Sixth Annual Translational Research Symposium
In Memory of David Seldin, MD, PhD
March 20, 2017

Speaker Biographies

David Seldin, MD, PhD

Dr. Seldin was a founding member of the BU CTSI in 2008. He made critical contributions to our Core facilities program instituting a highly innovative core voucher system to subsidize usage. He is likely best remembered for organizing this annual Translational Science Symposium. Every part of the day bears his signature, from the idea itself, to the types of speakers, poster sessions and venue. We are deeply *indebted* to him for his vision and his wisdom. We hope that holding these annual symposia in his memory transmits even a small part of his sincere love of science and we hope everyone enjoys the day. He always wanted it to be fun.

Dr. David Seldin was a Professor of Medicine and Microbiology at Boston University School of Medicine. He became Director of the Amyloidosis Center in 2007 and Chief of the Section of Hematology-Oncology in 2008. His research interests were cancer and blood disorders. His research interests were cancer and blood disorders, particularly the light chain form of amyloidosis.

Barry S. Coller, MD

On September 1, 2001, Barry S. Coller, M.D. became the David Rockefeller Professor of Medicine; Head, Allen and Frances Adler Laboratory of Blood and Vascular Biology; Physician-in-Chief of The Rockefeller University Hospital; and Vice President for Medical Affairs at The Rockefeller University. He also serves as the founding Director of the Rockefeller University Center for Clinical and Translational Science and the Principal Investigator of the University's Clinical and Translational Science Award (CTSA) from the National Center for Advancing Translational Sciences of the National Institutes of Health. From 1993 to 2001, Dr. Coller was the Murray M. Rosenberg Professor of Medicine and Chairman of the Samuel Bronfman Department of Medicine at Mount Sinai School of Medicine in New York City, as well as Chief of the Medical Service of the Mount Sinai Hospital. Dr. Coller received his B.A. degree, magna cum laude from Columbia College in 1966, and his M.D. from New York University School of Medicine in 1970.

He completed his residency in internal medicine at Bellevue Hospital in New York City and advanced training in hematology and clinical pathology at the National Institutes of Health. He joined the faculty at Stony Brook in 1976 as an Assistant Professor of Medicine in the Division of Hematology. During his years at Stony Brook he was the Clinical Director and Head of the Hematology Division, a consulting physician at the Northport VA Medical Center, Clinical Chief of the University Hospital Hematology Laboratory, a Director of the LI High Technology Incubator, a Director of the Stony Brook Foundation, and Associate Director for Biomedical Research of the Biotechnology Center for Advanced Technology. In 1982 Dr. Coller became Professor of Medicine and Pathology at Stony Brook. He was awarded the title of Distinguished Service Professor of Medicine and Pathology at Stony Brook in 1993.

Dr. Coller is a member of Phi Beta Kappa, Alpha Omega Alpha, the American Society for Clinical Investigation, the Association of American Physicians, the Institute of Medicine/National Academy of Medicine, and the National Academy of Sciences. He is a Fellow of the New York Academy of Medicine, the National Academy of Inventors, the American Association for the Advancement of Science, and the American Academy of Arts & Sciences, and a Master of the American College of Physicians.

Dr. Coller served as President of the American Society of Hematology in 1997-1998, the founding President of the Society for Clinical and Translational Science from 2008-2011, and as a member of the Advisory Council of the National Heart, Lung and Blood Institute from 2008-2012. In 2016 he completed service as Chair of the Steering Committee of the National Collaboratory, a trans-institute NIH Common Fund project, and he currently Chairs the Program Steering Committee of the NIH National Centers for Accelerated Innovations (NCAI). He also serves on the National Heart Lung and Blood Board of External Experts, and recently served on the NIH Advisory Committee to the Director (ACD) Intramural Research Program Working Group. Dr. Coller also served on the National Academy of Sciences Human Gene Editing Committee in 2015-2017 and currently serves on the National Academy of Sciences, Engineering, and Medicine (NASEM) Board on Health Sciences Policy.

Dr. Coller's research interests have focused on hemostasis and thrombosis, in particular platelet physiology. He developed a monoclonal antibody that inhibits platelet function and a derivative of that antibody (abciximab; ReoPro®; Centocor/Eli Lilly) was approved for human use by the FDA in 1994. It is now in clinical use throughout the United States, Europe, Scandinavia, Australia, and portions of Asia, to prevent ischemic complications of percutaneous coronary interventions such as angioplasty and stent insertion. More than 5.0 million patients have been treated with abciximab. He also developed an assay to assess platelet function, and automated derivatives of that assay to monitor therapy with abciximab, aspirin, and clopidogrel (Plavix™) have been approved for human use by the FDA (VerifyNow; Accumetrics). Dr. Coller is the recipient or a co-recipient of twenty-two U.S. patents.

Harold (Hal) Sox, MD

Harold Sox is a general internist, editor emeritus of Annals of Internal Medicine, and Director of Peer Review and Scientific Publications at The Patient-Centered Outcomes Research Institute (PCORI). Dr. Sox spent most of his professional life at Stanford University and Geisel School of Medicine at Dartmouth, the latter as chair of the Department of Medicine. He practiced general internal medicine for 30 years. He chaired the U.S. Preventive Services Task Force, the Medicare Coverage Advisory Committee, and several Institute of Medicine Committees, including the committee that set national priorities for Comparative Effectiveness Research. He was President of the American College of Physicians and is a member of the National Academy of Medicine and a fellow of the American Association for the Advancement of Science. He is a member of the JAMA Editorial Board and a past member of the Editorial Board of the New England Journal of Medicine. His books include Medical Decision Making, a standard textbook in this field.

Bill Adams, MD

Dr. William Adams is an epidemiologist, medical informatician, and practicing pediatrician at Boston Medical Center (BMC). He is Professor of Pediatrics, BU-CTSI Director of Clinical Research Informatics at BMC and BUSM and also serves as Director of Community Health Informatics for the Boston HealthNet. His research focuses on developing and evaluating information technology (IT)-based solutions for improving the quality of health and healthcare for urban populations, particularly children, and include the child health EHR, patient-centered IT, state-wide immunization registries, immunization decision support, and clinical data warehousing for research and quality improvement.

Tracy A. Battaglia, MD, MPH

Tracy Battaglia, MD, MPH, is a physician investigator whose research focuses on community-based approaches to reducing health disparities among underserved women. Dr. Battaglia is Associate Professor of Medicine and Epidemiology at Boston University Schools of Medicine and Public Health where she is also Director for the Center of Excellence in Women's Health. She serves as Director of Community Engagement at the Boston University Clinical and Translational Science Institute, which partners with all stakeholders to conduct rigorous clinical translational research necessary to achieve health equity in our historically under-represented, racially and ethnically diverse, urban population. She serves as Director of the Avon Breast Health Initiative at Boston Medical Center, a nationally recognized patient navigation program whose longitudinal evaluation database includes over 30,000 underserved women. Dr. Battaglia has extensive experience designing, implementing and evaluating community-based intervention clinical trials to reduce delays in care across the continuum of cancer care, from screening through survivorship. This includes experience with many methods of community-engaged research, such as comparative effectiveness, qualitative methods, survey research, and work with large databases on both primary and secondary analysis. She has published over 60 original articles related to access to and quality of care in primary care, with a focus on cancer prevention, patient navigation, and underserved populations. Dr. Battaglia currently serves as Chair of the Board of Directors to the American Cancer Society, New England Division.

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David M. Center, MD

Dr. Center is the Gordon and Ruth Snider Professor of Pulmonary Medicine, Associate Provost for Translational Research and Director of the BU Clinical and Translational Science Institute. For 31 years, he has been the Chief of the Pulmonary, Allergy, Sleep and Critical Care Division having added Allergy and Sleep accreditation to the program during his tenure. In that position he supervises 50 MD and PhD clinical and research faculty and 18 post-doctoral fellows in 3 major research areas (Outcomes Medicine and Informatics, Developmental Biology and, Regenerative Medicine, and Lung Inflammation and Immunity. He is co-discoverer of Interleukin-16 which is the topic of BU owned intellectual property licensed by multiple bioscience companies. He has been the PI of R01, P50, P01, UL, U54, U19 and T32 grants and the mentor for 8 K08s. The Biology of the Lung T32 is the largest at BU responsible for training over 250 pulmonary, allergy and critical care MD and PhD fellows and PhD students including multiple Chairs of Medicine, Deans, and Chiefs of Pulmonary in both medicine and pediatrics.

He is the Director of the Boston University Clinical and Translational Science Institute since its inception in 2008 and the PI of its NCATS sponsored Clinical and Translational Science Award. During this tenure he has instituted a number of innovative changes to the BU research environment, including the only institutional TL program in regenerative medicine in the CTSA network of 64 Universities.

Lindsay A. Farrer, PhD

Lindsay A. Farrer, PhD is the Boston University Distinguished Professor of Genetics and Chief of the Biomedical Genetics Division in the Department of Medicine. He is a Professor of Medicine, Neurology, Ophthalmology, Epidemiology, and Biostatistics at BU Schools of Medicine and Public Health. Dr. Farrer is also the Director of the BU Transformative Training Program in Addiction Science and the BU Molecular Genetics Core Facility. He received his PhD in Medical Genetics from Indiana University School of Medicine and completed postdoctoral training at Yale University. Dr. Farrer is a Founding Fellow of the American College of Medical Genetics. He has made numerous discoveries about the genetic basis of several common complex disorders including Alzheimer disease (AD), age-related macular degeneration (AMD), and substance use disorders (including cocaine, opioids, alcohol, cannabis and nicotine). His research utilizes many state-of-the-art genomics approaches including genome-wide association studies, next generation sequencing (whole genome, whole exome, and targeted gene), RNA sequencing, and functional experiments in cultured cells and various tissues such as leukocytes, brain and eye. His research has been supported by federal, private and commercial sources, and has led to more than 400 peer-reviewed publications.

Dr. Farrer has a major role in several large consortium projects. He co-directs data analyses for the US AD Genetics Consortium and the Consortium for Alzheimer Sequencing Analysis. He also serves on the Executive Committee of the national Alzheimer Disease Sequencing Project and co-directs several of its working groups. Dr. Farrer's research team identified a functional variant in the complement factor H gene which accounts for as much as 35% of the attributable risk for AMD, the most common cause of blindness in the elderly. His laboratory contributed to efforts leading to the cloning of the presenilin and nicastrin genes which were subsequently shown to have central roles in AD pathogenesis. His group demonstrated that SORL1 and other genes involved in protein trafficking are genetically and functionally associated with AD thus establishing intracellular trafficking as one of the major pathways leading to AD. His research demonstrated that genes encoding proteins and subunits for calcium and potassium channels involved in neuronal signaling are strongly associated with addiction to cocaine, opioids and cannabis. Dr. Farrer is a strong proponent of interdisciplinary research and training.

George O'Connor, MD

George T. O'Connor, MD, MS, is a professor of medicine in the Division of Pulmonary, Allergy, Sleep, and Critical Care Medicine at Boston University, where he serves as Director of Clinical Research for BU CTSI. His research uses the tools of epidemiology, genetic epidemiology, and clinical trials to study chronic lung disease. He has been the BU principal investigator of many NIH-sponsored multicenter investigations, and he has done research at the Framingham Heart Study for over 20 years. He is an associate editor of JAMA.

Katya Ravid, DSc

Katya Ravid is a professor of Medicine and Biochemistry at Boston University School of Medicine. Her research focuses on the development of blood stem cells with implications at the interface of hematology and cardiovascular biology. She is the founding director of the Evans Center for Interdisciplinary Biomedical Research and of the newly established Boston University Interdisciplinary Biomedical Research Office. Among numerous other recognitions, Dr. Ravid is a Fulbright Research Scholar, a Fellow of the American Association for the Advancement of Science, an Established Investigator of the American Heart Association and a member of national and international advisory boards. Dr. Ravid has mentored nearly forty five pre-and post docs and Junior faculty, is the director of an NIH-funded training program in Cardiovascular Biology, and of an interdisciplinary Master's of Science Program in Biological Research Cores Technologies.

Jonathan Rosen, PhD

Jonathan Rosen, PhD is currently Biomedical Engineering Adjunct Professor, Master Lecturer, and the Director, Innovation Programs at the College of Engineering at Boston University. He is also Director, Professional Master's Program in the Biomedical Engineering Department at BU. His teaching now focuses on "Advanced Biodesign and Societal Engineering". Dr. Rosen is the founding Executive Director of the Institute for Technology Entrepreneurship and Commercialization, and has served as Special Assistant to the Provost for Entrepreneurial Studies at Boston University.

Dr. Rosen's corporate career in the medical devices field spans more than four decades. He served as Chief Technology Officer for the Surgical Division of Johnson & Johnson, Director of Advanced Technology at the J&J Corporate Office of Science and Technology, and Director, Cardiovascular New Products at the J&J Vascor Heart Valve Division. Following his work at J&J, Dr. Rosen participated in the formation of Novoste Medical Systems as the founding CTO, and he founded MnemoSciences, GMbH, where he served as Managing Director. Dr. Rosen currently serves as the Chief Business Development and Executive Director Life Sciences for NBD Nanotechnologies.

Dr. Rosen received his PhD in Biomaterials Science from Case Western Reserve University, his MBA in Strategic Planning from Columbia University, and his MS and BSE in Materials Science from the University of Michigan.

Frederick Ruberg, MD

Dr. Ruberg is the Director, Pilot Grants Program, CTSI and an Associate Professor of Medicine and Radiology at Boston University School of Medicine. An active clinical cardiologist and investigator, Dr. Ruberg's commitment to interdisciplinary research and team science is exemplified by his various responsibilities at BUMC. He is the Director of the Advanced Cardiac Imaging Program at Boston Medical Center – a clinical service involving clinicians and trainees in the Departments of Radiology and Medicine. His clinical interest is in infiltrative cardiomyopathy and he is a participating clinician and researcher in both the multi-disciplinary BU Amyloidosis Center and Sarcoidosis Center. He is a nationally recognized expert in cardiac amyloidosis. Dr. Ruberg is also the Director of the Cardiovascular Medicine Fellowship Training Program. His clinical and research expertise is in the field of cardiac imaging with advanced training in echocardiography, cardiovascular magnetic resonance imaging (MRI), and cardiac computed tomography (CT). He is interested in refining quantitative MR techniques for application in the clinical care of infiltrative cardiomyopathies. His research has been funded by the American Heart Association (AHA), Amyloidosis Foundation, and NIH. He is also a past recipient of the BU CTSI Pilot award. Dr.

Ruberg is a peer reviewer for numerous journals relevant to cardiovascular medicine and internal medicine including Circulation, Annals of Internal Medicine, Journal of the American College of Cardiology, JACC: Cardiovascular Imaging, Journal of Cardiovascular Magnetic Resonance, and American Journal of Cardiology. He has served as an NIH peer reviewer and is an Associate Editor of Circulation: Cardiovascular Imaging. Dr. Ruberg is a fellow of the American College of Cardiology and the AHA.

Christopher Shanahan, MD, MPH

Christopher W. Shanahan, MD, MPH, FACP is a General internist with a focus in Primary Care Internal Medicine and Addiction. He is Board Certified in both Internal Medicine and Addiction Medicine.

He is the Faculty Lead for Research Networking for Boston University's Clinical Translational Sciences Institute (CTSI) and serves on its Senior Executive Committee and its Clinical Informatics unit.

His research focus includes: chronic pain management, substance use disorders, community-based research networks, and research informatics and application development to improve medical care quality and eliminate health disparities in underserved urban populations.

David H. Sherr, PhD

Since 1993, David Sherr's laboratory has conducted research on how common environmental pollutants, such as dioxins, polycyclic aromatic hydrocarbons and PCBs, adversely affect the growth and behavior of several different types of normal and malignant cells. In previous work, the Sherr laboratory studied how environmental chemicals affect the development of the immune system. In specific, his laboratory demonstrated that aromatic hydrocarbons (generated by the combustion of any carbon source) compromise the function of bone marrow cells required for the development of antibody-forming cells. These cells are critical for immune protection against viruses and bacteria. This work had its origins in Dr. Sherr's graduate studies on the ontogeny of lymphocyte development.

More recently, Dr. Sherr's laboratory has focused on the molecular mechanisms that initiate and maintain breast cancer and on the effects of environmental chemicals on these processes. The laboratory has shown that a cellular protein receptor, referred to as the aryl hydrocarbon receptor (AhR), plays an important role in the initiation and progression of human breast cancer. The results explain, in

part, the association between environmental chemical exposure and breast cancer risk. Perhaps most importantly, these studies demonstrate that the AhR drives human breast cancer cells to invade and, presumably, metastasize even in the absence of environmental chemicals. These observations have led to the development of AhR inhibitors which block AhR activity and prevent tumor cells from invading. One immediate goal of the laboratory, therefore, is the development of potent AhR inhibitors as novel, targeted therapeutics to be used for treatment of all breast cancers but especially for treatment of "triple negative" or chemotherapy-resistant breast cancers. Interestingly, preliminary studies suggest that these AhR inhibitors could be useful for treatment of several other cancer cell types.

A new area of study in Dr. Sherr's laboratory is the analysis of the role of the AhR in blood cell development. These studies are important from both an environmental science and medical science point of view. Studies performed to date suggest that the AhR plays an important role in the normal development of blood cells. The results suggest the intriguing possibility that common environmental pollutants can alter normal blood cell development by interfering with AhR signaling.

Dr. Sherr came to BUSPH from the faculty of Harvard Medical School, where he had earlier been a postdoctoral fellow in the department of Nobel Laureate Baruj Benacerraf. The Sherr Laboratory is funded by research grants from the National Institute of Environmental Health Sciences, the NIH Superfund Basic Research Program, and the Art BeCAUSE breast cancer foundation. Dr. Sherr is the Director of the Boston University Immunology Training Program, and a member of the Amyloid Treatment Research Program, the BU Cancer Center, the Hematology/Oncology Training Program, and the BU Hormone-dependent Cancer Center. He has trained 21 postdoctoral (M.D. or Ph.D.) and 11 predoctoral (M.D. and/or Ph.D.) fellows.

Gloria S. Waters, PhD

Gloria S. Waters is Vice President and Associate Provost for Research at Boston University. In this role, she has responsibility for BU's research enterprise, representing the University to key stakeholders in government, industry and foundations and leading the development and implementation of effective policies and procedures to streamline and manage research.

Prior to her appointment, Gloria served as Dean of BU's College of Health and Rehabilitation Sciences: Sargent College from 2005 to 2013. There, she led dramatic increases in the size, quality, and selectivity of the College's undergraduate and graduate programs, enhancing student and faculty support and doubling the volume of its research funding.

A Professor of Speech, Language and Hearing Science at BU since 1997, Gloria's research is in the areas of language and memory processes and includes a sizeable portfolio of federal and foundation-sponsored awards from the U.S. Department of Education, the National Institutes of Health, the Medical Research Council of Canada and the Alzheimer's Association of America, among others. Before arriving at BU, Gloria served as Acting Director of the School of Communication Sciences and Disorders at McGill University in Montreal. She received her B.A. in Psychology from McGill and her M.A. in Applied Psychology and Ph.D. in Psychology from Montreal's Concordia University.

Joyce Y. Wong, PhD

Joyce Y. Wong is a Professor of Biomedical Engineering and Materials Science & Engineering, and a College of Engineering Distinguished Faculty Fellow at Boston University. Her research is in the area of developing biomaterials to detect and treat disease. Some of her projects include bioengineered patches for congenital heart defects in pediatric patients and targeted nanoparticle magnetic resonance imaging contrast agents for early detection of cancer. She was Chair of the Gordon Research Conference in Biomaterials & Tissue Engineering in 2011. Awards she has received include a NSF CAREER Award and Clare Boothe Luce Professorship. Dr. Wong is a Fellow of the American Institute of Medical and Biological Engineering (AIMBE) and of the Biomedical Engineering Society. She is Director of a Boston University Provost Initiative promoting women in STEM at all levels: ARROWS (Advance, Recruit, Retain & Organize Women in STEM).