## RESEARCH AWARDS

***Division of Infectious Diseases physicians Curt G. Beckwith, MD and Josiah D. Rich, MD, MPH at The Miriam Hospital received three of 12 newly awarded grants from the National Institutes of Health (NIH)*** aimed at improving HIV prevention and treatment of prison and jail inmates. The awards to Curt G. Beckwith, MD, Josiah D. Rich, MD, MPH and collaborators are part of the *Seek, Test, and Treat: Addressing HIV in the Criminal Justice System* initiative – NIH's largest research initiative to date to aggressively identify and treat HIV-positive inmates, parolees and probationers and help them continue care when they return to their communities. Dr. Rich is a Co-Principal Investigator on two of the awards. The first award from the National Institute on Drug Abuse (NIDA), entitled *A Randomized Controlled Trial and Cohort Study of HIV Testing*, is being conducted in collaboration with Michael Gordon, DPA of the Friends Research Institute. This grant, with direct costs totaling $3,073,417 over five years, will be conducted in Rhode Island and Baltimore, MD. Investigators will compare a strategy of rapid HIV testing in probation and parole offices to referral to an off-site community HIV testing location with a randomized control study, as well as evaluate the impact of a theory driven, case managed based strategy on engagement and retention in HIV care, and viral suppression among individuals with HIV recruited through community corrections. Dr. Rich's second NIDA-funded award, entitled *Improving Linkage to HIV Care Following Release from Incarceration*, will focus on improving the link between HIV-positive inmates and HIV care following release from jail or prison. Dr. Rich will work with co-principal investigator Liza Solomon, PhD from Abt Associates and colleagues to design, implement and analyze a monitoring strategy for evaluating follow-up HIV medical care in the community after incarceration. Investigators will link the new Ryan White HIV/AIDS Program dataset to corrections release data, and then apply this process across multiple states, correctional jurisdictions and care environments. The direct costs awarded for this effort total $3,732,746 over five years. Co-Principal Investigator of the third award, Dr. Beckwith, will work with his co-principal investigators Irene Kuo, PhD from George Washington University, and Ann Kurth, PhD, CNM, from New York University on *CARE Corrections: Technology for Jail HIV/HCV Testing, Linkage and Care (TLC).* This project will adapt and evaluate information and communication technology-(ICT) based tools used for HIV testing and for improving adherence to HIV treatment, adding rapid hepatitis C virus (HCV) testing and prevention to the delivery of HIV services for jailed populations, and automated text messaging functionality. These tools will facilitate HIV and HCV testing and treatment counseling (CARE Corrections Screen), as well as linkage to community-based care for HIV-infected jail detainees and viral suppression for jail detainees on antiretrovirals being released to the community (CARE+ Corrections Call). CARE Corrections Screen will be evaluated in a two site pilot study RI and Washington DC, and a randomized controlled trial conducted within the Washington DC jail system will be used to compare CARE+ Corrections Call to standard discharge planning services. The grant, with direct costs totaling $4,511,416 over five years, is awarded by NIDA, with additional support provided by the National Institute of Allergy and Infectious Diseases (NIAID).

***Jason Alliota, MD/Matthew Reilly, Brown student, from the Hematology and Medical Oncology Division,*** received a $4,000 award from the American Society of Hematology. The funds will be used towards a project on Pulmonary Hypertension, a rare, progressive, and

ultimately fatal complication associated with bone marrow transplantation in patients. The two specific questions the research hopes to answer are: Does a specific cell type derived from marrow stem cells lead to pulmonary vascular changes? Does removing that cell type prevent the development of pulmonary hypertension in susceptible animals?

***Susan Cu-Uvin, MD, from the Division of Infectious Diseases,*** has received an NIH ARRA Supplement from the National Institutes of Health via the P-30 Center for AIDS Research grant (CFAR). This one-year supplement will provide $427,582 in total costs for the project 'Cervical Cancer See and Treat: How to Best Follow-up.' The specific aims are to 1) compare the accuracy of VIA to conventional pap smear or HPV typing as a follow-up tool to detect moderate to severe cervical cancer among HIV- women in Eldoret, Kenya who have undergone VIA and cryotherapy with histology as a gold standard and 2) assess the feasibility and acceptability of repeat VIA compared to pap smear or HIV typing among HIV+ women who have undergone VIA and cryotherapy for cervical dysplasia. Findings will be used to develop the best and most appropriate interventions in resource limited areas for cervical cancer prevention.

***Patricia Engler, PhD, from the Division of General Internal Medicine***, has received a Rhode Island Foundation grant to begin research on developing a comprehensive intervention that incorporates multiple individual self-care interventions that have been proven to assist in good diabetic control for patients with diabetes mellitus. The potential is that a more comprehensive intervention model could decrease rates of morbidity and mortality among individuals with diabetes mellitus.

***Traci Green, MD, from the Division of General Internal Medicine,*** has received $113,000 in direct costs per year for two years for a grant from the Centers of Disease Control. The funds will be used to explore the utility and effectiveness of Rhode Island and Connecticut prescription monitoring programs (PMP's) in reducing accidental intoxication deaths among adults proscribed opioid analgesics.

***Elizabeth Harrington, PhD, from the Pulmonary Division,*** has received a 3-year American Heart Association Grant-in-Aid titled 'Signal Transducers of Lung Endothelial Barrier Dysfunction.' With annual direct costs of $60,000 per year, the long range goal of this grant it to determine the cross-talk between PKCdelta and SHP2 in regulating endothelial barrier dysfunction.

***Milu Kojic, MD, from the Infectious Diseases Division,*** has received $88,000 in direct cost funding from the Centers of Disease Control for the 'SUN-FLU Study.' The primary purpose of this project is to determine whether quarantine and treatment recommendations for pandemic (H1N1) 2009 influenza among HIV-infected persons should differ from recommendations made to immunocompetent persons.

***Qing Lu, DVM, PhD, from the Pulmonary Division,*** along with Drs. Guarev Choudhary and Dr. John McGeary, were awarded a $495,000 in direct costs from a VA funded Shared Equipment Program. These funds were used to purchase a rodent pulmonary function

laboratory, an electrophoresis system, a slide scanner, and a nucleic acid extraction system, all of which are currently operational in the Providence VAMC research laboratories.

***Eduardo Nillni, PhD, from the Endocrinology Division,*** has received a 4-year R01 from the NIH for the project 'Hypothalamic SIRT1 and Energy Balances.' The grant will receive an average of $250,000 per year in direct cost funding. The grant will focus on the enzyme SIRT1 and the role/influence it may have on obesity. A more thorough understanding of the molecular mechanisms underlying the pathogenesis of obesity and regulation of energy metabolism is essential for the development of effective therapies for obesity. Specifically, Dr. Nillni hypothesizes that Sirt1 could play a role in the control of energy balance, perhaps by influencing the mTOR or AMPK pathways, at the level of the hypothalamus and the research will test this hypothesis.

***Sharon Rounds, MD and Qing Lu, DVM, PhD, from the Pulmonary Division*****,** were awarded a VA Merit Review grant for a project titled 'Lung Endothelial Cell Apoptosis and Emphysema.' This 4-year award averages $150,000 per year in direct costs. The objective of the grant is to understand mechanisms of lung endothelial apoptosis and how this contributes to the pathogenesis of emphysema.

***Katherine Sharkey, MD, from the Pulmonary Division,*** has received a one-year $20,000 grant from the Sleep Research Society Foundation for her project 'Sleep Circadian Rhythm Disruption in Postpartum Depression.' The specific aims of this grant are to 1) desctibe the changes the occur in sleep, circadian rhythms, and light exposure in women with major depressive disorder/bipolar disorder during the perinatal period; and 2) test the hypothesis that changes in sleep and circadian rhythms are associated with postpartum mood.

***Wen-Chih (Hank) Wu MD, from the Cardiology Division,*** has received $100,000 in direct costs via a VA QUERI grant titled 'Medical Center Implementation of Patient-Centered-Medical-Home Model in CHF to Reduce Hospitalization Rates.' These funds will be used to implement a hospital-wide inpatient referral program of patients admitted with CHF to a pharmacist-led CHF Transition of Care Program (CHF-TCP). A comparison of the hospital-wide risk-adjusted 30-day hospitalization rates for patients with a primary discharge diagnosis of CHF from before versus during the intervention period will be done.

***Peng Zhang, PhD, from the Cardiology Division****,* has received a grant from the Rhode Island Foundation. The funds will be used to investigate the central hypothesis that microRNAs, a class of endogenous, small non-coding RNAs, play a critical role in regulating fibroblast function and fibrosis development. The preliminary data generated from this grant will be used to develop a larger grant proposal that will investigate the functional role of microRNAs in cardiac fibroblasts for fibrosis development in vivo and explore the potential utility for the treatment and prevention of fibrosis.

***Shougang Zhuang, PhD, from the Renal Division,*** has received a 4-year grant from the National Institutes of Health for his project 'Histone Deacetylases as Novel Therapeutic Targets for Kidney Fibrosis.' Averaging approximately $250,000 per year in direct cost funding, the

long-term goal of this proposal is to elucidate the role and mechanisms of class I histone deacetylases (HDACs) in renal fibrosis. Specific Aim1 will define the role of the class I HDAC isoforms in regulating cell proliferation and activation and global protein expression and lysine acetylation in renal interstitial fibroblasts. Specific Aim 2 will elucidate the mechanism of class I HDAC-mediated activation of STAT3 in renal interstitial fibroblasts. Specific Aim 3 will evaluate the therapeutic effect of class I HDAC and STAT3 inhibitors on the progression of renal fibrosis following obstructive injury. Successful completion of these studies will increase our knowledge of the mechanisms of renal fibrosis and facilitate the development of HDAC inhibitors as novel treatments for CKD

***Congratulations to Drs. Adrian Gardner (Infectious Diseases) and Matthew Jankowich (Pulmonary)*** as recipients of the Department of Medicine Chairman's Developmental Research Grant Program. Each recipient will receive $25,000 in funding for their respective project.