

Mentor	Research area(s)	Internship category	Internship description
<p>Gal Shafirstein <i>Dept. of Cell Stress Biology</i> www.roswellpark.org / Gal-Shafirstein</p>	<p>Photodynamic Therapy</p>	<p>Scientific Research</p>	<p>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 3 pre-doctoral student. We do preclinical and clinical studies, and investigate combination therapies.</p>
<p>Khurshid Guru <i>Dept. of Urology</i> www.roswellpark.org / Khurshid-Guru</p>	<p>Urology;Medical Oncology;Surgical Oncology;Surgical training, human factors engineering, etc.</p>	<p>Scientific Research Clinical Research</p>	<p>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</p>

Internship Directory: Roswell Park Summer Research Experience Program in Oncology (Medical Students)

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<p>Eric Kauffman <i>Dept. of Urology</i> www.roswellpark.org / Eric-Kauffman</p>	<p>Cancer genetics;Cancer molecular and cellular biology;Cancer pharmacology and therapeutics;Urology; Medical Oncology;Surgical Oncology;Other (please specify);Radiology</p>	<p>Scientific Research Clinical Research</p>	<p>Molecular and cellular research in kidney cancer and prostate cancer Our research is focused on kidney cancer primarily, and prostate cancer secondarily. There are two main projects undergoing. The first project investigates the role of iron metabolism and resulting oxidative stress levels in the development and progression of kidney tumors. Iron metal is among the greatest sources of oxidative stress in cells of the human body, but also provides the sole “ingredient” needed to transform precursor tissue into kidney tissue during embryo organogenesis. We hypothesize that iron is therefore important in the development of kidney tumors and their progression. In mice, administration of high levels of iron leads to mouse kidney tumors which morphologically mimic human kidney cancer. On the other hand, too high iron levels are detrimental to kidney cancers. Drug treatments targeting iron/oxidative stress metabolism will be tested in vitro and mice to determine whether kidney cancer growth can be blocked. The second project investigates “circulating” cancer cells in the bloodstream of patients with kidney or prostate tumors. These cells exist at extremely low concentrations in the bloodstream and are challenging to identify. This project is exploring cell imaging based on flow cytometry principles to characterize protein expression in these circulating cancer cells to better guide treatment decisions of kidney and prostate cancer patients.</p> <p>Clinical research in kidney cancer and prostate cancer patientsThis internship involves clinical data abstraction and analysis for patients diagnosed with kidney or prostate cancer at Roswell Park 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. This internship is an ideal opportunity for the highly motivated medical student who is considering a career in Urologic Oncology, Medical Oncology or Radiology.</p>