

Broad Institute Seventh Annual Retreat

November 7TH – 8TH | 2011

New Research Building
Harvard Medical School



Seventh Annual
Retreat

November 7TH
2011

HMS
New Research
Building

Agenda | Monday November 7TH 2011

8:15 AM – 9:00 AM

Registration and Poster Session I Set-Up

Breakfast

9:00 AM – 9:10 AM

Welcome

David Altshuler

9:10 AM – 10:40 AM

First Plenary Session

Emerging Technologies

9:10 Niall J. Lennon

The Genome Sequencing Platform apps 2.0

9:25 Damian Young

Diversity-oriented fragment screening towards selective modulators for difficult targets

9:40 Feng Zhang

Genome engineering with TALEs

9:55 Alex Shalek

A vertical silicon nanowire platform for chemically perturbing hard-to-transfect cells

10:10 John Doench

Bugs into features: Off-target effects in RNAi screens

10:25 Philipp Mertins

Deciphering cellular signaling networks by quantitative phosphoproteomics

10:40 AM – 11:00 AM

Break

11:00 AM – 12:00 PM

Second Plenary Session

From Genetic Variation to Disease I

11:00 Danielle Perrin

*High-throughput process development in the
Genome Sequencing Platform*

11:15 Mike Lawrence

*The spectra of somatic mutations and
rearrangements across tumor types*

11:30 Peter Hammerman

*Comprehensive genomic analysis of cancers:
Squamous cell lung cancer as an example*

11:45 Erez Lieberman Aiden

Culturomics

12:00 PM – 2:00 PM

Poster Session I & Lunch

*Genome Biology, Chemical Biology and Novel
Therapeutics, Cell Circuits and RNAi,
Cancer, Metabolism*

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2:00 PM – 3:45 PM

Third Plenary Session

From Genetic Variation to Disease II

2:00 James Sun

A direct characterization of human mutation

2:15 Ben Neale

*Full exome sequencing of autism cases, families,
and controls*

2:30 Ganesh Mochida

*The Broad Mendelian sequencing project:
High-throughput identification of genes for
intellectual disability*

2:45 Ron Do

*A rare view of coding mutations and risk for
myocardial infarction*

3:00 David N. Reshef

Detecting novel associations in large data sets

3:15 Ke Liu

*Identification of small-molecule probes targeting
the new activity of IDH1/2 observed in cancer*

3:30 Megan Rokop

*The Educational Outreach Program: Connecting
Broadies to the next generation of scientists*

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Agenda | Tuesday November 8TH 2011

8:15 AM – 9:00 AM

Registration and Poster Session II Set-Up

Breakfast

9:00 AM – 10:30 AM

Fourth Plenary Session

How the Genome Works

9:00 Oren Ram

*Systematic screening of antibodies for 145
chromatin regulators by ChIP-string*

9:15 Alon Goren

*Combinatorial patterning of chromatin regulators
in human cells*

9:30 Tarjei Mikkelsen

Massively parallel reporter assays

9:45 Moran Cabili

*Integrative annotation of human large intergenic
non-coding RNAs reveals global properties and
specific subclasses*

10:00 Manuel Garber

RNA-seq informatics at the Broad

10:15 Kristin Ardlie

The Genotype Tissue Expression Project

10:30 AM – 11:00 AM

Break

11:00 AM – 12:00 PM

Fifth Plenary Session

Deciphering Disease Biology

11:00 Ester Kwon

Validation of schizophrenia-associated genes as miR-137 targets

11:15 Eric Alm

Microbiome: The human ecosystem in health and disease

11:30 Yonatan Grad

Whole-genome epidemiology of the E. coli O104:H4 outbreaks in Europe, 2011

11:45 Peter Miller

Expanding therapeutic target discovery in hematopoietic disease by incorporating physiologic complexity into small-molecule and genetic screens

12:00 Jesse Boehm

SPARCing collaboration

12:15 PM – 2:00 PM

Poster Session II & Lunch

Medical and Population Genetics, Infectious Disease, Psychiatric Disease, Broad Scientific Medley

Associate Member Welcome (concurrent)

Bray Room

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Sixth Plenary Session

Building Better Drugs

2:00 Alice Ting

A method for mapping the proteome of spatially defined compartments in living cells

2:15 Sarah Grant

Small-molecule probes of non-replicating M. tuberculosis biology

2:30 Levi Garraway

Profiling, perturbing, and predicting tumor drug responses in the Cancer Cell Line Encyclopedia

2:45 Ravid Straussman

Microenvironment-induced chemoresistance

3:00 Aravind Subramanian

Connectivity Map

3:15 Michelle Palmer

A view into the Chemical Biology probe pipeline

3:30 Mohit Jain

Integrative profiling of cancer cell metabolism

3:45 PM – 4:00 PM

Closing Remarks

Eric Lander