

# Eleventh Annual Chapel Hill Pharmaceutical Sciences Conference

## Pharmacy in the Era of Precision Medicine: From Discovery to Implementation

May 18 – 19, 2017

The Carolina Inn, Chapel Hill, NC

Co-Chairs: Daniel Gonzalez, PharmD, PhD and Tim Wiltshire, PhD

Thursday May 18, 2017

7:30 – 8:15 AM Registration and Breakfast

8:15 – 8:30 AM Welcome from Dean Bob Blouin and Associate Dean Kim Brouwer

### **ACPE#0046-0000-17-044-L04-P (2.75 hours)**

Session 1: Pharmacogenomics in Precision Medicine

At the conclusion of each knowledge based session, participants should be able to:

8:30 – 9:00 AM

Regulatory Perspective on Precision Medicine

Objectives:

- Provide a general overview of the regulatory aspects related to use of biomarkers to achieve precision medicine.
- Discuss more specifically the regulatory landscape of genetic biomarkers of drug response.

[Lawrence Lesko, PhD, FCP](#)

Clinical Professor and Director, Center for Pharmacometrics and Systems Pharmacology, College of Pharmacy, University of Florida

9:00 – 9:45 AM

How to Interpret Patient Genotyping Data (Part 1)

Objectives:

- Provide meeting participants genotyping data for the actionable pharmacogenome.
- Discuss case studies to illustrate the process of how to interpret pharmacogenetics testing for pharmacists and its clinical impact.
- Provide a panel discussion of the application of pharmacogenetics testing for cancer, pain management, and cardiovascular disease today.

[Tim Wiltshire, PhD](#)

Director, Center for Pharmacogenomics and Individualized Therapy;  
Associate Professor, Division of Pharmacotherapy and Experimental Therapeutics  
UNC Eshelman School of Pharmacy

9:45 – 10:00 AM

Break

10:00 – 10:30 AM

How to Interpret Patient Genotyping Data (Part 2: Case Studies)

[Daniel Crona, PharmD, PhD](#)

Assistant Professor, DPET, UNC Eshelman School of Pharmacy

[Craig Lee, PharmD, PhD](#)

Associate Professor, DPET, UNC Eshelman School of Pharmacy

DPET – Division of Pharmacotherapy and Experimental Therapeutics

PACE – Division of Practice Advancement and Clinical Education

10:30 – 11:00 AM How to Interpret Patient Genotyping Data (Part 3: Panel Discussion)

[Daniel Crona, PharmD, PhD](#)

[Jon Easter, BSPHarm](#)

[Craig Lee, PharmD, PhD](#)

[Amber Proctor, PharmD](#)

[John Valgus, PharmD, MHA, BCOP](#)

11:00 – 11:30 AM Implementation of Genetic Information within an Institutional Setting

Objective:

- Describe practical implementation at the institutional level (example of best practices).

[Alan Shuldiner, MD](#)

Vice President of Translational Genetics, Regeneron Pharmaceuticals, Inc.

11:30 AM – 12:30 PM Lunch

**ACPE# 0046-0000-17-045-L04-P (4.0 hours)**

Session 2: Novel Pharmacologic and Phenotypic Approaches to Precision Medicine

At the conclusion of each knowledge based session, participants should be able to:

12:30 – 1:00 PM T-Cell Engineering for the Treatment of Cancer

Objective:

- Provide an introduction to the use of Individualized T cell engineering as a novel therapeutic strategy for the treatment of malignancies.

[Barbara Savoldo, MD, PhD](#)

Professor, Immunology, Virology, Pediatrics Hematology-Oncology, UNC-Chapel Hill

1:00 – 1:30 PM The Role of the Gastrointestinal Microbiome in Precision Medicine

Objective:

- Describe the influence of the gut microbiome on individual drug response, and highlight new technologies in this emerging field of study.

[Lawrence David, PhD](#)

Assistant Professor, Center for Genomic and Computational Biology, Duke University

1:30 – 2:00 PM Integration of Pharmacometabolomics into Precision Medicine

Objective:

- Describe recent advances in pharmacometabolomics, and discuss how it's being used to complement pharmacogenomics for individualized drug therapy.

[Rima Kaddurah-Daouk, PhD](#)

Director, Pharmacometabolomics Research Center, Duke University  
Professor, Psychiatry and Behavioral Sciences, Medicine, Duke University

2:00 – 2:30 PM Speaker Panel Discussion

2:30 – 2:45 PM Break

### Session 3: Role of Quantitative Clinical Pharmacology in Delivering Precision Medicine

2:45 – 3:00 PM Role of Adaptive Feedback Control in Precision Medicine

Objective:

- Discuss the roles of adaptive feedback control in delivering precision medicine.

[Alan Forrest, PharmD](#)

Clinical Professor, DPET, UNC Eshelman School of Pharmacy

3:00 – 3:30 PM Innovative Tools and Applications to Adaptive Feedback Control

Objective:

- Provide examples of innovative tools and applications to adaptive feedback control.

[David D'Argenio, PhD](#)

Professor, Biomedical Engineering, USC Viterbi School of Engineering

3:30 – 4:00 PM Applications of Adaptive Feedback Control in the Pediatric Population

Objective:

- Present an overview of the applications of adaptive feedback control in the pediatric population.

[Michael Neely, MD, MSc, FCP](#)

Director, Laboratory of Applied Pharmacokinetics and Bioinformatics, The Saban Research Institute

4:00 – 4:30 PM Regulatory Perspective on Implementing Adaptive Feedback Control in Drug Development

Objective:

- Provide a regulatory perspective of the challenges and opportunities to implementing adaptive feedback control in drug development.

[Philip Colangelo, PharmD, PhD](#)

Clinical Pharmacology Team Leader, Office of Translational Sciences, U.S. Food and Drug Administration

4:30 – 4:50 PM Panel Discussion

### Evening Session: Cocktails, Hors d'oeuvres, and Science

5:30 – 7:30 PM Poster Session and Evening Cocktails/Hors d'oeuvres

6:00 – 6:30 PM Guided poster tour, two posters within each grouping (six total)

- 10-minute presentation with 5 minutes for questions.

Learning Objectives:

1. Disseminate ongoing research across therapeutic areas
2. Stimulate opportunities for future collaboration within and beyond The School of Pharmacy
3. Advance professional development of trainees in methods of scientific presentation.

## Friday May 19, 2017

7:15 – 8:00 AM Registration and Breakfast

**ACPE# 0046-0000-17-046-L04-P (4.25 hours)**

Session 4: Implementing Precision Therapy

Main Content: Precision medicine is an innovative medical model that takes into account individual variability in genes, environment, and lifestyle for each person. This “customization of healthcare” is one of the “biggest of the big data problems”.

At the conclusion of each knowledge based session, participants should be able to:

1. Assess and understand broadly the current state of precision therapy.
2. Describe the developing opportunities/strategies for precision therapy to leverage collaborations with academic and the non-academic partners.
3. Discuss new opportunities/strategies that should be pursued in Precision Therapy at UNC, and in North Carolina.

Questions to Address:

- What is the current state of precision therapy?
- What are the immediate opportunities for precision therapy?
- What is the future of precision medicine?
- Where should precision medicine be headed at UNC?

8:15 – 8:30 AM Welcome and Introduction

Objective:

- Summarize events from Day 1.

[Daniel Gonzalez PharmD, PhD, and/or, Tim Wiltshire PhD](#) (Conference Co-Chairs)

8:30 – 9:15 AM Plenary Lecture: “Imprecision Medicine”

Objective:

- Define what we are and aren’t doing right in precision medicine.

[Nick Schork, PhD](#)

Director of Bioinformatics and Biostatistics; Professor, Department of Molecular and Experimental Medicine, The Scripps Research Institute

9:15 – 10:15 AM Presentations: The Future of Precision Therapy from three perspectives

Presenters (3 areas for 20 minute presentations)

Pharmaceutical Industry

[Arlene Hughes](#)

Genomic Medicine Senior Director, PAREXEL International

Technology Industry

[Fah Sathirapongsasuti, PhD](#)

Computational Biologist, 23andMe

Health Care Payers

[Jon Easter, BSPHarm](#)

Director, Center for Medication Optimization through Practice and Policy (CMOPP)  
UNC Eshelman School of Pharmacy

10:30 – 11:30 AM

Panel Discussion

Objectives:

Panel presenters, plenary speakers and closing speaker will discuss the following in a panel format.

1. What are the strategies and barriers?
2. What technology should we be using?
3. What can we transfer from other disciplines (disciplines/stakeholders as well as Academia, Clinical, Industry (Pharmaceutical and Technology), Payers, and Regulatory)?

11:30 AM – 12:00 PM

Closing Plenary: Vision for Precision Medicine at UNC

Objective:

- Discuss the current state and vision for precision medicine initiatives at UNC-Chapel Hill.

[Terry Magnuson, PhD](#)

Vice Chancellor for Research, UNC-Chapel Hill

12:00 – 12:15 PM

Closing of Conference: Associate Dean Kim Brouwer



The University Of North Carolina Eshelman School Of Pharmacy is accredited by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education. The program ACPE# 0046-0000-17-044-L04-P, 0046-0000-17-045-L04-P 0046-0000-17-046-L04-P provides 11.00 contact hours of continuing pharmacy education credit. To receive CE credit, you must complete the CE attendance form and the online evaluation of the program. Statements of credit can be viewed and printed in CPE Monitor in approximately 2 to 3 weeks.