

*Nothing is permanent but change.*

— Heraclitus, 540–475 BC

Credited to the Greek philosopher from the ancient city of Ephesus, this play on words has certainly withstood the test of time. Reflecting back on the seven years I have been leading the UPMC Department of Urology, change has been the one constant. We have grown from five faculty members to 24. We have built new clinics, new laboratories, and new hospital floors. We have trained scores of students, residents and fellows. We have made discoveries, published papers, obtained grants and created new companies. In short, nothing is the same and that is precisely how we want it.

Sometimes, however, change comes with sleepless nights and wonderments about how to proceed. Such was the case when Dr. Robert Getzenberg, our first Director of Research, accepted a position at the Brady Urological Institute at Johns Hopkins—the place both he and I had worked and trained. Understanding the pull of home (Robert is a native to Maryland) and the prestige of the position only made it slightly easier to accept the departure of a productive colleague. Making lemonade out of the situation, I contacted the top scientists around the world about leading our research program, believing that we have an unparalleled opportunity to change the face of our field. One of the very best accepted our offer to be part of this change.

Dr. Zhou Wang was born in China, during a time of political upheaval and uncertainty. He was one of a handful of students selected from the country's over one billion citizens to enter college at the age of 14. Zhou's brilliance is only matched by his modesty: having known him for more than 10 years, I learned about his accelerated education only last month—and from another Chinese scientist. Dr. Wang and I first met at Johns Hopkins when we were both post-doctoral fellows. Zhou was rotating from the Carnegie Institute of Baltimore (where Andy Fire—Nobel Prize winner this year—was his close colleague and friend). After completing his training, Dr. Wang accepted a faculty position in the Department of Urology at Northwestern University where, in meteoric fashion, he rose from Assistant Professor to full Professor, being given the endowed O'Connor Family Chair in Urology.



As is the case with every successful scientist, Zhou has more questions than he has the time to answer. Nevertheless, he has built a large and very productive laboratory, with several separate grants from the National Institutes of Health. Indeed, one of his last grant applications was scored so high that he was given a MERIT award—essentially allowing him to double his funding and time for research (10 years) before he would need to reapply. MERIT awards are given to the most elite, with the rationale that such accomplished scientists' time is better spent answering questions and making discoveries rather than writing grant applications.

As you can tell, I am thrilled about Dr. Wang and the great fortune change has brought us with his recruitment. Since he arrived in May 2006, Dr. Wang has already recruited three more basic scientists to join our research team. The ability to attract the very best to the Department of Urology is in no small part due to the generosity of our grateful patients and donors. In addition to a discussion of Dr. Wang's research, the other articles in this issue of *Forefront* highlight some additional exciting programs. I hope you enjoy reading about our changes as much as we enjoy living them.

*Joel Nelson*

FEATURING

Harnessing the Potential of Cesium 131 for Prostate Brachytherapy

PAGE 2



Finding the On-Off Switch for Prostate Cancer

PAGE 3

The Team Approach to Fighting Kidney Cancer

PAGE 4



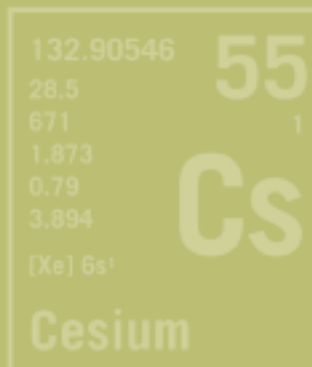
Hope for New Life: Advances in the Treatment of Male Infertility

PAGE 6



DR. RONALD BENOIT

## Escaping the Rock and the Hard Place: Harnessing the Potential of **Cesium 131** for Prostate Brachytherapy



In the past, a diagnosis of early-stage, localized prostate cancer—although potentially curable—placed a man at risk for treatment side effects. Fighting a sense of urgency to begin treatment promptly, men found themselves between the rock of their cancer and the hard place of treatment—associated declines in quality of life.

Making prostate cancer treatments both effective and innocuous has been a goal of the care provided by the UPMC Department of Urology. A new form of interstitial brachytherapy—better known as seed implantation—using a radioactive element called cesium 131 has the promise of minimizing treatment side effects.

Brachytherapy is a prostate cancer treatment approach that involves implanting small radioactive pieces of metal, or seeds, directly into the prostate gland. Between 70 and 100 such seeds are inserted through the perineum, and are permanently positioned throughout the gland during a 90-minute outpatient surgical procedure. The seeds then emit low-dose radiation into the prostate to kill adjacent cancerous cells. Among the least invasive of all prostate cancer treatments, post-operative discomfort is generally slight, with most men resuming their normal activities within days.

While the radiation emitted from the seeds effectively kills the prostate cancer cells, it also causes the prostate gland to swell: this enlargement can create a number of uncomfortable urinary side effects, including around-the-clock urinary frequency, a weak stream, burning and a sudden urgency to void.

“Brachytherapy has been shown to be an effective approach in treating early-stage localized prostate cancers,” said Ronald Benoit, MD, Assistant Professor and Director of General Urology. “For years, iodine or palladium have been the isotopes available for prostate brachytherapy. Unfortunately, the urinary side effects after prostate brachytherapy using iodine or palladium seeds last for as long as 12 months. These voiding difficulties resulted in significant discomfort and inconvenience for patients. New seeds containing the cesium 131 isotope—which has a half-life of only 9.7 days—may dramatically improve what has long been the major downside of prostate brachytherapy.”

In October of 2006, Dr. Benoit and his colleagues began implanting seeds containing the cesium 131 isotope in patients undergoing brachytherapy procedures. Preliminary research indicates that the duration of side effects should be markedly shorter with cesium 131, due to the isotope’s significantly shorter half-life.

According to Dr. Benoit, “Cesium 131 seeds have been in use in brachytherapy applications since 2004, and research has shown that the biologically effective radiation emitted from the seeds lasts approximately a month. Due to the shorter half-life of the isotope, side effects created by the therapy should only last a month or two—rather

than a year. This translates into a better quality of life for patients, as they can return to their baseline urinary function much faster than they would have with iodine or palladium isotope therapy treatment protocols.”

To gauge the effectiveness of the cesium 131 isotope, the urinary, bowel, and sexual side effects in patients implanted with cesium seeds in the brachytherapy program in the UPMC Department of Urology will be monitored closely. The severity and duration of their side effects, as well as their outcomes, will be carefully noted to ensure that the new isotope does indeed shorten the duration of side effects after prostate brachytherapy.

“Cesium 131 is a significant step forward for brachytherapy,” remarked Dr. Benoit. “At the present time, we are the only center in Pittsburgh—and one of a handful in the country—providing this treatment. We are excited about the potential of this isotope, and believe if we can provide effective treatment with shorter-term side effects, we will deliver a true benefit to patients.” **F**

“The seeds then emit low-dose radiation into the prostate to kill adjacent cancerous cells.”

## Finding the **ON-OFF SWITCH** for Prostate Cancer



DR. ZHOU WANG

In men diagnosed with prostate cancer who have taken the usual steps to stay healthy—eat right, exercise, take vitamins, antioxidants and supplements—the sense of betrayal is doubled. Not only do they have the disease they sought to avoid but their proactive stance clearly failed. Now they are faced with the prospect of treatments which may or may not be effective, can impact negatively on quality of life and are all reactive in nature. Effective prevention of prostate cancer has benefits that are as obvious as they are elusive. The fundamental question is—how?

Zhou Wang, PhD, the newly appointed Director of Urological Research in the UPMC Department of Urology, is looking for the answer to make prostate cancer prevention a reality. From his point of view, understanding the intricate and complicated roles of genes and proteins in prostate cancer progression may hold the key.

“For the past 10 years or so, first in my work at Northwestern University and now here at University of Pittsburgh Medical Center, we have been studying the downstream events of proteins and receptors and their role in prostate cancer progression,” said Dr. Wang. “In particular, we have been studying how proteins actually turn on or turn off specific genes. The response of a gene to a protein can potentially turn on or turn off the entire cell. In the case of prostate cancer, such interactions may determine whether or not the disease starts, and if it does, how fast it progresses.”

Much of Dr. Wang’s work has focused on the role of the U19 gene in prostate cancer. While there are more than 100 genes

expressed within the prostate that could possibly be viable targets for study, this particular gene shows a strong expression pattern in a healthy prostate, and lower expression levels in patients with prostate cancer—indicating the potential importance of the gene’s regulatory role on prostate cancer progression.

“In our research, we have compared healthy prostate glands with cancerous ones and looked for the differences in U19 expression,” explained Dr. Wang. “What we have found through cell culture and animal models is an over 80% down regulation in U19 expression in the prostate cancers we’ve studied. This seems to indicate that lower levels of the expressed gene may play a role in the emergence and growth of cancerous tumors, while higher levels of expression may, in fact, play a role in inhibiting the development and growth of cancerous cells.”

Dr. Wang’s research also focuses on understanding the mechanics of U19 and its interaction with other proteins. “A protein needs to bond with the gene to create a

response. Currently, we are examining traffic patterns of such proteins within a cell as we work towards a better understanding of the major pathway of prostate cancer progression,” said Dr. Wang. “We are also focusing on developing methods to prevent the downward expression of U19 we see in prostate cancer as a way to reverse and, ultimately, prevent the disease.”

To understand the mechanisms of protein responses to U19, Dr. Wang and his research team continue to conduct an array of animal studies. “U19 is a gene that is found in rats, as well as humans,” remarked Dr. Wang. “Although the tumor expression in a rat is different than that found with humans, by studying protein responses and pathways within the animal, we are gaining a better understanding of how and why responses to U19 occur. This, we hope, will lead to new therapies for treating or preventing prostate cancer.”

Dr. Wang’s work in gene/protein interaction is viewed by many in the scientific field as the forefront of prostate cancer research. Such efforts may eventually unlock the development pathways of other cancers, and will ultimately help to control their development and progression within patients. At the present, however, there is still a great deal of work to be done to understand the intricacies and the mechanics of proteins and genes responsible for prostate cancer development and progression. According to Dr. Wang, “My work is truly exciting, yet there are still many unanswered questions that must be addressed.” **F**

# The Team Approach to Fighting Kidney Cancer



DR. JODI MARANCHIE

DR. LEONARD APPLEMAN

“My work first seeks out the biochemical pathways that allow the formation of mutant cancerous cells in the kidney, and then focuses on creating molecules that stop the cell mutations and inhibit cancer development.”

—Dr. Jodi Maranchie

It is now known that the majority of kidney cancers are the result of a mutation in a particular gene which is also responsible for a genetic abnormality called von Hippel-Lindau disease (VHL). Named in the earlier 1900s by two ophthalmologists, VHL is characterized by the spontaneous development of vascular and cystic tumors in a host of tissues including the brain, the eye, the pancreas and the kidney. Through careful clinical observations and genetic detective work, the VHL gene was identified by a team of dedicated investigators at the National Cancer Institute. This success was a clear example of a great accomplishment resulting from a multidisciplinary approach to a common clinical problem.

Jodi Maranchie, MD and Leonard Appleman, MD, PhD, are such a team with a common focus on kidney cancer. The fact that they also happen to be a married couple simply facilitates their efforts beyond work. Dr. Maranchie was recently recruited from the University of Massachusetts to join the UPMC Department of Urology, and Dr. Appleman joined the Division of Hematology and Oncology, having previously been at the Dana Farber Cancer Center in Boston. Dr. Maranchie is a surgeon specializing in urologic oncology who also conducts research into the biomedical and genetic pathways that are involved in the formation of tumors within the kidney. Dr. Appleman’s research concentrates on understanding how kidney cancers become resistant to new drugs with the goal of identifying effective agents for supporting long-term kidney cancer treatment.

“With the majority of renal cancer patients, we find that many drugs are initially effective on their cancers. However, within six months to a year, the cancer becomes resistant to the drugs,” observed Dr. Appleman. “My research involves taking specimens from the recurrent cancerous tumors and looking for key molecular

changes and mutations. Using the mutation as a starting point, I work on developing new drugs that are toxic to the mutated cells and offer patients high therapeutic indexes.”

To support this research, Dr. Appleman is collaborating closely with Zhou Wang, PhD, Director of Urological Research in the UPMC Department of Urology. As a model of this line of investigation, they are identifying compounds directed against prostate cancers carrying specific genetic mutations, with the hope such studies will translate effectively into the renal cancer arena. Dr. Appleman is also developing assays to correlate clinical responses to therapies with medical tests, known as correlative research. He is also an active participant in many clinical trials for genitourinary malignancies.

Dr. Maranchie is conducting renal cancer research that dovetails with her husband’s efforts. In addition to her surgical duties and direct patient interactions, she is continuing investigations started when she was a fellow at the National Cancer Institute. This research focuses on the genetic pathways involved in the formation of renal cancer.

“My work first seeks out the biochemical pathways that allow the formation of mutant

cancerous cells in the kidney, and then focuses on creating molecules that stop the cell mutations and inhibit cancer development,” commented Dr. Maranchie. “In particular, I’m examining the genetic pathways regulated by the VHL gene that appears to be knocked out in most patients with kidney cancer. My husband then conducts clinical trials that employ agents targeted at that pathway and others.”

Despite the genetic breakthrough resulting from identification of the VHL gene, Dr. Appleman and Dr. Maranchie both agree that there is much work to be done in the renal cancer area. “I would like to get trials open for every class of patient with kidney cancer so I can bring my research work to the bedside,” remarked Dr. Maranchie. “Kidney cancer, as a disease, is really underserved at this point. I ultimately want to offer my patients with advanced kidney cancer something that works effectively in curing their cancer in the long term.”

Dr. Appleman agreed with his wife’s assessment. “There are still big questions that remain unanswered in the area of metastatic kidney disease. If we are about to better understand the biology behind the cancer, then we can develop more effective ways to treat it.” **F**

HOPE FOR NEW LIFE:

## Advances in the Treatment of Male Infertility



DR. THOMAS JAFFE

production. In addition, more sophisticated blood tests to detect abnormalities in the Y chromosome responsible for sperm production are available. Specifically, blood can be analyzed for the gene that is in part responsible for sperm production, the DAZ gene (Deleted in Azoospermia). DAZ gene analysis is important in patients who are considering in vitro fertilization techniques because a carrier of the gene mutation can transmit it to a male offspring, perpetuating the infertility problem. Testicular biopsies may also be employed to find and evaluate pockets of sperm hidden within the testicles.

“Through these diagnostic measures, we can get a better handle on the cause and severity of infertility in a patient,” said Dr. Jaffe. “Once we have a baseline on the individual’s ability to produce sperm, then we can develop treatment approaches that will hopefully support a biological pregnancy, whether it be through natural intercourse or via an advanced reproductive technology such as in vitro fertilization (IVF) or intra cytoplasmic sperm injection (ICSI).”

“In addition, more sophisticated blood tests to detect abnormalities in the Y chromosome responsible for sperm production are available.”

When one considers the intricacies of conception, the challenges of pregnancy and, indeed, the miracle of birth, it is amazing that this process works at all. Given the seeming ease with which babies are born, we not only expect fertility as a natural bodily function but, frankly, often take it for granted. While infertility has been viewed as a curse (remember Abraham and Sarah) the promise of fertility is greeted by the laugh of skepticism (remember their son, Isaac, which means “he laughs”).

Infertility is no laughing matter for men, as the inability to father a child can be very stressful. Infertility also denies a couple the promise of biological children, further testing a man’s relationship with his spouse.

The good news is that today, as a result of extensive research and better treatment techniques, infertility is being managed more effectively than ever. “For years, people commonly assumed that infertility issues were rather cut and dried. If pregnancy was not successful after a reasonable time of trying, couples either remained childless or had to adopt,” noted Thomas Jaffe, MD, Director of Male Reproductive Medicine and Surgery in the UPMC Department of Urology. “Now, there are more treatment options than there ever were in the past, and their effectiveness in helping couples conceive a child is improving.”

Comprehensive testing is the first step in determining the causes of infertility. Simple blood tests to measure the blood levels of hormones associated with normal testicular function, such as follicle stimulating hormone (FSH), are often used to gauge sperm

In cases of an extremely low sperm count where a biologic pregnancy is desired, ICSI is frequently used. An advanced form of IVF, ICSI injects sperm collected directly from the testicles into the egg. Developed in 1992, this technique has shown to be effective in helping men with severe male factor problems father children.

According to Dr. Jaffe, “For IVF to be successful, you need to have at least 50,000 sperm present. ICSI requires significantly less sperm, and the procedure can use testicular sperm that, in the past, were considered immature. We find that testicular sperm does work well, ICSI is successful in many cases, and a growing number of men who were previously not candidates for a biologic pregnancy now can consider it.

“Infertility is nothing to be ashamed of or simply tolerated. Men need to remember that there are a number of treatment approaches shown to be effective,” advised Dr. Jaffe. “The first step is to not accept the status quo and to seek out an infertility specialist.” **F**

# BREAKTHROUGHS

## That Mean Business

Research is the cornerstone of medical advancement. Unlike the controlled environment of a laboratory, however, moving discoveries into the marketplace can be a daunting and time-intensive undertaking. It takes considerable resources to perfect, patent and roll out a new pharmaceutical or medical device. Finding those resources often takes an out-of-the-box ingenuity to overcome obstacles and navigate regulatory and market challenges.

Michael Chancellor, MD, Director of Neurourology and Female Urology, has been a leader in establishing three local urological pharmaceutical companies, leveraging discoveries from the UPMC Department of Urology research labs. Working through the Center for Urological Regional Entrepreneurship, or CURE, his efforts have attracted support from the NIH, charitable foundations and venture capitalists, and have helped put Pittsburgh on the map as an innovative developer of novel urological treatments.

According to Dr. Chancellor, all three firms got their start with breakthrough science.

“The first company grew out of a partnership I had with Dr. Johnny Huard where we developed and licensed an adult muscle stem cell technology that can be used for treating bladder control issues,” Dr. Chancellor said. “We found that when an adult stem cell is harvested from healthy muscle, then cultured and re-injected into the sphincter muscles, it can build up and restore the function of the muscles. The enhanced muscles become stronger, and reduce and eliminate urinary leakage. We knew this research had excellent potential in treating the more than 17 million people that have urinary control issues, but we needed a way to get it out to the market.”

“...these business entities are generating revenue, creating jobs, and paying taxes, which benefits the local community and the region in a myriad of ways.”

To have that technology evaluated in clinical trials and eventually delivered to patients, the research findings were transferred to CURE for further development. In 1998, Cook MyoSite Company was formed, and became the first firm created through a technology transfer from CURE. “Once we moved the technology from the lab to the company, Cook MyoSite took on the responsibility for conducting clinical trials, managing FDA interactions and cultivating the funding resources needed to make commercialization a reality,” commented Dr. Chancellor. “These are things we are not set up to do in the lab.”

Supported by an NIH business grant, Cook MyoSite built on Chancellor’s and Huard’s efforts, and attracted financial support needed to get the technology into evaluation. Today the firm is expanding staff in its new space in Pittsburgh’s North Hills, participating in two clinical trials in Canada, and establishing an FDA-compliant manufacturing facility.

“The potential of the firm is huge,” observed Dr. Chancellor.

Following up on the success of Cook MyoSite, Dr. Chancellor and his colleagues at CURE transferred two more promising findings from the laboratory, resulting in the launch of two additional firms in 2004 and 2005.



DR. MICHAEL CHANCELLOR

“After perfecting intravesical liposome technology in the Department of Urology laboratories, we again used CURE to transfer the technology outside our organization and form another company,” Dr. Chancellor explained. “The result was Lipella Pharmaceutical, a firm that develops liposome systems that can be used to deliver drugs within the bladder, or to treat irritation caused by other pharmaceuticals.”

Shortly after Lipella was launched, DeLithe Natural Products was formed. It built on the potential of a plant extract that was isolated in the laboratory and shown to be effective in treating premature ejaculation. In both cases, the experience gained through the formation of Cook MyoSite helped to fast-track the growth of these companies.

“These firms are all bridging the gap between the bench and the bedside, and are attracting the attention of funding resources that typically wouldn’t be interested in supporting scientific research or working with pharmaceutical development,” observed Dr. Chancellor. “Beyond that, these business entities are generating revenue, creating jobs, and paying taxes, which benefits the local community and the region in a myriad of ways. Most importantly, these are businesses with potential for growth. They are more than a good idea— each firm is creating a real deliverable with real benefits.” **F**

## A CONVERSATION WITH MARIAN WEIL

I have been working as the Gifts Officer with the UPMC Department of Urology for 18 months now. During that time, certain questions about the department's Development program and goals have been asked frequently.

**Q** *Given the number of worthy causes competing for dollars, what motivates someone to support the UPMC Department of Urology?*

**A** Everyone knows that charitable giving comes from the heart. However, I think it often comes from the head as well. When a person has enjoyed a positive outcome from a potentially life-threatening situation due to treatment received here, it is natural that they would want to support our work. By contributing financially to urology, a donor (whether the patient, a family member, or friend) helps to ensure similar benefits will be provided to others. Even when a patient's outcome is, unfortunately, less than ideal, the satisfaction of supporting research and treatments leading to better results for future generations is tremendous. The heart is grateful and the head says that this is a worthwhile effort to support.

**Q** *We all know that donors of very large gifts can change lives; but what impact, if any, can the smaller donor make?*

**A** Too often, people don't realize what an amazing impact small gifts over a long period of time can make. For example, there is an increasing need to provide support for cutting-edge research. The funding rates for research by the National Institutes of Health have decreased significantly and, consequently, support for creative young investigators early in their careers is more difficult to find. In fact, even when the funds are available, the NIH takes a very conservative approach to research funding, limiting support for research considered to be "outside the box." Financial support at this level can often make the difference between a scientist being able to explore a new idea and having those ideas remain dormant. We have seen concrete examples where a gift of \$10,000

was enough to foster these novel ideas as data are generated to support successful NIH grants worth in excess of a million dollars. Together, people making small contributions can make a big difference.

**Q** *Why might a planned gift be a good choice for a donor who would like to support the work of the Department of Urology?*

**A** There are several different scenarios that might apply. For example, for someone who would like to be able to make a contribution but is concerned about first taking care of personal or family obligations, a planned gift can offer a great opportunity to achieve both goals. A bequest in a will, a beneficiary designation on a life insurance policy or a retirement account, or a remainder interest in a trust are easily accomplished—and these gifts do not take effect until the death of the donor. For a donor who is concerned about having an adequate income during life, there are charitable gift vehicles, such as gift annuities and remainder trusts, which can provide a guaranteed stream of income for the donor, with the balance eventually going to support urology research.

**Q** *The department has a number of generous donors who make annual contributions. Given the extent to which the department relies upon these gifts, can you suggest a planned giving vehicle that could help to alleviate this loss when a contributor is no longer able to make his or her yearly gift?*

**A** As costs for research and innovative patient care continue to climb, it is an ongoing challenge for the Department of Urology to raise new funds while also "making up" for those lost annual gifts upon which the department has come to rely. As I noted earlier, there are caring donors who make it a practice to give something back to urology every year. Taken as a whole, the consistent generosity of these contributors is something the department relies on in order to provide such essential things as research support, technology, library maintenance, and resource funds. Whenever a long-time annual gift is no longer available, the department must make up for that important loss. One way that a contributor can make certain that his or her gift will continue to support the department in perpetuity is by endowing his annual gift. This can be accomplished quite simply either during a donor's lifetime or through an end-of-life gift (such as a bequest in a will). For example, at the current payout rate of 4.25% employed by the University of Pittsburgh, an endowed gift of

\$24,000 would replace a donor's current annual gift of \$1,000 in perpetuity. An endowed gift of \$12,000 would provide a yearly gift of over \$500.

**Q** *How could the new Pension Protection Act assist owners of Individual Retirement Accounts in making charitable gifts?*

**A** The long-awaited passage of this Act is good news for qualified donors. First, though, it is important to understand that the IRA charitable rollover provision applies only to outright lifetime transfers to qualified charities—not to future gifts, charitable gift annuities, or charitable trusts. Also, the new rules will only apply to transfers made during years 2006 and 2007. In brief, the new law provides an exclusion from gross income for otherwise taxable IRA distributions of up to \$100,000 per year from traditional IRAs and Roth IRAs for qualified charitable distributions, when the distribution is made directly to the designated charity by the plan. The plan owner must have attained at least age 70½ on the date of the distribution to the charity. If this is not relevant for you, it may be appropriate for your parents. (Note that a "qualified charitable deduction" specifically excludes distributions to donor-advised funds or supporting organizations.)

And finally, I often visit with patients when they are in the hospital post surgery. Frequently, before I can get the words out of my mouth to ask them if they need anything or how they are feeling, there is an outpouring of feelings of gratitude. These positive feelings speak to the extraordinary level of medical and personal support that most patients experience. Perhaps this would be a good time to summon up those feelings again and to translate them into a thank you, allowing the important work being done in the Department of Urology to continue. This could be a truly meaningful legacy for generations of a family.

Please feel free to contact me if you would like to discuss any of these topics in greater detail. I can be reached at 412/647-4276 or [wmarian@pmhsf.org](mailto:wmarian@pmhsf.org). **F**

### To make a contribution please contact:

Marian J. Weil, University of Pittsburgh / UPMC Medical and Health Sciences Foundation, 3708 Fifth Avenue, Suite 400, Pittsburgh, PA 15213, or call (412) 647-4276. Email: [wmarian@pmhsf.org](mailto:wmarian@pmhsf.org)

Please write to us at UPMC Development, 3708 Fifth Avenue, Suite 400, Pittsburgh, PA 15213 if you wish to have your name removed from the list to receive future fundraising requests supporting the UPMC Department of Urology.



# UPMC

University of Pittsburgh  
Medical Center