



**Genomic and Proteomic Approaches to Complex  
Heart, Lung, Blood, & Sleep Disorders**

**October 6 – 12, 2013**

*Schedule is subject to change*

For more information please contact: [nancy.place@jax.org](mailto:nancy.place@jax.org)

**Sunday, October 6, 2013**

**Introduction**

*All lectures and workshops are on the 3<sup>rd</sup> floor at Highseas unless otherwise noted*

**4:00-7:00p.m.**

**Registration and Dinner Buffet**

**7:00-9:00**

**Introduction to Molecular Genetics and Genetic Variation**

Timothy Howard, Ph.D., Wake Forest University

**Monday, October 7, 2013**

*All lectures and workshops are on the 3<sup>rd</sup> floor at Highseas unless otherwise noted*

<b>7:30-8:30 a.m.</b>	<b>Breakfast</b>
<b>8:30-8:35</b>	<b>Welcome and Announcements</b>
<b>8:40-9:45</b>	<b>Importance of Phenotype in Genetic Studies</b> Eugene Bleecker, MD, Wake Forest University
<b>9:45-10:00</b>	<b>Break</b>
<b>10:00 -11:00</b>	<b>Life After Linkage: Family Studies</b> Deborah Meyers, Ph.D., Wake Forest University
<b>11:00-12:15</b>	<b>Introduction to Association Studies</b> Jianfeng Xu MD, Dr.PH, Wake Forest University
<b>12:15-1:00</b>	<b>Lunch</b>
<b>1:00-1:30</b>	<b>Study Design</b> Eugene Bleecker, MD, Wake Forest University Deborah Meyers, Ph.D., Wake Forest University
<b>1:30 – 2:30</b>	<b>Introduction to Genome Wide Association Studies</b> Deborah Meyers, Ph.D., Wake Forest University
<b>2:30 – 3:00</b>	<b>Break</b>
<b>3:00 – 4:00</b>	<b>Why Human Geneticists Need to Know About Mice</b> Ron Korstanje, Ph.D., The Jackson Laboratory
<b>4:00 – 5:00</b>	<b>Ethics</b> Deborah Meyers, Ph.D., Wake Forest University
<b>5:00–6:00</b>	<b>Wine and Beer Reception: Student and Faculty Introductions</b> (Highseas Living Room)
<b>6:00–7:00</b>	<b>Dinner</b>

**Tuesday, October 8, 2013**

*All lectures and workshops are on the 3<sup>rd</sup> floor at Highseas unless otherwise noted*

- 7:30-8:30 a.m.**      **Breakfast**
- 8:30-9:30**            **Epigenetics**  
Timothy Howard, Ph.D., Wake Forest University
- 9:30-9:45**            **Break**
- 9:45-10:45**          **RNAseq and RNAseq analysis**  
Narayanan Raghupathy, Ph.D., The Jackson Laboratory
- 10:45-12:00**        **Genome Wide Association Studies: Results and Implications**  
Jianfeng Xu MD, Dr.PH, Wake Forest University
- 12:00-1:00**          **Lunch**
- 1:00 – 2:30**          **Beyond GWAS – group discussion**  
Jianfeng Xu MD, Dr.PH, Wake Forest University
- 2:30-2:45**            **Break**
- 2:45- 4:30**            **In Vitro Analysis of Gene Function**  
Joachim Herz MD, University of Texas, Southwestern
- 4:30-6:00**            **Free time**
- 6:00-7:00**            **Dinner**
- 6:45 -7:00**            *Transportation to LCC Auditorium*
- 7:00-9:00**            **Using the genetic tool box of the rat to study complex disease**  
Howard Jacob, Ph.D, Medical College of Wisconsin  
*Via videoconference*
- 9:00 pm.**             *Transportation to Highseas*

**Wednesday, October 9, 2013**

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<b>7:30-8:30 a.m.</b>	<b>Breakfast</b>
<b>8:30-9:30</b>	<b>Sleep Disorders</b> Allan Pack, M.B., Ch.B, Ph.D., Univ. of Pennsylvania
<b>9:30-10:00</b>	<b>Break, Group Photo</b>
<b>10:00-11:00</b>	<b>Genetics of Asthma</b> Eugene Bleecker, M.D., Wake Forest University
<b>11:00-12:00</b>	<b>The role of rare and functional coding variants in disease risk - DNA sequencing and association studies</b> Rasika Mathias, ScD, Johns Hopkins University General Internal Medicine / Allergy and Clinical Immunology
<b>12:00-1:00</b>	<b>Lunch</b>
<b>1:00-2:00</b>	<b>CD14 as a Model for Gene-Environment Interaction</b> Donata Vercelli, M.D., University of Arizona
<b>2:00-3:00</b>	<b>Studying microRNAs: Why and how</b> Mingyu Liang, M.B., Ph.D., Medical College of Wisconsin
<b>3:00-3:15</b>	<b>Break</b>
<b>3:15-4:15</b>	<b>Functional Characterization of a Gene: IL13</b> Donata Vercelli, M.D., University of Arizona
<b>4:15-6:00</b>	<b>Free Time</b>
<b>6:00-7:00</b>	<b>Dinner</b>

**Thursday, October 10, 2013**

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- 7:30-8:30 a.m.**      **Breakfast**
- 8:30-9:30**            **Gene-Expression Microarrays In Complex Diseases**  
Katrina Steiling, M.D., Boston University, School of Medicine
- 9:30-10:30**          **Statistical Design and Analysis of Microarrays**  
Gary Churchill, Ph.D., The Jackson Laboratory
- 10:30-10:45**        **Break**
- 10:45 – 12:00**      **Genome Wide Association Studies-III and Beyond**  
Nancy Cox, PhD, University of Chicago
- 12:00-1:00 p.m.**    **Lunch**
- 1:00 -2:15**           **Pharmacogenetics**  
Eugene Bleecker, M.D., Wake Forest University
- 2:15-3:30**           **Complex Trait Analysis with Inbred Line Crosses**  
Gary Churchill, Ph.D., The Jackson Laboratory
- 3:30-3:45**           **Break**
- 3:45-4:45**           **From QTL to Gene**  
Ron Korstanje, Ph.D., The Jackson Laboratory
- 4:45-5:45**           **Discussion - Rare and functional coding variants**  
Nancy Cox, PhD, University of Chicago  
Rasika Mathias, ScD, Johns Hopkins University General Internal  
Medicine / Allergy and Clinical Immunology
- 5:45 – 6:15**        **Cocktails**
- 6:15-7:30**           **Lobster Dinner**

**Friday, October 11, 2013**

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<b>7:30-8:30 a.m.</b>	<b>Breakfast</b>
<b>8:30-9:30</b>	<b>Zebrafish Model</b> Barry Paw, M.D., Ph.D., Harvard Medical School/Brigham & Women's Hospital
<b>9:30-9:45</b>	<b>Break</b>
<b>9:45-11:00</b>	<b>Atrial Fibrillation: From Heritability and Genetics to Function</b> Patrick Ellinor, M.D., Ph.D., Massachusetts General Hospital
<b>11:00-12:00</b>	<b>Clinical Phenotyping of Mice to Detect Cardiovascular and Metabolic Disorders</b> Karen Svenson, Ph.D., The Jackson Laboratory
<b>12:00-1:00 p.m.</b>	<b>Lunch</b>
<b>1:00-2:30</b>	<b>Proteomics-Review of Methodologies and Technologies Part 1</b> Andy Greene, Medical College of Wisconsin
<b>2:30-2:45</b>	<b>Break</b>
<b>2:45-4:00</b>	<b>Proteomics-Review of Methodologies and Technologies Part 2</b> Andy Greene, Medical College of Wisconsin
<b>4:00-5:00</b>	<b>Genetic Studies of Blood Phenotypes</b> Luanne Peters, Ph.D, The Jackson Laboratory
<b>6:00-7:00</b>	<b>Dinner</b>
<b>7:00-</b>	<b>Student Grant Proposal Presentations</b> Course Faculty

**Saturday, October 12, 2013**

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- 7:30-8:30 a.m.      Breakfast**
- 8:30-10:30          Gene – environment interactions**  
Terri Beaty, Ph.D., Johns Hopkins University
- 10:30-10:45        Break**
- 10:45-12:00        Animal Models – Transgenics and Knockouts**  
Joachim Herz MD, University of Texas, Southwestern
- 12:00-1:00         Lunch**
- 1:00-3:00          Genetic Epidemiology: Questions-Discussion Period**  
Terri Beaty, Ph.D., Johns Hopkins University
- 3:00 – 6:00         Free Time**
- 6:00-7:00          Dinner**

**Sunday, October 13, 2013**

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- 8:00-9:00 a.m.      Breakfast**

**Departures**