Conference Moderators


Jeffrey Bishop


Jacob Brown


Mark Kirstein


Robert Straka


Brian VanNess

PHARMACOGENOMICS: Genomic Testing to Individualize Drug Therapy

Organized by Department of Experimental and Clinical Pharmacology College of Pharmacy, University of Minnesota, Minneapolis, MN


William Oetting


R. Stephanie Huang

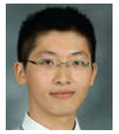
2018 Conference Planning Committee

Pamela Jacobson, Conference Chair

William Oetting	Mark Kirstein	Samuel Callisto
R. Stephanie Huang	Robert Straka	Jay (Ya-Feng) Wen
Jeffrey Bishop	Brian VanNess	Zachary Rivers
Jacob Brown	David Stenehjem	Summer (Dao) Tran

PhD Student Trainees


Samuel Callisto


Jay (Ya-Feng) Wen


Zachary Rivers


Summer (Dao) Tran

Description Pharmacogenomics (PGx) is the science of how an individual's genetic background impacts response to medications. The field is rapidly emerging as a tool for clinical care. Although the field has existed for over 30 years most clinicians remain unsure how to use PGx information. This one-day conference will provide education on a range of topics including somatic mutations and selection of targeted therapies, variants involved in altered analgesic responses, clinical guidelines, use of PGx in children and minority populations, evidence for cost effectiveness and improved quality of care with PGx guided therapies.

Objectives Following completion of this activity, the learner will be able to:

1. Discuss recent advances and future directions in pharmacogenomics.
2. Define how genomic medicine is used in selecting cancer regimens and targeted agents.
3. Describe pharmacogenomic implementation efforts in the U.S.
4. Describe the challenges in using pharmacogenomic testing in minority populations and children where there is limited data.
5. Assess how pharmacogenomic guided therapy could be applied in your practice setting.
6. Discuss the cost effectiveness and reimbursement for pharmacogenomic testing and the challenges related to assessing cost savings.

#UMNPGx2018

Special Thanks to our Exhibitors

AMGEN
AstraZeneca
BAYER
Bristol-Myers Squibb
FOUNDATION MEDICINE
Genentech
A Member of the Roche Group
genesight
Changing lives through genetic insight.
illumina
Incyte
IPSEN
Innovation for patient care
janssen
PHARMACEUTICAL COMPANIES OF Johnson & Johnson
Jazz Pharmaceuticals
MAYO CLINIC
Mayo Medical Laboratories
NOVARTIS
ONEOME
Pfizer
IPM PUMA
Institute of Personalized Medicine
PGx University of Minnesota Alliance
SANDOZ A Novartis Division
SANOFI GENZYME
teva
UNIVERSITY OF MINNESOTA
College of Pharmacy
DEPARTMENT OF EXPERIMENTAL & CLINICAL PHARMACOLOGY

PHARMACOGENOMICS CONFERENCE 2018

June 22, 2018
McNamara Alumni Center
University of Minnesota

PHARMACOGENOMICS: Genomic Testing to Individualize Drug Therapy

IPM PUMA
Institute of Personalized Medicine
PGx University of Minnesota Alliance

UNIVERSITY OF MINNESOTA
College of Pharmacy
DEPARTMENT OF EXPERIMENTAL & CLINICAL PHARMACOLOGY

PHARMACOGENOMICS CONFERENCE 2018

June 22, 2018


Pamala Jacobson


Lynda Welage


Julie A. Johnson


Douglas Yee


David Stenehjem


Shilpa Gupta


Gillian Bell


Jason Karnes


Kelly Caudle


David Gregornik


Mark Dunnenberger


Diana Brixner

PHARMACOGENOMICS: Genomic Testing to Individualize Drug Therapy

Program

7:00-8:00am **Continental Breakfast**

8:00-8:10am **Introduction to the Day** Pamala Jacobson, PharmD, FCCP, Conference Chair
Professor and Director of the Institute of Personalized Medicine
College of Pharmacy, University of Minnesota, Minneapolis, MN

8:10-8:15am **Welcome** Lynda Welage, PharmD
Professor and Dean, College of Pharmacy, University of Minnesota, Minneapolis, MN

8:15-9:00am **Keynote** ***Improving clinical outcomes through pharmacogenomics***
Julie A. Johnson, PharmD
Dean and Distinguished Professor, College of Pharmacy
University of Florida, Gainesville, FL

9:00-10:30am **Precision Medicine in Cancer**

The last decade has been an exciting era for cancer medicine. Speakers will discuss how genetic markers have transformed the treatment of breast cancer. They will also address how somatic tumor mutation information is powerfully guiding targeted drug therapy selection for patients and showing tumor responses in diseases never thought possible. Immunotherapies have emerged into clinical care nearly overnight and biomarkers predicting response are moving into clinical care.

Moderator: Mark Kirstein, PharmD, Associate Professor, Experimental and Clinical Pharmacology, College of Pharmacy, University of Minnesota, Minneapolis, MN

Speakers:

Precision Medicine in Early Stage Breast Cancer: The I-SPY 2 Experience
Douglas Yee, MD, Director of the Masonic Cancer Center
Professor of Medicine and Pharmacology
Medical Oncologist, University of Minnesota, Minneapolis, MN

Using Genetic Biomarkers for Selection of Targeted Cancer Therapies
David Stenehjem, PharmD, BCOP
Associate Professor, Department of Pharmacy Practice and Pharmaceutical Sciences
College of Pharmacy, University of Minnesota, Duluth, MN

Immunotherapy in the Precision Medicine Era; Profiling to Predict Responsiveness
Shilpa Gupta, MD, Assistant Professor of Medicine
Division of Hematology, Oncology and Transplantation
Lead, Phase 1 Interdisciplinary Solid Tumor Program
Medical School, University of Minnesota, Minneapolis, MN

10:30-11:00am **Coffee and beverage break, visit our Exhibitor booths**

11:00-12:00pm **Emerging Areas in Pharmacogenomics**

Amidst the backdrop of a nationwide opioid epidemic, the need for improving pain management medicine has never been greater. Our first speaker will discuss of the role of pharmacogenomics to advance precision medicine in pain management with considerations for research and clinical care. Additionally, our growing understanding of genetic diversity has raised awareness about the importance of conducting discovery and clinical pharmaco-genomic studies in diverse populations. Our second speaker will talk about this important area and how to advance the field by appropriately examining data from multiethnic study samples.

Moderator: Jeffrey Bishop, PharmD, FCCP, Associate Professor, Experimental and Clinical Pharmacology, College of Pharmacy, University of Minnesota, Minneapolis, MN

Speakers:

Challenges of studying pharmacogenomics in pain management; navigating the genetic and behavioral determinants of analgesia
Gillian Bell, PharmD, Clinical Pharmacist, Personalized Medicine Program
Fullerton Genetics Center, Mission Health, Asheville, NC

Multiethnic Populations and Precision Medicine:
Managing the lack of genetic data and clinical studies
Jason Karnes, PharmD, PhD, BCPS, Assistant Professor, Pharmacy Practice and Science
University of Arizona, College of Pharmacy, Tucson, AZ

12:00-1:30pm **Lunch and review of conference participant pharmacogenomic test results, visit our Exhibitor booths**

Who would have predicted 30 years ago that genetic information would predict response or toxicity to medications? It is well-known that drug failure is high for many classes of agents. PGx research has made progress in addressing this problem and now dozens of companies offer PGx testing for clinical care. Participants will be given the opportunity to obtain personal PGx testing for some of the commonly tested variants. Conference participants will be tested prior to the conference and receive the results at conference check-in. The clinical implications for the most common variants identified in conference participants will be discussed over lunch.

Moderators: Pamala Jacobson, PharmD, Jacob Brown, PharmD and Brian VanNess, PhD

1:30-2:30pm **Translating Pharmacogenomic Research into Evidence Based Medication and Dose Recommendations**

Speakers will discuss the process of developing Clinical Pharmacogenetics Implementation Consortium (CPIC) guidelines and pharmacogenomic information found in the package insert. CPIC is an international consortium facilitating the use of pharmacogenetic tests for children and adults. The FDA Table of Pharmacogenomic Biomarkers in Drug Labeling also contains drug-gene information for nearly 200 drug-gene pairs. However, for many medications or patient populations no guidelines exist. Our speakers will discuss the guidelines and how to apply PGx when no guideline exists.

Moderator: Jacob Brown, PharmD, Assistant Professor,
Dept of Pharmacy Practice and Pharmaceutical Sciences
College of Pharmacy, University of Minnesota, Duluth, MN

Speakers:

Creation of CPIC guidelines and drug labeling information to guide PGx prescribing and how to approach drugs without formal guidelines
Kelly Caudle, PharmD, PhD, BCPS
CPIC Director, St Jude Children's Research Hospital
Department of Pharmaceutical Sciences, Memphis, TN

Applying pharmacogenomic testing to children; overcoming limited pediatric data and adult centered guidelines
David Gregornik, PharmD, BCOP
Pharmacogenomics Program Leader, Childrens Hospitals and Clinics Minnesota, Minneapolis, MN

2:30-3:00pm **Coffee and beverage break.** Use this time to visit our Exhibitor booths.

3:00-4:00pm **Implementation of Pharmacogenomics in the Real World Setting**

As the evidence supporting the clinical significance of genomic-guided drug therapy grows, the importance of establishing the genoeconomic value increases. Studies which explore the cost-effectiveness or cost-utility of implementing pharmacogenomics will become central determinants of the rate and extent of uptake and implementation of pharmacogenomics in the real-world setting. This section of the program will review key issues to be considered when evaluating the feasibility and impact of implementing pharmacogenomic-guided drug therapy.

Moderator: Robert Straka, PharmD, FCCP
Professor and Department Head Experimental and Clinical Pharmacology,
College of Pharmacy, University of Minnesota, Minneapolis, MN

Speakers:

Implementation of Pharmacogenomic Testing and a Clinical Service; The NorthShore Experience
Henry 'Mark' Dunnenberger, PharmD, Director - Pharmacogenomics
NorthShore University HealthSystem,Center for Molecular Medicine, Evanston, IL

Insurance Reimbursement and the Payer Perspective on Pharmacogenomics
Diana Brixner, PhD, RPh, FAMCP, Professor, Department of Pharmacotherapy
Executive Director, Outcomes Research Center
Director of Outcomes, Program in Personalized Health Care
University of Utah, Salt Lake City, UT

4:00-4:30pm **Concluding Remarks**
Pamala Jacobson, PharmD, FCCP, Conference Chair

Drawing for Books