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
Emerging Areas in Pharmacogenomics
Despite the lack of a unifying genetic roadmap, the need for improved care management has never been greater. Our first speaker will discuss the role of pharmacogenomics in advanced medicine in pain management with considerations for research and clinical care. Additionally, our growing understanding of the role of pharmacogenomics in diverse disease populations. Our second speaker will talk about the importance and how to advance the field by appropriately sourcing data from multiplex research studies.

Moderator: Jeffrey Bishop, PharmD, FCP, Associate Professor and Clinical Pharmacologist, College of Pharmacy, University of Minnesota, Minneapolis, MN

Speakers:
- Diana Brixner, PhD, RPh, FAMCP, Professor, Department of Pharmacotherapy, College of Pharmacy, University of Minnesota, Minneapolis, MN
- David Gregor nik, PharmD, BCOP, Professor and Department Head Experimental and Clinical Pharmacology, University of North Dakota, Fargo, ND
- Applying pharmacogenomics to children; overcoming limited pediatric data and how to approach drugs without formal guidelines
- Mohammad S. Alkharusi, MD, Department of Pharmaceutical Sciences, University of South Florida, Tampa, FL
- Creation of CPIC guidelines and drug labeling information to guide PGx prescribing and how to approach drugs without formal guidelines
- Kelly Strum, PhD, PhD-BCOP, CPIC Director, St. Jude Children's Research Hospital

Insurance Reimbursement and the Payer Perspective on Pharmacogenomics
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 reframe issues to be considered when evaluating the feasibility and impact of implementing pharmacogenomics-guided drug therapy.

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

Speakers:
- Pamala Jacobson, PharmD, FCCP, Conference Chair
- Multiethnic Populations and Precision Medicine:
  - Challenges of studying pharmacogenomics in pain management: navigating the genetic and behavioral determinants of analgesia
  - Applying pharmacogenomics to children; overcoming limited pediatric data and how to approach drugs without formal guidelines
  - Creation of CPIC guidelines and drug labeling information to guide PGx prescribing and how to approach drugs without formal guidelines
  - Selection of CPC guidelines and drug labeling information to guide PGx prescribing and how to approach drugs without formal guidelines
  - How to approach drugs without formal guidelines

Concluding Remarks
Pamala Jacobson, PharmD, FCP, Conference Chair

Drawing for Books