



Biomedical Science and Medicine in the Next 50 Years

Symposium celebrating the 50th Annual Short
Course on Medical and Experimental
Mammalian Genetics

Friday, July 31, 2009

College of the Atlantic, Bar Harbor, Maine

Understanding the genetic basis of human disease has transformed medicine over the past 50 years. Today, the new frontier is individualized medicine: tailoring treatments and even prevention to each patient's unique genetic makeup. What are the scientific, technical, social and legal implications of 21st century medicine?

By bringing together the world's leading researchers and clinicians for five decades, the annual Short Course in Medical and Experimental Mammalian Genetics, presented in Bar Harbor, Maine, by The Jackson Laboratory and The Johns Hopkins University, is a major catalyst in the rise of genetic medicine. The 50th annual presentation of the Short Course will culminate with a symposium on the future of biomedical science and medicine. Please join us for this thought-provoking and historic gathering.

- 8:30 a.m. **Welcome and Introductions**
Rick Woychik, Ph.D., President and CEO, The Jackson Laboratory
- Aravinda Chakravarti, Ph.D., Professor of medicine, Pediatrics, Molecular Biology and Genetics;
and Professor of Biostatistics, Bloomberg School of Public Health, Johns Hopkins University
- 8:45 a.m. **Modeling Human Cancers in the Mouse**
Mario Capecchi, Ph.D., Co-Chairman of the Department of Human Genetics, University of Utah
School of Medicine, 2007 Nobel Laureate
- 9:15 a.m. **The Future of Cancer Research**
Janet Davison Rowley, M.D., Blum Riese Distinguished Service Professor of Medicine, Molecular
Genetics & Cell Biology and Human Genetics, University of Chicago
- 9:45 a.m. **A Molecular Logic of Olfactory Perception**
Richard Axel, M.D., Howard Hughes Medical Investigator and University Professor, Columbia
University, and 2004 Nobel Laureate
- 10:15 a.m. Morning Break
- 10:45 a.m. **The Future of Epigenetics**
Andrew Feinberg, M.D., M.P.H., King Fahd Professor of Molecular Medicine, Johns Hopkins
Medicine
- 11:15 a.m. **Stem Cells, Pluripotency and Nuclear Reprogramming**
Rudolf Jaenisch, M.D., Member, Whitehead Institute and Professor of Biology, MIT
- 11:45 a.m. Panel discussion of morning talks
Moderated by NPR science correspondent Joe Palca, Ph.D.

- 12:30 p.m. Lunch
- 1:30 p.m. **Darwin's "Rubbish", 150 Years and Counting**
Kenneth M. Weiss, Ph.D., Evan Pugh Professor of Biological Anthropology, and Genetics and Science, Technology and Society, Penn State University
- 2:00 p.m. **The Future of Individualized Medicine**
David Valle, M.D., Henry J. Knott Professor and Director of the Institute of Genetic Medicine; Professor, Departments of Pediatrics, Ophthalmology and Molecular Biology and Genetics; Director, Predoctoral Training Program in Human Genetics; Director, Center for Inherited Disease Research, Johns Hopkins University
- 2:30 p.m. Afternoon Break
- 3:00 p.m. **The Future of Public Policy**
Wylie Burke, M.D., Ph.D., Professor and Chair, Department of Bioethics and Humanities, University of Washington School of Medicine
- 3:30 p.m. **The Future of Science, Education and Policy**
Elias A. Zerhouni, M.D. Senior Fellow, Global Health Program, Bill & Melinda Gates Foundation, and Former Director, National Institutes of Health
- 4:00 p.m. Panel discussion of afternoon talks
Moderated by NPR science correspondent Joe Palca, Ph.D.
- 6:00 p.m. Reception at the Bar Harbor Club
- 7:00 p.m. Dinner at the Bar Harbor Club
Remarks by Michael Katz, M.D., Senior Vice President for Research & Global Programs, March of Dimes Foundation
- Keynote speaker: Eric S. Lander, Ph.D., Director, Broad Institute of MIT and Harvard; Professor of Biology, MIT; Professor of Systems Biology, Harvard Medical School