

PGRN The Expanding Universe of Pharmacogenomics

Sponsored by the Pharmacogenomics Research Network (PGRN)

Monday, October 17, 2016

Vancouver Convention Centre, West Building Rooms 109/110

Vancouver, Canada

Introductory Session

1:00 – 1:15 pm **Welcome and Introductions**
Ronald Krauss, MD (Children's Hospital Oakland Research Institute)

Session 1: Innovative Approaches for Pharmacogenomic Discovery

Moderators: Ronald Krauss, MD (Children's Hospital Oakland Research Institute) and Kathy Giacomini, PhD (University of California San Francisco)

1:15 – 1:55 pm **Mouse Models for Pharmacogenomic Discovery**
Karen Reue, PhD (University of California Los Angeles)

1:55 – 2:35 pm **Functional Characterization of Gene Regulatory Elements**
Nadav Ahituv, PhD (University of California San Francisco)

2:35 – 3:15 pm **Patient-Derived Induced Pluripotent Stem Cells in Cardiovascular Precision Medicine**
Joseph Wu, MD, PhD (Stanford University)

3:15 – 3:30 pm **BREAK**

Session 2: Pharmacogenomics in Drug Discovery

Moderators: Douglas Fowler, PhD (University of Washington) and Mignon Loh, MD (University of California San Francisco)

3:30 – 4:10 pm **Massively Parallel Combinatorial Genetic Perturbation Screening with CRISPR-Cas9 in Human Cells**
Cheryl Cui (Massachusetts Institute of Technology)

4:10 – 4:50 pm **Applications of Human Genetics in Drug Discovery to Present and Future Indications**
Lon Cardon, PhD (GlaxoSmithKline)

4:50 – 5:30 pm **Long noncoding RNA in statin pharmacogenomics**
Marisa Wong Medina, PhD (Children's Hospital Oakland Research Institute)

5:30 – 5:45 pm **Closing Remarks**

5:45 – 6:30 pm **Reception and Poster Session**

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Session 3: Technologies in Pharmacogenomic Studies

Moderators: Scott Weiss, MD (Harvard University) and Steve Scherer, PhD (Baylor College of Medicine)

8:00 – 8:40 am Data Integration Approaches to Novel Therapeutics

Nancy Cox, PhD (Vanderbilt University)

8:40 – 9:20 am Methods of Integrating Data to Uncover Pharmacogenomic Phenotypes

Marylyn Ritchie, PhD (Penn State University)

9:20 – 10:00 am Tissue-Specific Integrated View of Complex Human Disease

Olga Troyanskaya, PhD (Princeton University)

10:00 – 10:15 am BREAK

Session 4: Panel Discussion: Issues for Clinical Implementation of Pharmacogenomic Testing

Moderator: Mary Relling, PharmD (St. Jude Children's Research Hospital)

Panelists: Dan Roden, MD (Vanderbilt University/eMerge)
David Litwack, PhD (U.S. Food and Drug Administration)
Scott Weiss, MD (Harvard Medical School)

10:15 – 11:45 am Moderated Panel Discussion

11:45 – 1:00 pm Lunch Break (on your own)

Session 5: Pharmacogenetics in a Human Evolution Context

Moderator: Neil Risch, PhD (University of California San Francisco) and Sarah Tishkoff, PhD (University of Pennsylvania)

1:00 – 1:05 pm Introduction

Neil Risch, PhD (University of California San Francisco)

1:05 – 1:35 pm Influence of Ancestry on Pharmacogenomic Traits

Stuart Scott, PhD (Icahn School of Medicine at Mount Sinai)

1:35 – 2:05 pm Evolution of Drug Metabolizing Enzymes

Silvia Fuselli, PhD (University of Ferrara)

2:05 – 2:35 pm Impact of Ancestry and Natural Selection on African Genetic Diversity

Sarah Tishkoff, PhD (University of Pennsylvania)

2:35 – 3:05 pm Unexpected Impacts of Evolutionary Selection on Genes Relevant for Targeted Therapeutics in Cancer

Geoffrey H. Siwo, PhD (IBM Research Africa)

3:05 – 3:30 pm Panel Discussion of the Speakers