

DF/HCC

DANA-FARBER / HARVARD CANCER CENTER

Dana-Farber/Harvard Cancer Center  
**Conference on Cancer**

**April 7, 2009**

Sponsored by:  
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## CONFERENCE ON CANCER FACULTY ORGANIZING COMMITTEE

Faculty Chair: Edward Harlow, PhD, Harvard Medical School

Rebecca Betensky, PhD, Harvard School of Public Health

James Griffin, MD, Dana-Farber Cancer Institute

While Dana-Farber/Harvard Cancer Center holds conferences regularly on a smaller scale, typically focusing on one area of cancer research, this new initiative takes a broadened approach to include research topics that span the cancer continuum.

The objective of the program is to share information on recent groundbreaking research discoveries and to engage in dialogue regarding current problems in cancer research. The intended outcome is to catalyze trans-disciplinary collaborations that will ultimately improve cancer treatment, prevention, and outcomes.

**Dana-Farber/Harvard Cancer Center  
Conference on Cancer**

*Joseph B. Martin Conference Center  
at Harvard Medical School*

**AGENDA**

**Morning program: Amphitheater, Ground floor**

- 8:00 – 8:30      Breakfast
- 8:30 – 9:15      Edward J. Benz Jr., MD<sup>DFCI</sup>  
Director of DF/HCC  
*State of the Center Address*
- 9:15 – 9:45      Nathanael Gray, PhD<sup>DFCI/HMS</sup>  
*Targeting the Kinome: Bcr-Abl, EML4-ALK and EGFR*
- 9:45 – 10:15     Christopher French, MD<sup>BWH</sup>  
*Targeting the Tumor Epigenome in NUT-Midline Carcinoma*
- 10:15 – 10:30     Break
- 10:30 – 11:00     Lecia Sequist, MD, MPH<sup>MGH</sup>  
*Circulating Tumor Cells in Non-Small Cell Lung Cancer*
- 11:00 – 11:30     Lorelei Mucci, MPH, ScD<sup>BWH</sup>  
*Prostate Cancer Epidemiology and the TMPRSS2:ERG Fusion*
- 11:30 – 12:00     Matthew Freedman, MD<sup>DFCI</sup>  
*Functional Annotation of Non-Protein Coding Risk Alleles*

**Lunch: Rotunda, Third floor and Pechet Room, First floor**

- 12:15 – 1:15      Lunch and Keynote Speaker:  
Julio Frenk, MD, MPH, PhD<sup>HSPH</sup>  
Dean of Harvard School of Public Health  
*Cancer in the Developing World: Expanding the Global Health  
Agenda*

# AGENDA

(continued)

## Afternoon program

- 1:30 – 2:30      Break-out Discussion Topics and Leaders
- Biomarkers*  
Edward Harlow, PhD<sup>HMS</sup> and  
Monica Bertagnolli, MD<sup>BWH</sup>  
Amphitheater, Ground floor
- Combination Therapy*  
Lewis Cantley, PhD<sup>BIDMC</sup> and  
Ken Anderson, MD<sup>DFCI</sup>  
Pechet Room, First floor
- Risk Measurements*  
David Hunter, MBBS, MPH, ScD<sup>HSPH</sup> and  
Peter Kraft, PhD<sup>HSPH</sup>  
Room 216, Second floor
- Viral Etiology and Cancer*  
Matt Meyerson, MD, PhD<sup>DFCI</sup> and  
Peter Howley, MD, MMS<sup>HMS</sup>  
Room 217, Second floor
- 2:30 – 2:45      Break
- 2:45 – 3:30      Plenary Seminar (Amphitheater, Ground floor)  
Gary Ruvkun, PhD<sup>MGH</sup>  
Winner of the Albert Lasker Award for Basic Medical Research  
*The Small RNA Pathways of C. elegans*
- 3:30 – 3:45      Closing Remarks from Edward J. Benz Jr., MD<sup>DFCI</sup>
- 3:45 – 5:00      Reception and Core Poster Session (Ground floor)

## SPEAKER BIOGRAPHIES

### **EDWARD J. BENZ JR., MD, FACP<sup>DFCI</sup>**

*Director, Dana-Farber/Harvard Cancer Center*

Edward Benz is President and Chief Executive Officer of Dana-Farber Cancer Institute, CEO of Dana-Farber Partners Cancer Care, Principal Investigator and Director of Dana-Farber/Brigham and Women's Cancer Center, and a member of the Governing Board of Dana-Farber/Children's Hospital Cancer Center. He is the Richard and Susan Smith Professor of Medicine, Professor of Pediatrics, and Professor of Pathology at Harvard Medical School. Benz is a graduate of Princeton University and Harvard Medical School. An internationally recognized hematologist, Benz received his training in internal medicine and hematology at Brigham and Women's Hospital, the National Institutes of Health, and the Yale University School of Medicine. Board certified in Internal Medicine and Hematology, Benz is a clinically active internist and expert in inherited anemias and diseases of the red cell. He is a fellow of the American College of Physicians. Benz's accomplishments have been recognized by a number of distinctions, including membership in the Institute of Medicine and the American Academy of Arts and Science. In addition to numerous NIH assignments, he is currently the chair of the NIH Advisory Board for Clinical Research.

### **MATTHEW FREEDMAN, MD<sup>DFCI</sup>**

Matthew Freedman is an Assistant Professor in the Department of Medicine at Harvard Medical School and an Associate Member of the Broad Institute. Over the past couple of years, genome wide association scans have uncovered genetic risk factors for many common diseases,

including cancer. Interestingly, most of the genetic risk variants discovered to date are located in intronic or intergenic regions. As the non-protein coding regions are not annotated as well as the coding regions, it is difficult to predict the molecular and genetic consequences of inheriting these polymorphisms. Freedman's primary research focus is to understand the functional consequences of non-protein coding risk alleles discovered from genetic association studies. His research draws on utilizing diverse methods from the fields of genetics, epigenetics, and molecular and cellular biology. Freedman is a 2009 recipient of the Claudia Adams Barr Award and a 2008 recipient of the HHMI Physician-Scientist Early Career Award. His research is also currently supported by an R01 grant from the NCI, the Dana-Farber prostate and breast SPORes, and a Doris Duke Clinical Scientist Development Award.

**CHRISTOPHER FRENCH, MD<sup>BWH</sup>**

Originally from Los Angeles, Christopher French graduated from University of California, Los Angeles with a BS in biology and a minor in art, and from Columbia College of Physicians and Surgeons in 1995. He trained at BWH in pathology, where he began research into a rare, translocation-associated carcinoma in the laboratory of Jonathan Fletcher. He finished his post-doctoral research on this as a K08 recipient in the lab of Jon Aster, and has since remained at BWH as a new R01-funded investigator and associate pathologist, specializing in cytopathology. His main research continues to be centered on the basic and translational aspects of what he recently termed the NUT midline carcinoma, defined by chromosomal rearrangement of the gene, NUT. French is one of very few investigators in the world studying this disease, characterized by its aggressive biology. Carrying a single translocation

which results in the formation most often of the fusion oncogene, BRD4-NUT, NUT midline carcinomas are a particularly compelling epithelial disease model to study because the causative oncogene product is known and potentially targetable, similar to those of several leukemia oncogene products. French has recently formed a productive collaboration with James Bradner, another DF/HCC member, using high throughput screening to identify drugs which target BRD-NUT.

**JULIO FRENK, MD, MPH, PhD<sup>HSPH</sup>**

*Dean, Harvard School of Public Health*

Julio Frenk became dean of the Harvard School of Public Health on January 1, 2009. Prior to coming to HSPH, he served as a senior fellow in the global health program of the Bill & Melinda Gates Foundation and as president of the Carso Health Institute in Mexico City. From 2000-2006, Frenk was Minister of Health of Mexico where he pursued an ambitious agenda to reform the nation's health system, with an emphasis on redressing social inequality and establishing a program of comprehensive national health insurance, known as Seguro Popular. Frenk was founding director of the Center for Public Health Research in Mexico's Ministry of Health, founding director-general of the National Institute of Public Health in Mexico, and executive vice president of the Mexican Health Foundation and director of its Center for Health and the Economy. At WHO, he served as Executive Director of Evidence and Information for Policy. Frenk holds an MD from the National Autonomous University of Mexico, and an MPH, MA (Sociology), and PhD from the University of Michigan, and is a member of the U.S. Institute of Medicine and the National Academy of Medicine of Mexico.

**NATHANAEL GRAY, PhD<sup>DFCI/HMS</sup>**

Nathanael Gray received his PhD in organic chemistry from the Department of Chemistry at the University of California, Berkeley, in 1998. From 1998 until 2005, he worked for the Genomics Institute of the Novartis Research Foundation, San Diego. There, he led a group focused on the discovery, optimization and characterization of novel protein kinase inhibitors and their development into clinical candidates. In 2005, he joined Harvard Medical School and Dana-Farber Cancer Institute, where he is currently an assistant professor. His research focuses on the development and application of small-molecule kinase inhibitors as tools to understand tumor signalling pathways.

**LORELEI MUCCI, MPH, ScD<sup>BWH</sup>**

Lorelei Mucci received her doctoral training in epidemiology at Harvard School of Public Health, and post-doctoral training in cancer epidemiology at the Karolinska Institutet. She is currently Assistant Professor of Epidemiology and Medicine at HSPH and HMS, and Adjunct Professor at the University of Iceland. Her main research interests are in cancer epidemiology, with a particular focus on risk factors for prostate cancer incidence and mortality. She oversees the prostate tumor biorepository within the Physicians' Health Study and the Health Professionals Follow-up Study including tumor samples for 2,500 men, and collaborates with researchers in Sweden and Iceland, including on the Swedish Watchful Waiting cohort. She is part of a multidisciplinary team using array-based technologies to evaluate tissue biomarkers at the RNA, DNA, and protein level. This effort seeks to develop molecular signatures to distinguish indolent from aggressive prostate cancer, and also to provide insight into the biology of prostate cancer risk factors. Mucci is active in the DF/HCC Prostate SPORE

and is co-PI on the SPORE's project to investigate the TMPRSS2:ERG fusion in lethal prostate cancer. The Prostate Cancer Foundation recently recognized Mucci for her work in this area by naming her a Milken Scholar.

**GARY RUVKUN, PHD<sup>MGH</sup>**

Gary Ruvkun is Professor of Genetics at Harvard Medical School. His lab uses *C. elegans* molecular genetics and genomics to study problems in developmental biology and physiology. He is a graduate of the University of California at Berkeley and Harvard University. His PhD thesis with Fred Ausubel explored the nitrogen fixation genes of *Rhizobium*, a bacterium that forms a symbiotic relationship with leguminous plants. Ruvkun discovered that the *nif* genes were conserved over three billion years of prokaryotic evolution. The Ruvkun lab is now using functional genomic and genetic strategies to systematically discover the components of the RNAi and microRNA pathways in *C. elegans*. He and his colleagues have recently identified several genes that regulate RNAi and microRNA pathways. These genes reveal the trajectory of siRNAs and miRNAs as they target mRNAs, as well as components that may be developed as drug targets to enhance RNAi in mammals. Such technical improvements in RNAi may help elevate a laboratory tool to a therapeutic modality. In 2008, Ruvkun received the Albert Lasker Award for Basic Medical Research and was elected to the National Academy of Sciences. In 2003, he received an NIH Merit Award.

**LECIA SEQUIST, MD, MPH<sup>MGH</sup>**

Lecia Sequist is originally from Michigan and studied chemistry at Cornell University. She received her MD from Harvard Medical School

and trained in internal medicine at Brigham and Women's Hospital and in hematology/oncology at Dana-Farber Cancer Institute, where she also received an MPH from Harvard School of Public Health. She joined the faculty of the Center for Thoracic Cancers at the Massachusetts General Hospital Cancer Center in 2005 and has an active clinical and translational research career, as well as a busy practice caring for patients with lung and esophageal cancer. She is currently an Assistant Professor of Medicine at Harvard Medical School. Sequist's research focuses on studying novel targets and targeted agents for lung cancer treatment, particularly those that target the epidermal growth factor receptor (EGFR) and in detecting and studying the significance of tumor cells circulating in the bloodstream (circulating tumor cells, or CTCs). She aims to develop treatment algorithms for lung cancer that are more personalized than current strategies, utilizing targeted therapies specific to the patients' cancer genotypes, and understanding how this may change over the courses of the disease. In her free time, she likes to spend time with her husband and two sons.

Dana-Farber/Harvard Cancer Center is the largest National Cancer Institute-designated Comprehensive Cancer Center in the nation. Founded in 1998, DF/HCC is an inter-institutional research enterprise that unites the cancer research efforts of the Harvard-affiliated community. The primary goal of the Cancer Center is to encourage and promote collaborative interactions and translational research that will lead to new approaches to cancer prevention, diagnosis, and treatment.

DF/HCC's members—currently more than 1,000 investigators with cancer-related grants amounting to more than \$500 million—pool their extensive experience and acclaimed expertise in all aspects of cancer research. They carry out their research in disease site- and discipline-based research programs that cross both institutional and scientific boundaries.

DF/HCC is one of just 39 NCI-designated Comprehensive Cancer Centers. Its members hail from the following institutions: Beth Israel Deaconess Medical Center, Brigham and Women's Hospital, Children's Hospital Boston, Dana-Farber Cancer Institute, Harvard Medical School, Harvard School of Public Health, and Massachusetts General Hospital.

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