Department of Surgery Research Reinvestment Fund Awardees

The **Research Reinvestment Fund (RRF)** was established to help achieve the Department of Surgery's goal of becoming the premier home for surgical research. The third round of proposals for 2013 was recently completed with numerous faculty submissions. While all of the proposals addressed significant research questions, five were judged to be especially impressive in terms of their deliverables and potential returns on investment. Congratulations are in order to the following investigators:



Dr. Joseph Cuschieri, Professor of Surgery, Trauma Critical Care. This funding will be used to investigate the effects and duration of oxidant stress following severe traumatic injury. The project will provide the framework to evaluate unrecognized oxidant stress following injury that appears to be a precursor to the development of multiple organ failure. This research has the

potential to yield diagnostic and therapeutic strategies for sustained oxidant stress following severe traumatic injury.



Dr. Thomas Hatsukami, Professor, Vascular Surgery. Atherosclerotic plaques with a thin or ruptured fibrous cap overlying the lipid core are associated with a greater risk for stroke. With support from the Research Reinvestment Fund, Dr. Hatsukami will examine the association between a single nucleotide polymorphism of the CDKN1B gene (also called p27kip1) and the development of fibrous cap

thinning and rupture in carotid atherosclerosis. Findings from this study will provide a foundation to prospectively examine p27kip1 genotype and the risk for stroke in a large, multicenter cohort.





Dr. Anne Hocking, Research Associate Professor, Trauma and Burn Surgery. This funding will be used to determine the metabolic signatures of acute and chronic wounds. Detailed analysis of wound metabolites will provide essential information required for an ongoing investigation of the effect of metabolites on mesenchymal stem cell therapy for chronic wounds. In addition, the metabolic

profiles are also critical for the development of a new project determining the role of metabolism in regulating molecular and cellular responses to cutaneous injury.



Dr. Peter Wu, Associate Professor, VA Surgical Oncology. Molecular imaging using current FDG-PET tracer is based upon cellular metabolism and lacks tumor specificity. This pilot funding in collaboration with UW Nuclear Medicine will be used to develop and test novel senescence-based tumorspecific PET markers in animal xenograft models. This project aims to improve

detection of primary and metastatic gastrointestinal tumors, measure chemoradiotherapy treatment response, and guide combined-modality treatment protocols.



Dr. Saman Arbabi, Professor, Trauma and Burn Surgery. As Baby Boomers reach retirement, geriatric trauma will become a significant and growing public health concern. There is a dearth of information addressing trauma or surgical patients discharged to skilled nursing facilities (SNF). This funding will help generate preliminary data to better understand the natural progression of

recovery in older trauma patients, determine individual patient-level interventions for improving outcomes, and investigate the characteristics leading to outcome variation across SNF's.

The total award for this quarter was \$125,000, and it is anticipated that the results of these exciting projects will result in further funding from external sponsors.