GreenLight™ Laser Therapy
Creating A New Standard of Care
New Relief for Most Common Men’s Health Concern

What is GreenLight?
The GreenLight™ Laser Therapy is a treatment that combines the effectiveness of the traditional surgical procedure known as transurethral resection of the prostate (TURP) with fewer side effects. GreenLight is suitable for most patients with an enlarged prostate. With over 200,000 procedures performed worldwide, the GreenLight procedure is creating a new standard of care - a standard that offers freedom from enlarged prostate symptoms.

- Rapid urine flow improvement
- Quick return to normal activities
- Virtually bloodless procedure
- Less than 1% reported cases of erectile dysfunction
- Short to sometimes no catheterization (less than 24 hours in most cases)
- Outpatient procedure in otherwise healthy patients
- Long-lasting symptom relief

Most patients return home a few short hours after the photoselective vaporization of the prostate (PVP) procedure and can return to normal, non-strenuous activities within days. The GreenLight Laser System delivers the ultimate benign prostatic hyperplasia (BPH) solution.

How does the GreenLight Laser Therapy procedure work?
A small fiber is inserted into the urethra through a cystoscope. The fiber carries laser energy which removes enlarged prostate tissue. Natural urine flow is rapidly restored and urinary symptoms are quickly relieved in most patients.

Where is the procedure performed?
The procedure can be performed in a hospital outpatient center or an office-based surgical facility. Typically no overnight stay is needed. However, in some cases -- for instance when a patient travels a long distance, has other medical conditions to consider or is in frail condition -- an overnight stay may be recommended.

During or after GreenLight treatment, will I have discomfort?
Your doctor will discuss anesthesia requirements, as well as pain medication to ensure your complete comfort during and after the procedure.

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Dr. Ronningen testing the GreenLight Laser in the UC Irvine Surgical Education Center

Leland Ronningen, M.D.
Associate Clinical Professor of Urology
UC Irvine Department of Urology

Undergraduate Training
United States Military Academy

Medical School
Uniformed Services University

Residency
Letterman Army Medical Center
Naval Hospital Portsmouth

Dr. Leland Ronningen was appointed to the faculty at UC Irvine in June 1999. He completed his undergraduate studies at the United States Military Academy, West Point, N.Y., and received his medical degree from the Uniformed Services University of the Health Sciences School of Medicine in Bethesda, M.D.

He received urology training at Letterman Army Medical Center, Presidio of San Francisco, and the Portsmouth Naval Hospital in Portsmouth, V.A. He served as a urologist in the United States Army for seven years prior to coming to UC Irvine.

Dr. Ronningen's areas of expertise are benign diseases of the prostate and urologic care of spinal cord-injured patients. In October 2003, he introduced the GreenLight Laser prostatectomy at UC Irvine.

Leland Ronningen, M.D.
For Patient Appointments Call:
714.456.7005
Academic Office:
714.456.7127
Dr. Xiaolin Zi's area of research is in prevention of bladder and prostate cancer. He has been studying the kava plant and its impact on preventing bladder and prostate cancer. In addition, he is studying the impact of lycopene and docetaxel on prostate cancer.

The prostate is the most common organ that is affected by cancer, and over 200,000 men are diagnosed annually with prostate cancer. Bladder cancer, while less common, affects both men and women and has a much higher mortality rate. Any means that would be effective in preventing either of these cancers from developing would be of major significance. In 2000, a generous benefactor gave $450,000 in seed money to study bladder cancer. He named the fund after his friend and urologist, thus the Dr. Neil Chamberlain Bladder Cancer Fund was born.

Dr. Anne Simoneau, associate clinical professor of urology at UC Irvine, has research interests in bladder and prostate cancer and was given the responsibility to direct the research. Her first task was to find a scientist willing and able to take on the difficult task of starting a new lab and a new project with a finite budget. After two years she was able to recruit Dr. Xiaolin Zi, who had received a medical degree and basic sciences doctorate while in China. He had also completed several postdoctoral positions in the United States and Canada as well as receiving a masters in public health from McGill University. Dr. Zi has a lifelong interest in cancer prevention, having lost his father and several young friends to cancer. The Chao Family Comprehensive Cancer Center, under the direction of Dr. Frank L. Meyskens Jr., facilitated the recruitment by providing Dr. Zi laboratory space and equipment. In addition, Dr. Meyskens provided critical mentorship. Dr. Zi began his research by investigating natural compounds on bladder cancer and identified a previously uninvestigated compound from the kava plant. A grant from the NIH in 2004 made the team feel they were on their way to unlocking the potential of the compound; however, its funding amount fell woefully short of the amount needed to continue the laboratory work. It was at this point that Dr. Ralph Clayman, chairman of the
Department of Urology, took some of his own discretionary and research funds to support Dr. Zi's research. All involved knew the situation could not go on indefinitely unless outside funding was obtained.

This year the determination and perseverance paid off with three grants being funded to study the effects of kavakawain on bladder cancer and prostate cancer, and lycopene on prostate cancer. This is truly remarkable as at present fewer than 5% of new NIH RO1 applications are being funded. For Dr. Zi to obtain a RO1 from the NIH, as well as a R21 from NIH and a competitive grant from the American Institute for Cancer Research, is a major accomplishment and a testament to his perseverance, hard work and scientific creativity.

Dr. Zi has now moved into a larger laboratory space, and there is every reason to believe that in the near future his work will bring to light some important compounds that could be used today by individuals who are at risk for developing either prostate or bladder cancer. Similarly, these same compounds may be found to have a positive effect on reducing the growth of these cancers in those individuals already afflicted.

**Curing and Controlling Bladder Cancer with Kava Extracts: Cellular Studies**

**Dr. Xiaolin Zi and Dr. Anne R. Simoneau**

**Kava** (the *piper methysticum* Forst.f. plant) is a sterile plant limited to growth in the South Pacific tropics. Time required for its growth before root harvest is approximately four to five years. The root extract of kava has been part of the Pacific Islanders' culture for thousands of years, serving as a beverage, medicine and in socio-religious functions similar to wine in Western cultures.

Consumption of traditional aqueous kava preparation has not been documented with any major side effects for centuries, and has correlated with low and uncustomary gender ratios of cancer incidences (more cancer in women than men) in three kava-drinking countries -- Fiji, Vatu and Western Samoa. Kavalactones and chalcones are two major classes of chemicals isolated from kava extracts. The major kavalactones in kava extracts are kawain, methysticin, desmethoxyyangonin, yangonin, dihydrokawain and dihydromethysticin, whereas chalcones include flavokawain A, B and C.

We found that the kava extract standardized with 70% kavalactones inhibits proliferation of bladder cancer cell lines RT24, T24 and EJ in a dose-dependent manner. The IC50s of a kava extract for RT24, T24 and EJ cells were estimated to be about 20.1, 6.2 and 5.1 μg/ml at 48 hours, respectively. (IC50 represents the concentration of a drug that is required for 50% inhibition of cell growth.) Invasive, aggressive bladder cancer cell lines T24 and EJ cells with mutant p53 are more sensitive to the treatment of kava extract than superficial bladder cancer RT24 cells with wild-type p53. The antiproliferative effect of the kava extract was involved in typical apoptotic morphologies including cell shrinkage and rounding up, cell membrane blebbing as well as nuclear fragmentation and condensation.

Further study showed the differential abilities of kawain, a major kavalactone in kava extract, and flavokawain A, B and C on proliferation of bladder cancer cells. At doses up to 25 μg/ml, no inhibitory effect on proliferation of RT24 and EJ cells, and less than 27% inhibition of T24 cell proliferation was observed with kawain treatment. On the contrary, compared to 0.1% DMSO treated controls, flavokawain A, B and C at a dose of 25 μg/ml caused almost complete inhibition of RT24, T24 and EJ cell proliferation. Western blot analysis showed that 12.5 μg/ml flavokawain A induced a significant cleavage of PARP and caspase 3, two hallmarks of apoptosis (i.e., cell death), but that kawain, methysticin and yangonin at doses of 40 and 80 μg/ml did not.

Microarray analysis for comparing gene expression profiles of the kava extract and its components on treated bladder cancer cells is in progress to determine the active principles of kava extracts in induction of apoptosis in bladder cancer cells.

Your kind support will greatly assist and hasten Dr. Zi’s studies and progress in this important area. (See enclosed form.)
Orange County High School Students Broaden Career Horizons at UC Irvine Surgical Education Center

“Scrubs for a Day”
In an effort to further introduce the Orange County community to UC Irvine Medical Center and encourage young minds to consider a career in medicine/surgery, the Leadership Council of the Department of Urology, under the guidance of Wally Muratori, Rosanne Santos, and Drs. McDougall and Clayman, plans to provide 63 career day sessions, one for each high school in Orange County over the next five years. The Department of Urology will invite 20 students from each high school to attend a hands-on, interactive experience with the latest technological advances in less invasive surgery, held in the UC Irvine Surgical Education Center. The program began in June 2008 and has become immediately popular with 11 high schools scheduled to visit this coming year.

The students quickly became medical students for the morning, donning surgical scrubs and listening to a talk about advances in surgery since the 19th century. The introductory talk set the stage for the main event: using the same equipment doctors use to learn the minimally invasive surgery techniques for which UC Irvine’s Department of Urology has become renown worldwide.

In the surgical training laboratory, equipped with the latest surgical technology, the students used standard laparoscopic instruments to practice tasks viewed on video monitors. They also learned how to suture wounds on simulated skin and to operate the da Vinci® Robotic Surgical System, using it to thread suture through a series of eye-holes mounted on a board.

Interactions with World Renowned Physicians
During the sessions, students met and discussed medicine and career pathways with our world renowned faculty as well as with college undergraduate research volunteers, medical students, and resident urologists-in-training learning about what it takes to work toward a degree in medicine or a related field. The students were dreaming of new possibilities by day’s end, and many stated it was their best field trip ever.

Many thanks to Dr. and Mrs. Clayman and Deutsche Bank for sponsoring these events, and to Daphne’s Greek Cafe, Olive Garden and California Pizza Kitchen for donating lunches to the student program.

If you would like to help sponsor upcoming high school outreach programs, please see the enclosed remittance form for your consideration. This activity is completely and solely supported through philanthropic funding.

For more information, please contact:
Rosanne Santos
Office: 714.456.8176
Dr. Dash has worked closely with Drs. Ahlering and Ornstein in order to further hone his skills in robotic surgery. Accordingly, he will be able to offer each patient with urologic cancer a full slate of options including robotic, laparoscopic, and open procedures.

We wish Dr. Ornstein the best of success in his future endeavors. Certainly, we were fortunate to have had his services at UC Irvine Medical Center these past five years.

For appointments and referrals, please call: Atreya Dash, M.D.
Office: 714.456.7005

Your Urology
Fall 2008, Issue 10

The urology newsletter is published biannually. We welcome your comments and ideas for stories. Please send them to Dr. Elspeth McDougall, editor, at cshell@uci.edu; make sure to let us know if we have permission to reproduce your comment in full or in part in Your Urology. Copyright © 2008 The Regents of the University of California. All rights reserved.

Department Chairman
Ralph V. Clayman, M.D.

Newsletter Editor
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If you do not want to receive further communications from the Department of Urology, please contact Cynthia Shell.

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Department of Urology
333 City Blvd. West, Suite 2100
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Mission
Through excellence and leadership in patient care, education, and research, the Department of Urology will provide its patients with the absolute best in innovative, less invasive urological care; its residents with a superb curriculum-based educational and well-rounded operative training experience; and its faculty with every opportunity to excel clinically while teaching and pursuing research of both a basic and clinical nature.

Vision
By virtue of clinical and research accomplishments, the Department of Urology seeks to become recognized as one of the top 10 programs in urology in the United States. (We’re getting close...see page 6!)
U.S. News & World Report analyzed data on 5,453 medical centers and ranked the Department of Urology at UC Irvine in the top 20 for the second year in a row; we moved up a notch to #18. To be sure, this is a reflection of all of the superb work everyone has done to provide the very best in patient care as well as teaching and research throughout the year. I am so very proud of what the members of our department have created here at UC Irvine.

Ralph V. Clayman, M.D.
Professor and Chair

New University Hospital Opening Early 2009

Academic Center of Excellence

UC Irvine Healthcare has embarked on the next chapter of its mission to provide the highest quality of patient care. The new University Hospital will house the latest medical and surgical technologies and strengthen UC Irvine Healthcare’s ability to provide patients with the latest therapies and treatments.

The new 482,428-square-foot hospital promises to position UC Irvine Healthcare as one of the leading academic medical centers. Designed to create a patient-focused healing environment, it will also serve as a center for excellence in healthcare for the Orange County community.

Patient-Focused Healing Rooms

In the new hospital, patients will receive care in spacious, predominantly private rooms that offer ample space for families to be part of the caring and healing process. Instead of transporting patients to different treatment areas, larger private patient rooms will allow multidisciplinary teams to care for patients in the comfort of their own room. Also, there are 15 high-tech operating rooms that are twice the size of our standard operating room, including two da Vinci robots and the latest in laparoscopic technology providing our patients with state-of-the-art minimally invasive surgical care.

An Environment for Teaching and Translational Research

In addition to emphasizing patient care, the new hospital will allow researchers and clinicians to work closely together to bring the latest therapies and treatment to our patients. For it is in this hospital that the largest number of nationally recognized “Best Doctors”* within Orange County will practice.

*(Best Doctors in America®: Castle Connolly)

Give the Gift of Knowledge

The UC Irvine Anatomical Donation Program supports the education of health professionals and scientific research at the university. The medical students learn anatomy from the best of all teachers…the body itself.

For additional information, please contact
The Willed Body Program
UC Irvine School of Medicine
Office: 949.824.6061
www.uchs.uci.edu/com/willed-body

Many Thanks to the Industry Sponsors of our Weekly Urology Grand Rounds Conference

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Congratulations Urology Team!
Tony E. Khoury, M.D.
Professor and Chief of Pediatric Urology
Dr. Khoury is world renowned for his expertise in the medical and surgical management of complex pediatric urology anomalies, including reconstructive surgery for incontinence, genital anomalies, renal transplantation and oncology. He did his postgraduate fellowship training in Pediatric Urology at the Hospital for Sick Children, in Toronto, Ontario, Canada.

For appointments and referrals, please call: 714.456.7005

Ralph V. Clayman, M.D.
Professor and Chairman
Department of Urology
Dr. Clayman is world renowned for his clinical and laboratory work in minimally invasive surgery. He specializes in the treatment of kidney stones, kidney cancer, strictures of the ureter and all other aspects of renal and ureteral diseases.

For appointments and referrals, please call: 714.456.7005

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For appointments and referrals, please call: 714.456.7005

Thomas E. Ahlering, M.D.
Professor and Vice Chairman
Dr. Ahlering is well known for laparoscopic radical prostatectomy using the da Vinci® Robotic Surgical System. He specializes in treatments for cancer of the prostate, bladder, kidney, and testis. He did his postgraduate fellowship training in Urological Oncology at University of Southern California, Los Angeles.

For appointments and referrals, please call: 714.456.6068

Ralph V. Clayman, M.D.
Professor and Chairman
Department of Urology
Dr. Clayman is world renowned for his clinical and laboratory work in minimally invasive surgery. He specializes in the treatment of kidney stones, kidney cancer, strictures of the ureter and all other aspects of renal and ureteral diseases.

For appointments and referrals, please call: 714.456.7005

Elspeth M. McDougall, M.D., FRCSC
Professor of Urology and Associate Dean, Clinical Science Education
Dr. McDougall specializes in minimally invasive surgery for the treatment of kidney stones, kidney cancer and strictures of the ureter. She did her postgraduate fellowship training in Endourology and Extracorporeal Shock Wave Lithotripsy at Washington University Medical School, Barnes Hospital, St. Louis, Missouri.

For appointments and referrals, please call: 714.456.7005

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For appointments and referrals, please call: 714.456.6068

Leland Ronningen, M.D.
Associate Clinical Professor
Dr. Ronningen is particularly interested in benign diseases of the prostate and practices general urology. He received his urology training at Letterman Army Medical Center, Presidio of San Francisco and at the Portsmouth Naval Hospital in Portsmouth, Virginia.

For appointments and referrals, please call: 714.456.7127

Atreya Dash, M.D.
Assistant Professor of Urology
Chief, Urology Service VA Long Beach Healthcare System
Director of Robotic Surgery and Urologic Oncology, Long Beach Memorial Medical Center
Dr. Dash completed a fellowship in urologic oncology at Memorial Sloan-Kettering Cancer Center in New York. He has experience in all areas of urologic oncology including the advanced surgical treatment of prostate, renal, testis and bladder cancers. His patient treatment modalities include minimally invasive surgical technologies such as laparoscopy to improve the care and convalescence of patients with urologic cancers.

For appointments and referrals, please call: 714.456.7005

Regina M. Hovey, M.D.
Associate Clinical Professor
Director, Urology Residency Program
Dr. Hovey specializes in female urology, urinary incontinence, neurourology, and lower urinary tract reconstruction. She did her postgraduate fellowship training in Female Urology, Neurourology and Reconstructive Urology at University of California, Davis.

For appointments and referrals, please call: 714.456.7128

Elspeth M. McDougall, M.D., FRCSC
Professor of Urology and Associate Dean, Clinical Science Education
Dr. McDougall specializes in minimally invasive surgery for the treatment of kidney stones, kidney cancer and strictures of the ureter. She did her postgraduate fellowship training in Endourology and Extracorporeal Shock Wave Lithotripsy at Washington University Medical School, Barnes Hospital, St. Louis, Missouri.

For appointments and referrals, please call: 714.456.7005

Anne R. Simoneau, M.D.
Associate Clinical Professor
Assistant Director, Urological Oncology
Dr. Simoneau has clinical trials in prostate cancer prevention and is working in the laboratory on bladder cancer prevention. She did her postgraduate fellowship training in Clinical Urological Oncology at University of Southern California, Los Angeles.

For prostate cancer prevention, please call: 714.456.3330

Aaron Spitz, M.D.
Assistant Clinical Professor
Male Reproductive Medicine and Surgery
Dr. Spitz has expertise in the treatment of male infertility and sexual dysfunction. He did his fellowship training at Baylor College of Medicine, Houston, Texas.

For appointments and referrals, please call: 714.456.7005
Please mail or fax this completed form to:

Ralph V. Clayman, MD
Professor and Chair Department of Urology
333 City Blvd West, Suite 2100, Rt 81
Orange, CA 92868
Tel: 714.456.3418 Fax: 714.456.5062

Name(s): __________________________________________ (please print clearly)
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--------------------------------------------------------
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***********************************************************************************

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Driving Directions to UC Irvine Medical Center —
From I-5 take the Chapman Avenue exit. Drive westbound on Chapman. Turn left (south) onto The City Drive South. Proceed to Dawn Way. Turn left. The UC Irvine Medical Center visitor parking structure is on the left side. Upon exiting the parking structure after parking, continue down the broad walkway until you see Miss Kelly’s Coffee Cart on your right side. On your left side is the entry to the Pavilion III urology offices. If you are lost, please call 714.456.7005.

Visit the Department of Urology on the Web at -- www.ucihs.uci.edu/urology

UC Irvine Healthcare - Urology Newsletter -- www.healthcare.uci.edu/urology  Fall 2008