



# Discovery to Recovery

CLINICAL AND RESEARCH HIGHLIGHTS AT HSS | FALL 2006

## Demand for Care Spurs Expansion

*New Ambulatory Surgery Center Opens First Phase of Clinical Improvements*

**W**ith an ever increasing demand for specialized care in orthopedics and rheumatology, Hospital for Special Surgery (HSS) has embarked on an ambitious multi-year expansion project that will add more than 200,000 square feet of new space and renovate over 100,000 square feet of existing space in and around its campus. This expansion is a direct response to the increased attention being paid to musculoskeletal health by the public and professional health care community. Major demographic and sociological trends have brought this issue to the forefront. A dramatic increase in the over-sixty population and their need for orthopedic and rheumatic treatment, and a more active, younger population desiring to remain active and involved in sports as they grow older are among these trends.

Indeed, The World Health Organization declared 2000 to 2010 to be the “Bone and Joint Decade,” in recognition of the impact of musculoskeletal health on quality of life. Providing the best and most innovative treatments to patients is chief among the Hospital’s priorities as it expands beyond its current perimeter. “Here at Special Surgery, our patients are treated by the most talented physicians and surgeons and we must continue to improve the care environment for our patients,” says Thomas P. Sculco, MD, Surgeon-in-Chief and Korein-Wilson Professor in Orthopedic Surgery. “Our goal is to revolve our care around the patient

and focus on their recovery and rehabilitation, in the best tradition of patient-focused care.”

### **Increasing Surgical Space**

Since Special Surgery’s last expansion in 1996, surgical volume and outpatient visits have increased by approximately 60 percent. “HSS is in need of additional operating space to better accommodate the extraordinary growth in patient volume that we have seen over the last several years,” says Lisa Goldstein, Executive Vice President and Chief Operating Officer. “Wait time for patients requiring surgery will decrease significantly because there will be more physical space in which to perform surgeries.” In 2005, more than 17,500 inpatient and ambulatory surgeries were performed at Special Surgery. In response to the growing demand for inpatient surgical care, plans are underway to increase the number of inpatient operating rooms from 15 to 21 on the Hospital’s 4th floor by late 2008.

This fall, HSS will open a new ambulatory surgery area on the 9th floor, increasing the number of ambulatory surgical suites from five to eight. In 2007, two additional operating rooms for ambulatory surgery will open on the first floor. By teaming up with nursing and medical staff, architects have designed the most advanced surgical facilities with cutting edge technology. A brighter, more expansive ambulatory surgery space will accommodate larger equipment used for outpatient procedures such as

hip arthroscopy, while also creating an environment that is more efficient for more routine knee and shoulder ligament repairs.

Promising to enhance patient flow, the new ambulatory surgical suites will offer private and semi-private holding areas for patients and their families. Modern features in the surgical suites include the capability for audio/visual integration with other operating rooms and conference spaces, providing an educational tool for staff physicians and visiting

surgeons to monitor surgeries in progress. Carts that are currently used to hold surgical tools and equipment will be replaced with “booms” that will hang down from the ceiling, enabling physicians and staff to deploy equipment on either side of the patient for maximum coordination. Moreover, dedicated elevator service between the operating rooms and Central Sterile Supply will enhance the Hospital’s already outstanding infection control efforts, with one elevator exclusively used for sterile linens and equipment.

The expansion will increase inpatient and ambulatory operating rooms from 20 to 29.

*Continued on page 8*



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### **Renowned Rheumatologist Steven R. Goldring, MD, Appointed Chief Scientific Officer at HSS**



Steven R. Goldring, MD, recognized worldwide as an expert in orthopedic and rheumatology research and care, has been named Hospital for Special Surgery’s Chief Scientific Officer (CSO). In his new position, Dr. Goldring will oversee all aspects of clinical and basic science at HSS, a leader in the field of musculoskeletal research. **See page 3**

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# A Bridge to the Future

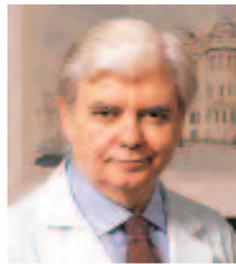
With the conclusion of our landmark Campaign for Research and the recent inauguration of a major modernization and expansion program, Hospital for Special Surgery has entered a dynamic and exciting period of growth on a number of fronts.

### Research Enterprise Expanded

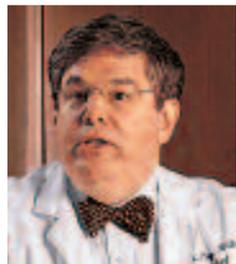
With \$115.7 million raised for research, we surpassed our goal by more than \$5.7 million. The phenomenal success of this campaign has provided the resources to transform our scientific agenda and to set the stage for major advances in patient care. We have already seen the construction and renovation of Special Surgery's research facilities. Moreover, we have established 21 named chairs and fellowships and recruited a cohort of renowned scientists.

Over the past few years, HSS has undertaken a major organizational restructuring of its research program with a goal toward accelerating the translation of discoveries into new methods of diagnosis, treatment and prevention. Now in place are pacesetter research initiatives aimed at finding the causes and developing new

therapies for musculoskeletal conditions. To lead and shape the future of research, we are pleased to welcome Steven R. Goldring, MD, as Chief Scientific Officer. Internationally renowned for his research in bone biology and inflammatory disorders, Dr. Goldring joins us from Harvard Medical School, where he served as Professor of Medicine; New England Baptist Hospital, where he was Chief of Rheumatology; and the New



Thomas P. Sculco, MD



Stephen A. Paget, MD

England Baptist Bone and Joint Institute at the Harvard Institutes of Medicine, where he was Director of Research.

As we embark on major construction of new clinical facilities, Special Surgery continues to achieve national and international recognition as a premier institution for musculoskeletal care, research, and education. In the 2006 *U.S. News & World Report* "America's Best Hospitals" survey, the Hospital has again ranked second in the nation in orthopedics and third in rheumatology. For the 16th

consecutive year, HSS has ranked above all other hospitals in the Northeast in orthopedics and rheumatology, and it is the only New York metropolitan area hospital in the top 10 nationwide in orthopedics.

### Growing Demand for Care

Patients from around the world seek our care in increasing numbers. With more than 17,000 surgeries per year, the Hospital's 20 operating rooms are now functioning at virtually full capacity. A growing demand for our services has necessitated a building program that will add nine operating rooms, a new ambulatory surgery center opening this fall, as well as additional inpatient units. Plans also call for a new physician office building, expanded rehabilitation centers, a new sports rehabilitation and performance center, as well as a new children's pavilion. We are delighted that our closest friends and supporters have stepped forward during this early phase of expansion to provide significant resources as part of the "nucleus" fund of a new capital campaign.

For the past five years, the *Discovery to Recovery* newsletter has reported on the progress of our research campaign as well as the innovative work and achievements – from the laboratory to the bedside – of our dedicated researchers. As we move forward, this publication will

now reflect our renewed and expanded focus not only on research, but on clinical programs as well. In this issue, we formally introduce Dr. Steven Goldring; preview our new ambulatory surgery center and patient rooms; profile new clinical programs, including the new Center for Musculoskeletal Ultrasound and Nuclear Medicine; and highlight the Rudolph Rupert Foundation's support for scleroderma research and new NIH grants recently awarded to HSS scientists.

Our many friends and donors have made possible extraordinary developments at Special Surgery and provided the resources that enable us to continue at the forefront of musculoskeletal care. With groundbreaking basic and clinical research underway, new clinical programs that are enhancing the care we can provide to patients, and the continued confidence of our supporters, HSS is well poised for the future.

Sincerely,

Thomas P. Sculco, MD  
Surgeon-in-Chief and  
Medical Director

Stephen A. Paget, MD  
Physician-in-Chief

## Research Breakthroughs

### Three Young Investigators Receive NIH Awards

Three of HSS's exceptional young scientists – Theresa Lu, MD, PhD, William T. Morris Fellow in Pediatric Rheumatology, Eric Meffre, PhD, Immunology and Inflammation Fellow, and Inez



Theresa Lu, MD, PhD

Rogatsky, PhD – were recently awarded their first individual Research Project Grants (RO1) from the National Institutes of Health (NIH). These large awards are a huge step forward in

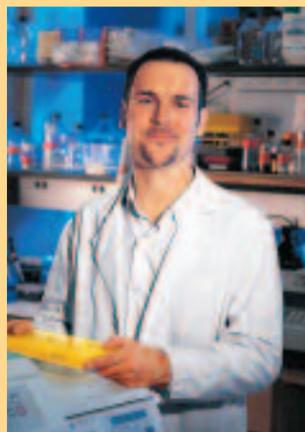
establishing the laboratories of these up-and-coming investigators, who were recruited to Special Surgery during the Hospital's Campaign for Research.

As members of the Hospital's Autoimmunity and Inflammation Program, Drs. Lu and Meffre are dedicated to understanding the underlying mechanisms that account for autoimmune and inflammatory diseases and identifying new therapeutic targets for illnesses like lupus and rheumatoid arthritis. Dr. Lu's innovative research is focused on elucidating how the blood vessels of the lymphoid tissue can shape immune

functioning. Dr. Meffre's work is concentrated on understanding why patients with autoimmune disease develop autoreactive B cells and damaging autoantibodies that attack the body's own tissues and organs. By providing important insights about how abnormal immune responses are initiated and what factors are responsible for controlling them, the groundbreaking investigations of Drs. Lu and Meffre promise to help speed the development of more effective treatments.

### Understanding Tissue Destruction

Dr. Rogatsky is an investigator in Special Surgery's Arthritis and Tissue Degeneration Program, which is devoted to understanding pathogenesis and tissue destruction in diseases such as arthritis. She is working to elucidate the molecular mechanisms by which glucocorticoid hormones, which have been used for decades to combat inflammatory and autoimmune illnesses, act on the immune system. Understanding this



Eric Meffre, PhD

interaction may enable scientists to selectively channel glucocorticoids exclusively to the cells of the immune system so that excessive exposure to these drugs no longer causes harmful side-effects, which can include osteoporosis, muscular dystrophy, and vascular hypertension.

"The Research Division is delighted that the NIH has recognized the great promise of the work being conducted by Drs. Lu, Meffre, and Rogatsky," commented Lionel Ivashkiv, MD, Director of Basic Research and David H. Koch Chair for Arthritis and Tissue Degeneration. "The ability of these young scientists to achieve the gold-standard of peer-reviewed research grants is evidence of their extraordinary hard work," added Dr. Ivashkiv, "as well as a clear sign of the strength of HSS." ●



Inez Rogatsky, PhD



## Renowned Rheumatologist Steven R. Goldring, MD, Appointed Chief Scientific Officer

**H**SS has named Steven R. Goldring, MD, an internationally recognized expert in orthopedic and rheumatology research and care, as Chief Scientific Officer (CSO).

“In this position, Dr. Goldring will head the Hospital’s basic and clinical research faculty, shape the overall direction of clinical and basic research at HSS, and oversee all aspects of research administration,” said John R. Reynolds, President and CEO.

Dr. Goldring comes to HSS from Harvard Medical School where he was chief of rheumatology at Beth Israel Deaconess Medical Center and New England Baptist Hospital, Boston. In addition, he served as professor of medicine at Harvard Medical School. He was also director of research at the New England Baptist Bone and Joint Institute at Harvard Institutes of Medicine.

### **A Leading Physician-Scientist.**

In welcoming Dr. Goldring, Stephen A. Paget, MD, Physician-in-Chief and Joseph P. Routh Professor of Rheumatic Diseases in Medicine, said, “The decision by Dr. Steven Goldring, a world-class physician-scientist, to become Chief Scientific Officer reflects two key realities in our history: the

first relates to the reputation and level of science that HSS has attained in the past, sufficient to attract someone of Dr. Goldring’s caliber; the second speaks to our bright future in his hands.”

Thomas P. Sculco, MD, Surgeon-in-Chief, noted, “Dr. Goldring’s exceptional background as a physician and researcher in arthritic conditions and bone and joint disorders makes him uniquely qualified to lead HSS in these areas of investigation. His interests in bone loss around

**“Dr. Goldring’s exceptional background as a physician and researcher in arthritic conditions and bone and joint disorders makes him uniquely qualified to lead HSS in these areas of investigation.”**

**Thomas P. Sculco, MD, Surgeon-in-Chief**

prosthetic implants will greatly enhance our research in this area and lead to prolonged survival of these implants in our patients.”

Dr. Goldring’s research efforts have focused on dissecting the mechanisms of bone and cartilage loss in orthopedic conditions and joint diseases such as rheumatoid arthritis. The ultimate goal of his studies has been to develop more effective and

direct strategies for the treatment of disorders such as osteoporosis, inflammatory arthritis, and osteoarthritis. Additional investigations have included the study of factors regulating the cellular responses to orthopedic implant biomaterials with the goal of translating this information into improving outcomes after total joint replacement.

Dr. Goldring has a history of impressive service on the national level. He was chairman from 1997 to 1999 for the Orthopedics and

awards and honors, Dr. Goldring is two-time winner of the Paget’s Disease Foundation Research Award.

### **Research Recognized Worldwide**

A native of St. Louis, Dr. Goldring received a BA from Williams College in 1965. He returned to his hometown to earn his MD at Washington University School of Medicine in 1969. He served his residency in medicine at Peter Bent Brigham Hospital, Boston, and completed a clinical and research fellowship in the Arthritis Division at Massachusetts General Hospital, Boston, in 1976.

In September, Dr. Goldring assumed the role of president of the American Society of Bone and Mineral Research. He is past chairman of the Massachusetts Chapter of the Arthritis Foundation and continues as a trustee. Dr. Goldring is also a member of the Subspecialty Board on Rheumatology for the American Board of Internal Medicine.

“I am honored to join colleagues who are committed to building on HSS’s tradition of interdisciplinary translational research,” said Dr. Goldring. “Together, we will advance Special Surgery’s research mission to translate basic science findings into new ways of treating and preventing musculoskeletal conditions.” ●

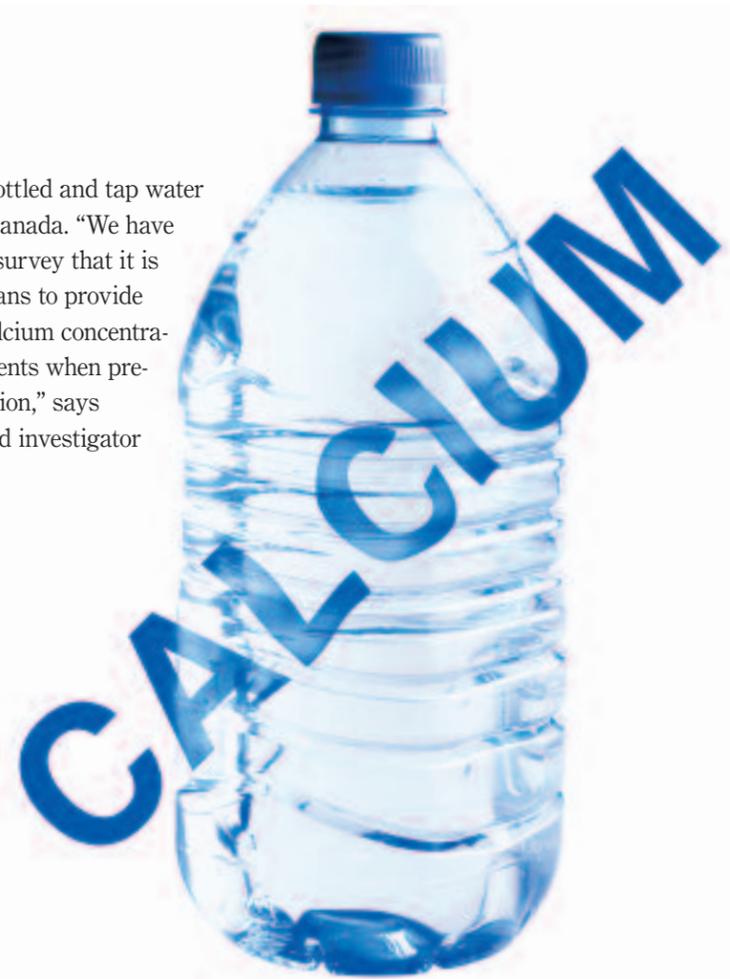
# THE

## HAPPENINGS AROUND THE HOSPITAL

### Calcium and Bottled Water >

Studies have shown that high concentrations of calcium may have an adverse effect on bisphosphonate drugs, which are typically prescribed to osteoporosis patients. A recent survey conducted by researchers at HSS and published in the *HSS Journal: The Musculoskeletal Journal of Hospital for Special Surgery* indicates that calcium concentrations vary among

different brands of bottled and tap water across the U.S. and Canada. “We have concluded from this survey that it is advisable for physicians to provide information about calcium concentrations in water to patients when prescribing this medication,” says Joseph Lane, MD, lead investigator for the study.



### Team Players ^

As team physicians for the New York Giants, Drs. Russell Warren, Bryan Kelly, and Scott Rodeo have seen their share of victories on and off the field. Since 1984, when Dr. Warren was named team physician, he and his HSS colleagues have treated hundreds of NFL players with career-threatening injuries and guided their successful return to the game. Dr. Warren has seen the Giants win two Super Bowl championships and accompanies the team for nearly every game throughout the country.

### Training the Next Generation of Leaders in Orthopedics >

Last year, the HSS orthopedic residency program received over 400 applications for only eight spots, making it one of the most competitive programs in the nation. Medical education is a critical focus of the HSS mission, and the residency program at HSS plays a crucial role in training the next generation of leaders in orthopedics. Wakenda Tyler, MD, now in her fifth and final year, plans to specialize in orthopedic oncology upon completing her residency. Dr. Tyler says the educational experience is unparalleled: “The residency program at HSS is unique because it has provided me with an opportunity to collaborate with outstanding physicians from a variety of disciplines within musculoskeletal medicine.”



# PULSE



## < Stereo X-Rays Track Patient Progress

Radiostereometric Analysis (RSA) is a unique x-ray research technique that is currently being used at Hospital for Special Surgery to study joint replacement patients. By tracking the motion of minute tantalum beads which have been implanted in the proximity of an implant, RSA enables HSS researchers to accomplish two goals at once – while carefully following the patient’s progress following surgery, they can also use information from this research to improve implant design and technology for future patients.



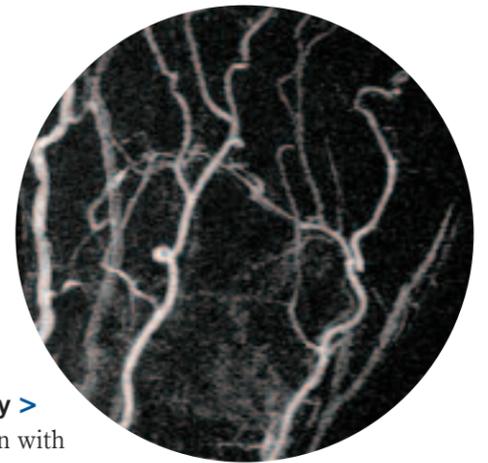
## Special Surgery's Peloton ^

Every morning at the crack of dawn, a group of HSS physician-cyclists meet in Central Park for a vigorous bike ride. Special Surgery's *peloton* (the French term for the main body of riders in a bicycle race) includes (from left to right) Drs. Chris Dimeo, Leonardo Paroli, David S. Levine, Andrew Weiland, Riley Williams, Brad Carson, Michael Gordon, and (not pictured) David Altchek and Frank Cordasco. Recently, the group traveled to Europe to ride a route included in the 2006 Tour de France. Although they didn't compete for the yellow jersey, these physicians embody the active lifestyle that they impress upon their patients.



## < Testing the Thumb

The widespread usage of handheld electronic devices such as PDAs, cell phones, and MP3 players has led to growing awareness of the importance of the thumb. Indeed, the media has touted the incidence of "TechnoThumb," pain in the thumb caused by possible tendonitis or arthritis due to



## Identifying Arthritis Early >

In collaboration with the Cornell General Clinical Research Center, researchers with HSS's Gosden-Robinson Early Arthritis Center and the Hospital's Department of Radiology and Imaging recently began a pilot study of possible early markers of inflammatory arthritis. Identifying arthritis in its earliest stages may help prevent the often severe joint damage it can cause. The team hopes to show that an increased number of new blood vessels around the affected joints in those with early inflammatory arthritis can predict how severe the disease might be in the future, or which medicines might work best. The study will also look at different tools for measuring abnormal blood vessels and blood flow: magnetic resonance angiography (MRA) and Power Doppler Ultrasound. Above, MRA reveals a proliferation of abnormal new vessels in a patient with new onset inflammation around the hand joints.

stress on the joints. While current testing for thumb function is a prolonged, potentially uncomfortable process, a team of researchers at HSS and Cornell University are employing a new, multi-sensored single spring aimed at testing thumb strength and dexterity quickly and simultaneously.

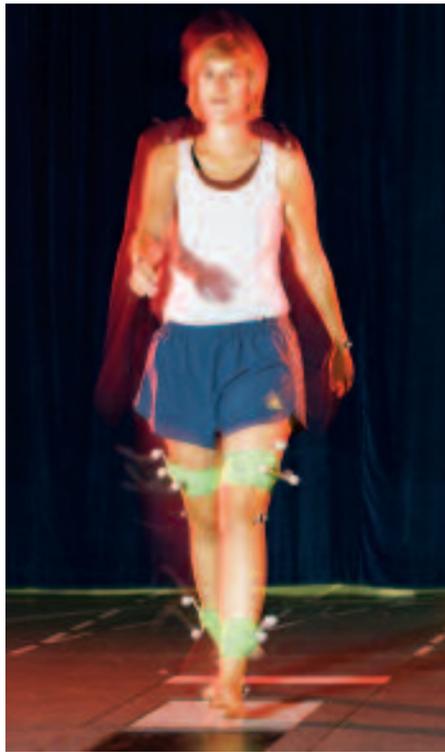
## Root Motion Analysis Lab Poised for the Future

As one of the foremost centers of its kind in the country, the Leon Root Motion Analysis Laboratory draws on the expertise of a multidisciplinary team of specialists in mobility to advance our understanding of gait and extremity disorders. Relocated and expanded into a 2,511 square foot space, the Root Laboratory also aims to advance studies of sports performance by analyzing such functions as pitching and throwing in both professional and amateur athletes.

Using state-of-the-art tools and techniques, investigators in the laboratory have contributed important knowledge about how the human body moves through time and space in both health and disability.

Honoring Dr. Leon Root, Director of Rehabilitation Medicine and one of the Hospital's most highly regarded surgeons, the laboratory was modernized and expanded with help from a number of generous donors.

Biomedical engineer Howard Hillstrom, PhD, Director of the laboratory, explained, "The central theme of the lab is to study the relationships

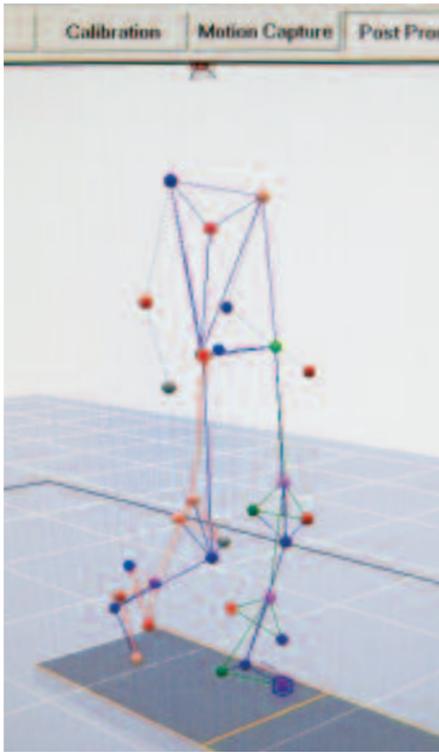


State-of-the-art tools evaluate how the body moves in space.

between lower and upper extremity structure and function. We believe that the key to understanding many of the biomechanically related diseases and injury mechanisms is identifying those relationships."

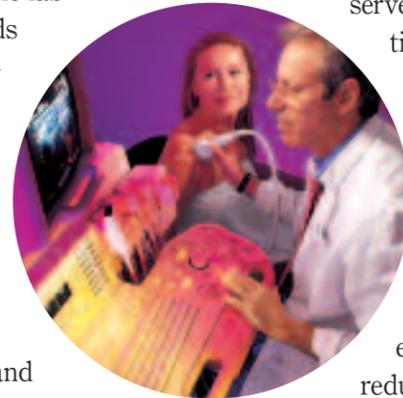
### Evaluating Motion

The lab plays a critical role in the care of patients with conditions such as cerebral palsy, where tests may be performed to evaluate a patient's functional limitations when performing purposeful movements, such as walking. Analysis of a patient's structure and alignment enables staff to better understand the cause of



impaired movement and determine an effective treatment.

The research goals of the lab include developing methods of tracking upper extremity motions; studying the effect of foot orthotics in patients with knee osteoarthritis; examining the influence of shoe design on feet; determining the mechanics behind sports medicine injuries; and identifying improved methods of evaluating cerebral palsy. ●



## New Ultrasound Center Shapes Patient Care

Radiologists at Special Surgery are now able to envision the diagnosis and care of musculoskeletal conditions like never before.

Marking the latest major step in establishing HSS as the premier center for musculoskeletal imaging, the Hospital recently opened the Center for Musculoskeletal Ultrasound and Nuclear Medicine, enabling the Department of Radiology & Imaging to meet the growing demands for the diagnosis and treatment of musculoskeletal conditions using ultrasound. Equipped with the latest technology and supported with expert staff, the new Center also

serves as an educational resource and research facility for medical professionals.

"The new Center is helping to expand capacity, reduce patient wait times, and improve care

with enhanced diagnosis capabilities and specific treatment options," explains Helene Pavlov, MD, FACR, Radiologist-in-Chief. "Our goal is for HSS to shape the current and future direction of ultrasound as it relates to orthopedics and rheumatology."

The Center features three ultrasound systems that are designed to decrease user fatigue while improving workflow. These new systems capture the real-time motion of muscles and tendons and provide higher resolution for more well-defined images.

"Careful diagnosis and image-guided therapies offer many patients immediate relief and often delay or eliminate the need for surgery," said Ronald S. Adler, PhD, MD, Chief of the Division of Ultrasound, who was recruited in 1998 specifically for his expertise in musculoskeletal ultrasound. "The expansion is allowing us to focus our ongoing clinical work and research on innovative treatments, such as image-guided therapeutic injections, for conditions such as tendonitis and arthritis."

Thomas P. Sculco, MD, Surgeon-in-Chief, congratulated Dr. Pavlov for having the foresight to introduce and sustain this innovative resource: "It took Dr. Pavlov's initiatives, as well as the support of the Board of Trustees, to recognize the potential that ultrasound could have in diagnosing and treating musculoskeletal conditions." ●

## Harnessing the Power of Bone Healing

Pioneered in Russia over a half century ago, limb lengthening, a surgical procedure that relies upon the body's ability to regenerate bone and tissues, has dramatically changed the lives of children and adults worldwide.

In the fall of 2005, HSS established the Limb Lengthening & Deformity Service to provide expert care to patients living with significant bone injuries and deformities.

"We have one of the most comprehensive limb lengthening programs in the U.S.," says S. Robert Rozbruch, MD, Co-Chief of the new service and editor of a recently published guide to treating patients with limb length conditions. "With this surgical practice, we have been able to significantly improve the lives of our patients by reconstructing their limb deformities. In addition, the biology of limb lengthening is fascinating and opens a window for us to better understand and radically improve bone healing."

### Accelerated Bone Growth

Limb length discrepancies may result from traumatic injury, growth deformity, disease or congenital defects. Treatment includes cutting the bone to be lengthened and stabilizing it

using external fixation frames or implantable internal devices. Adjustments are made by the patient to the device to gradually pull apart the bone at the

site of the cut, where new growth occurs. As the bone and surrounding tissue strengthens, the patient learns to walk without crutches. Bone growth can occur as rapidly as one inch per month.

### Transforming Lives

In 2001, James Messina, then 8, fractured the growth plate below his kneecap in a trampoline accident. The growth plate regulates the length and shape of mature bone. As his leg healed, James' mother noticed that it was bowing, and not growing as fast as his right leg. They sought out Dr. Roger Widmann, Chief of Pediatric Orthopedics and Co-Chief of the Limb Lengthening & Deformity Service, who operated to correct the deformity and lengthen his leg. Today, James' tibia is perfectly straight and as long as his right leg.

"Limb lengthening and angular deformity correction for congenital and traumatic deformities is one of the most challenging and rewarding areas of pediatric orthopedic surgery," Dr. Widmann remarked. "I am proud of the tremendous advances in the field over the last decade, and the positive impact on patient care." ●



James Messina is back on the field after undergoing a limb lengthening procedure that strengthened and lengthened his tibia.



## Rehabilitation Department Publishes Guidelines

Hospital for Special Surgery's newly published *Postsurgical Rehabilitation Guidelines for the Orthopedic Clinician* is the only one of its kind in the country. Incorporating 45 comprehensive guidelines, it is the first reference book to cover all aspects of evidence-based postsurgical rehabilitation for musculoskeletal disease.

Therapists around the country now have the opportunity to follow step-by-step examples used at Special Surgery to develop their own postsurgical treatment plans.

Compiled by the Rehabilitation Department at HSS, the textbook features easy-to-follow guidelines that enable practitioners and students to look up a procedure and quickly see the recommended rehabilitation strategy. Clear photos and illustrations show how to correctly perform the techniques described in the book. The phases of treatment are outlined in tables that depict goals, precautions, treatment strategies and criteria for advancement.

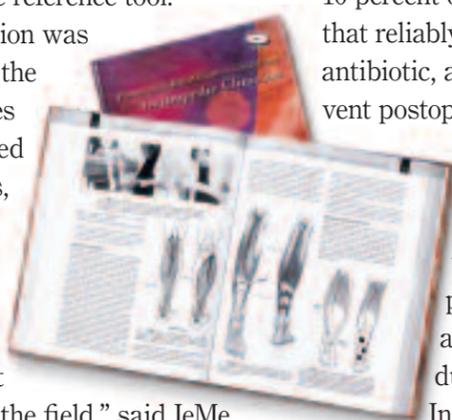
A DVD accompanies the book, featuring more than 60 minutes of rehabilitative demonstrations and instructions. In addition, the DVD also features an interview with David B. Levine, MD, who discusses the rich history of HSS and the important role rehabilitation has played since its inception in 1863.

### Compiled by Experts

Physical therapists, occupational therapists, and athletic trainers affiliated with Special Surgery played an integral role in developing this valuable reference tool.

"Information was drawn from the best practices of experienced practitioners, evidenced-based research, and the most current literature in the field," said JeMe Cioppa-Mosca, PT, MBA, Assistant Vice President, Department of Rehabilitation.

Leon Root, MD, Medical Director of the Rehabilitation Department, applauded the team under Ms. Cioppa-Mosca's leadership, "Challenging ourselves to continually improve and excel is what HSS is all about. The textbook beautifully exemplifies this philosophy." ●



## HSS Tops in Northeast

For the 16th consecutive year, *U.S. News & World Report* has recognized HSS for its expertise in orthopedics and rheumatology in its 2006 "America's Best Hospitals" issue. Ranked second in orthopedics and third in rheumatology nationwide, HSS was among more than 5,000 hospitals included in the survey based on reputation and other measures of quality including patient volumes and mortality rates as well as nursing care and technology services. The Hospital ranked 23rd in neurology and remains number one in the Northeast in its disciplines. ●



## Promoting Patient Safety

With the lowest annual mortality ratio of any orthopedic hospital in the U.S., HSS has made patient safety its top priority. This past year, with its participation in the Institute for Healthcare Improvement's (IHI) 100,000 Lives Campaign, HSS has led the way in the adoption of improved lifesaving practices.

While HSS was already a leader in preventing surgical site infections prior to the Campaign – initiated by IHI with a goal of reducing overall morbidity and mortality in American health care – recent IHI-adopted initiatives have propelled HSS to the top 10 percent of hospitals nationally that reliably administer the correct antibiotic, at the proper time, to prevent postoperative infection.

Interdisciplinary teams have also developed new processes to track and communicate patients' medication administration before, during, and after their stay.

In addition, HSS has adopted IHI's suggested criteria for determining when patients require a rapid response to their unique needs during their hospital stay.

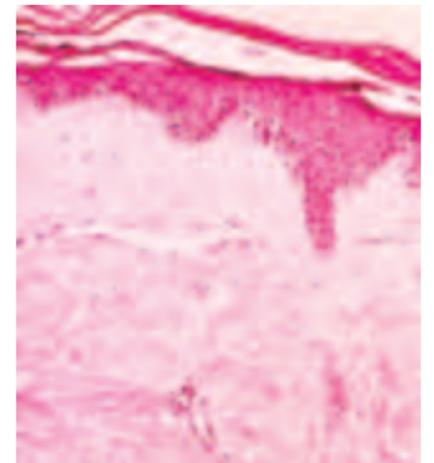
"Even an institution like HSS needs to aim for zero tolerance regarding adverse events," explains Stephen A. Paget, MD, Physician-in-Chief. "HSS's participation means that even the best can do better." ●

## Foundation Partners to Establish New Scleroderma Research Center

The Rudolph Rupert Medical Foundation has made an extraordinary \$1 million pledge to establish a Scleroderma Research Center at HSS. An autoimmune disease of unknown origin, scleroderma is a chronic connective tissue disease with symptoms that vary greatly from individual to individual. While some patients have limited disease characterized by skin thickening, others have extensive internal organ damage that begins with blood vessel alterations and then extends to tissue fibrosis, resulting in organ failure. Currently, there are few satisfactory treatment options for scleroderma patients.

Comprised of a multidisciplinary group of basic and clinical investigators, Special Surgery's Scleroderma Research Center is part of HSS's Autoimmune and Inflammation Program, directed by Peggy Crow, MD, Director of Rheumatology Research and Benjamin M. Rosen Chair in Autoimmunity and Inflammation Research. Robert Spiera, MD, an HSS rheumatologist who is active in the care of patients with scleroderma, both as a clinician and a researcher, is the Center's Clinical Director. The overall goal of the Center is to better understand the underlying disease mechanisms and develop new therapeutic approaches with a high potential of improving the lives of patients with scleroderma. Pursuit of this mission is informed by HSS's experience in the study of inflammatory diseases like lupus. "While scleroderma and lupus are distinct diseases, they have simi-

lar general disease mechanisms," explains Dr. Crow. "Both have autoimmune components, involve the activation of the immune system, and result in tissue damage."



Above, a skin biopsy exhibits excess collagen deposition and other signs of scleroderma.

Dedicated to advancing research to prevent and cure scleroderma, the Rudolph Rupert Medical Foundation is confident that Special Surgery's Scleroderma Research Center will provide a worthy legacy for founder Rudolph Rupert, who wished to honor his mother who had the disease. "We selected Hospital for Special Surgery to help us establish the center because of the quality and passion of its investigators and staff," explains Foundation Trustee Peter Bloom. "Rudolph Rupert would be proud of what the center aims to accomplish with the knowledge that it will serve physicians, patients, and their families." ●

Photo above: © 1972-2004 American College of Rheumatology Clinical Slide Collection. Used with permission.

## Annual Gala Honors Leaders and Raises Record-Breaking Funds

Over 925 friends of HSS gathered at Pier Sixty, Chelsea Piers in June for the Hospital's 23rd annual tribute dinner. The successful event, which raised a record-breaking \$2.1 million for the Hospital, honored Russell F. Warren, MD, Surgeon-in-Chief Emeritus, and Roland Betts, Founder and Chairman of Chelsea Piers Management. New York City Mayor Michael R. Bloomberg made a special appearance to present the 2006 Tribute Award to Mr. Betts in recognition of his outstanding professional and personal contributions to New York City. HSS Surgeon-in-Chief Thomas P. Sculco, MD, who served as toastmaster for the evening, presented the 2006 Lifetime Achievement



Honoree Roland Betts and Mayor Michael Bloomberg

Award to Dr. Warren, paying tribute to his leadership and exceptional 29-year commitment to Special Surgery. Guests included former New York City Mayor David Dinkins, and entertainment was provided by Jonathan Pryce and Rachel Yorke, stars of Broadway's *Dirty Rotten Scoundrels*, and the Michael Carney Orchestra. ●

## Recognition from Around the World

### Kudos

The National Institute of Dental and Craniofacial Research of the National Institutes of Health (NIH) has awarded **Adele Boskey, PhD**, a five-year, \$2.8 million grant to continue to study the mechanism of bone and hard tissue mineralization. The National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) of the NIH has awarded Dr. Boskey a four-year, \$1.5 million grant to study biological calcification in vitro, a five-year, \$300,000 grant to study mineral structure in osteoporosis, and a five-year, \$3.5 million core grant to provide facilities for investigations in this field.

**Nancy Pleshko Camacho, PhD**, received a one-year, \$55,692 Small Business Technology Transfer Program award from the NIH/NIAMS in collaboration with Remspec Corporation for a study focused on the spectroscopic identification and removal of PMMA from bone.

The American College of Rheumatology has awarded **R. Krishna Chaganti, MD**, a \$50,000 Physician Scientist Development Award for salary support to continue a project focusing on clinical and serological risk factors associated with periprosthetic osteolysis.

**C.T. Christopher Chen, PhD**, has received a three-year, \$257,916 award from the NIH/NIAMS for his study focusing on preventing cartilage degeneration after traumatic injury.

**Peggy Crow, MD**, received a two-year, \$85,000 award from the National Institute of Allergy and

Infectious Disease (NIAID) of the NIH to investigate interferon responses in systemic lupus erythematosus. The award is part of a larger grant made to the University of Alabama.

**Matthew Cunningham, MD**, received a one-year, \$15,000 Orthopedic Research and Education Foundation (OREF) award to study the development of a comparative model and pilot histological and biochemical evaluation of vascularized bone grafts.

**Lawrence Gullotta, MD**, received a one-year, \$50,000 Orthopedic Fellowship Award from the New York Chapter of the Arthritis Foundation to study cell-mediated therapies in tendon to bone healing.

**Brian C. Halpern, MD**, has been re-elected President of the Foundation of the American Medical Society for Sports Medicine.

**Jo Hannafin, MD, PhD**, has been named to the Board of Trustees of the OREF. She has been appointed to the NIH/NIAMS Small Grants for New Investigators study section.

**Lionel Ivashkiv, MD**, in collaboration with **Anne Davidson, MD**, of the Columbia College of Physicians and Surgeons, has received a five-year, \$2.1 million grant from the NIH/NIAID to study interferon regulation in systemic lupus.

The NIH/NIAMS (through Tephra, Inc.) has awarded **Joseph Lane, MD**, a \$47,790 grant to study a new antimicrobial bone graft.

In June, **Michael Lockshin, MD**, was invited to speak at the meeting of the Regensburg Rheumatology Association, and was a visiting professor at Regensburg University in Germany.

The New York Chapter of the Arthritis Foundation has awarded **Suzanne Maher, PhD**, a one-year \$40,000 grant to study a novel hydrogel for cartilage defect repair, **Xiaoyu Hu, PhD**, a three-year, \$75,000 award to investigate homeostatic function of interferons in arthritis, and **Melanie J. Harrison, MD, MS**, a one-year, \$75,000 award for a pilot study focusing on cognitive rehabilitation in SLE.

**Lisa Mandl, MD, Robert Marx, MD**, and **Stephen Lyman, PhD**, received a five-year, \$4 million award from the NIH/AHRQ in collaboration with the Department of Public Health of Weill Medical College of Cornell University to create a Center for Education and Therapeutics focusing on Medical Devices. Dr. Marx served as the keynote speaker at the biannual European Society for Sports Medicine, Knee Surgery and Arthroscopy meeting in Austria held in May.

**Mikhail Olfieriev, MD**, received the Clinician-Scientist Fellowship Award from the SLE Lupus Foundation, which will provide \$150,000 over three years to study receptor-dependent effector mechanisms in lupus mediated by subsets of T cells.

**Margaret G.E. Peterson, PhD**, served as an ad-hoc grant reviewer for the United States Army Medical Research Program for the 2006 Neurofibromatosis Research Program.

**Eduardo Salvati, MD, Geoffrey Westrich, MD**, and **Alejandro Gonzalez Della Valle, MD**, received a \$20,000 grant from the American Knee Society and the Orthopedic Research Education Foundation to study the role of inherited thrombophilia and hypofibrinolysis in patients who develop thromboembolic

disease following total knee replacement. The New York Chapter of the Arthritis Foundation presented Dr. Eduardo Salvati with the 2005 Lifetime Achievement Award.

The National Institute of General Medical Sciences has appointed **Marjana Tomic-Canic, PhD**, to the Centers for Innovative Wound Healing study section. Dr. Tomic-Canic was invited to serve on an NIH review committee for Career Development awards and Conference Grant applications, and a NIH/NIAMS Small Grant program for New Investigators. She received a one-year, \$244,414 NIH transfer award to study epidermal genes and their regulators in wound healing.

The American Society of Mechanical Engineering presented **Peter A. Torzilli, PhD**, with the distinguished 2006 H.R. Lissner Medal, recognizing his outstanding contributions to the field of bioengineering and his commitment to mentoring young bioengineers. Dr. Torzilli gave a lecture about the mechanobiology of osteoarthritis at Rensselaer Polytechnic Institute in April.

The National Chapter of the Arthritis Foundation has awarded **Lisa Vasanth, MD**, a two-year, \$100,000 renewable grant to assess synovial vascularity in early inflammatory arthritis.

**Timothy Wright, PhD**, served on the NIH/NIAMS Loan Repayment Program study section in March. That same month, Dr. Wright was invited to speak at the Combined Open Meeting of the Knee Society, the American Association of Hip and Knee Surgeons, and at the Annual Meeting of the National Association of Orthopaedic Nurses in Chicago.

*Continued from page 1*



New patient rooms, currently under construction, will overlook the East River.

**Patient Rooms Promote Healing** Studies suggest that the healing environment surrounding a patient plays a measurable role in a speedy convalescence. Reduced recovery time, decreased stress for patients

and staff, and greater patient satisfaction are among many factors that are influenced by the hospital environment. An outward expansion of the 8th floor this fall and the addition of two new floors (floors 10 and

11) in 2008 will increase the number of staffed beds dedicated to inpatient care from 146 to 188. Designed with patient amenities in mind, spacious new private and semi-private rooms will feature three 8-foot walls of glass windows. Every bed will be positioned to allow each patient a spectacular view of the East River. Linens and fabrics have been chosen in warm, wood tones, and soft lighting will reflect off walls adorned with metal sconces and colorful paintings. “Everything about the new patient rooms – the décor, the view of the river, the lighting – was designed to provide the patient with a sense of peace and calmness,” says Stephanie Goldberg, Vice President of Nursing. “It will be a beautiful environment for patients to receive care.”

“As we expand our capacity and enrich our medical culture with

young doctors, scientists, and specialists in allied services, patients will benefit from tremendous advances in care,” says Stephen Paget, MD, Physician-in-Chief. “Our highest priority has been and always will be to care for our patients and return them to their normal, active routine as rapidly as possible.” ●

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## Our Patients

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# FINDING THE STRENGTH TO SUCCEED

### **Lauren Davidson**

Diagnosed at birth with osteogenesis imperfecta, Lauren Davidson spent most of her young life in and out of surgery. At just 17 months old, she underwent the first of 15 surgeries at HSS with Leon Root, MD (see other side), an operation that involved inserting steel rods into her legs. As Lauren grew, the rods were replaced with longer ones that enabled her to walk without braces. Encouraged to swim as way to strengthen her bones and muscles, she became the first disabled student-athlete to swim for the University of Illinois. In 2000, Lauren represented the U.S. at the Paralympic Games in Australia, where she set a new world record in the 400-Meter Freestyle and received one gold medal and two silver medals. Today, Lauren enjoys recreational swimming, and is completing a master's degree in speech-language pathology at Kean University. "Dr. Root always encouraged me to follow my dreams," she said. "He helped me believe that there was nothing in this world that I couldn't conquer."





Our Physicians

# A PIONEER IN OSTEOGENESIS IMPERFECTA

## **Leon Root, MD**

Recognized as one of the nation's foremost specialists in pediatric orthopedics, Leon Root, MD, has paved the way for advances in treating and understanding the brittle bone disease osteogenesis imperfecta (OI). Dr. Root's pioneering work with OI began over 30 years ago, when he established the first specialized OI clinic and a research program to study the condition at Hospital for Special Surgery. Since then, he has collaborated with leading scientists in pursuit of groundbreaking research to develop novel therapies for OI. During his 27-year tenure as Chief of Pediatrics, a position he stepped down from in 1997, Dr. Root played a pivotal role in providing individualized care to children like Lauren Davidson (see other side). "The aspect of my practice that I have enjoyed most is the strong personal relationships that I've formed with many of these children and their families," says Dr. Root. "I care about all of these children as if they were my own."