The Urology Research Innovation and Leadership Fellowship

URIL Fellowship Overview

The URIL Fellowship in Urology at the University of California, Irvine is an intensive one-year program that provides up to two medical students with unmatched training and experience in urologic research. Students will be able to participate in innovative research projects throughout their fellowship year. Through basic science, translational, and clinical research, the research fellows will gain a broad understanding of Urology and will have the opportunity to contribute to the body of knowledge that drives diagnostic and therapeutic options forward. To facilitate this, research fellows will be paired with mentors from the department of urology’s world-class team of faculty. Additionally, students will receive focused training in leadership through UC Irvine Department of Urology’s Mentorship Program.

Our Department

The Department of Urology at UC Irvine is an innovative and nationally-recognized program comprised of world-class experts covering the comprehensive spectrum of urologic diseases and disorders. The Research Fellowship program assists fellows to take steps towards becoming innovative leaders in the field by providing them with leadership experience during their training. The medical student will be paired up with outstanding mentors in the field and will also be able to attend lectures given on a wide range of topics.

Additionally, the fellow will have access to the Department of Urology’s state-of-the-art laboratory and surgical skills center. Some of the simulators and models in the skills center include a da Vinci robot, MIMIC robotic simulator, Simbionix LAP mentor, Simbionix URO mentor, Simbionix PERC mentor, laparoscopic box trainers, pelvic models, ureteroscopy trainers, and an iPad-based lap trainer.
Application Instructions:

Each applicant will need to fill out an online application which can be found on the website, in addition to submitting a letter of recommendation from faculty at their home institution. The applicant will also need to submit a statement of purpose and a current medical school transcript.

Important Dates

**January 31st, 2014:** All application materials are due, no exceptions. If all materials are not received by this date, the application will not be considered for acceptance into the fellowship.

**February 15th, 2014:** Phone interviews of selected applicants will be conducted. Options will be available for in-state applicants to visit the Department for their interview.

**April 1st, 2014:** Offers of acceptances will be extended to two medical students. All other applicants will be placed on a waitlist.

**April 15th, 2014:** Outstanding offers must be accepted or declined. If fellowship offers are not accepted by this date, other applicants have the opportunity to be taken off the waitlist.
Mentors:

Jaime Landman, MD.

Dr. Landman is Chairman of the Department of Urology and Professor of Urology and Radiology at the University of California, Irvine School of Medicine. He is also the founder and Director of the UC Irvine Ablative Oncology Center where he performs many of his minimally invasive kidney cancer procedures. Dr. Landman was previously a full time faculty member of the New York Presbyterian Hospital and Director of the Columbia University Minimally Invasive Urologic Oncology Fellowship. Dr. Landman has extensive clinical expertise in laparoscopic renal and prostate surgery and endoscopic management of urinary tract pathology. His clinical interests include all aspects of minimally invasive urologic oncology with special emphasis on kidney cancer and prostate cancer. He has performed over 3000 advanced minimally invasive kidney procedures—one of the most extensive experiences in the world. He has pioneered technology and techniques for minimally invasive management of renal malignancies and has developed novel techniques that are used globally for laparoscopic partial nephrectomy. Dr. Landman is an internationally recognized expert and has been a visiting professor, lectured, and performed live surgical demonstrations around the United States, South America, Central America, Europe, Africa and Asia.

http://www.urology.uci.edu/dept_faculty_landman.shtml

Ralph Clayman, M.D.

Dr. Clayman is world renowned for his expertise in minimally invasive surgery for kidney stone disease, kidney cancer and strictures of the ureter, and is listed among the Best Doctors in America for urology. He is a graduate of Grinnell College and the University of California, San Diego School of Medicine. Following general surgery and urology training at the University of Minnesota, he spent two years at Southwestern Medical School in Dallas pursuing his interests in renal cancer research, kidney stone disease and minimally invasive urology. Dr. Clayman spent 17 years at Washington University School of Medicine in St. Louis, rising to become a professor of urology and radiology, director of the Midwest Stone Institute and co-director of the Division of Minimally Invasive Surgery. In January 2002, he joined UC Irvine’s School of Medicine as the founding chair of the Department of Urology and later in 2009, he was named Dean of the School of Medicine and stepped down as department chair. He continues his clinical work, albeit limited to renal cancer and kidney stones. In 1990, Dr. Clayman and his associates performed the world’s first laparoscopic removal of a kidney for a tumor, as well as the first
laparoscopic removal of a kidney and ureter to treat cancer. They also developed a balloon catheter to treat obstruction of the ureter and performed pioneering work on percutaneous and endoscopic therapy for ureteral and kidney stones. He established the nation's first fellowship program in minimally invasive urology in 1984; trainees of his program now occupy academic positions at universities throughout the United States, Canada and Israel. Dr. Clayman is the author of textbooks on laparoscopic and percutaneous urologic surgery, and has published more than 400 peer-reviewed papers and book chapters. He is co-founder and co-editor of the Journal of Endourology and has 14 minimally invasive surgical instrumentation patents to his name. He has received numerous national and international awards.

http://www.urology.uci.edu/dept_faculty_clayman.shtml

Thomas E. Ahlering, M.D.

Dr. Ahlering is Vice Chairman of the Department of Urology and Professor of Urology at the University of California, Irvine. He was formerly Chief of the Division of Urology from 1992-2002. He completed his residency in urology and his fellowship training in urologic oncology at the University of Southern California. He has pioneered innovations to the Indiana pouch, and ileal neo-bladder reconstructions. Dr. Ahlering has received local, national, and international recognition for his expertise in urologic oncology. His research focuses on the invasion and metastasis of prostate cancer and development of minimally invasive radical prostatectomy assisted by the da Vinci Surgical System. He has performed more than 700 such robotic surgeries, including the first robotic prostatectomies in Denmark, Canada and Australia. Dr. Ahlering is actively involved in research projects in prostate and bladder cancer, and has produced several publications and book chapters.

http://www.urology.uci.edu/dept_faculty_ahlering.shtml

Gamal Ghoniem, M.D., FACS

Dr. Ghoniem is Vice Chairman of the Department of Urology and is Professor of Urology in the at the University of California, Irvine. He is fellowship-trained in neurourology and female urology. Dr. Ghoniem was previously a full time faculty member at the Cleveland Clinic. He has served as a consultant of the surgical treatment group of the 1 International Consultation on Urinary Incontinence. Dr. Ghoniem has also been appointed by the NIH as the chairman for a review panel on incontinence. He has been a member of the SUFU executive committee and has served a three year term as chairman of the Research and Development Committee of the International Urogynecological Association (IUGA).
Dr. Ghoniem has edited two books on female pelvic pathologies in addition to writing multiple book chapters and publications in peer-reviewed journals. His clinical interests include female urology, pelvic reconstructive surgery, and voiding dysfunction.

http://www.urology.uci.edu/dept_faculty_ghoniem.shtml

Edward Uchio, M.D.

Dr. Uchio is a nationally recognized leader in the management of genitourinary malignancies. He completed a fellowship in urologic oncology at the National Cancer Institute in Bethesda, Maryland. He has vast expertise in all areas of urologic oncology including advanced surgical treatment of prostate, renal, testis and bladder cancers. He also actively uses laparoscopic, robotic and minimally invasive techniques in addition to newer technologies and treatments only available in clinical trials.

Dr. Uchio completed a fellowship in urologic oncology at the National Cancer Institute (NCI) in Bethesda, Md., where his laboratory specialized in hereditary renal cancer syndromes such as von Hippel Lindau Disease (VHL). He has presented internationally on the molecular basis of renal malignancies and is the author of numerous publications and book chapters on urologic cancers. Dr. Uchio has also received numerous research grants including NIH funding for many of his oncologic research projects.

http://www.urology.uci.edu/dept_faculty_uchio.shtml
Innovations of Faculty and Previous Fellows
Jaime Landman, MD.

- Bigopsy Device for biopsy of upper urinary tract urothelial tumors. This device has the ability to take a larger sample of tissue, potentially increasing the accuracy of grading and staging of upper tract TCC.
  - [http://www.youtube.com/watch?v=ozYSE_FFVuE](http://www.youtube.com/watch?v=ozYSE_FFVuE)

- Lithassist device for renal stone treatment

- Intra-renal Cooling technique for renal hypothermia during robotic and laparoscopic partial nephrectomy
Ralph Clayman, MD.

- Has numerous patents on his innovations some of which include Person and Blood Identification wrist band, laparoscopic entrapment sack, surgical endoscope apparatus, Acucise (cutting Balloon catheter), Radiolucent urology table, ureteral stent with small bladder tail, pneumatic
tissue dissector w/ exhaust system, and enabled soft tissue dissector. He has also been instrumental in the development of nephrostomy drapes, semi-rigid ureteroscope, endopyelotomy stents, flexible cystoscope and others. The most important innovation, however was that along with his colleagues, he performed the first laparoscopic removal of a kidney with tumor.

Thomas E. Ahlering, MD.

- UroCool balloon
  - The UroCool system is designed to apply targeted temperature control to the pelvic anatomy during robotic assisted radical prostatectomy. A clinical trial utilizing the UroCool balloon has shown statistically significant improvement in early postoperative continence following surgery.

Gamal Ghoniem, M.D.

- Denervation of the bladder via a vaginal probe for the treatment of overactive bladder. The newly developed method would be more successful in treating overactive bladder by surgically eliminating the pelvic nerve supply to the overactive bladder through a technique delivered by a vaginal probe.

Edward Uchio, M.D.

- Neurotome Device
  - A novel device used during surgical procedures to harvest the sural nerve.
Previous fellows have become innovators in the field of urology within a short time period. The lab team at the UC Irvine Department of Urology have successfully pioneered an office-based renal biopsy technique, produced and successfully tested the first 3D-printed ureteral stents and trocars, and have created novel 3D-reconstructions of detailed renal nerve anatomy from histopathology receiving international recognition. In addition, our lab team has received further international acclaim for our studies on the interaction between peri-renal fat and renal cell carcinoma.
Curriculum:

The fellowship at UC Irvine will provide a supportive and team-oriented environment where students spend a year conducting basic science, translational, clinical, and educational research. The students will perform research in multiple locations including the operating room, the outpatient clinic, and the research laboratories, where they will have the opportunity to practice their laparoscopic and robotic skills using the trainers that are available in the laboratory. During their experience at UC Irvine Medical Center, the students will be functioning as a member of the research team and will participate in weekly lab meetings and other seminars. In addition, each student is encouraged to apply to the MS-BATS program at UC Irvine. This optional masters degree program offers a unique curriculum aimed at comparative effectiveness research and is led by world-class faculty who are leaders in the field. Students will broaden their clinical research skills through courses on medical statistics, bioethics, health care policy, clinical trial design and more. The MS-BATS program provides students with the skillset to thrive in an increasingly challenging clinical research environment in addition to providing advanced training for the translation of basic science research into practical clinical work that improves patient care.

As part of the leadership experience and training of the fellowship, research fellows will help lead the Department’s Mentorship Program. Multiple lectures by internationally recognized figures both in urology and the medical device industry are in the process of being set up as part of the mentorship program. These talks will be designed to instill motivation to pursue innovative thinking and the goal of improving delivery of care in urology and surgery in general. Through this program, fellows will also get the opportunity to improve their public speaking skills by giving presentations on different medical topics in addition to improving their leadership skills by assisting their mentees in succeeding in meeting their goals. The student fellows will have a tremendous opportunity to be part of a research team with vast experience in presenting at national research conferences. Previous fellows have presented at the American Urological Association national meeting, World Congress of Endourology, American Urological Association Western Section, and others. Multiple awards have been won at these meetings including Best Basic Science Awards for “Extra-Renal and Intra-Renal Autonomic Nervous System Redefined” in 2012, and “Secreted Factors from Peritumor Adipose Tissues of Clear Cell Renal Cell Carcinoma Increased the Motility of Human ccRCC Cell Line Caki-2 Via Enhancement of WNT Signaling” in 2013 at World Congress of Endourology and James L Goebel Grand Prize for “Development and In-Vitro Test of Ureteral Stents Using Three-Dimensional Printing Technology” at AUA western section in 2013.
Financial Information:

- $20,000 stipend for the entire year the medical student will be performing research at the Urology Department
- $1,500 for research related expenses which include traveling to conferences for presentations
- The stipend will be paid monthly to the medical student. No taxes will be deducted at the time of dispersal
Previous Fellows:
2012-2013
Philip Bucur
Medical School: University of California, Irvine

Biography:

Philip Bucur was born and raised in San Dimas, CA and completed his undergraduate studies at UC Irvine. After spending two years at Hoag Hospital doing clinical work, he entered medical school in 2009. As a medical student at UC Irvine, he became interested in Urology during his clinical clerkships, and he spent a year with Dr. Landman conducting clinical, translational, and educational research while being concurrently enrolled in the MS-BATS program. His biggest accomplishments during his fellowship year included initiating and leading a prospective comparative trial, receiving two research grants from the Foundation for the Advancement of Minimally Invasive Surgery, being recognized by the UC Irvine faculty for graduation with distinction in research, co-founding the Department’s annual High School Summer Surgery Program, and presenting his research at the 2013 annual American Urological Association conference. The studies he has been a part of under the direction of Dr. Landman are listed below.
Matched for Residency at: In progress

Publications and Projects:


Abstracts:

1. Endockscope, Bringing Endoscopy with Mobile Technology for Global Healthcare Services
2. Cryoablation for Renal Cortical Masses: 5 and 7 Years Oncologic Follow-Up, 2013
7. In Vitro Comparison of a Novel Facilitated Ultrasound Targeting Technology versus Standard Technique for Percutaneous Renal Biopsy, 2013
8. Comparison of the iTrainer and Standard Laparoscopic Trainer for Basic Laparoscopic Tasks, 2013
9. Cross-Transplantation of Porcine Islet Cells in Alginate Sheets, 2010

Manuscripts in Progress:

2. Intermediate Term Outcomes of Renal Cryoablation: A Multi-Center Institutional Analysis, Second Author

3. Comparison of Outcomes in Patients Undergoing Percutaneous Renal Cryoablation with Sedation versus General Anesthesia, Third Author

4. Development and Comparison of the iTrainer vs. a Standard Laparoscopic Trainer for Basic Laparoscopic Tasks, Fourth Author

5. Comparison of Renal Parenchymal Closing Pressure During Open, Laparoscopic, and Robotic-Assisted Renal Reconstruction, Fourth Author

Master’s Thesis in Progress:

- A Prospective, Comparative Study of the Physiological Response, between AirSeal, an Integrated Insufflation and Access System, and Conventional Insufflation and Trocars

Ashleigh Menhadji
Medical School: Boston University

Biography:

Ashleigh graduated from the University of California, Irvine with a bachelor of art in Psychology and Social Behavior and a Bachelor’s of Science degree in Neurobiology. She moved to Boston to attend Boston University School of Medicine. She spent a year in the Urology Department between her 3rd and 4th years of medical school working on a variety of clinical, translational and educational studies. Her largest project involved testing a novel ultrasound transducer used for renal mass biopsy. The project went from an in vitro lab study to a pilot clinical study to a multicenter clinical trial. The work was published in both Urology Gold Journal and the Journal of Endourology and was presented at the Engineering in Urology Society 2013 meeting as well as at the World Congress of Endourology 2013. She also spent some time doing educational projects. Her paper on resident education and surgical training was published in the Journal of Endourology and was presented in a podium presentation at the 2013 AUA. She also coordinated and
participated in a multi-center study focused on validating a novel surgical training instrument. The project is still in progress.

Matched for Residency at: In progress

**Publications and Projects:**


Biography:

Garen Abedi graduated from University of California, Irvine with a Bachelor’s degree in biological sciences in 2009. He matriculated in University of California, Irvine School of Medicine in 2010. He is currently a fourth year medical student from UC Irvine who is pursuing his interest in Urologic research with focus on minimal invasive surgery. He is concurrently enrolled in the Masters in Biomedical and Translational Science program at UC Irvine. His main project this year is a clinical trial of intra-detrusor Botox injections for treatment of post ureteral stent pain and lower urinary tract symptoms. Outside of research, Garen is also one of the board members of the Urology interest Group and assists in the planning and execution of events throughout the year.

Publications/Projects in Progress:

1. Prospective Randomized Evaluation of Peri-Ureteral and Intradetrusor Injection of Botulinum Toxin Type A for the Treatment of Ureteral Stent Related Pain and Irritative Voiding Symptoms. In progress.
Martin Hofmann
Medical School: University of California, Irvine

Biography: Martin Hofmann received a Bachelor’s degree in biochemistry and cell biology from the University of California, San Diego in 2009. After spending one year working with elementary and middle-school students at Sycamore Canyon School in Newbury Park, CA, he entered medical school at UC Irvine in 2010. He is currently a fourth-year medical student pursuing dual degrees: an MD as well as a Masters in Biomedical and Translation Science with a particular interest in urological research. He is very involved in the medical school community in and outside of the sphere of urology, serving as both the Co-President for the medical student body as well as the President of the Urology Interest Group. His research interests include minimally invasive treatment of kidney and upper urological tract pathology, technology in medical education, and patient education. His main projects for the year include developing a tablet-based surgical atlas for urology trainees for which he received a $25,000 grant from the Society for Urology Chairpersons and Program Directors, and analyzing the physiologic effect and outcomes of various insufflation methods and pressures.

Publications/Projects in Progress:

2. Comparison of the iTrainer and Standard Laparoscopic Trainer for Basic Laparoscopic Tasks, 2013.
5. Repeat Percutaneous CT-Guided Cryoablation for Locally Recurrent Renal Cell Carcinoma. In progress.
7. Trends in management of T1a renal masses over five years. In progress.
Contact Information:

If you have any questions about the fellowship, please contact the program leaders below

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