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.
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

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