

Boston Medical Center/ Boston University School of Medicine

Department of Medicine Newsletter

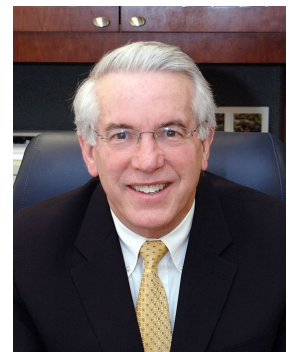
Message from the Chairman

Colleagues,

The fall has been very busy with departmental activities, some of which are summarized in this edition of the departmental newsletter. Of note, our annual Evans Days celebration was a remarkable success. Dr. Christine Sinsky, Ingelfinger Visiting Professor, provided important insights in how we can improve the clinical practice environment to improve quality and the experience for patients and clinicians. She had a wonderful visit and was very impressed by the innovation and energy in the Primary Care Practice. Dr. David Schwartz, Wilkins Visiting Professor, provided important insights into Pulmonary Fibrosis, and actively engaged with trainees and faculty in the research community, particularly in Computational Biomedicine. The poster session was, as usual, an inspiring example of the quality of research in the department and the passion of the young investigators across all of our research programs. We were delighted to acknowledge all the presenters at the Evans Days Dinner, especially including those individuals who received awards for their work. The awardees are summarized in the newsletter. The funding challenges experienced by researchers across the spectrum of our research programs can occasionally obscure the remarkable work and opportunities derived from the creativity of our students and faculty. Evans Days was an affirmation of the extraordinary colleagues in our department and their commitment to discovery, education, mentorship and excellence!

As we move into late fall, intern recruitment is in full swing and we are in the midst of a renewal of our departmental strategic plan. We will have more updates on our progress very shortly. I hope each of you enjoys the upcoming holiday season with loved ones and friends!

David Coleman, M.D.



CONGRATULATIONS



Tuhina Neogi, MD, PhD, FRCPC

Tuhina Neogi, MD, PhD, FRCPC

Clinical Epidemiology Research & Training Unit
Associate Professor Of Medicine

Dr. Neogi will be presented with an award at the next ACR conference being held here in Boston on November 14-19

“The Henry Kunkel Young Investigator Award is awarded to a young physician scientist, age 45 or younger, who has made outstanding and promising independent contributions to basic or clinical research in the field of rheumatology.”



Mary Warner, MMSc, PA-C
Director, BU PA Program

The PA program's first white coat ceremony was held in July 2014. The program received a small grant from the Gold Foundation to fund their white coat ceremony. The program was featured in the New York Times Education Life section <http://www.nytimes.com/2014/08/03/education/edlife/the-physician-assistant-will-see-you.html>, They are now gearing up for the second admission cycle.

CONGRATULATIONS



Dr. Vasan Ramachandran has been awarded AHA's 2014 Population Research Prize. The award recognizes an individual who is making outstanding contributions to the advancement of cardiovascular science and who currently heads an outstanding cardiovascular population research laboratory.

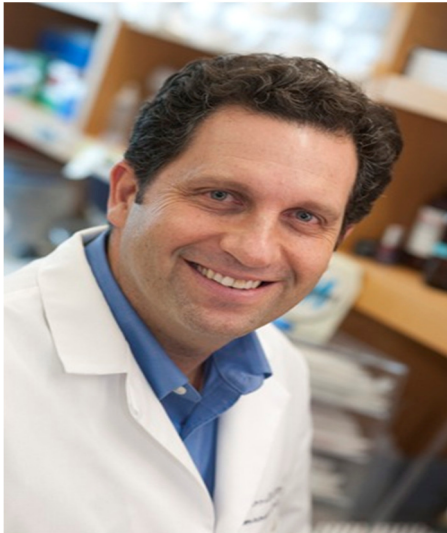
Vasan Ramachandran, MD, DM, FACC, FAHA



Daniel Alford, MD, MPH

Dr. Daniel Alford has been awarded the AMA Foundation Award for Health Education. He will be officially presented the award at the Mass Medical Society Interim Meeting on Friday, December 5, 2014.

EVANS DAY AWARDS 2014



Research Mentoring Award
Darrell Kotton, MD



Junior Faculty Mentoring
Award
Renda Wiener, MD



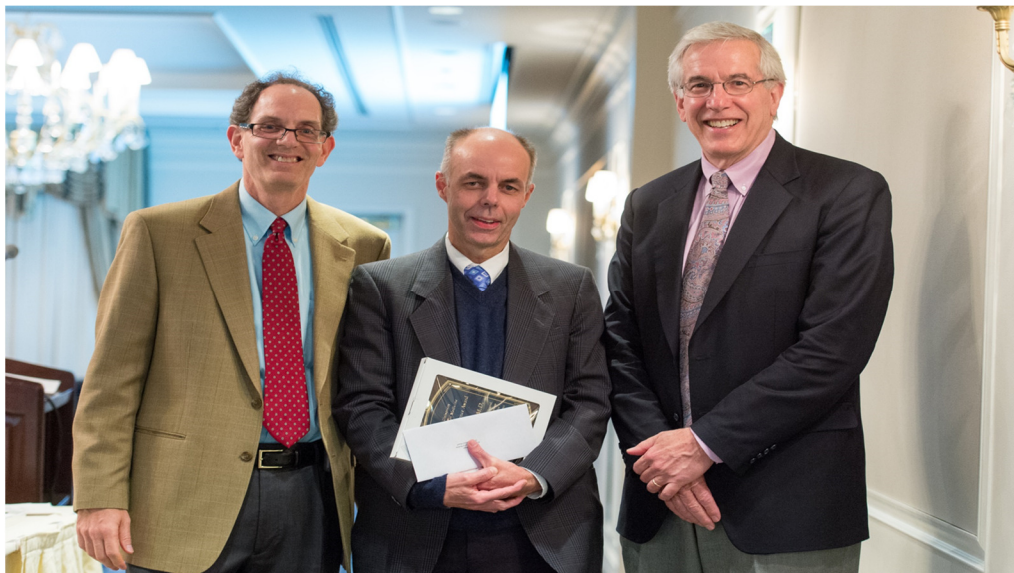
Special Contribution Teaching Award
Shoumita Dasgupta, PhD



Evans Department of Medicine Quality Improvement Award
Gastroenterology QI Team (**Team Lead: Brian Jacobson, MD**)



Outstanding Citizen
Henri Lee, MD



Clinical Excellence Award
David Nunes, MD



Clinical Excellence Award
Jeffrey Berman, MD



Evans Center
Research Collaborator Award
Barbara Nikolajczyk, PhD



Evans Center
Research & Education Collaborator
Award
Louis C. Gerstenfeld, PhD



Clinical Research Awards

(L to R):

Rosa Breton, Michelle Long, Shakun Karki,
Gianluca Toraldo (not shown)



Laboratory Basic Research Awards

(L to R):

Aly Elezaby (on behalf of) Ivan Luptak, Maria Serra, Gregory Wasserman, Munir
Mosaheb

Thomson Reuters names the Worlds Most Scientific Minds of 2014

Thomson Reuters answers this question, as it has in the past, by analyzing data using its Web of Science and InCities platforms to determine which researchers have produced work that is most frequently acknowledged by peers. These highly cited researchers were determined by analyzing citation data over the last 11 years to identify those who published the highest impact work (2002-2012 and 2012-2013). These individuals are influencing the future direction of their fields, and of the world.



Emelia Benjamin, MD, ScM



Vasan Ramachandran, MD, DM, FACC, FAHA



Alice Jacobs, MD



Michael Holick, MD, PhD



We are pleased to announce the addition of a new combined residency training program in internal medicine and preventive medicine. Please help spread the word about this exciting complement to our existing programs.

Combined Program in Primary Care Internal Medicine and Preventive Medicine

An exciting new program will be accepting its first applicants during the upcoming internal medicine residency interview season with the first interns to start in July 2015. This innovative new program combines two well established residencies at BMC- the primary care track internal medicine residency and preventive medicine residency-into a 4 year program. Thanks to a recently won federal grant, residents will take four years to complete internal medicine clinical training, pursue a fully funded Master of Science degree in health services or epidemiology at the Boston University School of Public Health, and gain valuable experience in public health practice and in population health research. Program graduates will be board eligible in internal medicine and preventive medicine.

The program is designed to instill a population health perspective early in a resident's training with a focus on the problems of the urban underserved. Public health coursework will start in the PGY2 year and continue during the PGY3 and 4 year with increased time devoted to coursework, research projects and public health practical experience.

For more information see:

<http://www.bumc.bu.edu/im-residency/training/internal-medicine-preventive-medicine/>

Spotlight on Computational BioMedicine

The **Section of Computational Biomedicine** under the direction of Dr. Avrum Spira, continues to grow and expand its research mission of developing and applying genomic approaches for disease detection and treatment. The section's combined funding in AY2014 (total dollars, new and continuing awards) totaled more than \$12 million dollars, which is a 50% increase in the section's research portfolio over the past two years. The section's research program continues to both build on and foster both new and existing collaborations. Highlights of the section's research portfolio are described below.



Avrum Spira, M.D., M.Sc., Chief, Division of Computational Biomedicine, Professor of Medicine

Dr. Avrum Spira received a five-year award from the **Department of Defense** in 2011 for a project entitled "Detection of Early Lung Cancer Among Military Personnel". This multi-site project aims to develop and validate molecular biomarkers that may be used for the early detection of lung cancer by collecting samples from heavy smokers in the military who are diagnosed with lung cancer and matching controls.



Marc Lenburg, Ph.D., Associate Professor of Medicine

Dr. Marc Lenburg is the lead PI of a multi-PI R01 from the **National Heart, Lung, and Blood Institute**. This project "Integrative Omics to Discover Molecular Determinants of COPD" involves researchers at BUSM, The University of British Columbia and Mt. Sinai in New York, and aims to identify the key molecular events that lead to COPD development and verify that targeting them interferes with disease processes. Drugs that target these disease determinants could be effective treatments for this deadly and debilitating disease.

The lab of Drs. Lenburg and Spira has funding from the **National Cancer Institute and FDA** to compare the gene expression patterns of non-smokers, cigarette smokers, and individuals using electronic cigarettes to understand the potential health risks associated with electronic cigarettes. This work was funded as part of an ongoing collaboration with colleagues at UCLA.



Stefano Monti, Ph.D., Associate Professor of Medicine

Dr. Stefano Monti received a **DOM Pilot Award** in AY2015 for a project entitled "Role of GPS2 in driving therapeutically relevant metabolic rewiring in cancer". This award was received in collaboration with Dr. Valentina Perissi a faculty member in the Department of Biochemistry and is complemented by a GSI Seed Grant on the role of GPS2 as a novel tumor suppressor gene. Dr. Monti's lab in collaboration was awarded a "Seed the Scientist" training grant from the **Art BeCAUSE Foundation**. These funds will support a graduate student's work for two years. This awarding foundation aims to support research into the environmental causes of breast cancer. The Foundation is working in earnest on a fundraising campaign to generate \$5,000,000 for a 5-investigator consortium that includes Drs. Monti and Sherr (BUSPH). The 'Seed the Scientist' funding from this initiative will complement funding from the **ECIBR** for an ARC "Computational Genomic Models of Environmental Chemical Carcinogenicity" as well as an **Administrative Supplement** to the BU Superfund Research Program. Finally, he received a seed grant from the **Hariri Institute for Computing** for his project "Network Inference And Perturbation To Study Chemical-Mediated Cancer Induction".

Computational Biomedicine continued....



W. Evan Johnson, Ph.D., Assistant Professor of Medicine

W. Evan Johnson, Ph.D. recently received a two-year award from the **National Institute of Environmental Health Sciences** for a project entitled “Integrative analyses of reference epigenomic maps and applications”. This project focuses on the integration of expression and epigenetic data and multi-omic biomarkers for epigenetic drug efficacy. Dr. Johnson also has funding as co-PI from the **National Cancer Institute** for a five-year project developing “Integrative growth signaling models to decipher complex cancer phenotypes”. He is in the last year of funding for a five-year project entitled “Statistical tools and methods for next-generation sequencing in epigenomics” funded by the **National Human Genome Research Institute**.



Jennifer Beane, Ph.D., Assistant Professor of Medicine

Jennifer Beane-Ebel, Ph.D. is in the final year of a **Career Development Award** from the **LUNGEvity Foundation** entitled “Airway transcriptomic biomarkers of pre-malignant disease progression for the early detection of lung cancer”. The project aims to identify gene expression alterations in the airway associated with the presence of regression/progression of premalignant lesions. Dr. Beane-Ebel received an Idea Development Award from the **Department of Defense (DoD) Lung Cancer Research Program (LCRP)** for a project entitled "Single-Cell RNA Sequencing of the Bronchial Epithelium in Smokers with Lung Cancer". The project will use single cell sequencing to determine the cellular composition and behavior of the airway epithelium from patients with and without cancer.

Drs. Jennifer Beane, Avrum Spira and Marc Lenburg received a new award in March 2013 from **Janssen Pharmaceutical Research & Development** for a project entitled “The Premalignant Cancer Genome Atlas (PCGA) for Squamous Cell Lung Carcinoma”. This study builds on collaboration with Roswell Cancer Institute to study genomic predictors of premalignant lesion progression, risk of progression, and risk of lung cancer development in both former and current smokers using RNA and DNA sequencing.



Katrina Steiling, M.D., M.Sc., Assistant Professor of Medicine

Katrina Steiling, MD, MSc is the recipient of a **2014 Young Clinicians' Research Award from the Consortia for Improving Medicine Through Innovative Technology (CIMIT)**. The goal of this award is to develop a minimally-invasive biomarker for lung cancer tailored for patients with COPD using the easily-accessible nasal epithelium. Dr. Katrina Steiling is co-Principal Investigator for the **2014 LUNGEvity Foundation Early Detection Research Award** in collaboration with Kimberly Rieger-Christ, Ph.D. at the Lahey Hospital and Medical Center. This study aims to develop a nasal test to distinguish benign from malignant pulmonary nodules detected by low-dose computerized tomography screening for lung cancer.



Honghuang Lin, Ph.D., Assistant Professor of Medicine

Honghuang Lin, PhD is serving as the principal bioinformatician for an R01 grant from the NHLBI to identify genetic variants associated with atrial fibrillation and PR interval. Dr. Lin, as a co-investigator, recently received an R01 award from the NIDDK to profile gene expression in human brain and study its association with consistent obesity.

New Faculty AY 2013-2104



Ivan Luptak, MD
Instructor
Cardiology



Sohera Syeda, MD
Assistant Professor
Pulmonary



Kyu Kim, MD
Assistant Professor
Rheumatology



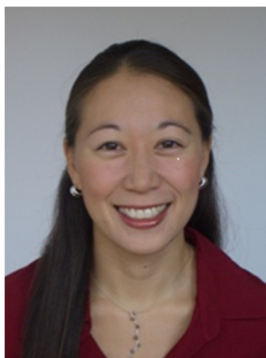
Rivka Ayalon, MD
Instructor
Nephrology



Nicolette Oleng, MD
Assistant Professor
General Internal Medicine



Thomas Ostrander, MD
Instructor
General Internal Medicine



Charlotte Wu, MD
Assistant Professor
General Internal Medicine



Ryan Chippendale, MD
Assistant Professor
Geriatrics

New Faculty AY 2013-2104 continued



Alexandra Yurkovic, MD
Assistant Professor
General Internal Medicine



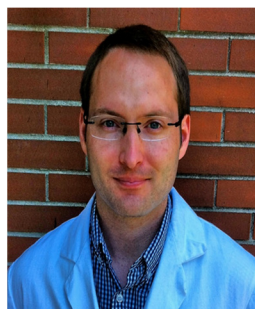
Maureen Dubreil, MD
Instructor
Rheumatology



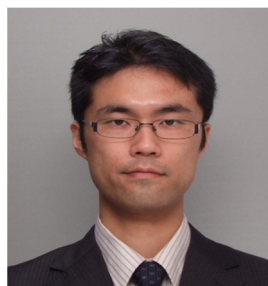
Devin Steenkamp, MD
Instructor
Endocrinology



Shwetha Sequiera, MD
Assistant Professor
General Internal Medicine



Finn Hawkins, MD
Assistant Professor
Pulmonary



Ippei Shimizu, MD, PhD
Instructor
Molecular Cardiology



Naomi Ko, MD
Instructor
Hematology/Oncology



Elizabeth Hutton, MD
Instructor
General Internal Medicine

BMC GRANTS AUGUST—OCTOBER

SECTION	PI LAST NAME	PI FIRST NAME	PROJECT TITLE	PROJECT TOTAL COSTS	PROJECT END DATE	FUNDING AGENCY
General Internal Medicine	Walley	Alexander	Implementation to Motivate Physician to Opioid Dependence on HIV Setting	\$210,879	6/30/2019	Rhode Island Hospital
Infectious Diseases	Sullivan	Margaret	PrEPception: Expanding Assisted Reproduction Options for Serodiscordant Couples	\$218,080	8/31/2015	Gilead Sciences
Infectious Diseases	Genco	Caroline	Global transcriptome analysis of mucosal gonococcal infection	\$580,855	7/31/2015	NIH-NIAID
Medical Information Systems Unit	Quintiliani	Lisa	Center for Innovation in Point of Care Technologies for the Future of Cancer Care	\$86,376	6/30/2015	Trustees of Boston University
General Internal Medicine	Samet	Jeffrey	Improving Physician Opioid Prescribing for Chronic Pain in HIV-infected Persons	\$5,145,137	\$43,708	NIH-NIDA
General Internal Medicine	Naimi	Timothy	IPA Agreement - CDC	\$48,752	8/31/2015	CDC
General Internal Medicine	Samet	Jeffrey	HIV Researchers Mentoring the Next Generation of Addiction Clinician Scientists	\$22,358	3/31/2019	University of British Columbia
General Internal Medicine	Samet	Jeffrey	Zinc for HIV disease among Alcohol Users - An RCT in the Russia ARCH Cohort	\$213,073	8/31/2017	NIH-NIAAA
General Internal Medicine	Naimi	Timothy	The Alcohol Policy Environment and Leading Causes of Alcohol Related Mortality	\$1,260,094	6/30/2017	NIH-NIAAA
Infectious Diseases	Wetzler	Lee	Characterization of a cell free recombinant gonococcal porin	\$16,000	6/30/2015	SutroVax, Inc.
Infectious Diseases	Ellner	Jerrold	RePORT India Executive Committee Role Support - Supplement	97,432	5/31/2016	U.S. Civilian Research and Development Foundation
Hematology and Medical Oncology	Ward	Jennifer	Binding of NeuroPhage NPT088 to amyloid fibrils	\$20,445	12/31/2015	NeuroPhage Pharmaceuticals
Pulmonary, Allergy and Critical Care	O'Connor	George	ScreenFlow - COPD Screening System	\$674,915	9/29/2016	Dimagi, Inc.

BU GRANTS

SECTION	PI	AWARD TITLE	SPONSOR	PROJECT END DATE	AWARD AMOUNT
CNTR--FRAMINGHAM HEART STUDY	MURABITO JOANNE	THE LONG LIFE FAMILY STUDY	BOSTON MEDICAL CENTER	05/31/2015	142,678
INFECT DISEASE MED	HOCHBERG S NATASHA	IMPACT OF PERSONAL EXPOSURE TO BLACK CARBON ON PULMONARY TUBERCULOSIS SEVERITY	THE POTTS MEMORIAL FOUNDATION	06/30/2015	21,000
INST MD--COMPUTATIONAL BIOMED	JOHNSON EVAN WILLIAM	INTEGRATIVE ANALYSES OF REFERENCE EPIGENOMIC MAPS AND APPLICATIONS	NIH/NATIONAL INSTITUTE OF ENVIRONMENTAL	08/31/2016	337,445
INST MD--COMPUTATIONAL BIOMED	BEANE-EBEL ELLEN JENNIFER	SINGLE-CELL RNA SEQUENCING OF THE BRONCHIAL EPITHELIUM IN SMOKERS WITH LUNG CANCER	DEPARTMENT OF DEFENSE/ARMY MEDICAL RESEA	06/30/2016	569,037
MED--CLIN EPI RES & TRAINUNIT	NEOGI TUHINA	DO OMEGA-3 FATTY ACIDS REDUCE RISK OF RECURRENT GOUT ATTACKS?	RHEUMATOLOGY RESEARCH FOUNDATION	11/30/2015	15,000
MED--GERIATRICS	PERLS T THOMAS	THE NEW ENGLAND CENTENARIAN STUDY	THE WILLIAM M. WOOD FOUNDATION	09/30/2015	75,000
MED--PREVENTIVE MED & EPIDEMIO	RAMACHANDRAN VASAN	PHYSICAL ACTIVITY, CARDIOMETABOLIC RISK, AND TARGET-ORGAN DAMAGE IN OLDER ADULTS	NIH/NATIONAL INSTITUTE ON AGING	03/31/2016	335,585
CNTR MED--CENTER FOR REGENERATIVE MED	KOTTON DARRELL	A NATIONAL RESOURCE FOR LUNG DISEASE-SPECIFIC IPS CELLS	NIH/NATIONAL HEART, LUNG, AND BLOOD INST	04/30/2019	541,100
CNTR MED--PULMONARY CENTER	GUHA ARJUN	REGULATION OF UPK3A-CLARA CELLS DURING HOMEOSTATIS AND POST-INJURY REPAIR	NIH/NATIONAL HEART, LUNG, AND BLOOD INST	08/31/2015	409,250