# The Future of Genomic Medicine IX

Thursday, March 3 and Friday, March 4, 2016 • Scripps Institution of Oceanography • La Jolla, California



### Course Introduction

#### Course Overview

In collaboration with AAAS/Science Translational Medicine we invite you to another exciting two day program on Thursday, March 3 and Friday, March 4, 2016 in beautiful San Diego, California. The 2016 program will again be held at Scripps Institution of Oceanography.

The 9th Future of Genomic Medicine conference will be the next iteration of taking genomic knowledge to transform the daily practice of medicine. To do this, we have patients present their story of how genomics affected their medical status, and have an international faculty of experts in genomics, science and medical journalism, and the life science industry provide critical perspective. This year we will be paying particular attention to the exciting area of genomic editing to treat particular diseases, cancer (a disease of the genome), and the genomics of rare and unknown diseases. Furthermore, we will delve into to the hot topics of the microbiome, genomic-guided drug therapies and genomic analytics. The overarching goal of the conference is to spearhead efforts to use genomic knowledge to change medicine and make it far more precise and individualized.

We look forward to your participation and another successful conference.

Eric J. Topol, MD

### Course Director

#### **Conference Highlights**

- Voice of the patient represented throughout the conference
- Renowned faculty representing the country's leading institutions
- Multiple panel discussion segments with ample question and answer time with faculty
- Additional networking opportunities

#### **Educational Objectives**

After attending this activity, participants should be able to:

- Demonstrate the unmet needs of medicine today with respect to more targeted, individualized prevention and treatments.
- · Discuss the opportunities of the genome, proteome, metabolome discovery to change medical practice as it exists today.
- Assess how changes and advances in technology are rapidly ushering in a whole array of new pathways for individualized medicine of the future.
- · Explore specific strategies in cancer, idiopathic and pharmacogenomic futuristic interventions.

#### **Target Audience**

- Physicians
- Human geneticists
- · Genomic scientists
- Researchers
- · Health care professionals of all disciplines interested in the future of medicine, especially with respect to individualized therapies

## Disclosures and About Scripps

#### Disclosure

#### **Commercial Support**

This course is supported, in part, by educational grants from industry. At the time of printing, a complete listing of commercial supporters was not available. Appropriate acknowledgement will be given to all supporters at the time of the educational activity.

#### **Cultural and Linguistic Competency**

This activity is in compliance with California Assembly Bill 1195 which requires that all CME activities comprising a patient care element include curriculum addressing the topic of cultural and linguistic competency. The intent of this bill is to ensure that health care professionals are able to meet the cultural and linguistic concerns of a diverse patient population through effective and appropriate professional development. Cultural and linguistic competency was incorporated into the planning of this activity.

#### **About Scripps Translational Science Institute**

The Scripps Translational Science Institute (STSI) aims to replace the status-quo of one-size-fits-all-medicine with individualized health care that is based on the known genetic factors influencing health and disease and that takes advantage of advances in digital technology for real-time health monitoring.

Since its founding in 2006 by Scripps Health, STSI has been distinguished by its leadership in translational genomics and for harnessing digital, or wireless, medical technology for health monitoring of individual patients. In addition, it is the only member of the National Institutes of Health's Clinical and Translational Science Award (CTSA) consortium that is not affiliated with a university.

STSI hybridizes The Scripps Research Institute (TSRI) 's considerable biomedical science expertise with Scripps Health's exceptional patient care and clinical research. As a translational bridge between TSRI and Scripps Health, STSI fosters innovative programs and methodology, provides an optimal setting for training and education and accelerates the conduct of studies that will have the greatest potential impact on the practice of health care in the clinic and the community.

For more information on the Scripps Translational Science Institute, visit www.stsiweb.org.

## Faculty

#### **Course Director**

#### Eric J. Topol, MD

Director Scripps Translational Science Institute Chief Academic Officer, Scripps Health Professor of Genomics The Scripps Research Institute La Jolla. California

#### **Planning Committee**

#### Kristian Andersen, PhD

Assistant Professor The Scripps Research Institute Director, Infectious Disease Genomics Scripps Translational Science Institute La Jolla, California

#### Laura Nicholson, MD, PhD

Co-Director of Education Scripps Translational Science Institute Associate Program Director, Medicine Residency, Scripps Green Hospital La Jolla, California

#### **Emily Spencer, PhD**

Assistant Professor Scripps Translational Science Institute Director, Clinical Genomics Program La Jolla, California

#### Steven R. Steinhubl, MD

Director of Digital Medicine Scripps Translational Science Institute La Jolla, California

#### Andrew Su, PhD

Associate Professor The Scripps Research Institute La Jolla. California

#### Ali Torkamani, PhD

Director of Genome Informatics and Drug Discovery Scripps Translational Science Institute Assistant Professor of Molecular and Experimental Medicine The Scripps Research Institute La Jolla, California

#### Nathan E. Wineinger, PhD

Assistant Professor
Director of Biostatistics
Scripps Translational Science Institute
La Jolla, California

#### **Faculty**

#### Gonçalo Abecasis, PhD

Chair Department of Biostatistics School of Public Health University of Michigan Ann Arbor, Michigan

#### Atul Butte, MD, PhD

Director

University of California, San Francisco
Executive Director for Clinical Informatics
University of California Health
San Francisco, California

#### Charles Chiu, MD, PhD

Associate Professor Laboratory Medicine and Medicine Infectious Diseases University of California, San Francisco San Francisco, California

#### George M. Church, PhD

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

#### Mirza Cifric

Founder and Chief Executive Officer Veritas Genetics Boston, Massachusetts

#### Andrew J. Conrad, PhD

Chief Executive Officer Google Life Sciences Mountain View, California

#### Chad Cowan, PhD

Harvard University Department of Stem Cell and Regenerative Biology Massachusetts General Hospital Cambridge, Massachusetts

#### Zubin Damania, MD

Chief Executive Officer Turntable Health Chief Rapper, ZDogg LLC Las Vegas, Nevada

#### Helmy Eltoukhy, PhD

Chief Executive Officer Guardant Health Redwood City, California

#### Elad Gil

Chief Executive Officer Color Genomics San Francisco, California

#### David B. Goldstein, PhD

Director Institute for Genomic Medicine New York City, New York

#### Robert C. Green, MD, MPH

Director Genomes2People Research Program Division of Genetics Brigham and Women's Hospital, Broad Institute and Harvard Medical School Boston, Massachusetts

#### Hakon Hakonarson, MD, PhD

Director, Center for Applied Genomics The Children's Hospital of Philadelphia University of Pennsylvania School of Medicine Philadelphia, Pennsylvania

#### David Haussler, PhD

Investigator
Howard Hughes Medical Institute
Scientific Director
UC Santa Cruz Genomics Institute
Santa Cruz, California

#### Erika Check Hayden

Reporter, *Nature*Professor
University of California, Santa Cruz
San Francisco, California

#### Elizabeth Holmes

Chief Executive Officer Theranos Palo Alto, California

#### Leroy Hood, MD, PhD

President Institute for Systems Biology Seattle, Washington

#### Tuuli Lappalainen, PhD

Assistant Professor, Department of Systems Biology at Columbia University Junior Investigator and Core Member New York Genome Center New York City, New York

#### David H. Ledbetter, PhD, FACMG

Executive Vice President and Chief Scientific Officer Geisinger's Autism & Developmental Medicine Institute (ADMI) Lewisburg, Pennsylvania

#### Nick Leschly

Chief Executive Officer Bluebird Bio Cambridge, Massachusetts

#### Elisa Long, PhD

Assistant Professor in Decisions, Operations & Technology Management University of California, Los Angeles Los Angeles, California

#### Elaine R. Mardis, PhD

Robert E. and Louise F. Dunn Distinguished Professor of Medicine Co-director, McDonnell Genome Institute at Washington University St. Louis, Missouri

#### Jessica Richman

Co-Founder uBiome

#### Beth A. Shapiro, DPhil

Associate Professor Department of Ecology & Evolutionary Biology University of California, Santa Cruz Santa Cruz, California

#### Patrick Soon-Shiong, MD

Surgeon and Medical Researcher University of California, Los Angeles Businessman and Philanthropist Los Angeles, California

#### Victor E. Velculescu, MD, PhD

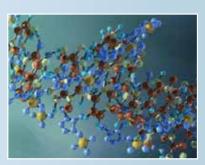
Co-Director, Cancer Biology Professor, Oncology and Pathology Johns Hopkins University Kimmel Cancer Center Baltimore, Maryland

#### **Ron Winslow**

Deputy Editor, Health and Science and Senior Medical and Health Care Writer Wall Street Journal

#### Anne E. Wojcicki

Chief Executive Officer and Co-Founder 23andMe Mountain View, California



## Agenda

### Thursday, March 3, 2016

7:30 a.m. Registration and Breakfast

8:00 a.m. Welcome and Opening Remarks

Eric Topol

8:05 a.m. Patient # 1: Elisa Long

8:50 a.m. Patrick Soon-Shiong

9:20 a.m. Q&A with Patrick Soon-Shiong

9:30 a.m. Break, View Exhibits and Networking

#### **Morning Session I: Where do we go from here?**

10 a.m. George M. Church

10:20 a.m. Leroy Hood

10:40 a.m. Andrew Conrad

11 a.m. Charles Chiu

11:20 a.m. Kristian Andersen

11:40 a.m. Morning Session I Panel Discussion/Q&A

Noon 9TH ANNUAL GENOMIC MEDICINE AWARD Lunch, View Exhibits and Networking





## Afternoon Session I: Democratizing DNA; Citizen Science

12:45 p.m. Elizabeth Holmes

1:05 p.m. Anne Wojcicki

1:25 p.m. Jessica Richman

1:45 p.m. Elad Gil

2:05 p.m. Mirza Cifric

2:35 p.m. Afternoon Session I Panel Discussion/Q&A

3:05 p.m. Break, View Exhibits and Networking

## Afternoon Session II: Can we edit humans and make them healthier?

3:35 p.m. Nick Leschly

3:55 p.m. Chad Cowan

### **Afternoon Session III: Late Breaking Topics**

4:15 p.m. David Haussler

4:35 p.m. Hakon Hakonarson

4:55 p.m. Afternoon Session II and III Panel Discussion/Q&A

5:25 a.m. Adjourn

# Thursday Evening Welcome Reception at Scripps Seaside Forum (until 7:30 p.m.)

Location: 8610 Kennel Way La Jolla, California 92037



### Friday, March 04, 2016

7:30 a.m. Registration and Breakfast

8:00 a.m. Patient #2/Molecular Autopsy

8:30 a.m. Ali Torkamani

#### **Morning Session I: Cancer**

8:50 a.m. Elaine Mardis

9:10 a.m. Victor Velculescu

9:30 a.m. Helmy Eltoukhy

9:50 a.m. Morning Session I Panel Discussion/Q&A

10:20 a.m. Break, View Exhibits and Networking

### **Morning Session II: Big Projects, Big Data**

10:50 a.m. David Ledbetter

11:10 a.m. David Goldstein

11:30 a.m. Atul Butte

11:50 a.m. Gonçalo Abecasis

12:10 p.m. Morning Session II Panel Discussion/Q&A

12:40 p.m. Lunch, View Exhibits and Networking

#### **Afternoon Session I: Hot Topics**

1:25 p.m. Beth Shapiro

1:45 p.m. Robert Green

2:05 p.m. Tuuli Lappalainen

2:25 p.m. Afternoon Session I Panel Discussion/Q&A

2:55 p.m. Break, View Exhibits and Networking

### **Afternoon Session II: The Hope, Hype and Humor**

3:25 p.m. Ericka Check Hayden

3:45 p.m. Ron Winslow

4:05 p.m. Afternoon Session II Panel Discussion/Q&A

4:35 p.m. Zubin Damania

5:05 p.m. Closing remarks and Adjourn

# Friday Evening Closing Reception at Scripps Seaside Forum (until 7:30 p.m.)

Location: 8610 Kennel Way La Jolla, California 92037





### Conference Location & Hotel Information



# Robert Paine Scripps Forum for Science, Society and the Environment

#### Samuel H. Scripps Auditorium

8610 Kennel Way, La Jolla, California 92037



#### **Parking and Transportation:**

- IMPORTANT! You CAN NOT park in the lots outside of Scripps Seaside Forum. You will be ticketed.
- Directional parking signs will be displayed and additional information regarding available parking will be provided upon registration.
- Parking is available in the following locations:
  - The Pangea Parking Garage located across the street from The Estancia La Jolla Hotel & Spa. Parking is available for visitors on floors 5 & 6. The cost is \$8/day. If this parking option is utilized you may walk across the street to The Estancia La Jolla Hotel & Spa to take advantage of the shuttle to the conference venue.
  - The underground parking lot at La Jolla Shores Hotel (\$10/vehicle) Please see the front desk at the hotel and mention you are attending the Scripps Genomic Medicine
    Conference in order to obtain a parking pass to receive the discounted rate.
  - Kellogg Park (free)
  - Streets around Scripps Institution of Oceanography (Free. Please note that street sweeping takes place on El Paseo Grande every Thursday from 8 – 11 a.m. Please read signs regarding this carefully
  - UCSD Employees/Faculty/Students are encouraged to park in a UCSD parking lot and take the SIO shuttle to/ from Scripps Seaside Forum.
  - You may also park and walk to/from La Jolla Shores Hotel and Kellogg Park to Scripps Seaside Forum (approx. 15 minutes).
  - Handicap parking is available in the lots outside of the forum. These spots are marked and appropriate signage must be displayed.

### **Recommended Lodging**

#### Estancia La Jolla Hotel & Spa

9700 N. Torrey Pines Road La Jolla, California 92037

Located only one mile from the conference venue, this beautiful hotel is situated adjacent to the Salk Institute for Biological Studies, the University of California San Diego (UCSD), the village of La Jolla, beaches, shopping, and San Diego's world-class attractions.

**Make your reservations early!** A specially priced block of rooms is being held until **Monday, February 22, 2016.** After that time, reservations will be accepted on a space and rate availability basis only. Be sure to request the Scripps reduced rate of \$199 per night plus tax. This low rate also includes:

- Discounted parking: \$10/overnight and \$8/day (valet-only)
- Complimentary guest room internet service
- 10% Spa Discount, Monday Friday for conference attendees
- Discounted Hospitality Services Fee of \$10

#### Reservations:

**Online:** www.estancialajolla.com (Enter code: **FOGM16** when making your reservation online in order to receive the reduced rate)

Phone: (877) 437-8262 (Reference "Scripps Genomic Medicine Conference" when making your reservation in order to receive the reduced rate.)

#### La Jolla Shores Hotel

8110 Camino Del Oro La Jolla, California 92037

Located only steps from the conference venue, La Jolla Shores Hotel is one of the select few hotels in San Diego situated directly on the beach.

Make your reservations early! A specially priced block of rooms is being held until Thursday, February 19, 2016. After that time, reservations will be accepted on a space and rate availability basis only. Be sure to request the Scripps reduced rate of \$199 per night plus tax for the Garden View Hotel room, \$209 per night plus tax for the Coast View room or \$239 per night plus tax for the Beach Front room. This low rate also includes:

- Discounted parking: \$10/day and \$18/ overnight (self-only)
- · Complimentary guest room internet service

#### Reservations:

**Online:** www.ljshoreshotel.com (Enter group code: **FOGMIX** when you "click here for special rates.")

Phone: (866) 392-8762 (Reference "The Genomic Medicine Conference" when making your reservation in order to receive the reduced rate.)

**Please note:** Attendees who book their room through an online, third-party service (Hotels.com©, Expedia.com©, Priceline.com©, etc.) are not eligible to receive the amenities listed above.

## Download the Scripps Translational Science Institute app for your smart phone or tablet!

All conference information including a detailed agenda, faculty listing, faculty disclosures, industry support, attendee list, and course materials can be found on the free Scripps Translational Science Institute conference app for iPhone, and Android. Instructions regarding accessing the conference app will be sent to you upon registration.

### The Future of Genomic Medicine IX

#### **Conference Fees**

#### Space is limited, so register early!

Included: Course tuition, access to conference materials (via mobile app), internet in meeting space, breakfasts, breaks, lunches and evening functions associated with this conference.

Not Included: Travel costs, lodging, parking, and dinners

Please note, this course does not offer Continuing Medical Education (CME) credits.

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| Main Conference Registration Fees   |                     |   |
|---|---------------------|---|
|   | Until Feb. 19       | On-site after Feb. 19                   |
| Registration Fee  | \$200               | \$225                                   |
| Scripps Translational Science Institute & Cypher Genomics employees (Registration staff will verify employment)   | \$50                | \$75                                    |
| Students, Residents, Fellows (Clinical – registration staff will verify status)  Please call Scripps Conference Services & CME at (858) 652–5400 to inquire about the student, resident, fellow registration process. |                     |   |
| Would you like to receive the Scripps Conference Services & CME email newsletter?  Yes No   |                     |   |
| By completing this registration form and returning it to Scripps you are acknowledging compliance with all attendance policies.   |                     |   |
| Please print clearly. Should we have any conference communications or updates please provide your direct contact information.   |                     |   |
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DATE

#### WAYS TO REGISTER

Online: www.stsiweb.org/event/fogm16/

Mail: Scripps Conference Services & CME Future of Genomic Medicine Conference

> 11025 North Torrey Pines Road Suite 200, Maildrop: SCRC200 La Jolla, California 92037

(858) 652-5565 Fax:

#### **ATTENDANCE POLICIES**

#### **Registration Confirmation**

A confirmation letter will be e-mailed to you upon receipt of the conference registration form and payment. If you have not received it within two weeks, please contact the Scripps Conference Services & CME office at (858) 652-5400.

#### **Attendee Cancellation, Substitution, Refund**

The course tuition is refundable, minus a \$50 processing fee, if your cancellation is received in writing no later than February 19, 2016. Attendee substitutions are allowed, but notification must be made in writing by February 19, 2016. After this date, under no circumstances will refunds, credits, or substitutions be granted. No refunds or credits will be given to "no shows."

#### **Guest Attendance Policy**

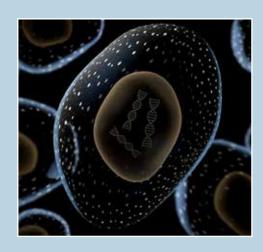
All conference activities (including educational sessions, meal functions, exhibit hall, etc.) are exclusively reserved for conference attendees. Non-registered guests (including children, family members, colleagues, etc.) are not allowed in the conference areas. Badges provided at registration are required for entrance into all functions and will be strictly enforced.

#### Scripps Conference Modification or Cancellation

Scripps reserves the right to modify the course's schedule or program as necessary. Scripps also reserves the right to cancel this conference, in which case a full refund of the registration fee will be provided. We are unable to refund any travel costs (flight, hotel, etc.) in the case of Scripps cancellation.

#### **Recording and Photography Clause**

Scripps reserves exclusive rights to record (audio and video) and/or photograph all conference proceedings for use in marketing materials, presentations and course content sales.





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Presented in partnership with AAAS/Science Translational Medicine







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#### **Conference Highlights**

Voice of the patient represented throughout the conference

Renowned faculty representing the country's leading institutions

Multiple panel discussion segments with ample question and answer time with faculty

Additional networking opportunities

Select lectures will be webcast in real time for participants around the world

Scan this QR Code to be directed to the conference website.



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