ROSWELL PARK CANCER INSTITUTE

2018 Internship Directory: Summer Research Experience Program in Oncology- PA Student Applicants (3 pages)

Mentor	Research area(s)	Internship category	Internship description
Khurshid Guru *Dept. of* ***Urology*** **www.roswellpark.org /Khurshid-Guru**	Urology; Medical Oncology; Surgical Oncology; Surgical training, human factors engineering, etc.	Clinical Research	**ATLAS Internship** Specialties: 1) Medicine 2) Engineering 3) Medical Illustration 4) Data Managing Past Intern Accomplishments: 1. Published as co-authors of manuscripts, posters, and presentations in prestigious journals and conferences such as the Journal of Urology, BJUI, IJU, AUA, ERUS, EAU, etc. 2. Develop medical technologies and apply and achieve patents for their inventions 3. Invited to attended and present projects at national conferences 4. Develop patient education tools (Android application) 5. Become a co-consenter in clinical trials where they are able to interact with patients in RPCI clinic 6. Become wet-lab certified to bed-side assist in robotic surgery labs 7. Log hours of OR observation and video classification of real cases 8. Complete the Introduction to Robotic Surgery and Introduction to Laparoscopic Surgery Curriculum (Certification) 9. Learn how to navigate patient records on multiple web-based platforms 10. Learn how to maintain, develop, and manipulate databases for research purposes.

Eric Kauffman *Dept. of* ***Urology***	Cancer genetics; Cancer molecular and cellular biology; Cancer pharmacology and therapeutics; Urology; Medical Oncology; Surgical Oncology; Other (please specify); Radiology	Clinical Research	**Clinical research in kidney cancer and prostate cancer patients** This internship involves clinical data abstraction and analysis for patients diagnosed with kidney or prostate cancer at Roswell Park Cancer Institute who have been treated with surgery or managed non-operatively with active surveillance. Comprehensive patient databases within the Department of Urology are already constructed for these patient populations and will be used to assist this research. The student will perform patient chart reviews, clinical data collection and simple data analyses to answer key questions about kidney or prostate cancer patient care. Numerous questions are currently under study, and several different options will be available to for the student to choose from. Several projects have considerable overlap with Radiology. Most research projects are designed to be completed within the 8-week period, but may require longer periods in some cases. Middle authorship on one or multiple manuscript publications will be awarded to the student if his/her assignment is appropriately completed within the 8-week period (or, if necessary, after the 8-week period). For students who perform well during the 8-week rotation, the unique opportunity for future first-author manuscripts will be discussed if the student wishes to continue with the research after the 8-week period. The mentor will meet regularly with the student throughout the 8-week period and provide close one-on-one guidance. No prior clinical research experience is needed. This internship is an ideal opportunity for the highly motivated medical student who is considering a career in Urology/Urologic Oncology, Medical Oncology or Radiology.
Xiang Ling *Dept. of* ***Pharmacology and Therapeutics*** **www.roswellpark.org /Xiang-Ling**	Cancer molecular and cellular biology; Cancer pharmacology and therapeutics	Scientific Research	**Anticancer drug evaluation and mechanism study** Our current research focuses on: the molecular mechanisms of action of FL118, the DMPK profile and potential side effects induced by FL118 treatment. In addition, survivin isoforms perform different functions in distinct subcellular compartments. Type of work involved: cell culture, cell viability assay, western blot, qPCR and animal experiment.
Denise Rokitka *Dept. of* ***Pediatrics*** **www.roswellpark.org /Denise-Rokitka**	Pediatrics; Cancer survivorship	Clinical Research	**Pediatric Clinical Survivorship** Long term emotional and physical side effects of pediatric cancer survivors. Data management, data collection.

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Gal Shafirstein *Dept. of* ***Cell Stress Biology*** **www.roswellpark.org /Gal-Shafirstein**	Photodynamic Therapy	Scientific Research	**Treatment Planning and Light Dosimetry in Photodynamic Therapy (PDT)** My research team is focused on the development and implementation of treatment planning and light dosimetry in PDT. My group includes, 2 engineers, 2 research scholars and 2 pre-doctoral student. We do preclinical and clinical studies, and investigate combination therapies.
Lei Wei *Dept. of* ***Bioinformatics/Biostatistics*** **www.roswellpark.org /Lei-Wei**	Cancer bioinformatics; Cancer genetics	Scientific Research	**Identifying driver mutations by using next generation sequencing (NGS)** Next generation sequencing (NGS) is providing an efficient system for characterizing cancer genomes. By comparing with the matched normal DNA, we can identify additionally acquired mutations, so called somatic mutations in cancers. Certain somatic mutations may directly contribute to tumorigenesis process by disrupting tumor suppressors or activating oncogenes. Identifying such driver mutations is an important step for understanding the mechanism of cancers and facilitating the development of personalized treatments. The current research will work on the somatic mutations found by NGS in various cancer types. The trainee will be expected to: 1) develop a good understanding of cancer NGS data; 2) by doing literature search and data-mining, identify novel mutations/mechanisms that may contribute to tumor initiation, progression and recurrence; 3) contribute to scientific publications.