predict the potential for fracture and develop relevant treatments. Working with Children's National Medical Center in Washington, DC, we are establishing a data registry, tissue repository and a gene repository to aid us in this endeavor.

ORTHOPAEDIC TRAUMA SERVICE

DAVID L. HELFET, MD, CHIEF

The Orthopaedic Trauma Service is a combined service of Hospital for Special Surgery and NewYork-Presbyterian Hospital/Weill Cornell Medical Center. This collaboration brings together the resources and services that are unique to a fully dedicated musculoskeletal hospital with the multiple medical, surgical and critical care specialties that are available at an academic medical center—a relationship that maximizes outcomes for our most injured patients.

An international specialty referral center, our program draws patients with complex orthopaedic trauma—both acute and subacute injuries, as well as the sequelae of trauma—from around the world. Our team of seven orthopaedic trauma surgeons has particular interest and expertise in:

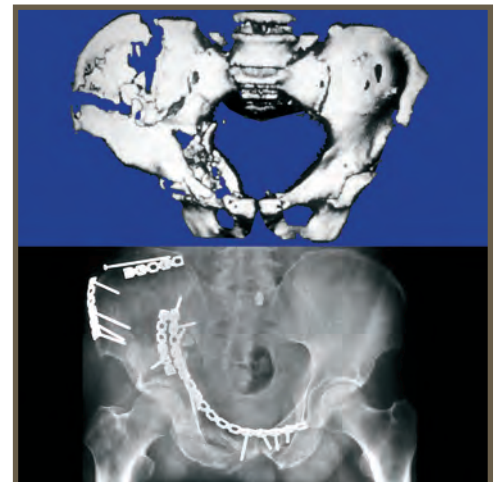
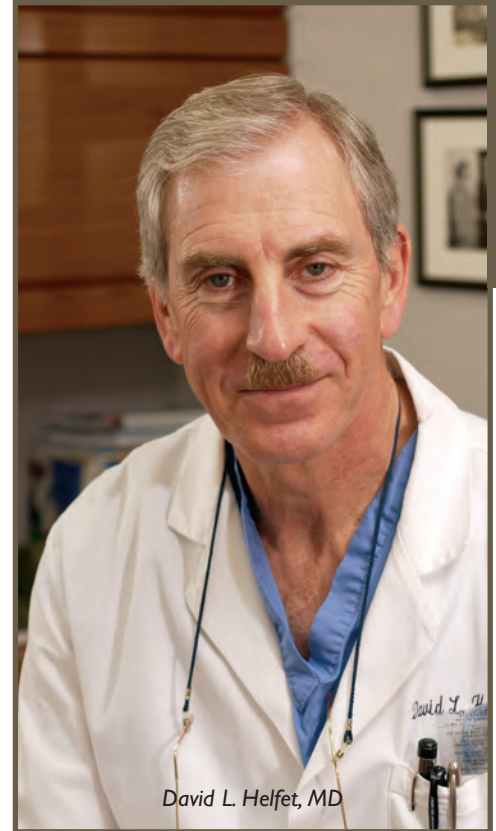
- complex polytrauma involving injuries to the pelvis and the acetabulum—the most challenging and mortal of orthopaedic injuries
- the repair of articular fractures
- fractures that do not heal or that have healed poorly
- fractures in the elderly
- complex osteotomies to correct deformity or congenital dysplasia

A large research component involves both clinical and basic science initiatives. One of the areas of interest is the elderly, and multiple studies are underway investigating ways to restore bone and better repair

fractures in this population. These efforts focus on compounds that would restore the integrity of the bone in the area of the fracture; new designs for implants that facilitate improved fixation in poor quality bone; and the effect of pharmaceutical agents, including some hormones, that may not only promote fracture healing, but also offer restoration of bone quality in the elderly. In collaboration with the Hospital's Metabolic Bone Disease Service, we are also exploring the effects of bisphosphonates and parathyroid hormone in osteoporotic fracture healing.

Some trauma patients with head injuries may develop heterotopic ossification in which they produce more bone than is needed. This, too, is being evaluated from two perspectives: preventing heterotopic ossification and examining why it occurs and how to make it come about in people who do not heal.

The Orthopaedic Trauma Service has three fellowship positions, with six residents rotating at any given time on the service. In addition to training in management of orthopaedic trauma—single or multisystem injuries—the fellow spends one-third of the year pursuing research activities.



PEDIATRIC ORTHOPAEDIC SERVICE

ROGER F. WIDMANN, MD, CHIEF



Roger F. Widmann, MD



The Pediatric Orthopaedic Service is comprised of six orthopaedic surgeons and one surgical assistant with specialized training in the management of pediatric musculoskeletal disorders. We see over 10,000 outpatient visits and perform over 1,000 surgical procedures on children per year. Three full-time pediatric anesthesiologists provide state-of-the-art pediatric anesthesia. HSS has an inpatient pediatric orthopaedic unit staffed with nurses who are specially trained in the care of pediatric orthopaedic surgical patients.

Three full-time pediatricians with staff appointments at both HSS and NewYork-Presbyterian Hospital greatly enhance our patients' perioperative medical care. The pediatric specialists at NewYork-Presbyterian also have privileges at HSS if their services are needed.

Specialized care is provided by the Pediatric Orthopaedic Service for large numbers of young patients with congenital, developmental and traumatic conditions, including:

- developmental dysplasia of the hip
- foot deformity including clubfoot
- limb length discrepancy and deformity
- neuromuscular conditions
- osteogenesis imperfecta
- scoliosis and other pediatric spinal deformities
- skeletal dysplasias
- sports injuries
- trauma

Our surgeons utilize the most innovative techniques for management of club foot deformity. Current techniques are based on the regimen described by Ponseti, which utilizes an innovative casting technique and minimally invasive surgical intervention.

For more than a decade, our service has subspecialized in the surgical management of limb length discrepancies and angular deformities. Treatment options include both minimally invasive growth modulation and minimally invasive limb lengthening procedures utilizing monolateral and circular external fixators.

One of the areas of largest growth has been the subspecialty of pediatric sports medicine. HSS has been a leader in adult sports medicine, and the application of arthroscopic techniques for management of pediatric sports injuries has greatly improved outcomes for young athletes as well.

Our service is committed to the education of residents and fellows, and we have two third-year and one fifth-year orthopaedic resident on the service at all times. We also have one pediatric orthopaedic fellow per year approved by the Accreditation Council for Graduate Medical Education. Most fellows go on to fill academic positions in pediatric orthopaedic surgery in the United States and internationally. Our growing research program focuses on growth plate modulation, spinal deformity and scoliosis outcomes, gait analysis and limb length discrepancy.

SCOLIOSIS SERVICE

OHENEBA BOACHIE-ADJEI, MD, CHIEF

The Scoliosis Service has earned a worldwide reputation in the correction of complex pediatric and adult spinal deformities in patients as young as six months or into their eighties. Performing some 300 cases a year, our surgeons work closely with specialists in intensive care, pulmonology, neurology, neurosurgery and anesthesia resulting in a distinguished record of excellent clinical outcomes for the treatment of scoliosis and kyphosis, as well as revision procedures.

Our surgeons have evaluated, with promising results, a new bracing system for adolescent idiopathic scoliosis that is made up of a vest, pelvic support and a strap—providing extra room for breathing and flexibility while correcting the spinal curvature.

We are implementing new endoscopic procedures for thoracic deformities that allow access to the spine through the chest cavity.

The scoliosis surgical team is also advancing surgery for early onset scoliosis with severe curvature using a modified and improved dual-rod technique that achieves correction through the implantation of growing rods, thereby avoiding major fusion surgery that carries the risk of stunted growth.

More recently, the team is evaluating the benefits of using a vertebral bone screw approach to correct spinal deformities,

and we continue to be involved in the development of instrumentation systems and implant materials, such as titanium, that will provide and maintain optimum correction, strength and flexibility, while enabling postoperative imaging studies such as CT and MRI.

Our research involves both laboratory-based projects and clinically based outcome studies of operative and non-operative management of spine patients. With a scoliosis registry enrollment of over 1,000 patients, we are in a key position to conduct prospective studies, long-term retrospective studies and reviews.

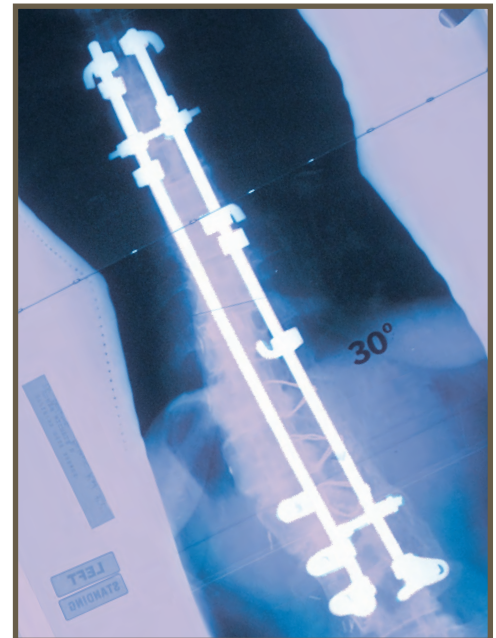
In the laboratory, our surgeons are exploring various methods for enhancing spinal fusion through regional expression of the vascular endothelial growth factor gene, as well as using bone morphogenetic protein (BMP) to promote bone growth and avoid autologous bone grafts.

Preliminary reports are very promising and show the potential for stimulating local cells in the patient's marrow to make BMP, which can be introduced at the site of the spinal fusion.

The Scoliosis Service has four clinical fellows and one research fellow who is involved in basic and translational research.



Oheneba Boachie-Adjei, MD



SPINE SERVICE

FRANK P. CAMMISA, JR., MD, CHIEF



Frank P. Cammisa, Jr., MD



The field of spinal surgery has advanced tremendously over the last decade with the advent of new imaging techniques, clinical assessments, interdisciplinary approaches and the development of new surgical techniques.

At HSS, spine surgeons work closely with other disciplines including imaging, neurology, physiatry, pain management and metabolic bone disease to provide comprehensive pre- and postoperative care. We address all pathologies involving the thoracic, or lumbar spine, or a combination of these regions, including:

- herniated discs
- stenosis
- spondylolisthesis
- fractures
- tumors
- complex spinal deformities

The Spine Service continues to be at the forefront in the development, testing, improvement and basic and clinical evaluation of all surgical spinal procedures. Some of these address the concept of restoring function without eliminating motion. Technologies involve lumbar; nuclear, partial, and total disc replacement, cervical disc replacement and posterior dynamic stabilizing procedures in combination with minimally invasive techniques. HSS has been one of the pioneers in the country assessing the efficacy and safety of such devices. We have a close relationship with the Department of Biomechanics and Biomaterials, which has been critical

to evaluating these devices prior to implantation. Several studies are underway to assess new technologies in this rapidly expanding field.

Our surgeons have been working on basic and clinical science research to improve fusion procedures as well. This has been based on the combination of different proteins, matrices and bone substitutes that can avoid or minimize the need for bone graft harvesting. Many of these biomaterials have been tested not only in experimental models, but also have achieved very promising results in clinical trials.

The Spine Service was one of the first in the country to utilize computer-assisted image guidance beginning in 1996. This computer technology has allowed the use of real-time navigation in surgery with very accurate placement of tools and instruments in very challenging anatomies. These technologies, in conjunction with minimally invasive techniques, such as endoscopes or special retractors, will facilitate a safe transition to percutaneous surgery at some point.

The Spine Service is dedicated to the assessment of surgical and non-surgical techniques with prospective randomized trials to refine the indication, timing and treatment prognosis of these pathologies.

Committed to training orthopaedic surgeons here and abroad, the Spine Service received approval for a fifth fellowship position in 2005.

SPORTS MEDICINE AND SHOULDER SERVICE

DAVID W. ALTCHER, MD, CHIEF AND SCOTT A. RODEO, MD, CHIEF

With 22 orthopaedic surgeons, HSS has assembled one of the largest Sports Medicine and Shoulder Services in the country, with a breadth of clinical and research expertise that is virtually unsurpassed. Our collective experience treating both elite professional athletes and recreational sports enthusiasts covers the entire scope of non-operative management and surgical approaches for soft tissue injuries.

In addition to pursuing innovations in arthroscopic surgery and soft tissue reconstruction, our surgeons have refined traditional procedures such as the Tommy John surgery for repairing a torn medial collateral ligament. Less than a decade ago, we modified the technique to dock the ends of the tendon graft to the bone making it easier for the surgeon to perform and less traumatic to the patient. The docking procedure is now the treatment of choice.

Collaborating with the Hospital's Department of Radiology and Imaging, the Sports Medicine and Shoulder Service has developed techniques using MRI and ultrasound to more precisely diagnose sports-related conditions at an earlier stage when surgery may be avoided. We also employ ultrasound-guided injections to treat certain conditions, particularly in recreational athletes, to forestall surgical intervention.

Our surgeons work closely with the Hospital's nationally regarded sports medicine and rehabilitation program, and we are embarking on a major expansion of a "human performance" rehabilitation and training center dedicated to restoring athletes to their pre-injury level, as well as helping them to achieve an even greater performance ability.

Basic and clinical research, major components of our service, focus on soft tissue and cartilage reconstruction of joints and clinical application to the active individual, specifically targeting:

- knee ligament stability
- shoulder stability
- rotator cuff tendon healing
- articular cartilage repair

We are also establishing computerized registries of all patients undergoing surgery for anterior cruciate ligament reconstruction, rotator cuff repair and shoulder stabilization surgery. Ongoing basic science projects, which support our clinical efforts, include investigating ligament healing, ligament fibroblast physiology, cartilage repair, meniscus transplantation and rotator cuff tendon healing.

Our one-year orthopaedic sports medicine fellowship has six accredited positions. In addition, we offer a two-year fellowship position that allows for the first year to be dedicated to research.



David W. Altchek, MD



Scott A. Rodeo, MD

PROFESSIONAL STAFF

FOOT AND ANKLE SERVICE

Jonathan T. Deland, MD, *Chief*
 Walther H.O. Bohne, MD
 Andrew J. Elliott, MD
 John G. Kennedy, MD
 David S. Levine, MD
 Martin J. O'Malley, MD
 Matthew M. Roberts, MD
 2005-2006 FELLOWS
 Andrew Brief, MD
 Roman Sibel, MD

HAND SERVICE

Scott W. Wolfe, MD, *Chief*
 Edward A. Athanasian, MD
 Michelle G. Carlson, MD
 Aaron Daluiski, MD
 Robert N. Hotchkiss, MD
 Lana Kang, MD
 Andrew J. Weiland, MD
 2005-2006 FELLOWS
 Joshua Richards, MD
 Rachel Rohde, MD
 Tito Vasquez, MD

HIP AND KNEE SERVICE

Eduardo A. Salvati, MD, *Director*
 Paul M. Pellicci, MD, *Chief, Hip*
 Richard S. Laskin, MD,
Co-Chief, Knee
 Russell E. Windsor, MD,
Co-Chief, Knee
 Mathias P. Bostrom, MD,
Associate Chief, Hip
 Steven B. Haas, MD,
Associate Chief, Knee
 Alejandro Gonzalez
 Della Valle, MD
 David J. Mayman, MD
 Douglas E. Padgett, MD
 Daniel S. Rich, MD
 Edwin P. Su, MD
 Geoffrey H. Westrich, MD
 2005-2006 FELLOWS
 David Casey, MD
 Sanjay Gupta, MD
 John Hur, MD
 Adam Lazzarini, MD
 Samuel MacDessi, MD

SURGICAL ARTHRITIS SERVICE

Mark P. Figgie, MD, *Chief*
 Michael M. Alexiades, MD
 Robert L. Buly, MD
 Bryan J. Nestor, MD
 Thomas P. Sculco, MD
 2005-2006 FELLOWS
 David Casey, MD
 Sanjay Gupta, MD
 John Hur, MD
 Adam Lazzarini, MD
 Samuel MacDessi, MD

ADULT LIMB LENGTHENING AND RECONSTRUCTION SERVICE

S. Robert Rozbruch, MD, *Chief*
 Austin T. Fragomen, MD
 Svetlana Ilizarov, MD
 2005-2006 FELLOW
 Nazzar Tellisi, MD

METABOLIC BONE DISEASE SERVICE

Joseph M. Lane, MD, *Chief*
 Richard S. Bockman, MD, PhD
 Julie T. Lin, MD
 Martin Nydick, MD
 Linda A. Russell, MD
 Robert Schneider, MD
 David A. Zackson, MD
 2005-2006 FELLOWS
 Paul Issack, MD
 Alana Serota, MD

ORTHOPAEDIC TRAUMA SERVICE

David L. Helfet, MD, *Chief*
 Charles N. Cornell, MD
 Bryan T. Kelly, MD
 Joseph M. Lane, MD
 Dean G. Lorch, MD
 John P. Lyden, MD
 2005-2006 FELLOWS
 Andrew Grose, MD
 Eric Pagenkopf, MD
 George Partal, MD
 Yoram Weil, MD

PEDIATRIC

ORTHOPAEDIC SERVICE

Roger F. Widmann, MD, *Chief*
 Stephen W. Burke, MD
 Daniel W. Green, MD
 Cathleen L. Raggio, MD
 Leon Root, MD
 David M. Scher, MD
 2005-2006 FELLOW
 Mengnai Li, BM, PhD

SCOLIOSIS SERVICE

Oheneba Boachie-Adjei, MD,
Chief
 Stephen W. Burke, MD
 Daniel W. Green, MD
 Bernard A. Rawlins, MD
 Roger F. Widmann, MD
 2005-2006 FELLOWS
 Jerome Boatey, MB, ChB
 Matthew Cunningham, MD,
 PhD
 Marcelo Molina, MD
 Seamus Morris, MD
 Michael Peelle, MB, BCh
 Matias Petracchi, MD

SPINE SERVICE

Frank P. Cammisa, Jr., MD, *Chief*
 James C. Farmer, MD
 Federico P. Girardi, MD
 Charles B. Goodwin, MD
 Russel C. Huang, MD
 Patrick F. O'Leary, MD
 Bernard A. Rawlins, MD
 Andrew A. Sama, MD
 Harvinder S. Sandhu, MD
 2005-2006 FELLOWS
 Jerome Boatey, MB, ChB
 Matthew Cunningham, MD,
 PhD
 Marcelo Molina, MD
 Seamus Morris, MD
 Michael Peelle, MB, BCh
 Matias Petracchi, MD

SPORTS MEDICINE

AND SHOULDER SERVICE

David W. Altchek, MD, *Co-Chief*
 Scott A. Rodeo, MD, *Co-Chief*
 Answorth A. Allen, MD
 Struan H. Coleman, MD
 Frank A. Cordasco, MD
 Edward V. Craig, MD
 Stephen Fealy, MD
 Jo A. Hannafin, MD, PhD
 Anne M. Kelly, MD
 Bryan T. Kelly, MD
 John D. MacGillivray, MD
 Robert G. Marx, MD
 Michael J. Maynard, MD
 Stephen J. O'Brien, MD
 Andrew D. Pearle, MD
 Howard A. Rose, MD
 Beth E. Shubin Stein, MD
 Russell F. Warren, MD
 Thomas L. Wickiewicz, MD
 Riley J. Williams, III, MD
 2005-2006 FELLOWS
 Eric Chehab, MD
 David Green, MD
 Heather Harnly, MD
 Kent Jackson, MD
 Warren Kadrmas, MD
 Jonas Rudzki, MD
 Fintan Shannon, MD
 Vonda Wright, MD

2005 NOTABLE ACHIEVEMENTS

The orthopaedic surgeons at Hospital for Special Surgery are regularly cited for their outstanding work and professional achievements. They also serve in leadership positions, participate in national and international organizations and professional societies and serve as editors on peer-reviewed journals, helping to further excellence in orthopaedic medicine, research and education worldwide.

AWARDS AND SPECIAL RECOGNITION

Answorth A. Allen, MD

Team Orthopaedic Physician, New York Knicks
Head Team Physician, New York Mets

David W. Altchek, MD

Medical Director, New York Mets
Medical Director, North American Association of
Tennis Professionals

Oheneba Boachie-Adjei, MD

Science & Peace Gold Medal (Humanitarian Award)
Albert Schweitzer International University, Geneva, Switzerland

Michelle G. Carlson, MD

Consulting Hand Surgeon, New York Mets
Consulting Hand Surgeon, St. John's University Athletic Department

Daniel W. Green, MD

Leadership Fellowship Award, American Academy of
Orthopaedic Surgeons

Jo A. Hannafin, MD, PhD

Ruth Jackson Lectureship Award, University of Iowa
Chief Medical Officer, FISA World Cup Regatta, Eton, England
Team Orthopaedic Surgeon, New York Liberty (WNBA)

Bryan T. Kelly, MD

Assistant Team Doctor, New York Giants

Joseph M. Lane, MD

Excellence in Teaching Award, Weill Cornell Medical College

John D. MacGillivray, MD

Team Physician, U.S. Ski Team
Orthopaedic Consultant, Players Association, National Hockey
League

Robert G. Marx, MD

Aircast Award for Clinical Science, American Orthopaedic Society
for Sports Medicine

Paul M. Pellicci, MD

Philip D. Wilson, Jr. Teaching Award, Hospital for Special Surgery

Scott A. Rodeo, MD

Associate Team Physician, New York Giants
Orthopaedic Consultant, Team RLX Polo Sport Cycling Team
Medical Adviser, Asphalt Green Swimming Team, New York City

Leon Root, MD

Annual Humanitarian Award, United Cerebral Palsy of Nassau County

Thomas P. Sculco, MD

Gold Medal Award for Clinical Medicine, Columbia University
College of Physicians and Surgeons

Beth E. Shubin Stein, MD

Team Physician, New York Liberty (WNBA)

Geoffrey H. Westrich, MD

Sir John Charnley Hip Society Award

Riley J. Williams, III, MD

Head Team Physician, Iona College Department of Athletics
Aircast Award for Clinical Science, American Orthopaedic Society
for Sports Medicine
Consultant, National Football League

Russell F. Warren, MD

Team Physician, New York Giants

Scott W. Wolfe, MD

Emanuel Kaplan Award, New York Society for Surgery of the Hand
Philip D. Wilson Award, Hospital for Special Surgery
First Place Award, 3rd Annual Bioengineering Expo, Institute for
Biological Engineering

LEADERSHIP POSITIONS

Oheneba Boachie-Adjei, MD

Member-at-Large, Board of Directors, American Academy of
Orthopaedic Surgeons
Director-at-Large, Board of Directors, Scoliosis Research Society
Chair, Fellowship Committee, Scoliosis Research Society

Frank P. Cammisa, Jr., MD

Chair, Spine Arthroplasty Society, 5th Annual Global Symposium
on Motion Preservation Technology

Frank A. Cordasco, MD

Chair, Membership Committee, American Shoulder and
Elbow Surgeons

Daniel W. Green, MD

Chair Elect, Government Affairs Committee, New York County
Medical Society

Jo A. Hannafin, MD, PhD

Council of Delegates, American Orthopaedic Society for
Sports Medicine
Vice President, Board of Trustees, National Rowing Foundation
Medical Advisory Board, Women's Sports Foundation

David L. Helfet, MD

Trustee, AO Foundation
Chair, AO/ASIF Documentation and Publishing Foundation
Board Member, National Orthopaedic Surgery Fellows Foundation
Board of Medical Advisors, *The Best Doctors in America*

2005 NOTABLE ACHIEVEMENTS CONTINUED

Joseph M. Lane, MD

Chair, American Academy of Orthopaedic Surgeons Review Course

Cathleen L. Raggio, MD

Co-Chair, International Osteogenesis Imperfecta Meeting

Chair, Membership Committee, Orthopaedic Research Society

Scott A. Rodeo, MD

Council of Delegates, American Orthopaedic Society for Sports Medicine

Chair, Fellowship Exam Committee, American Orthopaedic Society for Sports Medicine

Chair, Self-Assessment Exam Committee, American Orthopaedic Society for Sports Medicine

Chair, United States Swimming Sports Medicine Committee

State Campaign Coordinator, Orthopaedic Research and Education Foundation

Leon Root, MD

Medical Advisory Council, Osteogenesis Imperfecta Foundation

Consultant in Orthopaedics, United Cerebral Palsy of Nassau County

S. Robert Rozbruch, MD

Treasurer and Executive Board Member, Limb Lengthening and Reconstruction Society

Thomas P. Sculco, MD

Chair, Membership Committee, The Hip Society

Treasurer, The Knee Society

Russell F. Warren, MD

Board of Trustees, Orthopaedic Research Education Fund

Board of Trustees, National Football Foundation and

College Hall of Fame

Roger F. Widmann, MD

President, Pediatric Orthopaedic Club of New York

Riley J. Williams, III, MD

Consultant, National Football League

Scott W. Wolfe, MD

Chair, Case-based controversies and techniques in upper extremity trauma. American Society for Surgery of the Hand Annual Meeting Pre-course

Chair, Bunnell Traveling Fellowship Committee, American Society for Surgery of the Hand

EDITORIAL APPOINTMENTS

Walther H. O. Bohne, MD

Assistant Editor, *Foot and Ankle International*

Assistant Editor, *Clinical Orthopaedics and Related Research*

Mathias P. Bostrom, MD

Journal Reviewer: *Bone; Clinical Orthopaedics and Related Research;*

Journal of Bone and Mineral Research; Journal of Orthopaedic Research; Spine; Journal of Orthopaedic Trauma

Frank P. Cammisa, Jr., MD

Editor, *Newsletter of the Spine Arthroplasty Society*

Editorial Board, *Journal of Spinal Disorders & Techniques*

Reviewer, *Spine*

Frank A. Cordasco, MD

Editorial Board, *Arthroscopy: The Journal of Arthroscopic and Related Surgery*

Editorial Reviewer: *Journal of Shoulder and Elbow Surgery; Arthroscopy:*

The Journal of Arthroscopic and Related Surgery; The American

Journal of Sports Medicine; Clinical Orthopaedics and Related Research

Charles N. Cornell, MD

Senior Associate Editor, *Clinical Orthopaedics and Related Research*

Board of Consulting Editors for Research, *Journal of Bone and Joint Surgery (Am)*

Reviewer: *Journal of Bone and Joint Surgery, (Am); Journal of Surgery, Gynecology and Obstetrics; Current Science, Current Opinion in Orthopaedics; Clinical Orthopaedics and Related Research; Journal of Orthopaedic Research; Journal of Orthopaedic Trauma*

Edward V. Craig, MD

Co-Editor-in-Chief, *Journal of Orthopaedic Science*

Editorial Boards: *Techniques in Shoulder and Elbow Surgery; Journal of Shoulder and Elbow Surgery; Current Opinion in Orthopaedics; The Joint Letter; Journal of Bone and Joint Surgery*

Journal Reviewer: *American Journal of Sports Medicine; Clinical Orthopaedics and Related Research; Journal of Bone and Joint Surgery; Journal of Shoulder and Elbow Surgery; Orthopaedics*

Jonathan T. Deland, MD

Associate Editor, *Foot & Ankle International*

Austin T. Fragomen, MD

Reviewer, *Journal of Orthopaedic Research*

Federico P. Girardi, MD

Editorial Reviewer: *The Spine Journal; British Medical Journal*

Daniel W. Green, MD

Reviewer, *Spine*

Jo A. Hannafin, MD, PhD

Editorial Reviewer: *Journal of Shoulder and Elbow Surgery; Journal of Orthopaedic Research; American Journal of Sports Medicine*

David L. Helfet, MD

Department Editor, *The American Journal of Orthopaedics*
 Associate Editor, *Journal of Orthopaedic Techniques*
 Editorial Boards: *The Journal of Orthopaedic Trauma*; *Techniques in Orthopaedics*; *Journal of the American Academy of Orthopaedic Surgeons*
 Roster of Reviewers, *The Journal of Trauma*

Joseph M. Lane, MD

International Advisory Board, *Journal of Bone and Mineral Metabolism*
 Editorial Boards: *Bone*; *Journal of Arthroplasty*; *Journal of Orthopaedic Research*; *Spine*
 Reviewer: *Journal of Orthopaedic Research*; *Journal of Bone and Joint Surgery (American/British)*; *Journal of the Association of Bone and Mineral Research*; *Clinical Orthopaedics and Related Research*; *Journal of Orthopaedic Trauma*; *Osteoporosis International*; *Journal of Biomechanics*

Richard S. Laskin, MD

Editor-in-Chief, *HSS Journal: The Musculoskeletal Journal of Hospital for Special Surgery*
 Editor-in-Chief, *The Knee*
 Deputy Editor, *Clinical Orthopaedics and Related Research*
 Editorial Boards: *American Journal of Knee Surgery*; *The Spanish Knee Society*; *Pathology of the Knee*
 Reviewer, *Journal of Bone and Joint Surgery*

John D. MacGillivray, MD

Reviewer: *American Journal of Sports Medicine*; *Clinical Orthopaedics and Related Research*; *Journal of Bone and Joint Surgery (Am)*

Robert G. Marx, MD

Deputy Editor, *Evidence Based Orthopedics*, *Clinical Orthopaedics and Related Research*
 Journal Reviewer: *Journal of Shoulder and Elbow Surgery*; *American College of Physicians Information and Education Resource*; *Clinical Orthopaedics and Related Research*; *Journal of Bone and Joint Surgery (Am)*; *Journal of Clinical Epidemiology*; *British Journal of Sports Medicine*; *American Journal of Sports Medicine*; *Arthritis and Rheumatism*

Paul M. Pellicci, MD

Editor: *Manual of Rheumatology and Outpatient Orthopaedic Disorders*; *Orthopaedic Knowledge Update. Hip and Knee Reconstruction 2*
 Associate Editor, *Clinical Orthopaedics and Related Research*
 Section Editor, *Lower Extremity Orthopaedic Knowledge Update 3*
 Editorial Board, *Perspectives in Orthopaedic Surgery*

Scott A. Rodeo, MD

Board of Consulting Editors for Research, *Journal of Bone and Joint Surgery*
 Editorial Advisory Board, *Orthopaedics Today*
 Editorial Boards: *American Journal of Sports Medicine*; *Journal of Orthopaedic Research*; *Journal of Shoulder and Elbow Surgery*; *Arthritis and Rheumatism*

S. Robert Rozbruch, MD

Editorial Board, *Journal of Orthopaedic Trauma: Medical Principles and Practice*
 Editorial Panel, *Journal of Orthopaedic Research*

Thomas P. Sculco, MD

Deputy Editor-in-Chief, *American Journal of Orthopaedics*
 Associate Editor, *Arthritis and Rheumatism*
 Associate Editor, *Techniques in Orthopaedics*
 Editorial Board, *Advances in Healing*
 Consultant Reviewer, *Journal of the American Academy of Orthopaedic Surgeons*
 Reviewer: *Journal of Bone and Joint Surgery*; *Clinical Orthopaedics and Related Research*; *Journal of Orthopaedic Research*

Beth E. Shubin Stein, MD

Reviewer, *Arthroscopy: The Journal of Arthroscopic and Related Surgery*

Russell F. Warren, MD

Editor-in-Chief, *Techniques in Shoulder and Elbow Surgery*
 Editorial Boards: *The Journal of Knee Surgery*; *Advances in Orthopaedic Surgery*

Andrew J. Weiland, MD

Series Editor, *Orthopaedic Surgical Skills*
 Associate Editor: *International Journal of Microsurgery*; *Year Book of Orthopaedics*; *Orthopaedic Review: Aspects of Trauma*
 Senior Advisory Board, *Hand Index*
 Board of Advisory Editors, *Clinical Orthopaedics and Related Research*
 Editorial Advisory Board, *Journal of Reconstructive Microsurgery*
 Editorial Boards: *Orthopaedic Knowledge Update 2*; *Journal of Orthopaedic Techniques*; *Perspectives in Orthopaedic Surgery*

Thomas L. Wickiewicz, MD

Editorial Boards: *The Knee*; *American Journal of Sports Medicine*
 Reviewer, *Journal of Bone and Joint Surgery*

Riley J. Williams, III, MD

Reviewer: *Journal of Bone and Joint Surgery*; *American Journal of Sports Medicine*; *Clinical Orthopaedics and Related Research*; *Journal of Knee Surgery*

2005 SELECTED PUBLICATIONS

Hospital for Special Surgery orthopaedic surgeons are prolific scientific and clinical authors with articles routinely published in peer-reviewed journals.

FOOT AND ANKLE SERVICE

Agel J, Coetzee JC, Sangeorzan BJ, Roberts MM, Hansen ST: Functional limitations of patients with end-stage ankle arthrosis. *Foot & Ankle International* 2005.

Anderson R, Bohne WHO, Deland JT, O'Malley MJ, Kennedy JG: An analysis of outcome following surgical correction in Haglund's deformity. *Acta Orthopaedica Belgica* 2005.

Brodsky JW, Bohne WHO, O'Malley MJ, Deland JT, Kennedy JG: An analysis of outcome measures following the Brostrom-Gould procedure for chronic lateral ankle instability. *Foot & Ankle International* 2005.

Brunner J, Anderson J, O'Malley MJ, Bohne WHO, Deland JT, Kennedy JG: Physician and patient based outcomes following surgical resection of Haglund's deformity. *Acta Orthopaedica Belgica* 2005

Deland JT, deAsla RJ, Sung IH, Ernberg LA, Potter HG: Posterior tibial tendon insufficiency: which ligaments are involved? *Foot & Ankle International* 2005.

Kennedy JG, Deland JT, Knowles B, Dolan M, Bohne WHO: Foot and ankle injuries in adolescent runners. *Current Opinion in Pediatrics* 2005.

Kopp FJ, Patel MM, Levine DS, Deland JT: Modified lapidus procedure for hallux valgus. *Foot & Ankle International* 2005.

HAND SERVICE

Athwal GS, Bartsich SA, Weiland AJ: Herpes zoster in the ulnar nerve distribution. *British Journal of Hand Surgery* 2005.

Athwal GS, Bueno RA Jr, Wolfe SW: Radiation exposure in hand surgery: mini versus standard C-arm. *Journal of Hand Surgery (Am)* 2005.

Athwal GS, Bueno RA, Bansal M, Mintz DN, Athanasian EA: Intra-articular fibroma of tendon sheath involving the scapholunate and radiocarpal joints. *Skeletal Radiology* 2005.

Athwal GS, Wolfe SW: Treatment of acute flexor tendon injury: zones III-V. *Hand Clinics* 2005.

Beredjikian PK, Hotchkiss RN, Athanasian EA, Ramsey ML, Katz MA: Recalcitrant nonunion of the distal humerus: treatment with free vascularized bone grafting. *Clinical Orthopaedics and Related Research* 2005.

Brophy, RH; Wolfe, SW: Planning brachial plexus surgery: treatment options and priorities. *Hand Clinics* 2005.

Crisco JJ, Coburn JC, Moore DC, Akelman E, Weiss AP, Wolfe SW: In vivo radiocarpal kinematics and the dart thrower's motion. *Journal of Bone and Joint Surgery (Am)* 2005.

Cunningham ME, Bueno R, Potter HG, Weiland AJ: Closed partial rupture of a common digital nerve in the palm: a case report. *Journal of Hand Surgery* 2005.

Diresta GR, Nathan SS, Manoso MW, Casas-Ganem J, Wyatt C, Kubo T, Boland PJ, Athanasian EA, Miodownik J, Gorlick R, Healey JH: Cell proliferation of cultured human cancer cells are affected by the elevated tumor pressures that exist in vivo. *Annals of Biomedical Engineering* 2005.

Gardner MJ, Griffith MH, Dines JS, Briggs SM, Weiland AJ, Lorch DG: The extended anterolateral acromial approach allows minimal invasive access to the proximal humerus. *Clinical Orthopaedics and Related Research* 2005.

Gilbert R, Wolfe SW: Vascularized fibula grafts: clinical applications. *Bone Regeneration and Repair, Biology and Clinical Applications* 2005.

Hanasono MM and Hotchkiss RN: Locking horizontal mattress suture. *Dermatological Surgery* 2005.

Kang L, Belcher D, Hulstyn MJ: Stress fractures of the femoral shaft in women's college lacrosse: a report of seven cases and a review of the literature. *British Journal of Sports Medicine* 2005.

Kwon YW, Kalainov DM, Rose HA, Bisson LJ, Weiland AJ: Management of early deep infection after rotator cuff repair surgery. *Journal of Shoulder and Elbow Surgery* 2005.

Manoso MW, Healey JH, Boland PJ, Athanasian EA, Maki RG, Huvo AG, Morris CD: De novo osteogenic sarcoma in patients older than forty: benefit of multimodality therapy. *Clinical Orthopaedics and Related Research* 2005.

Milllett PJ, Johnson TR, Weiland AJ: Post-traumatic osteonecrosis of a child's carpal scaphoid and carpal lunate: a case report and literature review. *American Journal of Orthopaedics* 2005.

Mintz MB, Sowers R, Brown KM, Hilmer SC, Mazza B, Huvo AG, Meyers PA, Lafleur B, McDonough WS, Henry MM, Ramsey KE, Antonescu CR, Chen W, Healey JH, Daluiski A, Berens ME, Macdonald TJ, Gorlick R, Stephan DA: An expression signature classifies chemotherapy-resistant pediatric osteosarcoma. *Cancer Research* 2005.

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HOSPITAL FOR SPECIAL SURGERY 2005-2006 ORTHOPAEDIC SURGERY GRADUATING RESIDENTS



Front row, left to right:

Christina Kuo, MD, Hand Fellowship, Brigham Women's Hospital, Boston, MA
Holly Johnson, MD, Foot/Ankle Fellowship, Hospital for Special Surgery, New York, NY
Robert Brophy, MD, Sports Fellowship, Hospital for Special Surgery, New York, NY

Middle row, left to right:

Academic Leadership

Edward V. Craig, MD, Director, Orthopaedic Residency Program
Thomas P. Sculco, MD, Surgeon-in-Chief
Mathias P. Bostrom, MD, Academic Director, Orthopaedic Surgery

Back row, left to right:

Anil Ranawat, MD, Sports Medicine Fellowship, University of Pittsburgh, Pittsburgh, PA
Ben Huffard, MD, Sports Medicine Fellowship, Steadman-Hawkins Clinic, Vail, CO
Ben Domb, MD, Sports Medicine Fellowship, Kerlan-Jobe Orthopaedic Clinic, Los Angeles, CA
Joshua Dines, MD, Sports Medicine Fellowship, Kerlan-Jobe Orthopaedic Clinic, Los Angeles, CA

LEWIS CLARK WAGNER AWARD

Joshua Dines, MD

The Effect of a Tissue Engineered-Gene Therapy Construct on Rotator Cuff Tendon Healing in a Rat Model

HOSPITAL FOR SPECIAL SURGERY 2005-2006 GRADUATING FELLOWS



Hospital for Special Surgery graduated the following 2005-2006 fellows in orthopaedic surgery.
They are joined in the photo by graduating fellows in musculoskeletal radiology, anesthesiology and neurology.

DEPARTMENT OF ORTHOPAEDIC SURGERY FELLOWS

Jerome Boatey, MB, ChB, Spine/Scoliosis	Marcelo Molina, MD, Spine/Scoliosis
Andrew Brief, MD, Foot/Ankle	Seamus Morris, MB, BCh, Spine/Scoliosis
David Casey, MD, Adult Reconstruction Surgery	Eric Pagenkopf, MD, Trauma
Eric Chehab, MD, Sports Medicine/Shoulder	George Partal, MD, Trauma
Matthew Cunningham, MD, PhD, Spine/Scoliosis Research	Michael Peelle, MD, Spine/Scoliosis
Aditya Daftary, MBBS, Adult Reconstruction Surgery	Matias Petracchi, MD, Spine/Scoliosis
David Doward, MD, Spine and Sports Medicine	Joshua Richards, MD, MPH, Hand
David Green, MD, Sports Medicine/Shoulder	Rachel Rohde, MD, Hand
Andrew Grose, MD, Trauma	Jonas Rudzki, MD, Sports Medicine/Shoulder
Sanjay Gupta, MD, Adult Reconstruction Surgery	Alana Serota, MD, Metabolic Bone Diseases
Heather Harnly, MD, Sports Medicine/Shoulder	Fintan Shannon, MB, BCh, ARS/Sports Medicine
John Hur, MD, Adult Reconstruction Surgery	Roman Sibel, MD, Foot/Ankle
Paul Issack, MD, PhD, Adult Reconstruction Surgery	Tito Vasquez, MD, Hand
Kent Jackson, MD, Sports Medicine/Shoulder	Yusuf Tatli, MD, Spine and Sports Medicine
Warren Kadrmas, MD, Sports Medicine/Shoulder	Nazzar Tellisi, MB, BCh, Limb Lengthening
Adam Lazzarini, MD, Adult Reconstruction Surgery	Lorne Weeks, MD, General Orthopaedics
Mengnai Li, BM, PhD, Pediatrics	Yoram Weil, MD, Trauma
Samuel MacDessi, MD, Adult Reconstruction Surgery	Vonda Wright, MD, Sports Medicine/Shoulder

PHILIP D. WILSON AWARD

Vonda Wright, MD

ACL Fibroblasts Respond to Mechanical Load by Activation of Stress-Activated Protein Kinases and Transcription Factors

CHARLES L. CHRISTIAN MUSCULOSKELETAL RESEARCH AWARD

Sebastian Fung, MD

Stratification of Cartilage Injury Following Isolated ACL Injury

*The 2005 Annual Report of the Department of Orthopaedic Surgery
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