I AM PLEASED TO SHARE WITH YOU THE 2008 ANNUAL REPORT OF THE UNIVERSITY OF CHICAGO DEPARTMENT OF SURGERY. This report highlights our many accomplishments and strengths, and provides a window into a world that is continuously moving and growing. As leaders and innovators in the field of surgery, we are constantly transforming our approach to clinical care, research and education to enhance our endeavors and shape the future of surgical practice.

Once again, the University of Chicago Medical Center received acclaim from U.S. News & World Report (July 2008), including Honor Roll status as one of the 18 best hospitals in the United States. Additionally, many of our programs ranked in the top 25, including digestive disorders (#6), endocrinology (#11), cancer (#18), neurology and neurosurgery (#19), heart and heart surgery (#20), kidney disease (#22), ear, nose and throat (#22).
We are cultivating a unique, research-rich environment to hold ourselves to the highest standards. Our strategic vision emphasizes:

- Premier multidisciplinary clinical programs anchored in translational research and distinguished by leading-edge technology
- "Chicago-style" training programs that embed simulation and immersive learning within a unique framework of ethics and professionalism
- Agenda-setting research teams addressing questions of fundamental importance and applied relevance with toolboxes extending beyond traditional biomedicine
- Stewardship of the Department and its legacy, leading by example to meet complex and dynamic challenges that face the University of Chicago Medical Center and its local community

Through collaborations among our 11 sections and with medical and scientific professionals at the University of Chicago and beyond, we are evolving the way we perform surgical procedures to ensure that our patients receive the most advanced, quality care to treat their diseases and conditions. Many of our patients benefit from our expertise in minimally invasive laparoscopic, robotic and endoluminal procedures, including totally endoscopic coronary artery bypass, robotic prostatectomy, endovascular procedures, robotic hepatectomy and nissen fundoplication. With the recent addition of a second da Vinci Surgical System, we are now able to provide these minimally invasive procedures to more patients.

Another key aspect is the merging of basic and translational research into our clinical practice to break new ground and move promising new treatments from the laboratory bench to the patient’s bedside. This includes basic investigation in five major areas: cancer and metastasis; cardiothoracic and vascular; epithelial pathobiology; immunology and inflammation; and tissue biology, bioengineering and imaging.

The new University of Chicago-Argonne National Laboratory Bioengineering Institute for Advanced Surgery and Endoscopy is a unique collaboration that will fuse cutting-edge technology with the practice of surgery and endoscopy to augment the delivery of treatment and care within and outside the operating room. The potential outcomes could include the development of advanced instrumentation, enhanced visualization and biomaterials.

As part of a robust academic medical center, we strive to provide our medical students, residents and fellows with comprehensive training and diverse experiences that will inspire them to be the next generation of leaders.

Through the use of simulation and immersive learning technology, we are transforming the way we train our medical students, residents and fellows. This past year alone, we developed a new simulation laboratory that features state-of-the-art technology which allows our students, residents and fellows to practice and become proficient in the basic skills and cognitive knowledge required to perform laparoscopic surgical procedures prior to entering the operating room. This innovative concept of rehearsal represents a major shift from the traditional model of demonstration and apprenticeship.

We look forward to another year of significant achievements and distinctions in our scholarly efforts, training programs and, above all, the care of our patients.

JEFFREY B. MATTHEWS, MD
Dallas B. Phemister Professor of Surgery
Chairman, Department of Surgery
The University of Chicago
SHAPING PATIENT CARE

Advancing surgical care has always been the hallmark of the University of Chicago Department of Surgery.

Our predecessors’ pioneering work includes: Dallas B. Phemister, MD, who in the 1930s proved that most cases of surgical shock are caused by loss of blood; Charles B. Huggins, MD, who oversaw the first orchectomy to treat advanced prostate cancer in 1939; as well as Christoph Broelsch, MD, who performed the first successful living-donor transplant in 1989. The Department continues to transform patient care using comprehensive knowledge, sophisticated surgical techniques and revolutionary technology to provide the best treatment and outcomes for patients.

As part of a unified “Chicago” approach to emerging technologies, the Department is grounding new techniques in outcomes research to find the most appropriate applications of minimally invasive surgery. In this approach, faculty discuss with each patient the entire range of options available, striving to provide the right treatment to the right patient at the right time.

The Department is a recognized leader in endoscopy and minimally invasive surgery, the practice of performing surgical procedures through tiny incisions. Minimally invasive surgery offers many benefits over traditional techniques, including: less pain, shorter hospital stays, quicker return to normal activities, minimal scarring, reduced recovery time and less injury to tissue.

Due to the increase in volume of minimally invasive surgical procedures, the Department purchased a second da Vinci Surgical System, a high tech, computer-enhanced system. Many faculty have long been using the robot. Oncologic urologic surgeons, as an example, have been performing robotic procedures since 2002. They have developed the largest experience in Illinois to manage prostate, bladder and kidney cancer using laparoscopic and robotic techniques.

Among this group, pediatric urologist Mohan S. Gundeti, MD, performed the first-ever robotic-assisted augmentation cystoplasty with appendicovesicostomy (Mitrofanoff). This is a reconstructive surgery for patients with a neurogenic bladder utilizing about 12–14 inches of the small intestine to increase the size of the bladder. The tip of the appendix, a hollow muscular tube, is then connected between the bladder and the skin of the lower abdomen to allow patients to drain the bladder. He invited his colleague, Gregory Zagaja, MD, to assist on this complex procedure.

In the past year, Hisham Bassouny, MD, has begun to use the robotic system to treat aortoiliac occlusive disease and abdominal aortic aneurysm, a condition which results from the expansion of a weakened aorta and can be fatal if the aorta ruptures. An investigational device exemption (IDE) from the FDA is under review for broader use of this technology in the minimally invasive treatment of abdominal aortic disease.

As a leader in robotic and minimally invasive cardiac surgery, the Department is on the cutting-edge of new technology. Sudhir Srivastava, MD, has collaborative relationships with various companies to build new devices related to robotic cardiac surgery. Of particular note, he spent time in the lab developing a new imaging camera that is integrated into the robotic camera allowing the surgeon to see how well the graft is working during surgery. Typically, the surgeon would finish the graft and the patient would have a CT-Angiogram following the operation to assess its effectiveness. This new technology would allow the surgeon to identify and repair any problems before the operation has concluded and the chest is closed.

Head and Neck Cancer surgeons Elizabeth Blair, MD, Louis Portugal, MD, and Kerstin Stenson, MD, have developed the largest experience in Illinois for broader use of this technology in the minimally invasive treatment of abdominal aortic disease. In the past year, Hisham Bassouny, MD, has begun to use the robotic system to treat aortoiliac occlusive disease and abdominal aortic aneurysm, a condition which results from the expansion of a weakened aorta and can be fatal if the aorta ruptures. An investigational device exemption (IDE) from the FDA is under review for broader use of this technology in the minimally invasive treatment of abdominal aortic disease.

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Giuliano Testa, MD, Director of Liver Transplant and Hepatobiliary Surgery, is seen here reviewing an ultrasound to localize a cancerous tumor prior to performing the liver resection.

Recruitment of Julie E. Park, MD, a plastic surgeon with extensive training in reconstructive microsurgery and breast reconstruction, the Department will have the largest center for perforator breast reconstruction in the greater Chicago area.

The sports medicine program provides state-of-the-art clinical care for athletes of all ages and skill levels, from professional players and school athletes to “weekend warriors.” Michael Terry, MD, provides medical coverage for the Chicago Blackhawks, while Sherwin Ho, MD, provides medical coverage for the U.S. national women’s indoor volleyball team. Dr. Ho recently traveled with the team to the World Cup in Japan and the 2008 Summer Olympics in Beijing. Most recently, the Section has recruited J. Martin Leland III, MD, who specializes in sports medicine injuries and previously provided medical coverage for the Philadelphia Eagles, Philadelphia Phillies and the Philadelphia Marathon.

Many of the Department’s sections have expanded their practices to outpatient settings, surgery centers and office locations throughout the greater Metropolitan area, including the western suburbs (Pediatric Surgery), southern suburbs (Orthopaedics and OHNS), as well as Weiss Memorial Hospital (Ophthalmology, Vascular Surgery, Plastic Surgery, Urology and Orthopaedics).

Increasingly, patient care is becoming a multidisciplinary experience. The Center for Gastrointestinal Oncology, under the direction of Mitchell C. Posner, MD (Surgical Oncology), Hedy L. Kindler, MD (Medical Oncology), and Irving Waxman, MD (Interventional Gastroenterology), continues to provide expertise in the diagnosis, treatment and management of a variety of complex cancers of the digestive system, including: rectal cancers, pancreatic cancer, liver cancer, esophageal cancer, gastrointestinal stromal tumors (GIST) and stomach cancers. Through innovative surgical procedures and medical treatments, physicians offer patients the highest chances of success against their disease. Some of the procedures include: minimally invasive esophagectomy; gastrectomy; pancreaticoectomy; hepatic resection; rectal resection; diagnostic and therapeutic endoscopy for pancreatic, hepatobiliary, and esophageal cancers; and gene therapy for upper GI cancers.

Most recently, the University of Chicago Medical Center opened the Center for Esophageal Diseases, one of the few centers in the United States solely dedicated to diagnosing and treating disorders of the esophagus. These include: gastroesophageal reflux disease (GERD), Barrett’s esophagus, esophageal achalasia, paraesophageal hernia, esophageal diverticulum, cancers of the esophagus as well as submucosal tumors of the esophagus. Directing this Center is Marco Patti, MD, who was recruited this past year for his extensive expertise in the surgical treatment of esophageal disorders. Additionally, a Motility Laboratory is part of the Center for Esophageal Diseases. In this laboratory, state-of-the-art equipment is used to diagnose motility disorders and assess the severity of gastroesophageal reflux disease.

For its advanced expertise and experience, the Transplant Center at the University of Chicago Medical Center received full unconditional accreditation for all solid organ programs from the Centers for Medicare and Medicaid Services. Under the leadership of J. Michael Millis, MD, it was the second center in the city and among the first twenty centers in the country to receive this designation. The Transplant Center has the largest heart transplant program in the state of Illinois and the most experienced multi-organ transplant center in the Midwest. The Center performed the first successful heart/liver/kidney transplant in the world in addition to being the first program to successfully perform a heart/kidney/pancreas transplant.

In neurosurgery, the Pediatric Neurosciences Center, under the leadership of David Frim, MD, continues to offer a wide range of expertise from neurosurgery, neurology, neuro-oncology and neurogenetics to treat pediatric neuro-disorders, emphasizing hydrocephalus and congenital anomalies of the nervous system, epilepsy, and brain and spine tumors. The section recently recruited Ann Marie Flannery, MD, an internationally recognized pediatric neurosurgeon with expertise in minimally invasive endoscopic neurosurgery, craniofacial surgery and brain tumor surgery.

Right: Giuliano Testa, MD, Director of Liver Transplant and Hepatobiliary Surgery. (right) is seen here reviewing an ultrasound to localize a cancerous tumor prior to performing the liver resection.
The University of Chicago Department of Surgery has inaugurated a state-of-the-art Laparoscopic Skills Laboratory with an associated Minimal Access Surgery (MAS) curriculum to enhance training in minimally invasive surgery. The new technology allows residents to become proficient in the basic skills and cognitive knowledge required to perform laparoscopic surgical procedures prior to entering the operating room.

However, “the broader, long-term goal is to establish a pattern of self-directed practice and continuous performance improvement that can be applied to MAS as well as to the adoption of other novel surgical techniques, technologies and knowledge,” says Vivek Prachand, MD, who has led the efforts to develop the Lab.

The Lab features both inanimate and virtual reality simulators to allow residents to develop the skills used in laparoscopic surgery. These simulators include:
- **EndoTower** — a virtual reality laparoscope simulator used to train residents and medical students in camera navigation
- **LapTrainer with Simuvision** — inanimate trainers used for the majority of task practice
- **ProMIS** — a hybrid virtual reality trainer that measures speed, accuracy and efficiency of standardized tasks using actual laparoscopic instrumentation to provide residents with feedback on their performance

The curriculum is designed to develop proficiency using a combination of lectures, computer-based self-study, faculty-mentored training sessions and deliberate practice sessions at which trainees work at their own pace. Assessment of trainee progress compared to baseline performance will take place using simulator-based and validated expert-based performance metrics.

Prior to beginning PGY-3, residents will demonstrate competency by obtaining certification from the Fundamentals of Laparoscopic Surgery program jointly developed by the Society of American Gastrointestinal and Endoscopic Surgeons (SAGES) and the American College of Surgeons (ACS). FLS Certification will be prerequisite for active participation in advanced laparoscopic procedures in the OR.

Residents will benefit from the expertise and mentorship of surgical faculty from across the Department, including general surgery, urology, thoracic surgery, pediatric surgery, and transplantation. Some of the faculty includes: John Alverdy, MD; Alessandro Fichera, MD; Mark Ferguson, MD; Mohan Gundeti, MD; Robert Harland, MD; Donald Liu, MD; Sangtae Park, MD; Mavee Patai, MD; Vivek Prachand, MD; Arieh Shalhav, MD; and Kevin Zorn, MD.

In another technological innovation, the Department opened the Dennis and Claire Nardoni Surgical Conference Center. This new facility is an interactive, multimedia, educational meeting and conference center with state-of-the-art technology and remarkable cross-communication capabilities including video conferencing and live feed connections to the operating rooms. The Conference Center was designed to enhance educational and collaborative interactions both internally and externally for students, residents and faculty.

Along with technology, collaborative relationships are transforming education and providing diverse training opportunities for medical students, residents and fellows. The University of Chicago Pritzker School of Medicine and NorthShore University HealthSystem, previously known as Evanston Northwestern Healthcare, have agreed on an academic affiliation that will make the NorthShore hospital locations in Evanston, Glenbrook and Highland Park the primary off-site learning environment for University of Chicago medical students and residents.

**ProMIS** is a cutting edge technology system that simulates the environment within the abdominal cavity to assist students and residents in understanding the mechanics of laparoscopic surgery.
This new affiliation pairs the strengths of the University of Chicago Medical Center, which has a sharp focus on complex care, biomedical science and distinguished programs, with those of the NorthShore system, which is one of the most fully integrated, multi-hospital, research and primary care organizations in the country. Both institutions share a commitment to the highest levels of patient care and medical research, yet expose students and residents to different patient populations, hospital environments and operational systems.

The Department’s graduate medical education programs continue to be robust and competitive with all core programs receiving four or five year accreditation cycles. Interest in post-graduate surgical training programs remained at a high level as the Department continued its successes in the national intern and resident matching program. As an example, the Department received 1,013 applications for the general surgery program from graduating medical students around the country. During the 2008-09 recruitment season, the Department’s six first-year general surgery residents matched in the top third of the highly competitive match list. This recruitment success has been equally strong in the Department’s other training programs in Cardiac and Thoracic Surgery, Neurosurgery, Ophthalmology and Visual Science, Orthopaedic Surgery, Otolaryngology-Head and Neck Surgery, Pediatric Surgery, Plastic Surgery, Transplantation, Urology, and Vascular Surgery and Endovascular Therapy.

As part of the Department’s commitment to education and training, many faculty have taken on additional teaching responsibilities in the University of Chicago Pritzker School of Medicine. Karl Matlin, PhD, for example, has taken on the role of Course Director of Molecular and Cell Biology. His outstanding leadership and innovative teaching has resulted in the course receiving its highest rating since 2005. Michael Simon, MD, and Colleen Ross, PhD, markedly expanded surgical faculty participation in the Human Morphology course, bringing to life the value of gross anatomy to the practice of medicine. Bringing together technology and anatomy, Jonathan Silverstein, MD, MS, has served as the Course Director of “Immersive Virtual Anatomy” through the Biological Sciences Division. Students learn fine anatomic details of the human body from high-resolution clinical volumetric data (e.g., computed tomography and magnetic resonance) via high-performance, interactive stereo visualization systems based on computer gaming boards. Students have responded favorably to this course, which has consistently received outstanding evaluations and enrollment requests from more than 40 students for a course originally designed for seven. Due to this high demand, Dr. Silverstein taught concurrent sessions in two rooms using simultaneous immersive displays and video communications allowing an enrollment of 17 students. Eventually, Dr. Silverstein hopes to expand this course across multiple sites including other universities.

Moving beyond anatomy, the Department is committed to the education and practice of surgical ethics. As an example, J. Terry Ernest, MD, PhD, is teaching a bioscience course designed specifically for optometry students to encourage students to look into themselves and others to evaluate their own beliefs and values as part of their lifelong process of growth and learning.

On a larger scale, the Department has collaborated with the University of Chicago MacLean Center for Clinical Medical Ethics to develop the first formal Surgical Ethics Fellowship Program with an accompanying seminar series. The one-year surgical ethics fellowship program, directed by Peter Angelos, MD, PhD, provides ethics training in research, teaching and clinical ethics consultations for a junior or mid-career surgeon. Throughout the year, the program hosts a weekly seminar featuring local and national scholars in the field of surgical ethics. Three lectures cover several themes, including: surgical innovation and surgical research, commodification of intellectual property in surgical innovation, solid organ and composite tissue transplantation, and the surgeon-patient relationship. Already, several of the surgery faculty, residents and fellows have participated in the program. They included: Tina Desai, MD; Giuliano Testa, MD; Javad Hekmat-Panah, MD; Jateen Prema, MD; and Amy Lehman, MD.
Carriz Rinker-Schaeffer, PhD, in collaboration with John Alverdy, MD and Bonnie Bassler, MD (Princeton University), is working on a novel line of research that applies a concept from microbiology to cancer metastasis. They are currently investigating whether cancer cells forming a metastatic colony exhibit behavior that resembles bacterial quorum sensing, a process in which a single bacterium finds and communicates with other bacteria through local chemical messages and allows the bacteria to interact as a collective group rather than as individual units.

Should this prove to be the case in cancer behavior, it would represent a unique departure from current theory, which assumes that cancer cells work alone and that metastatic disease is caused by the most deadly cells. Given current statistics that 560,000 Americans will die this year from cancer (most from metastatic disease), understanding this cellular process could eventually translate into the development of targeted antimetastatic therapies and improved outcomes for patient survival.

Also in the tradition of innovative research, Christopher Skelly, MD, has been investigating the role of a neurovirulence attenuated Herpes simplex virus (HSV-1) to prevent arterial restenosis (the process by which arteries re-clog after treatment due to an unregulated growth and movement of cells in the vessel). Most recently, he tested the effects of a genetically-engineered R7020 herpes virus on the carotid artery following balloon angioplasty (a procedure to open narrow or blocked blood vessels of the heart) and ligation-induced blood flow reduction. Dr. Skelly found that the R7020 virus preferentially blocks the arterial restenosis caused by smooth muscle cells, while allowing the endothelial cell layer to re-form. He further showed that the R7020 prevents the scariﬁcation of cell death. These have resulted in a ﬁrst-authored publication in the Proceedings of the National Academy of Sciences as well as a new NIH K08 award. Additionally, with nearly one million Americans newly diagnosed with symptomatic peripheral vascular occlusive disease and one million angioplasty and stent procedures performed annually, the research could potentially translate into treatment to prevent injury to the arteries and thus, reduce the need for further intervention.

With the goal of moving promising treatments from benchside to bedside, the Laboratory of Molecular and Regenerative Medicine has been established to discover novel techniques to regenerate human tissues using combinations of synthetic materials, cultured cells and gene delivery to treat a variety of human diseases. Although in the early stages, some of the initial research themes of this group include: musculoskeletal regenerative medicine; craniofacial bone biology and healing; novel biomaterials design; wound healing and vascular biology; biomechanics and bioimaging as well as immune and inﬂammatory responses to engineered tissues.

Materials science provides the basic foundation and building blocks in the early phases of tissue regeneration. Joel Collier, PhD, develops novel synthetic biomaterials from polymers and peptides (components of proteins) and...
Dr. Reid has developed a new laboratory in Craniofacial and/or chemopreventive agents from natural products. Research, to search for potential, novel chemotherapeutic University of Chicago Tang Center for Herbal Medicine of a $6 million program grant in collaboration with the received $1.7 million in NIH research funding, as part of the bone marrow stromal microenvironment on tumor roles in cancer metastasis. They are also studying the effect metastasis-associated genes and are characterizing their bone tumor development and metastasis, Drs. Haydon, In an effort to discover the molecular events that lead to models. features of injured tendons and ligaments in animal models. In an effort to discover the molecular events that lead to biologically active factors associated with bone regeneration. They demonstrated that BMP-9 has the strongest ability to stimulate bone formation. In collaboration with Daniel Mass, MD and Brian Ttoian, MD they also demonstrated that growth factors, such as BMP-13 and BMP-14, can effectively improve the tensile strength and biomechanical features of injured tendons and ligaments in animal models.

Dr. Collier’s work has already spurred early collaborations with Rex C. Haydon, MD, PhD Tong-Chuan He, MD, PhD, Hue H. Lau, MD, and Russell R. Reid, MD, PhD. This team arranges progenitor cells on these scaffolds and uses growth factors, bone morphogenetic proteins (BMPs), to influence the type of cell that would develop. They discovered that BMP-9 has the strongest ability to stimulate bone formation. In collaboration with Daniel Mass, MD and Brian Ttoian, MD they also demonstrated that growth factors, such as BMP-13 and BMP-14, can effectively improve the tensile strength and biomechanical features of injured tendons and ligaments in animal models.

In an effort to discover the molecular events that lead to bone tumor development and metastasis, Drs. Haydon, He and Lau have already identified the role of a panel of metastasis-associated genes and are characterizing their roles in cancer metastasis. They are also studying the effect of the bone marrow stromal microenvironment on tumor progression and metastasis. Additionally, they have recently received $1.7 million in NIH research funding, as part of a $6 million program grant in collaboration with the University of Chicago Tang Center for Herbal Medicine Research, to search for potential, novel chemotherapeutic and/or chemopreventive agents from natural products.

Dr. Reid has developed a new laboratory in Craniofacial Biology and Development, funded by the Bernard G. Samat endowed. Through his collaboration with Drs. He, Haydon and Lau, Dr. Reid’s research focuses on the discovery of new bone regeneration techniques using mesenchymal stem cells, bone morphogenetic proteins, and other innovative stem cell stimulants, such as pulsed electromagnetic fields. The objective of this research is to apply these techniques to common clinical problems that affect the craniofacial skeleton, such as traumatic craniofacial defects, craniosynostosis and skeletal deficiency. One of the recent projects from his laboratory, “Enhanced Osteogenic Capacity of Bone Precursor Cells Transduced with Bone Morphogenetic Protein and Human Telomerase,” has already received recognition and acclaim from the Plastic Surgery Research Council (Cislerand Award, 2008).

Beyond bone, regeneration also has immense potential to assist with certain autoimmune disorders. As many as three million Americans may have Type 1 diabetes, a medical condition primarily caused by the autoimmune-mediated destruction of beta cells. Each year over 15,000 children are diagnosed with diabetes in the United States. Currently, the only cure for Type 1 diabetes is pancreas or islet transplantation. Anita Chong, PhD is collaborating with Graeme Bell, PhD (University of Chicago Department of Medicine and Department of Human Genetics) and Louis Philibosian, MD, (University of Chicago Department of Medicine), on a unique line of diabetes research involving the restoration of beta-cell mass through beta cell regeneration to treat Type 1 diabetes. This approach may circumvent the need for islet or pancreas transplantation, and might represent a potentially important approach to cure Type 1 diabetes.

Dr. Chong is also working on identifying clinically relevant strategies to control the immunological reactions that cause autoimmune Type 1 diabetes and the rejection of transplanted allogeneic islets.

A different facet of the Department’s research program fuses surgery with cutting-edge technological research. A joint partnership between the University of Chicago Department of Surgery and Argonne National Laboratory has resulted in the Bioengineering Institute for Advanced Surgery and Endoscopy “This is a unique collaboration that will fuel a pipeline of discoveries that will enhance the delivery of treatment and care within and outside the operating room,” says John Alverdy, MD, who spearheaded this initiative.

Research from the institute will focus on developing:

- Enhanced visualization techniques that will incorporate near-real-time computer simulation and principles of physics, such as heat transfer and fluid dynamics. These techniques will take three-dimensional imaging to the next level and enhance the planning and execution of surgeries.
- Advanced instruments (e.g. robotics, “smart” instruments) that will contain wireless components to provide real-time data to surgeons. These instruments have the potential to improve surgical precision and enable procedures that are currently not feasible.
- Biomaterials that will be particularly beneficial in developing targeted treatment of bacterial infections and creating frictionless surfaces for structural implants.

The Department hopes to integrate these concepts and devices into the design and instrumentation of the New Hospital Pavilion. Currently, the institute features a fully functional simulation laboratory for students and residents to perform virtual surgery. It also has a core research team consisting of two University of Chicago surgery research fellows and two postdoctoral Argonne fellows. They will be housed in a state-of-the-art laboratory on the University of Chicago campus with AccessGrid, a technology that allows for group-to-group interaction via multimedia large-format displays and interactive environments for data streaming. Therefore, this unique environment is ripe for training, education and groundbreaking discoveries.

Increasingly, technology is providing exceptional opportunities not only to advance surgical practice, but also address relevant social issues for patients. Dana L. Suskind, MD, is conducting research to address health disparities among children from a lower socioeconomic status (SES) who received a cochlear implant to treat sensorineural hearing loss (nurse deafness), a condition that affects approximately 1–2 per 1,000 children.

Children from a lower SES face more barriers when it comes to post-implant rehabilitation to successfully hear and understand language. These barriers include: access to quality rehabilitative programs as well as parental communication skills, self-efficacy and health literacy.

To address these issues, Dr. Suskind designed a parent-directed, educational intervention called Project ASPIRE (Achieving Superior Parental Involvement for Reconstructive Excellence). The goal of Project ASPIRE is to educate and empower parents so they can help their children reach their listening, speaking and understanding potential. Project ASPIRE is an interactive, multimedia DVD program conducted in a group setting that utilizes a “best-practices” curriculum intended to increase parental understanding of the components necessary for a child’s post-implant success, to demonstrate their own importance to that success and to supply the knowledge and skills to help assure that success.

The weekly interactive DVD program will include an animated introduction, parent-child videos which demonstrate methods ‘in action,’ relevant songs to assist with concept recall and a simple video game to solidify the lesson. Additionally, to facilitate the needs of this diverse population, the animated modules can be translated into any language and the parent-child videos will include families of diverse ethnicity and children at different ages.

Dr. Suskind is conducting research to address health disparities among children from a lower socioeconomic status (SES) who received a cochlear implant to treat sensorineural hearing loss (nurse deafness), a condition that affects approximately 1–2 per 1,000 children. Children from a lower SES face more barriers when it comes to post-implant rehabilitation to successfully hear and understand language. These barriers include: access to quality rehabilitative programs as well as parental communication skills, self-efficacy and health literacy.

To address these issues, Dr. Suskind designed a parent-directed, educational intervention called Project ASPIRE (Achieving Superior Parental Involvement for Reconstructive Excellence). The goal of Project ASPIRE is to educate and empower parents so they can help their children reach their listening, speaking and understanding potential. Project ASPIRE is an interactive, multimedia DVD program conducted in a group setting that utilizes a “best-practices” curriculum intended to increase parental understanding of the components necessary for a child’s post-implant success, to demonstrate their own importance to that success and to supply the knowledge and skills to help assure that success.

The weekly interactive DVD program will include an animated introduction, parent-child videos which demonstrate methods ‘in action,’ relevant songs to assist with concept recall and a simple video game to solidify the lesson. Additionally, to facilitate the needs of this diverse population, the animated modules can be translated into any language and the parent-child videos will include families of diverse ethnicity and children at different ages.
Locally, the Department is developing ways to participate in the Urban Health Initiative, a partnership between the University of Chicago Medical Center and community doctors, clinics and hospitals to improve the long-term health of South Side residents in Chicago. These opportunities may include more convenient clinic sites for treatment of glaucoma, tonsils and hernias.

Globally, many faculty donate their time and advanced clinical expertise to treating patients living in countries that have little or no access to adequate health care, let alone surgical care. They are also equipping physicians in these countries with the latest surgical techniques and knowledge to continue treating more patients.

Mark Greenwald, MD, Susan Ksiazek, MD, and resident Megan Collins, MD, consulted with colleagues on patients and observed surgery while on a volunteer trip in Warsaw, Poland. Meanwhile, their colleague, Michael Saidel, MD, traveled to Ethiopia to conduct research in trachoma, a leading cause of infectious blindness worldwide with an incidence reaching 40 percent of children in parts of Africa. In addition, faculty members have traveled to the Caribbean and Latin America. David Song, MD, an active volunteer and member of the Board of Directors for the Medical Aid for Children of Latin America, travels annually from the Dominican Republic with a team of plastic surgery residents to provide free surgical care for children with congenital deformities, such as cleft lips and palates, burn scar contractures and other correctable physical deformities. Dr. Song’s team typically examines over 900 patients and treats over 200 patients each trip.

Over the past two years, Bassem Mora, MD, MBA, resident Megan Collins, MD, and resident Megan Collins, MD, consulted with colleagues on patients and observed surgery while on a volunteer trip in Warsaw, Poland. Meanwhile, their colleague, Michael Saidel, MD, traveled to Ethiopia to conduct research on trachoma, a leading cause of infectious blindness worldwide with an incidence reaching 40 percent of children in parts of Africa.

Through the auspices of Health Volunteers Overseas, Daniel Mass, MD, and hand fellow Ruth Baer, MD, treated hand patients in Lima, Peru. Hand problems in this country range from carpal tunnel to complex untreated trauma and congenital hand anomalies. Drs. Mass and Baer were able to perform approximately 20 procedures, including a pollicization, several muscle transfers for brachial plexus palsies, trauma reconstructions after crush injuries as well as tendon transfers for nerve palsies. Another component of this trip involved training local physicians interested in hand surgery. Topics ranged from rheumatoid arthritis, tendon transfers, wrist arthroscopies, distal radius fractures, trauma reconstruction and replantation.

Heading east, Valluvan Jeevanandam, MD, travels a few times a year to a charity hospital in Puthaparthi, India (near Bangalore) for a period of two to three weeks providing free cardiac surgery, with an emphasis on complex cases. On these trips, he typically performs about 20 charity cases per week. Without Dr. Jeevanandam’s help, most patients cannot afford the care they need, often face a life expectancy of less than one year and have no other treatment options.

While surgical treatment is a vital aspect of this trip, Dr. Jeevanandam realized that training and education could produce more good work. “Initially, I started performing operations for charity, but then I realized that more substantial gains would be produced if I helped the surgeons expand their skills and knowledge base,” says Dr. Jeevanandam. “By teaching them to do the more complex surgeries, they are able to serve many more patients than I can on my own.”
The Section of Cardiac and Thoracic Surgery

The Section of Cardiac and Thoracic Surgery continues to be a leader in robotic and minimally invasive surgery. The clinical faculty provide treatment for the most complex cases, with particular specialization in heart, lung and heart/lung transplants, ventricular assist device implants, complex cardiac reconstruction, minimally invasive valvular and arrhythmia surgeries, malignancies, esophageal diseases, as well as high-risk pulmonary resection.

Section Highlights and Accomplishments

- Ranked among the top 20 programs for heart surgery by U.S. News & World Report (July 2008)
- Participated in an exclusive clinical trial for the HeartWare device, a third generation ventricular assist device providing cutting-edge treatment for patients with heart failure
- Started a new clinical trial with Quark Pharmaceuticals in which patients are given an RNA inhibitor to prevent renal failure after cardiac surgery
- Sudhir Srivastava, MD, worked on the development of a new imaging camera, integrated into the robotic camera, that will allow surgeons to visualize the patency of an anastomosis interoperatively
- Wickii Vigneswaran, MD, named President of the International College of Surgeons, US Section, and appointed to the Board of Trustees for the American College of Chest Physicians’ Chest Foundation
- Valluvan Jeevanandam, MD, provided free cardiac surgery while educating practitioners on techniques at a charity hospital in India for two to three weeks, during which he performed roughly 20 charity cases per week
- Bassam Mora, MD, MBA, traveled to the Dominican Republic in April 2008 on a medical mission to treat pediatric cardiac surgery patients
- Worked to implement an ACGME cardiothoracic residency program in collaboration with NorthShore University HealthSystem

VALLUVAN JEEVANANDAM, MD
Section Chief
Professor of Surgery

FACULTY

Professor of Surgery:
Mark Ferguson, MD
Valluvan Jeevanandam, MD
Jai Raman, MD, PhD
Wickii Vigneswaran, MD

Associate Professor of Surgery:
Mahesh Gupta, PhD

Assistant Professor of Surgery:
Shahab Akhter, MD
Bassem Mora, MD, MBA
Sudhir Srivastava, MD

Postdoctoral Scholar:
Venkatesh Nagalingam, PhD

* denotes new faculty
The Section of General Surgery

The Section of General Surgery focuses on a variety of diseases and complex conditions, with particular expertise in cancer treatment, endocrine surgery, hepatobiliary and pancreatic surgery, esophageal disorders, inflammatory bowel disease and obesity surgery. The Section has expertise in applying minimally invasive surgical techniques to treat many of these disease processes. Fueled by clinical research, the Section has designed and participated in numerous clinical trials to ask critical questions related to improving treatment for pancreatic, esophageal, gastric, colorectal and breast cancer, and inflammatory bowel disorder.

Section Highlights and Accomplishments

- Rated as one of the Top 10 Cancer and Gastrointestinal Centers in America
- Recruited Marco Patti, MD, an internationally known gastrointestinal surgeon with expertise in the surgical treatment of colon and rectal diseases
- Recruited Konstantin Umanskiy, MD, a specialist in the treatment of colon and rectal diseases
- Jose Guarra-Patin, MD, PhD, received funding from the National Institutes of Health and the American Cancer Society to investigate the development of new treatments for pancreatic cancer
- V. Leo Towle, MD, received approval from the American Cancer Society to investigate the development of new treatments for pancreatic cancer
- Nora Jaskowiak, MD, has been inducted into the Alpha Omega Alpha Honor Medical Society by the University of Chicago Pritzker School of Medicine
- Vivek Prachand, MD, led the development of a new curricular program for surgical residents and collaborative interactions internally/externally
- Increased from four to five clinical services that have each been given a designation to commemorate the University of Chicago Pritzker School of Medicine’s commitment to excellence in clinical care, research and education

The Section of Neurosurgery

The Section of Neurosurgery builds upon its rich legacy of excellence in clinical care, research and education. The faculty use their clinical expertise and advanced neurosurgical technology to provide the most effective and up-to-date treatment for the entire spectrum of neurosurgical disease, including neurovascular surgery, neuro-oncology, surgical epilepsy, spinal surgery, pediatric neurosurgery, as well as functional and stereotactic neurosurgery. Along with delivering the best medical care, the Section is actively involved in clinical and basic science investigations to create new knowledge that will advance the fields of neurosurgery and the neurosciences.

Section Highlights and Accomplishments

- Ranked among the top 19 Neurosurgery/Neurology programs by U.S. News & World Report (July 2008)
- Recruited Ann Marie Flannery, MD, an internationally recognized pediatric neurosurgeon with expertise in minimally invasive endoscopic neurosurgery, craniofacial surgery, pediatric neuro-oncology, surgical epilepsy, and brain tumor surgery. Dr. Flannery also specializes in the surgical treatment of congenital spine anomalies and brachial plexus injuries
- The Brain Tumor Center continues to offer a coordinated, multidisciplinary approach to the care of adult and pediatric patients with tumors of the central nervous system
- The Pediatric Neurosciences Center in Comer Children’s Hospital has united physicians and nurses from neurosurgery, neurology, neuro-oncology and neuroanesthesia to treat pediatric neuro-disorders, emphasizing hydrocephalus and congenital anomalies of the nervous system, epilepsy, and brain and spine tumors
- The University of Chicago Adult Epilepsy program collaborated with brain imaging experts to investigate ways to improve surgical epilepsy treatment with less invasive diagnostic techniques and more effective surgery
- The Neurosurgery Residency Program continues to educate a group of physician-scientists who will advance the future of academic neurosurgery and make a lasting contribution to the care of neurosurgical patients

The University of Chicago Department of Surgery
The Section of Ophthalmology and Visual Science

The Section of Ophthalmology and Visual Science provides comprehensive medical and surgical treatment of eye diseases. Some of the services they offer include: cataract surgery with lens implantation, corneal transplantation plus refractive surgery, vitreo-retinal surgery, special treatment of diabetic retinopathy and age-related retinal degeneration, eye plastic surgery, strabismus surgery and neuro-ophthalmology.

Section Highlights and Accomplishments

- Michael Saidel, MD, uses state-of-the-art techniques in performing Descemet’s Stripping Endothelial Keratoplasty (DSEK). He was the first to perform this procedure at the University of Chicago. He also has research interests in keratoconus, ocular infectious disease and conflict of interest issues related to ophthalmology. He has ongoing research in Ethiopia on trachoma, a leading cause of infectious blindness worldwide with an incidence reaching 40 percent of children in parts of Africa.
- Soma Harekrishna, MD, has enrolled his first patient in a newly initiated multicenter clinical trial appraising a novel treatment for retinal vein occlusion, a condition that often times results in severe vision loss which currently has a large unmet need in terms of treatment.
- Mark Greenwald, MD, Susan Ksiazek, MD, and resident Megan Collins, MD, consulted with colleagues on patients and observed surgery while on a volunteer trip in Warsaw, Poland.
- J. Terry Ernest, MD, PhD, has designed a bioethics course specifically for ophthalmologists to encourage students to look into themselves and others to evaluate their own beliefs and values as part of a lifelong process of growth and learning.
- Michael Grass, MD, in conjunction with Dangco Cai, PhD, has established the Krill Retinal Degeneration Clinic to carry out specialized retinal function testing, such as the electroretinogram (ERG) as well as genetic testing for patients with retinitis pigmentosa and other retinal degenerative conditions.
- Louise Sclafani, OD, received the Optometrist of the Year Award, the highest honor bestowed by the Illinois Optometric Association based on service in the community, to the visual welfare of the public and to optometry.

The Section of Orthopaedic Surgery and Rehabilitation Medicine

The Section of Orthopaedic Surgery and Rehabilitation Medicine continues to be a cohesive academic unit with a clinical and basic science faculty dedicated to the care of patients, education of students, residents and fellows, as well as the creation of new knowledge in the clinical and basic sciences of musculoskeletal diseases.

Section Highlights and Accomplishments

- Recruited J. Martin Leland III, MD, an orthopaedic surgeon with a special interest in sports medicine injuries. Prior to coming to the University of Chicago, Dr. Leland provided medical coverage for the Philadelphia Eagles, Philadelphia Phillies and the Philadelphia Marathon.
- Kim Allen, MD, joined the Bone and Joint Program at Weill Memorial Hospital.
- Terrance D. Peabody, MD, named President of the Musculoskeletal Editors Society.
- David Manning, MD, established an “Early Walk” program, a multidisciplinary program for modern hip and knee arthroplasty that includes minimally invasive surgery joint replacement, specialized aesthetic techniques, multimodal pain management and rapid return physical therapy program.

FACULTY

Professor of Surgery:
J. Terry Ernest, MD, PhD
Mark Greenwald, MD
Teresa Peabody, MD
Louise Sclafani, OD
Michael Grass, MD
Soma Harekrishna, MD
Susan Ksiazek, MD
Meredith Meruel, MD*
Michael Saidel, MD
Clinical Assistant Professor of Surgery:
Rama Jager, MD, MBA
Clinical Associate:
Chris Albano, MD

Robert Felberg, MD
Janae Green, MD
Valera Kurts, MD
Jeffrey Nichols, MD
A. Greenberg-Holadh, MD
Thomas Putnam, MD
Postdoctoral Scholar:
Shanika Ranaweera, PhD

* denotes secondary appointment
** denotes new faculty

Postdoctoral Scholar:
Guo-Wei Zuo, PhD
Postdoctoral Fellow:
Yong R. Mo
Bai-Cheng He, MD, PhD
Yang Bi, MD

Instructors of Surgery:
Mark Greenwald, MD
Kun-Qiu He, MD
Shawn Ho, MD
Tong-Chuan He, MD, PhD

Clinical Associate Professor of Surgery:
McKean Getler, MD
Clinical Assistant Professor of Surgery:
Mary Laver, MD
Gopal Sivaprasad, MD
Lisa Thomas, MD

Clinical Associate:
Kristin Allen, MD
Kun-Lai Kim, MD
Edward Park, MD
Susan Replogle, MD

Clinical Assistant Professor:
Guo-Wei Zuo, PhD
Postdoctoral Fellow:
Yong R. Mo
Bai-Cheng He, MD, PhD
Yong R. Mo, MD, PhD

* denotes new faculty

The Section of Otolaryngology-Head and Neck Surgery and Dentistry

The Section of Otolaryngology-Head and Neck Surgery (OHNS) and Dentistry diagnoses and treats the full range of Ear, Nose and Throat (ENT) disorders using the most advanced surgical and non-surgical techniques, with subspecialties in chronic nasal and sinus disorders, otology, head and neck cancer, minimally invasive surgery, allergies, hearing disorders, and speech language and voice disorders.

Section Highlights and Accomplishments

- Ranked among the top 22 ENT programs in the country and the best in Illinois by U.S. News & World Report (July 2008)
- Minimally invasive surgery of the skull base has been further developed with our neurosurgical colleagues
- Head and neck cancer surgeons have applied multimodality treatment and reconstruction for patients with head and neck cancer
- Elizabeth Blair, MD, has developed a new High Risk Oral Cancer Clinic and has ongoing clinical trials of novel technologies for early detection of oral cancer
- Fuad Baroody, MD, and Robert Naclerio, MD, have worked to understand the paradox of how an internal tumor can relieve the eye symptoms associated with seasonal allergies: rhinitis
- Dana Siskind, MD, has built a strong clinical team to treat children needing cochlear implants. She has also initiated the integration of surgeons into the medical students’ anatomy course.
- Nedra Joyner, MD, and Jayant Pinto, MD, have also contributed to this course
- Completed clinical trials of novel therapies for chronic sinus disease (Auto Ig)
- Utilized medical simulation of airway emergencies to teach professionalism in OHNS
- Ellen MacCrenich, MS, has used Flexible Endoscopic Evaluation of Swallowing (FEES) testing for patients with swallowing disorders. This test provides better anatomical information and detects subtle abnormalities
- Jayant Pinto, MD, obtained funding to study the olfactory loss in aging
- Utilized transnasal esophagoscopy, a minimally invasive technique, to examine the esophagus and perform biopsies
- Dentists continue to develop novel techniques to improve dental implants

The Section of Pediatric Surgery

The Section of Pediatric Surgery at the University of Chicago continues to provide comprehensive care for diverse surgical problems in infants and children. This includes congenital, neoplastic, infectious and other acquired conditions of the gastrointestinal system, the blood and vascular system, the integument, the diaphragm and thorax (exclusive of heart), the endocrine glands, the genitourinary system, and the head and neck. The Section continues to be the national and international leader in minimally invasive pediatric surgery and performs over 4,000 operations each year.

Section Highlights and Accomplishments

- Successfully implemented an ACGME-accredited pediatric fellowship program that is recognized as a leader in teaching minimally invasive surgery to both surgical residents and pediatric surgical fellows. The Section currently has its first two fellows
- Expanded its service and outreach to the Western Suburbs. The Section partners with Edward Hospital, Advocate Good Samaritan Hospital and Adventist Hinsdale Hospital
- The Pediatric Surgery program has received national and local media coverage for the complex procedures the surgeons perform. An example of this attention is the coverage Donald Liu, MD, PhD received for the operation he performed on Bella Mia Craig. Baby Bella was born with a giant omphalocele, a rare condition in which several of her abdominal organs were developing outside her body. Dr. Liu was able to migrate these organs, including her liver and bowel, into the abdominal cavity, which allowed for a successful closure.
The Section of Plastic and Reconstructive Surgery

The Section of Plastic and Reconstructive Surgery provides compassionate and superior healthcare and advances plastic surgery through innovative research, while training the future leaders of plastic surgery in a collegial setting. The Section provides a broad range of surgical services to people suffering from the compromising effects of injury or disease as well as to those wishing to modify a certain physical feature. This includes the field of complex microsurgical reconstruction of the head/neck, extremity and breast.

Section Highlights and Accomplishments

- David H. Song, MD, has conducted research to investigate the clinical outcomes of manuectomy reconstruction, immediate lamprocyto reconstruction and the impact of regenerative tissue matrices on long-term outcomes. This work has been published by international breast symposia, Figure and local television.
- Recruited Julie E. Park, MD, a plastic surgeon with extensive training in reconstructive microsurgery and breast reconstruction with a keen interest in outcomes research. With the addition of Dr. Park, the Section will be the largest center for perforator breast reconstruction in the Midwest.
- Lawrence S. Zachary, MD, has developed a new research laboratory in Craniosfacial Biology and Development, funded by the Bernard G. Samat Endowment. This lab focuses on discovering innovative bone regeneration techniques using mesenchymal stem cells and applying these discoveries to common clinical problems that affect the craniofacial skeleton (craniosynostosis, left lip and palate, skeletal deficiency).
- Girard J. Henry, MD, in collaboration with Jonathan Silverstrom, MD, MS, has examined techniques to enhance and increase reconstructive surgical techniques using three-dimensional virtual surgery in vivo radiography.
- Raphael C. Lee, MD, ScD, DSc (Hon), went on a mission trip to the United Nations Educational, Scientific and Cultural Organization (UNESCO) Center in Fianarantsoa, Madagascar.
- Lawrence J. Gottlieb, MD, was invited to the first annual combined China-American Society of Reconstructive Microsurgery meeting as a panelist and lecturer discussing his work with chimera perforator flaps for head and neck reconstruction.
- Lawrence S. Zachary, Director of Plastic Surgery Services at Weiss Memorial Hospital, continues to build one of the largest programs in post-bariatric body contouring in the Chicago area.
- Russell R. Reid, MD, PhD, has developed a new research laboratory in craniofacial biology and development, funded by the Bernard G. Samat Endowment. This lab focuses on discovering innovative bone regeneration techniques using mesenchymal stem cells and applying these discoveries to common clinical problems that affect the craniofacial skeleton (craniosynostosis, left lip and palate, skeletal deficiency).
- The Section of Plastic and Reconstructive Surgery is recognized as a leader in the field, the Section has the largest heart transplant program in Illinois and the most experienced multi-organ transplant center in the Midwest.

The Section of Transplantation

The Section of Transplantation has expertise in the areas of heart, kidney, liver, lung and pancreas transplantation as well as complex surgical procedures involving multi-organ transplants. The Section has a long history of firsts in transplantation and is continually seeking out new and innovative ways to advance the science of transplantation. Considered a leader in the field, the Section has the largest heart transplant program in Illinois and the most experienced multi-organ transplant center in the Midwest.

Section Highlights and Accomplishments

- Received full, unconditional accreditation from the Centers of Medicare and Medicaid Services for all solid organ programs. It was the second center in the city and among the first twenty centers in the United States to receive this designation.
- Performed the first successful heart/liver/pancreas transplant in the world in addition to being the first program to successfully perform a heart/kidney/pancreas transplant.
- Engaged in national and international ethics programs to improve the field of transplant ethics.
- Partnered with local hospitals to improve access to transplant in those areas that have an underserved patient population.
The Section of Urology

The Section of Urology is now the leading institution in Illinois for minimally invasive management of urologic cancer and benign urologic disease. The Section continues to provide compassionate, comprehensive tertiary care with specialization in urologic oncology, reconstructive, female urology, stone disease and pediatric urology. Locally and regionally, the Section has the highest volume of complex urologic oncology, reconstructive urology and minimally invasive procedures, including robotically-assisted laparoscopic prostatectomy cases.

Section Highlights and Accomplishments

- Recruited Mohan S. Gundeti, MD, who performed the first robotic-assisted bladder augmentation using bowel segments.
- Recruited Scott Eganmore, MD, a urologic surgeon with specialization in the care of patients with urologic cancers, utilizing surgical, medical and non-interventional approaches.
- Recruited Kevin Zorn, MD, who specializes in minimally invasive and general urologic, both on-site and at Weiss Memorial Hospital.
- Oncologic urologic surgeons are developing the largest experience in Illinois managing prostate, bladder and kidney cancer using laparoscopic and robotic techniques.
- Urologic oncology and minimally invasive surgery programs continue to train two clinical fellows and one research fellow per year.
- Provides an annual national course for Board review in Urology and robotic surgery training.
- Urologic surgeons utilize robotic systems to operate on the most complex cases and develop novel procedures.
- Urologic surgeons investigated new methods of preserving kidney function during surgery.
- The Urology Research Laboratory investigated the basic scientific mechanisms of cancer metastasis as well as the molecular events involved in bladder cancer formation and progression.
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SELECTED HONORS 2007-2008

CARDIAC AND THORACIC SURGERY

Mark Ferguson, MD

William J. Paton, MD, PhD
Visiting Professor, Johns Hopkins University, “Current Concepts in the Diagnosis and Prevention of Rhabdomyolysis,” New York

Joel C. Farkas, MD
Visiting Professor, University of California, San Diego, “Revolutionizing the Treatment of Aortic Disease,” Tokyo

Michele M. Cheville, MD
Visiting Professor, University of California, San Diego, “Primary Care Surgery,” Tokyo

Patricia L. Castaneda, MD
Visiting Professor, University of California, San Diego, “Primary Care Surgery,” Tokyo

Christopher E. Waugh, MD
Visiting Professor, University of California, San Diego, “Current Concepts in the Diagnosis and Prevention of Rhabdomyolysis,” New York

SURGERY

Giuliano Testa, MD, PhD

Michael Morowitz, MD

NORA JAKOWISH, MD
Alpha Omega Alpha Honor Society, The University of Chicago Pritzker School of Medicine

Jeffrey B. Matthews, MD
Breda Almuphal Chair, Royal College of Surgeons in Ireland, “Surgical Biomechanics,” Dublin, Ireland

Paul M. McCarthy, MD
Chair, AOA-ASG Traveling Fellowship

Charles B. Huggins Research Award, The University of Chicago

FUND BARDY, MD
American Top Doctor for Cancer

John D. McLaughlin, MD
American Top Doctor for Cancer

Lori A. Bialick, MD
American Top Doctor for Cancer

MICHAEL ROGGIN, MD
Best Doctors in America Database

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<td>Conditionally Replicative Adenovector for Malignant Glial (Clinical Trial)</td>
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<td>Development of an Adenovector with Chimeric Fiber for Malignant Gliomas (Federal)</td>
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<td>Molecular Dynamics of Wound Angiogenesis and the Role of the EPH/EPHRIN System in Wound Angiogenesis (Non-federal)</td>
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<td>A Phase II/II Randomized Study of CDS-110 with Radiation and Temozolomide in Patients with Newly Diagnosed Glioblastoma Multiforme (Clinical Trial)</td>
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<td>Phase II, Multicenter, Exploratory Study, Evaluating the Treatment Effect of Surgery plus Gliadel Wafer in Patients with Metastatic Brain Cancer (Clinical Trial)</td>
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**CLINICAL ACTIVITY**

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**RESEARCH ACTIVITY**

| 75 ACTIVE GRANTS | OVER 450 PEER-REVIEWED PUBLICATIONS | $10.4 MILLION IN TOTAL GRANT FUNDING | $7.6 MILLION IN FEDERAL FUNDING |

**EDUCATIONAL ACTIVITY**

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Richard Penn, MD
Collaborative Research Mathematical Optimization for Targeted Macromolecular Delivery to the Brain (Federal)
Modeling, Monitoring and Control of Hydrophobins (Federal)

Bahirte Yamin, MD
Enhancing Apoptosis in Glioma by Using TNP-Alpha, Tensinsolome, and Radiotherapy (Non-federal)
Tensinsolome and Nuclear Factor-KB in the Treatment of Multikine Glioma (Non-federal)
Investigation of the Role of NF Kappa B in the Treatment of Multikine Glioma and Tumor Necrosis Factor (Non-federal)

OPHTHALMOLOGY AND VISUAL SCIENCE
Michael Grassi, MD
Genomic and Genetic Studies of Diabetic Retinopathy (Federal)
Role of Wnt Signal in the Pathogenesis of Retinopathy of Prematurity (Non-federal) (Clinical Trial)
Canonical Wnt Signaling in Diabetic Retinopathy (Non-federal)
The Chicago Retinal Dogmatism Consortium: Advancing a Systems-Based Approach to Understanding & Treating Retinal Degenerative Disease (Clinical Trial)

Seenu Hariprasad, MD
A Phase III, Multicenter, Randomized, Sham-Injected Treatment Controlled Study of the Safety and Efficacy of Ranibizumab Injection Compared With Sham in Patients With Macular Edema Secondary to Central Retinal Vein Occlusion (Clinical Trial)
A Phase III, Multicenter, Randomized, Sham-Injected-Controlled Study of the Efficacy and Safety of Ranibizumab Injection Compared With Sham in Patients With Macular Edema Secondary to Central Retinal Vein Occlusion (Clinical Trial)
A Randomized Controlled Study of the Safety, Tolerability and Biological Effect of Repeated Intravitreal Administration of VEGF Trap in Patients with Neovascular Age-Related Macular Degeneration: Clinical Evaluation of Anti-Angiogenesis in the Retina Intravitreal Trial AMD Phase 2 (CLEAR-IT AMD-2) (Clinical Trial)
The MOORE Study: A Randomized Trial to Compare the Efficacy and Safety of Intravitreal Injection(s) of Triamcinolone Acetonide with Standard Care to Treat Macular Edema Associated With Central Retinal Vein Occlusion and Branch Retinal Vein Occlusion (Clinical Trial)
A Six-month, Phase III, Multicenter, Randomized, Sham-Controlled Trial With Six Months-Open-Label Extension: To Assess the Safety and Efficacy of 700 µg and 350 µg Dexamethasone Intravitreal Insert in the Treatment of Patients With Macular Edema (Clinical Trial)

OTOLARYNGOLOGY–HEAD AND NECK SURGERY
Joel Pokorny, PhD
Psychophysical Studies of Color Defective Vision (Non-federal)

Michael A. Saidel, MD
BMP6 Mediated Osteogenesis (Non-federal)

Robert Naclerio, MD
Regulatory T cells in Chronic Rhinosinusitis (Non-federal)

Fuad Baroody, MD
Mechanism of Action of Fluticasone Furoate in Childhood Obstructive Sleep Apnea Syndrome (OSAS) (Clinical Trial)
Safety and Efficacy Evaluation of Topical Moxifloxacin Solution Compared to Moxifloxacin Solution in the Treatment of Acute Otitis Media with Otitis (Clinical Trial)

Elizabeth Blair, MD
A Model Curriculum to Improve Resident Feedback and Professionals Using Immersive Simulation (Non-federal)

Adam Marksman, PhD
Mitochondrial Delinates in Cochlear Tissues and Prognosis (Non-federal)

Robert Naclerio, MD
Effects of Continuous Airflow Pressure on the Ability to Breathe and Humidify Air (Non-federal)
Interru ted CO2 for Allergic Rhinitis (Clinical Trial)
Study PUO1015: A Combination of Placebo, Paracetamol/Naproxen Oral Formulation in the Treatment of Seasonal Allergic Rhinitis (Non-federal)
Does the Response to a Nasal Decongestant Test Predict the Outcomes to Treatment of Seasonal Allergic Rhinitis with Nasal Steroids? (Clinical Trial)
A Combination of Intranasal Steroids/Ontanexad leads to Lower Rates of Nasal Congestion Without Inducing Rhinitis Medications (Clinical Trial)
The Addition of Membranoid to Placebo in the Treatment of Personal Allergic Rhinitis (Clinical Trial)
Effects of Salmi Afl Ahmed Omalizumab (Xolair®) on Patients with Chronic Sinusitis and a Positive Allergen Test (Clinical Trial)

Jayent Pete, MD
Regulatory T Cells in Chronic Rhinosinusitis (Non-federal)
Age-Related Ocular Decline: The Role of Genetic Factors (Non-federal)
Treatment of Vascular Dysfunction in Seasonal Allergic Rhinitis (Clinical Trial)

Dana Sokol, MD
CUTICARE RS Plue (Clinical Trial)

PLASTIC AND RECONSTRUCTIVE SURGERY
Raphael C. Lee, MD, ScD, DSc (hon)
Non-Ionizing Research: Electrical Simulation of Biological Tissues (Federal)
Effect of Curing Edge Sharpness on Healing Response (Non-federal)

David H. Song, MD
A Multicenter, Prospective, Open-Label Study to Assess the Clinical Outcomes of EML Use in Two-Stage Breast Reconstruction Immediately Post-Mastectomy (Clinical Trial)
A Multicenter, Prospective, Randomized, Blinded, Controlled Study to Evaluate the Clinical Outcomes of AlloDerm 1.0 vs. AlloDerm 2.0 Use in Two-Stage Breast Reconstruction Immediately Post-Mastectomy (Clinical Trial)

RESEARCH
Joel Cober, PhD
Modular Biomaterials for Cell Shrot Regeneration (Federal)
CALIBERS: Modular Assemblies for Controlling the Cell-Material Interface (Federal)

Karl S. Matin, PhD
Cell-Matrix Interactions in Epithelial Polarization (Federal)

Myung Zegers, PhD
Regulation of Epithelial Contact Inhibition by RMC Effectors (Federal)
BACARE: Baseline Biomaterial Assembly and Epithelial Cell Transplantation (Federal)

TRANSLATION
Anita S. Chang, PhD
Mechanism Studies on Listeria Infection and Inhibition of Allergic Tolerance (Federal)

David H. Song, MD
A Pilot Study of Toxoplasmosis, Schizophrenia and Bipolar Incapacitation (EMI) (Non-federal)

Robert Naclerio, MD
Biopolymer Surfactants for Sealing Electroporated Membranes (Federal)

Karl S. Matin, PhD
A Model Curriculum to Improve Resident Feedback and Professionals Using Immersive Simulation (Non-federal)

Robert Harland, MD  
Solid Organ Transplantation in HIV: Multi-site Study  
(Federal)  
Phase II Randomized, Multicenter, Arm-Computer- 
Controlled Trial to Evaluate the Safety and Effectiveness of 
Combination of Crestimine (CP-690,550) and 
Mycophenolate Sodium in De Novo Kidney 
Transplant Recipients  
(Clinical Trial)  
Prograf/FK775 and Prograf/MMF in de novo Kidney 
Transplant Recipients  
(Clinical Trial)  
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Tasolimus (Prograf) in De Novo Renal Transplant 
Patients  
(Clinical Trial)  
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Controlled CsA/Cyclosporin Regimens for Patients 
Following Single Uretal Renal 
Transplantation in Combination with Full Dose and Reduced 
Dose Calcineurin Inhibitors  
(Clinical Trial)  
J. Michael Milam, MD  
Studies of Pediatric Liver Transplantation—Split EMMES  
(Federal)  
J. Richard Thistlethwaite Jr., MD, PhD  
Immune Tolerance Network—immunosuppression  
(Federal)  
Belatacept Evaluation of Nephroprotection and Efficacy as 
First-Line Immunosuppression Trial—Extended Criteria Donors  
(Clinical Trial)  
Belatacept Evaluation of Nephroprotection and Efficacy as 
First-Line Immunosuppression Trial—Non-federal  
(Clinical Trial)  
Comparing Concentration-Controlled CsA in Two Doses 
(1.5 and 3.0 mg/kg Starting Doses) with Reduced Neoral vs. 
1.4g Mycophenolate Mofetil in Standard Dose 
Renal Transplant Recipients  
(Clinical Trial)  
Belatacept Evaluation of Nephroprotection and Efficacy as 
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A 4-Week, Multicenter, Double-Blind, Randomized, Parallel 
Group Study to Compare the Gastrointestinal Safety and 
Tolerability of Mycophenolic Acid and MMF (CsA/Cyclosporin)  
(Clinical Trial)  
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VASCULAR SURGERY AND ENDOVASCULAR 
THERAPY  
Hisham Bainsouy, MD  
Structural and Molecular Determinants of Carotid 
Atherosclerotic Plaque Tissues  
(Non-federal)  
Tina Drees, MD  
Clinical Evaluation of Efficacy and Safety of 
Fibrin Sealant VH 50/500 APR, for Hemostasis in 
Subjects Undergoing Vascular Surgery  
(Clinical Trial)  
Stenting and Angioplasty with Protection in Patients 
at High-Risk for Endothecum  
(Clinical Trial)  
Positive Impact of Endovascular Options for Treating 
Anomalies of the Pancreatic Innervation  
(Clinical Trial)  
Christopher Skelly, MD  
CTSA K12 Scholar Award  
(Federal)  
Preservation of Arterial Renostomy Utilizing a 
Neurotransmission-Amplified Herpes Simplex Virus  
(Nor-federal)  
Preservation of Arterial Renostomy Utilizing an 
HIV-1 Enzyme Snare  
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OPTHALMOLOGY AND VISUAL SCIENCE  
Moijaz Goiosndo, MD  
Resident Remontier Morni  
Resident Ajay Singh
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**OPHTHALMOLOGY AND VISUAL SCIENCE (CONT)**

**PEDIATRIC SURGERY**

**PLASTIC SURGERY**

**SURGICAL ONCOLOGY**

**TRANSPLANT**

**UREOLOGY**

**VASCULAR SURGERY AND ENDOVASCULAR THERAPY**


PUBLICATIONS 2007–2008


Valeria Kattouf, MD
Bellefer K, Katsiou V. Hypomature and Eupotamia in Mycophenolic DAPPO 2008; (12):69-75.

Susanne Kisloz, MD

Marcus Marcot, MD


Louise Scifian, OD


Sifian L. Contact Lens for Allergy Season Primary Care Optometric News 2008.

ORTHOPAEDIC SURGERY AND REHABILITATION MEDICINE

Robert Biedl, MD

Roderick Birnie, MD

Pumuda Gupta, MD

Ray Haydon, MD


Chau-Chen Tsao, MD, PHD


Hue Luo, MD


David Manning, MD


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Gofrit ON, Shalhav AL, Lin S, Shalhav AL, Zagaja GP, Steindel GD. Adjunct chemotherapy in lymph node positive bladder cancer. Urol Oncol 2008; 23(2):385–8


Gofrit ON, Shalhav AL, Lin S, Shalhav AL, Zagaja GP, Steindel GD. Adjunct chemotherapy in lymph node positive bladder cancer. Urol Oncol 2008; 23(2):385–8


VASCULAR SURGERY AND ENDOVASCULAR THERAPY

Hisham Basseinawy, MD


We would like to thank our corporations, foundations and individual donors for their extraordinary generosity in support of our academic programs. In fiscal year 2008, some of the Department’s major donors include:

- The Brain Research Foundation
- The Brinson Foundation
- The Foley Family Foundation
- The Michael Rolfe Pancreatic Cancer Foundation
- Judy and Wayne Lewis
- Mr. James P. McHugh
- Mr. Earl Meltzer
- Mrs. Rita Meltzer
- Gladys and Arthur Pancoe
- Mr. and Mrs. John B. Snyder

Opportunities for giving include patient care programs, designated research projects, fellowships and named professorships. This past year alone, we were able to honor four of our distinguished faculty with named professorships, including: John C. Alverdy, MD, Sara and Harold Lincoln Thompson Professor; David Frim, MD, PhD, Ralph Cannon Professor of Neurosurgery; Donald C. Liu, MD, PhD, Mary Campau Ryerson Professor; and Arieh Shalhav, MD, Fritz and Mary Lee Duda Family Professor.

Another key accomplishment was the opening of the Dennis and Claire Nardoni Surgical Conference Center.

This unique, innovative facility is a newly designed, interactive, educational meeting and conference center in the Department of Surgery featuring state-of-the-art technology and remarkable cross-communication capabilities including video conferencing and live feed connections to the operating rooms.

We look forward to another full year of outreach activities, which will include the University of Chicago Phemister Surgical Society annual alumni reception, Discovery and Impact programs, trustee hosted dinners, tours, CME courses and lectures. If you’d like more information about one of these events or how you can make a difference to help educate the next generation of leaders, develop advanced treatments and offer hope to those in need, contact either:

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