



*Scripps Translational Science Institute  
In Partnership with AAAS/Science Translational Medicine  
Present*

## **The Future of Genomic Medicine VI Conference**

**Scripps Seaside Forum - Scripps Institution of Oceanography  
Robert Paine Scripps Forum for Science, Society and the Environment  
Samuel H. Scripps Auditorium  
La Jolla, California**

**Thursday March 7<sup>th</sup> 2013  
Friday March 8<sup>th</sup> 2013**



## Conference Faculty

### **David Altschuler, MD, PhD**

Professor of Genetics & Medicine, Harvard Medical School  
Center for Human Genetic Research  
Department of Molecular Biology  
Diabetes Unit, Department of Medicine  
Massachusetts General Hospital  
Richard B. Simches Research Center  
Director, Program in Medical and Population Genetics  
Broad Institute of Harvard and MIT

### **Russ B. Altman, MD, PhD**

Associate Professor of Genetics and of Medicine  
Stanford University  
Stanford, California

### **Katrina Armstrong, MD, MSCE**

Professor of Medicine  
University of Pennsylvania School of Medicine  
Philadelphia, Pennsylvania

### **Mark T. Bertolini**

Chairman, Chief Executive Officer and President  
Aetna

### **Cinnamon S. Bloss, PhD**

Assistant Professor  
Scripps Translational Science Institute, Scripps Health &  
The Scripps Research Institute  
La Jolla, California

### **Atul Butte, MD, PhD**

Associate Professor, Pediatrics – Systems Medicine  
Stanford School of Medicine  
Stanford, California

### **George M. Church, PhD**

Professor of Genetics,  
Harvard Medical School  
Director of Center for Computational Genetics

### **Francis S. Collins, MD, PhD**

Director, National Institutes of Health  
Bethesda, Maryland

### **Ronald DePinho, MD**

President  
The University of Texas MD Anderson Cancer Center  
Houston, Texas

### **Joseph R. Ecker**

Professor  
Plant Molecular and Cellular Biology Laboratory  
Salk International Council Chair in Genetics  
The Salk Institute  
La Jolla, California

### **Evan Eichler, PhD**

Investigator of the Howard Hughes Medical Institute  
Professor of Genome Sciences  
University of Washington  
Seattle, Washington

### **Jonathan Eisen, PhD**

Professor  
UC Davis Genome Center  
Department of Evolution and Ecology,  
College of Biological Sciences  
Department of Microbiology and Immunology,  
School of Medicine  
Davis, California

### **David B. Goldstein, PhD**

Director, Center for Human Genome Variation  
The Richard and Pat Johnson Distinguished  
University Professor  
Duke Center for Human Genomic Variation  
Durham, North Carolina

### **Jerome Groopman, MD**

Dina and Raphael Recanati Professor of Medicine,  
Harvard Medical School  
Chief of Experimental Medicine,  
Beth Israel Deaconess Medical Center

### **Susan Desmond Hellman, MD, MPH**

Chancellor  
University of California, San Francisco  
San Francisco, California

### **A.J. Jacobs**

Author of “Drop Dead Healthy”

### **Stephen F. Kingsmore, MB, ChB, BAO, DSc, FRCPath**

Director, Center for Pediatric Genomic Medicine  
Children’s Mercy Center for Pediatric Genomic Medicine

### **Elaine R. Mardis, PhD**

Professor, Genetics and Molecular Microbiology  
Co-Director of The Genome Institute  
Washington University  
Washington University School of Medicine at Washington  
University Medical Center  
St. Louis, Missouri

### **Siddhartha Mukherjee**

Assistant Professor of Medicine, Columbia University  
Physician, Columbia University Medical Center  
Author, The Emperor of All Maladies: A Biography of  
Cancer (2011 Pulitzer Prize for Non-Fiction)  
New York, New York

### **Stephen Quake, D.Phil**

Professor of Bioengineering

Co – Chair, Department of Bioengineering  
Investigator, Howard Hughes Medical Institute  
Stanford, California

**Michael Synder**

Professor and Chair of Genetics  
Director, Stanford Center for Genomics and  
Personalized Medicine  
Stanford, California

**Eric Schadt, PhD**

Professor and Chair Genetics and Genomic Sciences  
Director, Institute for Genomics and Multi Scale Biology  
Mount Sinai School of Medicine  
New York, New York

**Randal W. Scott, PhD**

Founder and Director  
Genomic Health  
Chief Executive Officer  
InVitae™ Corporation

**Ali Torkamani, PhD**

Assistant Professor of MEM  
Assistant Faculty, Scripps Genomic Medicine  
Department of Molecular and Experimental Medicine  
La Jolla, California

**Harold E. Varmus**

Director, National Cancer Institute

**Peter Visscher, PhD**

Senior Principle Research Fellow, QIMR  
Honorary Professorship,  
Institute for Molecular Bioscience

**Bert Vogelstein, MD**

Howard Hughes Medical Institute Investigator  
Johns Hopkins University  
Baltimore, Maryland

**Daniel D. Von Hoff, MD**

Physician-in-Chief, Distinguished Professor  
Translational Genomics Research Institute (TGen)  
Professor of Medicine, Mayo Clinic and  
Chief Scientific Officer  
Scottsdale Healthcare and US Oncology

**Daniel B. Vorhaus, JD, MA**

Attorney, Robinson Bradshaw & Hinson  
Editor, Genomics Law Report  
New York, New York

**George Weinstock, PhD**

Professor, Department of Genetics  
Associate Director, The Genome Institute

Washington University  
St. Louis, Missouri

**Janet Woodcock, MD**

Director, Center for Drug Evaluation and Research  
U.S. Food and Drug Administration

**Elias Zerhouni, MD**

Member of the Executive Committee and the  
Global Leadership Team  
President, Global R&D  
Sanofi

## Program 2013

Thursday, March 07, 2013

- 7:30 a.m. Registration and Breakfast
- 8:00 a.m. **Welcome and Opening Remarks**  
Eric J. Topol, MD, Director, Scripps Translational Science Institute
- 8:15 a.m. **Patient/Family # 1: Idiopathic Condition**

### Morning Session: Sequencing Individuals

- 8:45 a.m. **Panoramics**  
Michael Snyder
- 9:05 a.m. **Finding the Causative Mutation**  
Ali Torkamani, PhD
- 9:25 a.m. **What Data to Give Back**  
Cinnamon Bloss, PhD
- 9:45 a.m. **Morning Panel Discussion/Q&A**  
Morning Session Speakers and Moderators
- 10:10 a.m. *Break, View Exhibits and Networking*
- 10:40 a.m. **State of the Art: Pharmacogenomics**  
Russ Altman, MD, PhD

**11:00 a.m. Keynote Address: Genomics is Changing Medicine**  
Francis S. Collins, MD, PhD

- 11:45 a.m. Q&A with Dr. Francis Collins
- Noon *Lunch, View Exhibits and Networking*

### Afternoon Session I: Hot Topics in Genomic Medicine

- 1:15 p.m. **What Causes De Novo Mutations?**  
Evan Eichler, PhD
- 1:35 p.m. **Big Data and Genomics**  
Eric Schadt, PhD
- 1:55 p.m. **Bending the Cost Curve with Genomics**  
Katrina Armstrong, MD, MSCE
- 2:15 p.m. **How Genomics Will Change Infectious Disease Diagnosis and Prescription**  
George Weinstruck
- 2:35 p.m. **Afternoon Session I Panel Discussion/Q&A**  
Afternoon Session I Speakers and Moderators
- 3:00 p.m. *Break, View Exhibits and Networking*

### Afternoon Session II: Hot Topics in Genomic Medicine (*continued*)

- 3:30 p.m. **The Under – Appreciated Epigenome**  
Joseph R. Ecker
- 3:50 p.m. **How the Microbiome Will Become the Big Player**  
Jonathan Eisen, PhD
- 4:10 p.m. **Genomics of the Neonates Intersection of Genomics and Neonates**  
Stephen F. Kingsmore, MB, ChB, BAO, DSc, FRCPath
- 4:30 p.m. **Genomics of the Unborn**  
Stephen Quake, D.Phil
- 4:50 p.m. **Afternoon Session II Panel Discussion/Q&A**  
Afternoon Session I Speakers and Moderators
- 5:15 p.m. *Adjourn*

**5:15 – 7:30 p.m.**

**Thursday Evening Welcome Reception at Scripps Seaside Forum**

Location: 8610 Kennel Way

La Jolla, California 92037

**Friday, March 08, 2013**

7:30 a.m. Registration and Breakfast

**Morning Session: A Revamped Approach to Cancer**

8:00 a.m. **Patient/Family # 2: Genetically Guided Cancer Prescription**

8:30 a.m. **What are the Fundamental Challenges?**

Siddhartha Mukherjee

9:00 a.m. **Sequencing to Guide Therapy**

Elaine Mardis, PhD

9:20 a.m. **Immunotherapy for Cancer**

Jerome Groopman, MD

9:40 a.m. **Memorial Sloan Kettering Cancer Center – Using IBM Watson to Cure Cancer**

Craig B. Thompson

10:00 a.m. **Innovations at MD Anderson to Change the Face of Cancer**

Ronald DePinho, MD

10:20 a.m. **Morning Panel Discussion/Q&A**

Morning Session Speakers and Moderators

10:35 a.m. *Break, View Exhibits and Networking*

11:00 a.m. **Taking Genomics Into the Daily Practice of Oncology**

Danel D. Von Hoff, MD

11:20 a.m. **Toward Precision Medicine**

Susan Desmond Hellman, MD, MPH

11:40 a.m. **Beyond Genomic Health**

Randy Scott, PhD

Noon *Lunch, View Exhibits and Networking*

**1:30 p.m. Keynote Address: Brighter Prospects for Cancer Curative Means?**

Harold E. Varmus

2:00 p.m. *6<sup>th</sup> Annual Scripps Genomic Medicine Award Presentation*

2:10 p.m. **Debate: The Common Variant/Common Disease Hypothesis is Dead**

David B. Goldstein, PhD and Peter Visscher, PhD

**Afternoon Session I: Predicting Susceptibility to Disease**

2:40 p.m. **What We Cannot Do**

Bert Vogelstein, MD

3:00 p.m. **What We Will Be Able to Do**

George M. Church, PhD

3:20 p.m. **What are the Boundaries of Impact of Human Genomic Variation?**

David Altschuler, MD, PhD

3:40 p.m. **How Does Big Data Change the Scene?**

Atul Butte, MD, PhD

4:00 p.m. **Afternoon Panel I Discussion/Q&A**

Afternoon Session I Speakers and Moderators

4:15 p.m. *Break, View Exhibits and Networking*

**Afternoon Session II: Critical Insights in How to Move Forward**

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- 4:30 p.m.      **Drop Dead Healthy**  
A.J. Jacobs
- 4:50 p.m.      **How Insurers Can Adapt to Genomic Medicine**  
Mark T. Bertolini
- 5:10 p.m.      **Drug Development in a New Era**  
Elias Zerhouni, MD
- 5:30 p.m.      **The Intersection of Genomics and Regulatory Issues**  
Janet Woodcock, MD
- 5:50 p.m.      **Legal Implications of Genomics in the Clinic**  
Daniel B. Vorhaus, JD, MA
- 6:10 p.m.      **Afternoon Session II Panel Discussion/Q&A**  
Afternoon Session II Speakers and Moderators
- 6:30 p.m.      *Adjourn*

**6:30 – 7:30 p.m.**

**Friday Evening Closing Reception at Scripps Seaside Forum**

Location: 8610 Kennel Way

La Jolla, California 92037

**For additional information contact:**

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**Conference webpage:** *forthcoming*

**Facebook page:** *forthcoming*

**Twitter Hashtag:** #FOGM13

**Scripps Conference Services & CME:** [www.scripps.org/conferenceservices](http://www.scripps.org/conferenceservices)

**Scripps Translational Science Institute (STSI):** [www.stsiweb.org](http://www.stsiweb.org)



**Future of Genomic Medicine V Conference, 2012**

