THE COMMON FUND

TH ANNIVERSARY

RESEARCH SYMPOSIUM PROGRAM



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A DECADE OF DISCOVERY

THURSDAY JUNE 19, 2014 8:30 A.M.-5:00 P.M. ET MASUR AUDITORIUM, BUILDING 10 NATIONAL INSTITUTES OF HEALTH BETHESDA, MD





National Institutes of Health Office of Strategic Coordination - The Common Fund



THE NIH COMMON FUND

In 2004, the National Institutes of Health (NIH) launched a bold, transformative approach to the support of science that transcended the individual NIH Institutes and Centers, known collectively as the "NIH Roadmap." This novel approach identified significant opportunities and challenges that no single or small group of NIH Institutes and Centers could or should conduct on its own, but that the NIH as a whole must address. The NIH Roadmap was a bold set of programs designed to transform medical research capabilities and speed the movement of research from the laboratory to the patient's bedside.

The Roadmap consisted of a compelling set of programs focused on efforts essential to accelerate basic research discoveries and speed translation of these discoveries into clinical practice, as well as explicitly address roadblocks that slow the pace of medical research in improving the health of our nation and across the globe. Roadmap programs were goal-driven, so that specific, high-impact outcomes could be reached within a set schedule of five to ten years.

Responding to the need for NIH to continue to foster new approaches to biomedical research, Congress established the NIH Common Fund in 2006 through the NIH Reform Act. The Reform Act provided continued support for Roadmap programs through the NIH Common Fund within the Division of Program Coordination, Planning, and Strategic Initiatives within the NIH Office of the Director, and provided the means to launch new programs of trans-NIH relevance. This has allowed NIH to think strategically about the future of biomedical research and has provided the opportunity to develop unique programs that could not be supported via traditional mechanisms. Today, approximately 30 programs are managed through the Common Fund.

Over the last decade, the Common Fund has engaged Institute and Center Directors, NIH staff, and hundreds of investigators in programs that have changed the face of science. It has fostered innovation, enabled the development of transformative tools and methodologies, filled fundamental knowledge gaps, and established new scientific paradigms. As we look back over the last ten years, it is gratifying to see that small molecule screening has become a common approach to the functional analysis of proteins, that interdisciplinary research is easier to conduct and that team leadership is recognized, that a new paradigm of humans as ecosystems with their microbial inhabitants has been established, that physicians have accurate and reproducible tools to assess patient outcomes, and that the many other achievements of the Roadmap/Common Fund programs are having profound effects. Common Fund programs are continuing to deliver catalytic tools, technologies, approaches, and data sets that are enabling investigator-initiated research across the NIH. New ways of supporting high risk-high reward research and collaborative team science are proving valuable. While research supported by the NIH Institutes and Centers remains the center of the NIH mission, the Common Fund fosters trans-disciplinary collaboration and innovation that benefits the entire biomedical research enterprise. The catalytic nature of Common Fund programs ensures that their impact will continue to grow, and the fun has just begun. New challenges and opportunities emerge every day, and the entire community is invited to help establish a vision for the next "Decade of Discovery."

AGENDA

8:30AM WELCOME & OPENING REMARKS — TEN YEARS OF THE NIH ROADMAP/ COMMON FUND

Dr. Francis Collins: NIH Director *Welcome/Introductions*

Dr. Elias Zerhouni: President, Global Research & Development, Sanofi; NIH Director 2002 – 2008 *Birth of the NIH Roadmap*

Dr. Dushanka Kleinman: Associate Dean for Research, School of Public Health, University of Maryland Implementing the NIH Roadmap

Dr. Elizabeth Wilder: NIH Office of Strategic Coordination Director *The Roadmap Becomes the Common Fund*

9:10AM NEW PATHWAYS TO DISCOVERY

Introduced and Moderated by Dr. Judith Greenberg, National Institute of General Medical Sciences, Acting Deputy Director Exhibition of winning video entry: "In Search of Treasures from the Sea"

Invited Speakers:

Dr. Brian Kobilka, Stanford University School of Medicine Structural Insights Into G Protein Coupled Receptor Signaling

Dr. Benjamin Cravatt, The Scripps Research Institute Activity-Based Proteomics – Applications for Enzyme and Inhibitor Discovery

Dr. Kristin Ardlie: Broad Institute of MIT and Harvard The *Genotype-Tissue Expression Project*

10:35AM BREAK

10:50AM NEW PATHWAYS TO DISCOVERY

Introduced and Moderated by Dr. Richard Hodes, National Institute On Aging Director Exhibition of winning video entry:"Some Cells Know How to Keep Their Secrets"

Invited Speakers:

Dr. Bradley Bernstein: Massachusetts General Hospital, Harvard Medical School and Broad Institute

Maps and Mechanisms of Genome Regulation in Health and Disease

Dr. Claire Fraser: University of Maryland, *Human Microbiome Project*

Dr. K.C. Kent Lloyd: University of California Davis School of Medicine A Celebration of Discovery: How the Common Fund's KOMP2 Phenotyping Project Reveals New Knowledge about Gene Function

Exhibition of "NIH Selected" winning video entry: "Role of the Innate Immunue System and Development of Alzheimer's Disease"

12:15PM LUNCH BREAK

1:15PM RESEARCH TEAMS OF THE FUTURE

Introduced and Moderated by Dr. Lawrence Tabak NIH Principal Deputy Director Exhibition of winning video entry: "When Research is Personal: Conquering Genetic Disease in the Eric T. Wang Lab"

Invited Speakers:

Dr. Rajita Sinha: Yale University School of Medicine Promise and Challenge of Interdisciplinary Research: Behavior, Biology and Chronic Diseases

Dr. Pardis Sabeti: Harvard University, and Broad Institute of Harvard and MIT *Evolutionary Forces in Humans and Pathogens*

2:15PM REENGINEERING THE CLINICAL RESEARCH ENTERPRISE

Introduced and Moderated by Dr. Stephen Katz, National Institute of Arthritis and Musculoskeletal and Skin Diseases Director Exhibition of winning video entry: "Transforming Cancer Knowledge, Attitudes & Behavior Through Narrative"

Invited Speakers:

Dr. David Cella: Feinberg School of Medicine, Northwestern University Re-engineering Patient-Reported Outcomes Research: Over-Delivering on a PROMIS

Dr. Robert Califf: Duke Translational Medicine Institute The Health Care Systems Research Collaboratory

3:15PM BREAK

3:30PM REENGINEERING THE CLINICAL RESEARCH ENTERPRISE

Introduced and Moderated by Dr. Christopher Austin, National Center for Advancing Translational Sciences Director

Exhibition of winning video entry: "Go with the CTSC and the NIH Common Fund: A Rap"

Invited Speakers:

Dr. Donald Ingber: Wyss Institute Harvard University, Harvard Medical School & Boston Children's Hospital

Human Organs-on-Chips as Replacements for Animal Testing

Dr. Isaac Kohane: Children's Hospital and Harvard Medical School, Large-Scale Data and the Rebirth of an Old Role for Biomedical Investigators

4:30PM CLOSING REMARKS & SONG

Dr. James Anderson: Director NIH Division of Program Coordination, Planning, and Strategic Initiatives Lessons Learned and the Future of the Common Fund Dr. Francis Collins: NIH Director, The NIH and Biomedical Research Ten Years Later Performance of winning song contest entry

Note: Attendees will be responsible for meals and/or light refreshments on their own, at their own cost. The government and/or government contractors are not involved in facilitating the provision of food and/or light refreshments



ELIAS ZERHOUNI, M.D.

Since January 2011, Elias Zerhouni, M.D., is the President, Global Research & Development for Sanofi, a global pharmaceutical company.

Dr. Zerhouni is a native of Algeria where he received his medical education prior to immigrating to the United States. Dr. Zerhouni's academic career was spent at the Johns Hopkins University where he reached the rank of professor of Radiology and Biomedical engineering. He was Chair of the Russell H. Morgan Department of Radiological Sciences, Vice Dean

for Research and Executive Vice Dean of the Johns Hopkins School of Medicine from 1996 to 2002.

He served as Director of the National Institutes of Health from May 2002 through October 2008. He was the Senior Fellow at the Bill and Melinda Gates foundation from 2009 to 2010. In November 2009, President Obama appointed Dr. Zerhouni as one of three presidential U.S. science envoys.

Dr. Zerhouni has authored more than 200 publications and holds eight patents. He is a member of the Institute of Medicine and of the National Academy of Engineering.

He serves on the Board of the Lasker foundation and Research! America.



DUSHANKA KLEINMAN, D.D.S., M.SC.D.

Dr. Kleinman serves as Associate Dean for Research and professor in the Department of Epidemiology and Biostatistics, School of Public Health, at the University of Maryland, College Park. In this role, she works closely with the School's senior leadership, faculty, and students and has devoted much of the past few years to the initial accreditation of this new School of Public Health. She earned her D.D.S. from the College of Dentistry at the University of Illinois at Chicago and completed a rotating-hospital

internship at the University of Chicago Hospitals and Clinics. She then received a M.Sc.D. in dental public health from the Henry M. Goldman School of Dental Medicine at Boston University. Prior to joining the University of Maryland in 2007, Dr. Kleinman completed 28 years of government service; she most recently served as Deputy Director of the National Institute of Dental and Craniofacial Research (NICDR), NIH, and Assistant Surgeon General, U.S. Public Health Service (USPHS) Commissioned Corps. In 2006, she also completed a five-year term as the 15th USPHS Chief Dental Officer. At NIH, Dr. Kleinman assumed the role of NIDCR Acting Director twice during transitions between directors. She coordinated the federal involvement in the development of the first-ever Surgeon General's report on oral health (2000) and served as the first assistant director of the NIH Roadmap for Medical Research.



BRIAN K. KOBILKA, M.D.

Dr. Kobilka received Bachelor of Science degrees in biology and chemistry from the University of Minnesota, Duluth, in 1977. He graduated from Yale University School of Medicine in 1981 and completed residency training in internal medicine at the Barnes Hospital, Washington University School of Medicine, St. Louis, Missouri, in 1984. From 1984 to 1989 he was a postdoctoral fellow in the laboratory of Robert Lefkowitz at Duke University. In 1990 he joined the faculty of medicine and molecular

and cellular physiology at Stanford University. He was promoted to professor of medicine and molecular and cellular physiology in 2000. Research in the Kobilka Lab focuses on the structure and mechanism of action of G protein coupled receptors (GPCRs), which constitute the largest family of receptors for hormones and neurotransmitters in the human genome. GPCRs are the largest group of targets for new therapeutics for a very broad spectrum of diseases.



BENJAMIN F. CRAVATT, PH.D.

Dr. Cravatt is a professor in the Skaggs Institute for Chemical Biology and chair of the Department of Chemical Physiology at The Scripps Research Institute. His research group is interested in understanding the roles that enzymes play in physiological and pathological processes, especially as pertains to the nervous system and cancer. To address this challenge, they develop and apply an array of genetic, pharmacological, and proteomic/metabolomic technologies. The Cravatt group has obtained

fundamental insights into the chemical, biochemical, and physiological workings of several important mammalian serine hydrolases, including enzymes involved in the neurobiology of pain and cancer metabolism and malignancy.

Dr. Cravatt obtained his undergraduate education at Stanford University, receiving a B.S. in the biological sciences and a B.A. in history. He then trained with Drs. Dale Boger and Richard Lerner and received a Ph.D. in macromolecular and cellular structure and chemistry from The Scripps Research Institute (TSRI) in 1996. Professor Cravatt joined the faculty at TSRI in 1997 as a member of the Skaggs Institute for Chemical Biology and the Departments of Cell Biology and Chemistry. Dr. Cravatt is a co-founder and scientific advisor of Activx Biosciences and Abide Therapeutics. His honors include a Searle Scholar Award (1998–2001), the Eli Lilly Award in Biological Chemistry (2004), a Cope Scholar Award (2005), the Irving Sigal Young Investigator Award (2007), the Tetrahedron Young Investigator Award in Bioorganic and Medicinal Chemistry (2008), a MERIT award from the National Cancer Institute (2009), and membership in the National Academy of Sciences (2014).



KRISTIN ARDLIE, PH.D.

Dr. Ardlie earned her Ph.D. in population genetics at Princeton University. She completed a Junior Fellowship with Harvard University's Society of Fellows and then worked at the Whitehead Institute/MIT Center for Genome Research. Prior to joining the Broad Institute, she spent six years as Vice President of Genetics at Genomics Collaborative, Inc., a commercial large-scale biorepository. She joined the Broad Institute in 2006 as founder and director of the Biological Samples Platform. Currently, Dr.

Ardlie is a co-principal investigator of the Laboratory, Data Analysis, and Coordinating Center of the NIH Common Fund's Genotype-Tissue Expression (GTEx) program. She oversees a team responsible for the generation, quality control, and analysis of RNA sequence data from up to 20,000 tissues, with a goal toward characterizing the relationship between genetic variation and the regulation of gene expression across multiple human tissues.



CLAIRE M. FRASER, PH.D.

Dr. Fraser is director of the Institute for Genome Sciences and a professor of medicine at the University of Maryland School of Medicine in Baltimore, Maryland. She was previously the president and director of The Institute for Genomic Research in Rockville, Maryland. Dr. Fraser has played a seminal role in the sequencing and analysis of human, animal, plant, and microbial genomes to better understand the role that genes play in development, evolution, physiology, and disease. She led the teams that sequenced the genomes of several microbial organisms, including

important human and animal pathogens, and as a consequence helped to initiate the era of comparative genomics. Her current research interests are focused on the structure and function of the human GIT microbiota. Dr. Fraser has more than 240 scientific publications, and has served on committees of the National Science Foundation, Department of Energy, and National Institutes of Health. She is the recipient of numerous awards and honors, including the Promega Biotechnology Award and the E.O. Lawrence Award from the Department of Energy. She is a fellow of AAAS and the American Association of Microbiology, and she has been elected into the Maryland Women's Hall of Fame and the Institute of Medicine. She received her Ph.D. in pharmacology from State University of New York at Buffalo.



BRADLEY E. BERNSTEIN, M.D., PH.D.

Dr. Bernstein is a professor of pathology at Harvard Medical School, an Early Career Scientist at Howard Hughes Medical Institute, and a senior associate member at the Broad Institute. He has a laboratory in the Richard B. Simches Research Center at Massachusetts General Hospital, part of Experimental Pathology and the Center for Systems Biology. Dr. Bernstein's research focuses on chromatin and epigenetic regulation in normal and malignant stem cells. His laboratory applies high-throughput

sequencing-based technologies to characterize chromatin structure and DNA methylation genome-wide in human and mouse cells. In addition to advancing technology and providing unprecedented global views of mammalian chromatin, this work has led to an appreciation of the role of large-scale chromatin structures, or "domains," in regulating developmental genes. For example, in differentiated cells, chromatin domains marked by either "active" or "repressive" histone modifications maintain expression or repression of key developmental genes. However, in pluripotent embryonic stem (ES) cells, chromatin domains enriched for both active and repressive modifications repress developmental genes while maintaining their potential for subsequent activation. Current projects in the lab are focused on these "bivalent" domains with the goal of understanding their initial establishment, their higher-order structure, and their roles in ES cell pluripotency and epigenetic regulation of development. Similar approaches are being used to characterize chromatin modifications in adult stem cells and cancer models. In particular, recent work has shed light on the epigenetic and transcriptional regulatory networks in Wilms tumor and glioblastoma.



K.C. KENT LLOYD, D.V.M., PH.D.

Dr. Lloyd is a veterinarian, research physiologist, and mutant mouse biologist. He received his bachelor's degree in biology/biochemistry from the University of California (UC), San Diego, and his D.V.M. from UC Davis. After an internship at the University of Pennsylvania and residency at UC Davis, Dr. Lloyd became a faculty surgeon at UC Davis. He then earned his Ph.D. in physiology at the University of California, Los Angeles, in 1992 and joined the faculty in the Department of Physiology, where

he established his NIH-funded research laboratory investigating enterogastric reflexes. Dr. Lloyd was a visiting scientist at the European Molecular Biology Laboratory in Heidelberg, Germany, working on conditional mutagenesis. In 1996, Dr. Lloyd was recruited to UC Davis as associate professor and as a founding member of the Center for Comparative Medicine. In 2002, he was promoted to full professor and was appointed Associate Dean for Research and Graduate Education. Dr. Lloyd is currently a professor of surgery in the UC Davis School of Medicine, director of the Mouse Biology Program, and Associate Director of Shared Resources for the Comprehensive Cancer Center. Dr. Lloyd has an active NIH-funded research program using genetically altered mice to understand gene function and disease pathogenesis. He actively participates in mentoring students and scholars. Dr. Lloyd also serves on school and campus committees, professional organizations, and the NIH Council of Councils. Dr. Lloyd was elected a fellow of the American Association for the Advancement of Science. He lives in Davis, California, with his wife and two children.



RAJITA SINHA, PH.D.

Dr. Sinha is the Foundations Fund Professor of psychiatry, neurobiology, and child study at Yale University School of Medicine. She is also chief of the Psychology Section in Psychiatry, and deputy director of interdisciplinary research at the Yale Center of Clinical Investigation, home of the Yale CTSA. She is the founding director of the Yale Interdisciplinary Stress Center, which was established when she led an interdisciplinary group of basic and clinical scientists to set up an NIH Common Fund-supported

interdisciplinary research consortium on stress, self-control, and addictive behaviors of nicotine smoking, alcohol abuse, and overeating. Her own research has made discoveries on stress mechanisms that link to maladaptive behaviors and poor health outcomes, and on developing and validating novel stress reduction strategies that target these mechanisms. She has also established a unique evidence-supported integrative brain-mind-body clinical care service to improve health and wellbeing. She has been Pl on a series of NIH grants including P50, P30, U01, R01, R21, and T32 grants and she has over 200 peer-reviewed publications. She has served on many NIH special emphasis panels, review committees, and workshops and presented at numerous national and international conferences, and her work is widely cited. She is currently on the National Advisory Council of the National Institute on Alcohol Abuse and Alcoholism at the NIH. She is a much sought-after speaker on stress effects on the brain, health, and behaviors and she conducts workshops, lectures, and ways to address stress to enrich and enhance work, family, and life.



PARDIS SABETI, M.D., D.PHIL.

Dr. Sabeti is an associate professor at the Center for Systems Biology and Department of Organismic and Evolutionary Biology at Harvard University and a senior associate member of the Broad Institute.

Dr. Sabeti is a computational geneticist with expertise developing algorithms to detect genetic signatures of adaption in humans and the microbial organisms that infect humans. Her key research areas include: (1) Developing analytical methods to detect and investigate evolution in

the genomes of humans and other species; (2) Examining host and viral genetic factors driving disease susceptibility to Lassa hemorrhagic fever virus, a devastating disease widespread in West Africa; and (3) Investigating the genomes of microbes, including Lassa virus, Ebola virus, and Mycobacterium tuberculosis, to help in the development of intervention strategies. Dr. Sabeti has published her work in numerous journals, including *Nature, Science, Cell*, and *PLoS Biology*.

Dr. Sabeti was born in Tehran, Iran, and immigrated to the United States at age two. She completed her undergraduate degree at MIT, her graduate work at Oxford University, and her medical degree at Harvard Medical School. Dr. Sabeti's work is currently supported by the Burroughs Wellcome Fund, the Packard Foundation, NIH, TMTI, DTRA, and the Gates Foundation.

Dr. Sabeti is a World Economic Forum (WEF) Young Global Leader and serves on the WEF's Global Agenda Council on Personalized and Precision Medicine. She carries out a number of activities to support women in science and science education in the U.S. and abroad. Dr. Sabeti is also the lead singer of the rock band Thousand Days.



DAVID CELLA, PH.D.

Dr. Cella is currently professor and chair of the Department of Medical Social Sciences at Northwestern University Feinberg School of Medicine. He also directs the Center for Patient Centered Outcomes Research at Northwestern's Institute for Public Health and Medicine. His research interests and accomplishments are focused in the areas of basic measurement research, descriptive studies of quality of life in chronic illness, psychosocial and behavioral health intervention, and the analysis

and interpretation of patient-reported outcomes data in clinical trials. Prior to his work on PROMIS, Dr. Cella developed and validated a wide array of questionnaires, known collectively as the Functional Assessment of Chronic Illness Therapy Measurement System (FACIT), that are in wide use internationally.

Over the past 25 years, beginning with a FIRST Award in 1989, Dr. Cella has had continuous NIH funding as principal investigator on projects related to measurement and interventions to improve the quality of life of people affected by chronic illnesses such as cancer, arthritis, heart disease, and neurologic disorders. Since its inception in 2004, Dr. Cella has chaired the Steering Committee of the NIH Common Fund project known as PROMIS: The Patient Reported Outcomes Measurement Information System. He also serves as principal investigator of its Statistical Center. Dr. Cella also has parallel funded projects, Neuro-QoL and PROsetta Stone, which, while scientific accomplishments in their own right, extend the reach and potential of PROMIS to be truly transformative and unifying, enabling the patient's voice to be heard more loudly and clearly than ever before.



ROBERT CALIFF, M.D.

Vice Chancellor for Clinical and Translational Research, director of the Duke Translational Medicine Institute (DTMI), and professor of medicine in the Division of Cardiology at Duke University Medical Center, Dr. Califf leads a multifaceted organization that seeks to transform how scientific discoveries are translated into improved health outcomes. Prior to leading the DTMI, he was the founding director of the Duke Clinical Research Institute (DCRI), one of the nation's premier academic research organizations. At the DCRI, Dr. Califf led many landmark clinical trials,

and he remains actively involved in designing, leading, and conducting multinational clinical trials. He also is editor-in-chief of the American Heart Journal and a practicing cardiologist at Duke University Medical Center.

Dr. Califf received undergraduate and medical degrees from Duke University and completed a residency in internal medicine at the University of California, San Francisco. An international leader in the fields of cardiovascular medicine, health care outcomes, quality of care, and medical economics, he has authored or coauthored more than 1,000 peer-reviewed articles. He also is a contributing editor for theHeart.org, an information resource for health care professionals working in cardiovascular medicine.

Dr. Califf is a member of the Institute of Medicine Forum on Drug Discovery, Development, and Translation and the National Advisory Council on Aging. He also is co-chair of the Clinical Trials Transformation Initiative, a public-private partnership focused on improving the clinical trials system, and chair of the Clinical Research Forum, an organization of academic health and science system leaders devoted to improving the clinical research enterprise.



DONALD E. INGBER, M.D., PH.D.

Dr. Ingber is the founding director of the Wyss Institute for Biologically Inspired Engineering at Harvard University, the Judah Folkman Professor of Vascular Biology at Harvard Medical School and Boston Children's Hospital, and professor of bioengineering at the Harvard School of Engineering and Applied Sciences. He received his B.A., M.A., M.Phil., M.D., and Ph.D. from Yale University. Dr. Ingber is a founder of the emerging field of biologically inspired engineering, and at the Wyss Institute, he oversees

a multifaceted effort to identify the mechanisms that living organisms use to self-assemble from molecules and cells, and to apply these design principles to develop advanced materials and devices for health care and to improve sustainability. His most recent innovation is a technology for building tiny, complex, three-dimensional models of living human organs, or "Organs on Chips," that mimic complicated human functions as a way to replace traditional animal-based methods for testing of drugs and establishment of human disease models. In addition, Dr. Ingber has made major contributions to mechanobiology, tissue engineering, tumor angiogenesis, systems biology, and nanobiotechnology. Dr. Ingber has authored more than 375 publications and 85 patents, and has received numerous honors including the Holst Medal, the Pritzker Award from the Biomedical Engineering Society, a Lifetime Achievement Award from the Society of In Vitro Biology, and the Department of Defense Breast Cancer Innovator Award. He is a member of both the American Institute for Medical and Biological Engineering and the Institute of Medicine of the National Academies.

The NIH Roadmap/Common Fund has supported some of the most innovative and enthusiastic investigators within the biomedical research community. In recognition of this, the NIH Office of Strategic Coordination asked them to use their creative skills to communicate about their work in engaging ways via a video competition and a song competition.

Grantees and their lab colleagues were asked to produce brief, creative videos explaining their research to a general audience. The five videos that received the most "Likes" on YouTube were declared the winners. Because we received so many outstanding videos, the NIH Director, Dr. Francis Collins, also designated an "NIH Selected" winner and two runners-up. All video competition entries can be viewed at http://commonfund.nih.gov/contests/videos.

Grantees and NIH staff were asked to create original song lyrics that described the work and achievements of the NIH Common Fund as a whole. Dr. Collins has selected two song competition finalists. The winner will be announced live during the Symposium. All song competition entries can be viewed at http://commonfund.nih.gov/contests/songs.

All winners and runners-up will receive certificates signed by Dr. Collins. The winning videos will be shown during the Common Fund 10th Anniversary Symposium and the winning song will be performed by Dr. Collins at the Symposium finale.



ISAAC KOHANE, M.D., PH.D.

Dr. Kohane co-directs the Center for Biomedical Informatics at Harvard Medical School. He applies computational techniques, whole genome analysis, and functional genomics to study human diseases through the developmental lens and particularly through the use of animal model systems. Dr. Kohane has led the use of whole health care systems, notably in the i2b2 project, as "living laboratories" to drive discovery research in disease genomics (with a focus on autism) and pharmacovigilance

(including providing evidence for the cardiovascular risk of hypoglycemic agents, which ultimately contributed to an FDA "black box" warning) and comparative effectiveness with software and methods adopted in more than 84 academic health centers internationally.

Dr. Kohane has published more than 200 papers in the medical literature and authored a widely used book titled *Microarrays for an Integrative Genomics*. He has been elected to multiple honor societies, including the American Society for Clinical Investigation, the American College of Medical Informatics, and the Institute of Medicine. He leads a doctoral program in genomics and bioinformatics within the Division of Medical Sciences at Harvard University. He also is an occasionally practicing pediatric endocrinologist.

VIDEO COMPETITION WINNERS

SONG COMPETITION FINALISTS

NIH Common Fund Video Competition Winners



"In Search of Treasures from the Sea," Dr. Hendrik Luesch, Linda Homewood, Christopher Bilowich; University of Florida





"Some Cells Know How to Keep Their Secrets," Dr. Arthur Edison & Alexandra Mills: Southeast Center for Integrated Metabolomics, University of Florida



NIH Selected Winner



"Role of the Innate Immune System in Aging and Development of Alzheimer's Disease," Dr. Howard Weiner; Harvard University



"When Research is Personal: Conquering Genetic Disease in the Eric T. Wang Lab," Dr. Eric T. Wang; Massachusetts Institute of Technology







"Go with the CTSC and the NIH Common Fund: A Rap," Dr. Julianne Imperato-McGinley, Timothy Baker, Jesse Yi-Teh Jou, Jifeng (Jeff) Zhu; Weill Cornell Medical College CTSC

Dr. Sheila T. Murphy & Dr. Lourdes A. Baezconde-Garbanati;

Annenberg School for Communication / USC

NIH Common Fund Video Competition NIH Selected Runners-Up

Through Narrative,"



"Breaking (Bad) Barriers," Dr. Richard S. Larson & Rebecca Gustaf: University of New Mexico Health Sciences Center





"Clot Blocking." Dr. Barry Coller & Dr. Daniel Gareau; Rockefeller University*



* The work presented in "Clot Blocking" is the result of collaboration among Dr. Barry Coller, Dr. Craig Thomas at the National Center for Advancing Translational Sciences, and Dr. Marta Filizola at the Icahn School of Medicine at Mount Sinai.

NIH Common Fund Song Competition Finalists

The winner of the song competition will be announced live during the Common Fund 10th Anniversary Symposium by NIH Director Dr. Francis Collins.

"The NIH Common Fund (Say Hey)" by Dr. David Chambers, National Institute of Mental Health (NIMH)

Recognizing opportunities for something big Transcending individual initiatives The building blocks that will raise biomedicine A roadmap to a future bright indeed

A decade of progress we've made All toward a common goal

Say Hey to the Common Fund of NIH Say Hey, big data turns to knowledge

Say Hey to single cell analysis Say Hey, the pioneers will lead this

GTEx, knockout mice, molecular libraries Epigenomics, RNA, and bioinformatics PROMIS brings the patients' outcomes in And HCS Collaboratories are a win-win

A decade toward novel cures And better treatments for all

Say Hey to the Common Fund of NIH Say Hey to advancing global health

Say Hey to the science of behavior change Say Hey to strengthening the workforce

And lest you thought the journey was done There's so many races left to run

Say Hey to the Common Fund of NIH Say Hey to CTSAs gaining steam

Say Hey, fundamental sea change is here And we're just getting started...

"A Song for the Common Fund in Year 10" by Dr. Gene E. Robinson and Dr. Claudia C. Lutz, University of Illinois at Urbana-Champaign

To the tune of: "With a Little Help from my Friends" by the Beatles

What would you think if I asked you to fund A consortium to cure all disease? Read my proposal, it's cutting-edge work It's high-risk, but the goal's sure to please We'll get by with the Common Fund as our friend We'll aim high and set the world on the mend Going to try, we know our work will transcend

Could we get a grant from NIAID? (It looks great but we can't do it alone) NHGRI, please do this for me (It's too broad for us to fund on our own) We'll get by with the Common Fund as our friend We'll aim high and set the world on the mend Going to try, we know our work will transcend

(Do we need a new funding body?) We just need inter-Institute love (Could it be any body?) We just need strategic funds from above

(Can you state goals both defined and unique?) Yes, I'm certain that we'll meet them on time (Can Pls share expertise and techniques?) We'll all tell you this is "ours," not "mine" We'll get by with the Common Fund as our friend We'll aim high and set the world on the mend Going to try, we know our work will transcend

(Do we need a new funding body?) We just need inter-Institute love (Could it be any body?) We just need strategic funds from above

We'll get by with the Common Fund as our friend Going to try, we know our work will transcend We'll aim high and set the world on the mend We'll get by with the Common Fund as our friend Set the world on the mend

