



University Hospitals
Case Medical Center

Cleveland | Ohio

FORGING MEDICINE'S FUTURE

DEPARTMENT OF UROLOGY



DEAR COLLEAGUE:

As one of just 18 hospitals named to the **U.S. News & World Report Honor Roll**, University Hospitals Case Medical Center is committed to building upon a legacy of medical discovery that began nearly 150 years ago and continues today.

As the primary affiliate of Case Western Reserve University School of Medicine, UH Case Medical Center and its urologists – many of whom are also faculty at the School of Medicine – are forging the future of medicine through a number of programs and initiatives:

- The Female Pelvic Medicine & Surgery Center provides a unique model of care through a multidisciplinary team of physicians. We are one of approximately 30 programs in the nation offering a fellowship program in female pelvic medicine. In conjunction with The Pelvic Pain Center, female pelvic patients have the full breadth and depth of treatment options available.

- Leading-edge research into a health issue affecting many women in the U.S. today – bladder incontinence. The NIH is reviewing an innovative research proposal to examine stem cell therapies to treat – and possibly prevent – bladder incontinence.
- Unsurpassed experience in reconstructive surgery, particularly with urethroplasty, as a result of special training and expertise.

- Ongoing leadership in pediatric urology as Jonathan Ross, MD, becomes the inaugural president of a new national organization – the Pediatric Urologic Oncology Working Group of the Society for Pediatric Urology.

We welcome your feedback on how we can work together to further enhance urology.

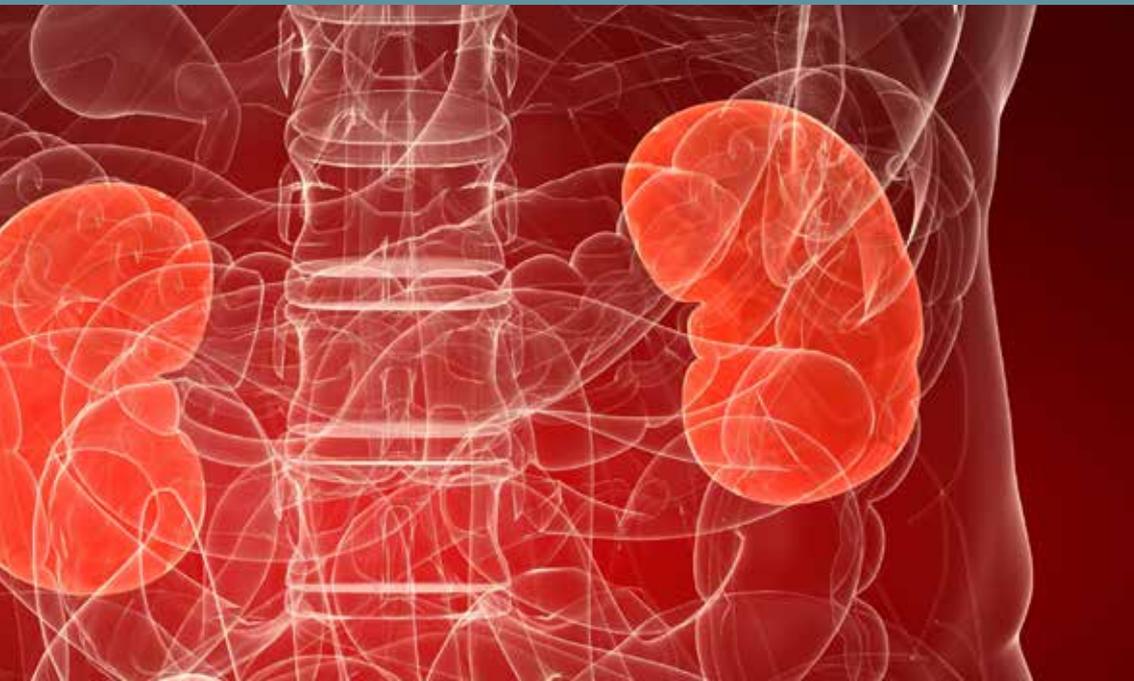
P.S. We look forward to seeing you next May at the American Urological Association Annual Meeting in Orlando.



A handwritten signature in black ink, appearing to read "F. Daneshgari".

Firouz Daneshgari, MD

*Chairman, Department of Urology, UH Case Medical Center and Case Western Reserve University School of Medicine
Director, University Hospitals Urology Institute
Lester Persky Professor, Case Western Reserve University School of Medicine*



Department of Urology

The UH Urology Institute is a regional and national destination for referring physicians and patients seeking the most comprehensive advanced care and groundbreaking treatments for female pelvic surgery, pelvic pain, urologic oncology and chemoprevention, pediatric urology, and a growing range of minimally invasive and robotic surgeries.

Recognized in the Cleveland area and throughout the country for expert treatment and innovative research, surgeon-scientists at UH Urology Institute at UH Case Medical Center offer state-of-the-art care for the full range of urologic conditions for adults and children. This is accomplished through eight clinical Centers of Excellence. **UH Urology Institute offers innovative, multidisciplinary and individualized clinical care to patients.** Through a dedicated team of skilled specialists with access to leading-edge technologies, regional facilities and clinical research, the institute delivers superlative care for the full range of urological conditions, from management of common disorders to the most advanced treatments and surgeries.

UH CASE MEDICAL CENTER

Among the nation's leading academic medical centers, UH Case Medical Center is the **primary affiliate of Case Western Reserve University School of Medicine.**

TO HEAL. TO TEACH. TO DISCOVER.

With more than 1,000 registered beds, UH Case Medical Center provides primary, specialty and subspecialty medical and surgical care. Located in the heart of Cleveland's University Circle on a beautiful 35-acre campus, UH Case Medical Center includes general medical, intensive care and surgical units, as well as three major specialty hospitals:

University Hospitals Seidman Cancer Center

University Hospitals MacDonald Women's Hospital

University Hospitals Rainbow Babies & Children's Hospital

Our physicians and researchers – who also serve as faculty at Case Western Reserve University School of Medicine – are leaders in their respective fields, and their ongoing clinical research programs push the boundaries of medical progress.

Our dedication to clinical research and education has played a major role in building UH Case Medical Center's rich legacy of medical innovation, and continues to this day. Coupled with a commitment to implementing the latest therapies and integrating with the most technologically advanced hospitals and community facilities, UH Case Medical Center offers a depth of care and scope of services unmatched by any other medical center in Ohio.

1,000+
registered
beds

35
acre
campus

3
major
specialty
hospitals



THE PRIMARY AFFILIATE OF Case Western Reserve University School of Medicine

The commitment to exceptional patient care begins with revolutionary discovery. **University Hospitals Case Medical Center is the primary affiliate of Case Western Reserve University School of Medicine**, a national leader in medical research and education, and consistently ranked among the top research medical schools in the country by U.S. News & World Report. Through their faculty appointments at Case Western Reserve University School of Medicine, physicians at UH Case Medical Center are advancing medical care through innovative research and discovery that bring the latest treatment options to patients.



Dr. Edward Cherullo

Department of Urology

Through its eight Centers of Excellence, the UH Urology Institute at UH Case Medical Center offers exceptional diagnostic and surgical urology services for adults and children.

Our multidisciplinary team of fellowship-trained and board-certified urologists, urogynecologists, neurologists and pain specialists treats the full spectrum of urological conditions using the latest therapies, treatments, and minimally invasive techniques and robotic surgery.

CENTERS OF EXCELLENCE

Female Pelvic Medicine & Surgery Center

Men's Health & Stones Center

Pediatric Urology Center

Pelvic Pain Center

Robotic & Minimally Invasive Surgery Center

Urologic Oncology & Minimally Invasive Therapies Center

Quality & Outcomes Center

Research & Innovation Center

To learn more about leading-edge developments at the UH Urology Institute, watch our video at UHhospitals.org/AboutUrology

The surgeon-scientists and staff in the Department of Urology at UH Case Medical Center and Case Western Reserve University School of Medicine are among the most highly skilled and innovative in the field, continually advancing clinical practice and medical research to ensure patients have access to the most clinically effective treatments. They are known in Cleveland and beyond for their success in the treatment of and clinical research involving both adult and pediatric urological conditions.

Leading the team is **Firouz Daneshgari, MD**, *Chairman, Department of Urology, UH Case Medical Center and Case Western Reserve University School of Medicine; Director, UH Urology Institute; and Lester Persky Professor, Case Western Reserve University School of Medicine.* Dr. Daneshgari is an internationally renowned expert in female pelvic surgery and has clinical and research expertise in the areas of urinary incontinence, female pelvic organ prolapse and neurogenic bladder conditions. Dr. Daneshgari's investigative work has been continuously supported for more than 10 years by the NIH and other peer-reviewed sources. He has trained more than 30 clinical fellows, postdoctoral fellows, residents and students, and has published more than 100 articles and book chapters in clinical and research topics related to lower urinary tract dysfunction. In 2007, the Society for Urodynamics and Female Urology recognized Dr. Daneshgari's scientific accomplishments by selecting him as the recipient of the Zimskind Award for continuing excellence and leadership in the field of voiding dysfunction. Dr. Daneshgari's investigative work has focused on bladder remodeling after diabetes and obesity, animal models of incontinence and lower urinary tract dysfunction, translational research of female pelvic floor disorders (PPFD), and robotic/minimally invasive approaches to female pelvic surgery.

A portrait of Dr. Firouz Daneshgari, a middle-aged man with short brown hair, smiling warmly. He is wearing a dark suit jacket, a light-colored checkered shirt, and a patterned bow tie. The background is a soft-focus indoor setting.

**NATIONALLY
RECOGNIZED
EXPERTS**

DEPARTMENT OF UROLOGY

NATIONALLY RECOGNIZED EXPERTS

Moving forward in the field of female pelvic medicine and reconstructive surgery with Dr. Daneshgari, is **Adonis Hijaz, MD**, *Director, Female Pelvic Medicine & Surgery Center, UH Urology Institute; and Associate Professor of Urology, Case Western Reserve University School of Medicine*. The center boasts a unique model of care, one of the first of its kind in the country, with the goal of breaking down the walls between specialists caring for FPF. A multidisciplinary team of urologists, urogynecologists and colorectal surgeons is committed to collaboration and utilization of advanced technology in a fully integrated approach to treat FPF.

Providing departmental leadership in the areas of physician relations and residency education is **Edward Cherullo, MD**, *Vice-Chair, Clinical Operations, Co-Director, Men's Health & Stones Center, UH Urology Institute; Urology Residency Program Director, UH Case Medical Center; and Associate Professor of Urology, Case Western Reserve University School of Medicine*. Dr. Cherullo has been the recipient of the Martin I. Resnick, MD, Teaching Award. He is affiliated with several professional organizations, including the Society of Urology Chairpersons and Program Directors and the American Urological Association. Dr. Cherullo, with his colleague, Jonathan Ross, MD, was among the first to use laparoendoscopic single-site techniques to perform nephrectomies in children.

At the helm of pediatric urology care is **Jonathan Ross, MD**, *Director, Pediatric Urology Center, UH Urology Institute and UH Rainbow Babies & Children's Hospital; and Professor of Urology, Case Western Reserve University School of Medicine*, a national expert in the treatment of pediatric tumors of the kidney, bladder and testicles. Dr. Ross has been involved in groundbreaking minimally invasive surgery, such as a novel approach to ureteral reimplantation using laparoscopic surgical techniques. Dr. Ross is a member of the American Urological Association and the American Association of Pediatric Urologists, among others, and has contributed chapters in many books and articles in several journals including *Biochemistry*, the *British Journal of Urology* and the *Journal of Urology*. Dr. Ross is the inaugural president of the Pediatric Urologic Oncology Working Group of the Society for Pediatric Urology. He has served as guest editor for Pediatric Urologic Oncology in the *Urologic Clinics of North America* and has contributed to the Strategic Plan for Pediatric Urology in the U.S. Department of Health and Human Services' Research Progress Report. He currently is a member of the Children's Oncology Group's Germ Cell Tumor Committee and Surgical Committee.

Lee Ponsky, MD, *Leo & Charlotte Goldberg Chair in Advanced Surgical Therapies, UH Case Medical Center; and Associate Professor of Urology, Case Western Reserve University School of Medicine*, is both widely published and highly active in surgical innovations and training and webinars to teach and promote minimally invasive techniques. Dr. Ponsky is the Editor-in-Chief of the 2012 published textbook titled *Robotic Radiosurgery: Treating Prostate Cancer and Related Genitourinary Applications*. He has received several awards, including the distinguished Leonard Tow Humanism in Medicine Award, exemplifying his outstanding humanism in medicine and scientific excellence, the Richard Cornuelle Award for Social Entrepreneurship from the Manhattan Institute, and the Rescuer of Humanity by Project Love. Dr. Ponsky and US Urology (subsidiary of US Endoscopy) were awarded a prestigious Ohio Third Frontier grant of \$1 million to develop and commercially market a promising new ureteral stent.

All National Institutes of Health (NIH) funding for basic and clinical research is awarded to the School of Medicine at Case Western Reserve University.

Patients at UH Rainbow Babies & Children's Hospital often include children who have multiple problems, or are born with congenital anomalies that are not specific to just one subspecialty. **Lynn Woo, MD**, *Pediatric Urologist, UH Urology Institute and UH Rainbow Babies & Children's Hospital; and Assistant Professor of Urology, Case Western Reserve University School of Medicine*, understands the necessity of gathering the appropriate teams from various specialties to comanage patients' specific, complex issues.

One key group that can particularly benefit from this approach: teenage patients, who are at the transition point between being purely pediatric and adult patients.

Combined Talents and Specialties Benefit Pediatric Urology

Dr. Lynn Woo Brings Together Teams for Better Outcomes

By virtue of their age, they are still considered children but they're bigger and very active. Including techniques pioneered in adult care, such as robotic surgery, is becoming more accepted for pediatric cases. Dr. Woo frequently engages colleagues who routinely work with adult patients and who are expert at using the robot on a day-to-day basis to share their expertise, at times working side by side when she has cases that are amenable to robotics intervention.

For example, Dr. Woo enlisted the help of **Robert Abouassaly, MD, MSC**, *Urologic Oncology & Minimally Invasive Therapies Center, UH Case Medical Center; and Assistant Professor of Urology, Case Western Reserve University School of Medicine*, on a laparoscopic surgical approach to remove a teenager's nonfunctional kidney. Experiencing kidney problems from birth, the patient had a narrowed artery that contributed to her hypertension. A laparoscopic approach called retroperitoneal laparoscopy was recommended. It is less commonly employed in pediatrics because the space is usually very small in younger children, which

can make mobilization and visualization more difficult. However, by avoiding the peritoneal cavity and the organs inside, the procedure allows patients to recover faster, regain bowel functions and resume normal activity more quickly. Dr. Abouassaly uses this particular approach in many cancer operations for the kidney as well as the adrenal gland, and the alliance of pediatric specialists with surgeons who more frequently work with adult patients made for a more efficient and beneficial outcome.

Partnerships with colleagues working within the UH system can also benefit patients living with spina bifida. These patients often have orthopaedic, spine, urological, urinary tract and gastrointestinal issues and other developmental

problems. UH Rainbow Babies & Children's Hospital's Spina Bifida Clinic is a multidisciplinary clinic in which patients can see a urologist, orthopaedist, neurosurgeon and developmental pediatrician in one visit, on the same day.

Dr. Woo has been assistant residency coordinator for several years now, helping to manage the program with **Dr. Edward Cherullo**. Dr. Cherullo takes a very active role in education and the year-to-year recruitment of residents while Dr. Woo provides additional resources for residents, proactively addressing their concerns and, through their feedback, helping to improve the residency program and design a better rotation for them for the following year.



Dr. Lynn Woo

CLINICAL ADVANCES

The UH Urology Institute at UH Case Medical Center constantly seeks to create better structures for the management of patients in clinical trials. Well-designed research includes the needs of patients, making the realization of research goals even more of a team-oriented approach.

- The field of female pelvic medicine and reconstructive surgery is an emerging one and, in 2011, the boards of urology and gynecology began issuing a special certification for urologists or gynecologists who have completed their training. The Department of Urology's fellowship program recently received Accreditation Council for Graduate Medical Education (ACGME) approval, which allows fellows to become board certified in female pelvic medicine and surgeries upon completion of their training and taking the exam. The fellowship program at the UH Urology Institute is one of approximately 30 programs in the country to have this ACGME approval.
- A grant application was submitted to establish a George M. O'Brien Urology Research Center. The purpose of these centers is to establish individual research communities among major health care organizations for research into major benign urologic diseases and syndromes. The Department of Urology submitted a grant to establish the first center in the country focusing on the urological complications of obesity and diabetes in both men and women.

- In late 2011, **Dr. Edward Cherullo** traveled to Europe and designed his own training opportunity with University College London Hospitals, United Kingdom, where he learned about the latest reconstructive techniques and gained experience with highly complicated procedures, focusing particularly on urethroplasty. With Dr. Cherullo's unique and specialized background, UH Urology Institute offers expertise in the full scope of reconstructive urology surgery, including urethral reconstruction, artificial urinary sphincter implantation, prosthetic or male sling implantation and bladder substitution.
- Advanced surgical care in treatment of surgical mesh complications is a focus at UH Urology Institute. Transvaginal placement of surgical mesh, typically to repair pelvic organ prolapse and stress urinary incontinence, has been associated with an increased risk for complications. Although transvaginal applications of surgical mesh have not been performed at UH Urology Institute, patients who are experiencing complications related to these procedures receive exceptional care from experienced surgeons. Familiarity with the range of problems that can arise is important because each case varies and can be quite complex, according to **Dr. Adonis Hijaz**.

- As a result of treatment for prostate cancer, many men may have quality-of-life concerns. At *UH Urology Institute's Men's Health & Stones Center*, Co-Director **Sue Flick, RN, APRN, MSN, CNP, OCN, CCRP**, has been a primary force in the development of a program to offer men effective, compassionate care focused on quality-of-life issues related to prostate cancer survivorship and other men's health issues. Men receive individualized, multidisciplinary support for treatment of conditions such as erectile dysfunction and urinary incontinence.
- The Urologic Oncology & Minimally Invasive Therapies Center offers the full range of prostate cancer treatment options available. Surgeons are opting to treat early-stage prostate cancers with focal therapy, precisely targeting and ablating only the small area of the prostate that is cancerous and preserving the unaffected area, rather than removing or ablating the entire gland. Other prostate cancer treatment strategies may involve active surveillance, CyberKnife®, or reoperative robotic prostatectomy. UH Urology Institute surgeons are leaders in exploring the use of natural orifice transluminal endoscopic surgery (NOTES) – a “scarless” abdominal operation.

- To address the unique needs of an advancing population, the UH Case Medical Center urology team led by **Dr. Daneshgari**, and the UH geriatrics team led by **Peter DeGolia, MD**, Director, *Center for Geriatric Medicine, UH Case Medical Center*; and Associate Professor of Family Medicine, *Case Western Reserve School of Medicine*, recently initiated a program to provide specialized urology care on-site to several senior residences. With collaboration between urologists and geriatricians, patients receive highly coordinated, comprehensive care.
- **Dr. Robert Abouassaly** is developing a Health Services Research (HSR) program to study practice patterns in the UH hospital system to explore the needs of the broader treatment community. The program will be made up of a multidisciplinary team of surgeon-scientists and research fellows from the UH Urology Institute, as well as HSR experts from other areas of UH and the School of Medicine. The goal of the program is to establish a methodology for HSR while applying it to key concerns in urologic oncology, with the future goal of creating a resource for studying the latest trends in any area of urological clinical practice.



DATA ANALYSIS AIMS TO IMPROVE OUTCOMES

Findings Can Inform Guidelines to Reduce Complications and Readmissions

Dr. Robert Abouassaly, Siran Koroukian, PhD, *Department of Epidemiology & Biostatistics and Associate Professor, Case Western Reserve University School of Medicine,* and **Conor P. Delaney, MD, MCh, PhD, FRCSI, FACS, FASCRS,** *Director, UH Digestive Health Institute; Chief, Division of Colorectal Surgery, Vice Chair, Department of Surgery, UH Case Medical Center; Director, Case Western Reserve University School of Medicine Skills and Simulation Center; and Jeffrey L. Ponsky Professor of Surgical Education, Case Western Reserve University School of Medicine,* are conducting extensive analysis of data from a variety of sources to identify the practices and procedures that characterize prolonged hospitalization, readmission rates and complications related to bladder cancer surgery.

Bladder cancer surgery is complicated and readmission rates within 30 to 90 days after surgery are as high as 25 percent. Patients are generally elderly, with comorbidities that often include diabetes and heart disease. They tend to develop complications, infections, urine leaks and problems with bowel obstruction and return of full function. Depending on how complication is defined, rates have been described as high as 50 percent.

The databases used by Drs. Abouassaly, Koroukian, Delaney and Ponsky are large and give statistically supported overviews of readmission rates, complications, recommended therapies and rates of adherence, as well as the characteristics of the patients themselves that may impact treatment, such as age, health insurance status, race, income and education. The research team is looking for implications in terms of modifiable practices that might reduce the rate of readmission and complications from bladder cancer surgery.

Data and statistics are being gathered from the Surveillance, Epidemiology and End Results database, which includes information on the incidence, prevalence and survival rates of 28 percent of the U.S. population from specific geographic areas; the Healthcare Cost and Utilization Project database, in which relevant ICD-9 codes are used to track patients, admissions, diagnoses, life expectancy and readmissions data; and the National Cancer Database, from which data is accessible to centers that contribute data and requires an application to the American College of Surgeons with a research idea.

These databases can be linked together and with others, such as Medicare. The combined information is then gathered, sorted and analyzed as the research project requires it. In addition to providing data for the purposes described here, the study has a larger implication related to quality assurance and health policy. The data is currently being analyzed and publication is targeted for early 2014.



Drs. Adonis Hijaz and Kerry Grimberg

Stem Cell Therapy to Treat Female Incontinence Under FDA Review

INNOVATIVE TREATMENT AND PROCEDURES SPEED PROCESS AND SPARK INTEREST

Urinary incontinence in women is generally associated with pregnancy and childbirth, and there are also certain patient populations of women at risk of persistent urinary incontinence. This condition seriously affects quality of life for all patients. Clinical pilot trials developed by **Dr. Firouz Daneshgari** and **Dr. Adonis Hijaz**, assisted by **Kerry O. Grimberg, PhD**, *Director, Research Operations & Education for the Department of Urology, Case Western Reserve University School of Medicine*, will test the use of stem cell therapy in treating urinary incontinence. Based on promising data gathered during the preclinical aspect of the research,

Drs. Hijaz and Grimberg believe that stem cell therapy may be a viable treatment option for women with an established history of urinary incontinence and may even prevent the occurrence of the problem for those at significant risk.

The unique aspect of this research is that the stem cells are autologous, with treatment at the point of care. Cells are isolated and given back to the patient in a very short time window, in the same setting and without sophisticated treatment of the cells, such as culturing or expanding them. The studies are designed to test the safety of the stem cells within detailed protocols that ensure quality. This therapy represents a new opportunity for the treatment of established urinary incontinence in women and prevention in young women of

childbearing age with indications, symptoms or signs that they will be at the risk of incontinence a year or two after giving birth.

Drs. Hijaz and Grimberg were advised by colleagues with the UH Center for Clinical Research and Technology on the regulatory aspects and worked with the FDA. They also received assistance from the School of Medicine's National Center for Regenerative Medicine, which has gone through the process with other models of stem cell research. The proposal is under FDA review. If approval is granted as anticipated, recruitment would start in early 2014 with completion of the trial within two years.

In addition, Drs. Hijaz and Grimberg have established guidelines and overviews within their department to expedite processes and ensure that implementation of these procedures is productive in moving the projects forward to eventual completion, and their work has attracted corporate support for five clinical trials in the past year, compared with two such trials in the five previous years.

UH Case Medical Center's physicians, surgeons and scientists – all members of the faculty of Case Western Reserve University School of Medicine – are leaders in their respective fields, and their ongoing research programs are at the leading edge of medical progress. A strong emphasis on translational, or “bench-to-bedside,” research means that new and innovative treatments and technologies transfer more rapidly from the research laboratory to actual patient care.

TOMORROW'S CURES TODAY.

Dr. Zhina Sadeghi



Oxidative stress caused by hyperglycemia may be the underlying factor in diabetic bladder dysfunction. This innovative discovery is being researched by **Dr. Firouz Daneshgari**, under a prestigious NIH RO1 grant. The research will focus on better understanding the changes that the bladder undergoes in response to oxidative stress caused by hyperglycemia. The work will be conducted in collaboration with **Guiming Liu, MD, PhD, Assistant**

Professor, Department of Urology, Case Western Reserve University School of Medicine. Dr. Liu is also the principal investigator of a grant awarded by the National Institute of Diabetes and Digestive and Kidney Diseases-sponsored Diabetic Complications Consortium to the School of Medicine to develop adipose-derived mesenchymal stem cells for the treatment of diabetes and diabetic bladder dysfunction. An article published in September

2012 in the Journal of Urology highlights the basis for this work. The article, “Roles of Polyuria and Hyperglycemia on Bladder Dysfunction in Diabetes,” found that diabetes and diuresis led to increased drinking volume, voiding volume and bladder weight in rats. Nitrotyrosine and manganese superoxide dismutase (MnSOD), which are markers for nitrative and oxidative stress, were substantially increased only in rats with hyperglycemia.

The Department of Urology is one of only a few programs in the country to receive both NIH T32 and K12 grants. Both are physician-scientists training grants – the T32 to train postdoctoral fellows and the K12 to train junior faculty in urological research. They allow the department to hire MDs and PhDs and train them for two years in the areas of research. The grants allow the hiring of faculty level staff and expand collaboration through other departments. **Zhina Sadeghi, MD**, a Urology fellow, is currently training with a T32 grant.

Dr. Sanjay Gupta



A grant received by **Sanjay Gupta, PhD, MS, Carter Kissell Professor and Research Director, Department of Urology, Case Western Reserve University School of Medicine**, from the NIH adds to the Department of Urology's active research into the conservative management of prostate cancer, using chemotherapy prevention in patients who have preliminary, low-grade and low-volume prostate cancer, rather than invasive surgery.

RESEARCH

All National Institutes of Health (NIH) funding for basic and clinical research is awarded to the School of Medicine at Case Western Reserve University.

TOMORROW'S CURES TODAY.

In an effort to support on-site-sponsored and industry-sponsored clinical trials, **Dr. Adonis Hijaz** is developing a robust infrastructure that involves individual components focused on regulatory issues, daily patient coordination and database management expertise. The new framework and its concentration in core clinical research functions will ensure that studies are managed successfully and that valid data results are obtained. Industry professionals who have visited the facilities have already begun planning trials at UH Urology Institute.



Dr. Adonis Hijaz

In collaboration with colleagues at UH Case Medical Center, **Dr. Sanjay Gupta** also received funding to conduct a Phase IIb study assessing the therapeutic efficacy of green tea polyphenols in the prevention and treatment of prostate cancer in men with early stage, clinically localized T-1 and T-2 prostate cancers with a Gleason score 6 or lower who opt for active surveillance. The clinical research will also investigate new biomarkers that may help define disease progression. Patients in the trial will receive green tea polyphenol capsules for one year. Biopsies and blood samples will be evaluated for disease progression and PSA levels, as well as several other potential biomarkers.

Promising Phase I results were recently reported from a first-of-its-kind clinical trial that evaluated noninvasive, highly focused ablative radiation applied with submillimeter accuracy using the CyberKnife® for treatment of localized primary renal cancer. This study represents a unique collaboration between a surgeon-scientist, **Dr. Lee Ponsky**, and radiation oncologist, **Rod Ellis, MD**, *Clinical Director and Vice Chair for Clinical Affairs, Department of Radiation Oncology at UH Case Medical Center; and Associate Professor of Radiation Oncology and Urology at Case Western Reserve University School of Medicine*. Specifically, 94 percent of patients treated in the study had decreased or stable disease, with limited side effects. These results are encouraging particularly for patients who are not candidates for surgery. Phase II of the clinical trial will focus on determining the most effective, tolerable dose of radiation.

RESEARCH

Dr. Jonathan Ross is the inaugural president of a new national organization – the Pediatric Urologic Oncology Working Group of the Society for Pediatric Urology. The group launched at the Pediatric Urology Fall Congress and is dedicated to education and research in areas of pediatric urological oncology, particularly fostering multicenter trials to address surgical questions in pediatric GU tumors.

Dr. Jonathan Ross



The commitment to exceptional patient care begins with revolutionary discovery. University Hospitals Case Medical Center is the primary affiliate of Case Western Reserve University School of Medicine, a national leader in medical research and education and consistently ranked among the top research medical schools in the country by U.S. News & World Report. Through their faculty appointments at Case Western Reserve University School of Medicine, physicians at UH Case Medical Center are advancing medical care through innovative research and discovery that bring the latest treatment options to patients.

All National Institutes of Health (NIH) funding for basic and clinical research is awarded to the School of Medicine at Case Western Reserve University.

The Harrington Project for Discovery & Development is a \$250 million national initiative to accelerate the development of medical breakthroughs by physician-scientists into medicines that benefit patients. It is a unique model that aligns, through mission and structure, nonprofit and for-profit resources into a system for drug development. The Harrington Project thereby addresses a set of major challenges in medicine that have created a development gap for promising discoveries.

The Harrington Discovery Institute at University Hospitals Case Medical Center, the nonprofit component of The Harrington Project, enables physician-scientists to translate their clinical insights and research into novel therapies that benefit patients and society. Through an annual competition, the Harrington Discovery Institute selects a group of medical innovators known as Harrington Scholar-Innovators whose projects are funded and actively guided by drug discovery experts toward the clinical realm.

HARRINGTON DISCOVERY INSTITUTE
AT UNIVERSITY HOSPITALS CASE MEDICAL CENTER

A CATALYST FOR A NEW MODEL IN DRUG DEVELOPMENT

2014 SCHOLARS The 2014 class of Harrington Scholar-Innovators selected by the institute's scientific advisory board are:

Jayakrishna Ambati, MD
University of Kentucky

Darren Carpizo, MD, PhD
*Rutgers Cancer Institute
of New Jersey*

Garret FitzGerald, MD
University of Pennsylvania

Mark Humayun, MD, PhD
University of Southern California

John Kheir, MD
Harvard University

Rahul Kohli, MD, PhD
University of Pennsylvania

Gavril Pasternak, MD, PhD
*Memorial Sloan-Kettering
Cancer Center*

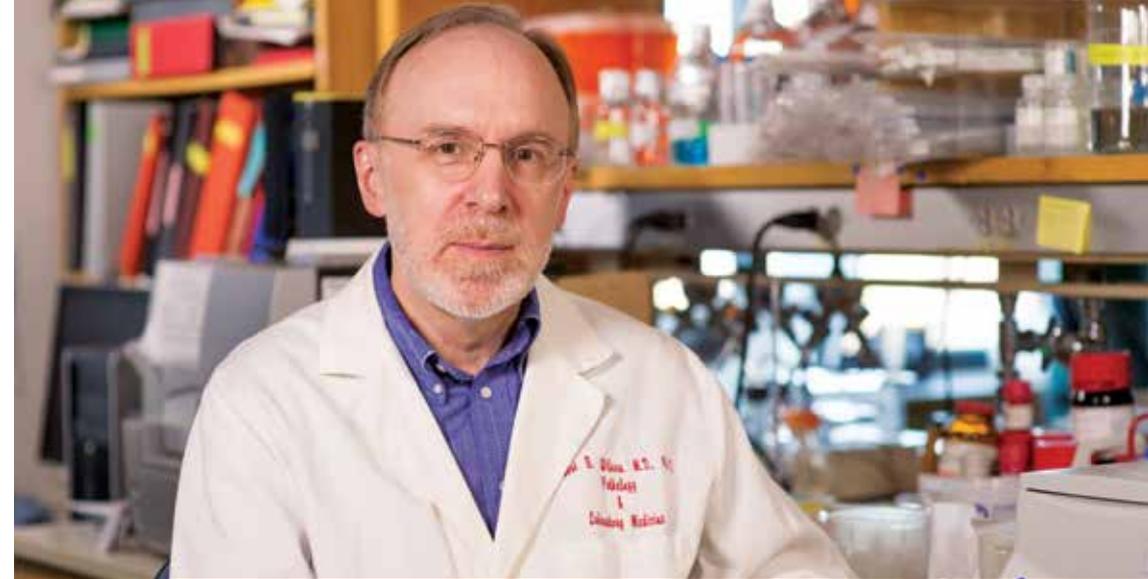
Irina Petrache, MD
Indiana University

David Rowitch, MD, PhD
*University of California,
San Francisco*

Jean Tang, MD, PhD
Stanford University

David Wald, MD, PhD
Case Western Reserve University

To learn more, visit HarringtonDiscovery.org.



THE HARRINGTON SCHOLAR-INNOVATOR GRANT PROGRAM: CHANGING THE STATUS QUO

*Robert B. Wilson, MD, PhD
Harrington Scholar-Innovator 2013
University of Pennsylvania, Philadelphia, Pa.
Cancer*

Dr. Wilson, professor and pathologist at the Hospital of the University of Pennsylvania, is driven to find shRNAs that are toxic to cells that lack a tumor suppressor. Such a discovery could lead to small-RNA therapeutics or identify possible therapeutic targets to disrupt cancer cell growth and multiplication. To date, he and his team have found shRNA sequences that may specifically inhibit prostate cancer cells.

**“This work opens the door to the possibility
of a personalized mix of drugs for prostate cancer.”**

His Harrington grant will help him to optimize his approach, which he anticipates eventually will lead to the discovery of shRNAs specifically toxic to cancer cells. Although this work is still in its early stages, he is convinced that shRNAs hold the potential to yield a breakthrough in cancer treatment.

“Bringing knowledge from basic science in the laboratory to making a difference in human health,” says Dr. Wilson. “That’s what gets me up in the morning.” Read more at HarringtonDiscovery.org/Scholar-Innovator2013.

**To be notified of the next Harrington
Scholar-Innovator Grant call for proposals,
email Natalie.Haynes@UHhospitals.org.**

In 1996, UH created a clinical trials office at what is now UH Case Medical Center. At the time of its creation, the focus and management of clinical trials was managed by a small staff. This team was charged with the fiscal management of a handful of clinical trials, as well as regulatory oversight of human subject protections. By 2000, the office became known as the UH Research Institute.

From 1996 to 2003, the clinical research enterprise at the academic medical center continued to expand, resulting in exponential growth of both the staff and the research activity managed. The institute grew into a much broader

support department and became the **Center for Clinical Research and Technology (CCRT)**, which consists of seven offices dedicated to developing a standardized platform ensuring the responsible conduct of research for patients through scientific, regulatory, legal, ethical and fiscal review.

The CCRT now provides infrastructure, programmatic, personnel and administrative support for all research activities performed at UH by UH medical or scientific staff. These medical scientists are national and international leaders in their respective fields and are committed to **identifying standards of excellence** and potential areas for improvement to promote and **facilitate clinical and translational research**.

By 2013, the CCRT activities amounted to over \$42 million at UH and \$167 million of UH activity related to the affiliation between UH and Case Western Reserve University School of Medicine. These funds emanate from nearly 1,200 active grants and contracts at UH and nearly 700 additional grants that annually fund the shared faculty of UH and the School of Medicine through nearly 2,300 active human research protocols.

To learn more about the Center for Clinical Research and Technology directly, visit UHhospitals.org/Clinical-Research, call 216-844-5576 or email ClinicalResearch@UHhospitals.org.

UH Case Medical Center **CENTER FOR CLINICAL RESEARCH AND TECHNOLOGY**

Clinical research has always driven the practice of medicine to new heights and, as such, is deeply embedded within the very mission statement of University Hospitals:

To Heal. To Teach. To Discover.

Clinicians and Scientists at UH Case Medical Center and Case Western Reserve University School of Medicine



Department of Urology

Firouz Daneshgari, MD
Chairman, Department of Urology, UH Case Medical Center and Case Western Reserve University School of Medicine
Director, University Hospitals Urology Institute

Robert Abouassaly, MD
Assistant Professor

Kevin Banks, MD
Clinical Assistant Professor

Donald Bodner, MD
Professor

Edward Cherullo, MD
Associate Professor

Sue Flick, RN, APRN, MSN, CNP, OCN, CCRP
Nurse Practitioner

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Physicians receive their academic appointments and their accompanying titles from Case Western Reserve University School of Medicine.

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