RESEARCH HIGHLIGHTS

The research activity in the department continues to grow. Today, the department has a $2.3 million annual budget which includes external funding from NIH, DOD and various foundations. Two basic science laboratories, headed by Drs. Aria Olumi and Chin-Lee Wu, are dedicated to the department. The department employs nine post-doctoral fellows, seven of whom are dedicated to basic science research and two who are dedicated to clinical research. Some of the 2008 research related highlights are listed below.

Dr. Aria Olumi
Director of Research

Dr. Olumi was awarded a two-year grant from the New York Academy of Sciences – Edwin Beer Research Award for his research entitled “c-FLIP and c-Fos Regulate Sensitivity & Resistance to TRAIL-induced Apoptosis in Prostate Cancer Cells.” His work focuses on mechanisms of resistance to pro-apoptotic therapies in prostate cancer. The lab has discovered novel regulatory mechanisms involving different transcription factors (e.g. c-Fos, FBXL10) involved in apoptotic pathways. The goal of the research is to improve apoptotic related therapies in prostate cancer and develop novel treatment strategies for hormone refractory prostate cancer.

Other research activities in the Olumi lab include deciphering the molecular mechanisms of resistance to Finasteride therapy in patients suffering from BPH. The lab is investigating paradoxical proliferative effects of Finasteride on prostate epithelial cells.

For more information contact the Mass General Department of Urology 617-726-3010 | massgeneral.org/urology

RESIDENT/POSTDOC REPORT

Dr. Douglas Dahl

Dr. Dahl led and completed a prospective study that evaluated the outcome of surgically treated patients who were managed by laparoscopic vs. open prostatectomy. The study found both open and laparoscopic techniques have similar functional and cancer control outcomes. This is an important and well executed study which will be essential for patients when making decisions about surgical management of their prostate cancer.

Dr. Chin-Lee Wu
Director of Urology Research Labs

Dr. Wu, along with Drs. Leo Cheng (radiology) and McDougal, are investigating metabolomic MRI-related techniques in order to reduce the rate of false negative prostate needle biopsies for evaluation of prostate cancer. In another study, the group is using in-vivo metabolites (spermine) to evaluate the proliferative rate and potential aggressiveness of prostate cancer prior to treatment. Such studies should improve the detection of prostate cancer, and help differentiate between clinically significant and dormant prostate cancer in order to tailor therapeutic strategies.

Dr. Adam Feldman

Dr. Feldman received a Young Investigator Award from the Prostate Cancer Foundation, which supports investigations into the discovery and analysis of novel biomarkers in prostate cancer. Intracellular, membrane-associated and secreted proteins are differentially expressed by prostate cancer cells as compared to benign prostate cells. Under the mentorship of Matthew Smith, MD, PhD and Bruce Zetter, PhD, this study uses proteomic based mass spectrometry to discover these differentially expressed proteins in urine, a non-invasive practical biological fluid for biomarker discovery. The second goal of this project is to correlate biomarker findings with prostate cancer diagnosis, grade and pathologic stage.

Dr. Christopher Cutie

Dr. Cutie is currently at Massachusetts General Hospital finishing his CABIN Attending Rotation. He will sit for the American Board of Urology examination in July, and will begin his Urologic Oncology Fellowship at Mass General in September 2009. Starting in August, he will also attend Harvard Business School as a member of the MBA Class of 2011. Dr. Cutie is interested in the development and commercialization of medical devices, and hopes to focus his graduate studies in healthcare management and finance.

Dr. Brian Chapin

Dr. Chapin, who is anticipated to graduate in June 2010, has been accepted to a urologic oncology fellowship at M.D. Anderson Cancer Center, Houston, Texas. We congratulate Dr. Chapin and look forward to his continued accomplishments and contributions to our field.

Dr. Rongbin Ge

Dr. Ge, a postdoctoral fellow in Dr. Olumi’s lab, works on molecular mechanisms of apoptosis. Dr. Ge has discovered novel mechanisms of transcriptional regulation for apoptotic therapies. His work has been selected for a podium presentation at the annual American Association of Cancer Research in Denver, Colorado.

Dr. Melina Mccarty

Dr. McCarty was awarded the Resident Scholarship Travel Award from the International Volunteers in Urology for 2009. This program allows residents and fellows beyond PGY-4 level to accompany a mentoring urologist to a developing country to teach and perform supervised operations. Residents work under conditions that they would likely never see in the developed world and learn to develop a more global view of medicine. In return, local hospitals receive hands-on training in new techniques and much needed additional professional assistance.

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