Vanderbilt Digestive Disease Research Center (VDDRC) Retreat

*Obesity, Metabolism, and Nutrient Absorption (OMNA)*

Agenda

Tuesday, January 26, 2016 – 9:00 a.m. – 2:50 p.m.
Student Life Center – Board of Trust Room

9:00 am  Welcome
Richard M. Peek, Jr., MD
Mina Cobb Wallace Professor of Medicine and Cancer Biology
Director, Vanderbilt Digestive Diseases Research Center

9:05 – 9:25 am  “The Importance of Bile Acid Enterohepatic Circulation in Nutrient Handling” Part 1
Naji Abumrad, MD
Professor of Surgery
John L. Sawyers Chair in Surgical Sciences

9:25 – 9:45 am  “The Importance of Bile Acid Enterohepatic Circulation in Nutrient Handling” Part 2
C. Robb Flynn, Ph.D.
Assistant Professor of Surgery

9:45 – 10:05 am  “A New Role for Macrophages in Adipose Tissue Iron Homeostasis”
Alyssa Hasty, Ph.D.
Professor of Molecular Physiology and Biophysics

10:05 – 10:25 am  “Training and Usage of Mass Cytometry for DDRC Members”
Kevin Weller
Managing Director
Flow Cytometry Core

10:25 – 10:45 am  “Decoding Tissue Microenvironments with High Dimensional Mass Cytometry (CyTOF)”
Jonathan Irish, Ph.D.
Assistant Professor of Cancer Biology
Assistant Professor of Pathology, Microbiology and Immunology

10:45 – 11:00 am  Eposter Presentations

11:00 am - 12:15 pm  Poster Board Session/Lunch in Ballroom C

12:15 - 12:35 pm  “Enteroendocrine Melanocortin-4 Receptor Regulation of Peptide YY”
Nathan Bingham, M.D., Ph.D.
Assistant Professor of Pediatrics
Assistant Professor of Molecular Physiology and Biophysics
12:35 – 12:55 pm  “Capitalizing on Gut Hormones for Metabolic Disease: Positive Allosteric Modulators of the Glucagon-like Peptide-1 Receptor”  
Kevin Niswender, M.D., Ph.D.  
Associate Professor of Medicine  
Associate Professor of Molecular Physiology and Biophysics

12:55 – 1:15 pm  “Engineering the Gut Microbiome”  
Sean Davies, Ph.D.  
Associate Professor of Pharmacology

1:15 – 1:35 pm  “Selective Insulin Resistance: Implications for Fatty Liver and Obesity-Associated Cardiovascular Disease”  
John Stafford, M.D., Ph.D.  
Assistant Professor of Medicine  
Assistant Professor of Molecular Physiology and Biophysics

1:35 – 1:50 pm  Break

1:50 - 2:50 pm  Keynote Speaker  
“Obesity, Metabolism, and Nutrient Absorption: The Critical Involvement of the Adipocyte”  
Philipp E. Scherer, Ph.D.  
Professor, Department of Internal Medicine  
Director, Touchstone Diabetes Center  
University of Texas, Southwestern Medical Center
Vanderbilt Digestive Disease Research Center (VDDRC) Retreat

Progenitor Cells, Development, Regeneration and Pre-malignant lesions (PC)

Agenda

Tuesday, April 28, 2015 – 9:00 a.m. – 2:30 p.m.
Student Life Center – Board of Trust Room

8:00 – 9:00 am  
Closed External Advisory Board Meeting: Student Life Center Meeting Room 3

9:00 am  
Welcome  
Richard M. Peek, Jr., MD  
Mina Cobb Wallace Professor of Medicine and Cancer Biology  
Director, Vanderbilt Digestive Disease Research Center

9:05 am – 9:30 am  
“Plasticity and organ interconversion in the early gut tube”  
Christopher V. E. Wright, D.Phil.  
Director, Vanderbilt University Program in Developmental Biology  
Louise B. McGavock Chair  
Professor and Vice-Chair for Faculty Affairs  
Department of Cell & Developmental Biology

9:30 – 9:55 am  
“Building cell state trajectories using single cell analysis”  
Ken Lau, Ph.D.  
Assistant Professor of Cell and Developmental Biology

9:55 – 10:20 am  
“Toward a new understanding of acute liver failure”  
Seth Karp, M.D.  
Professor and Vice Chairman of Surgery  
Ingram Chair in Surgical Sciences  
Director, Vanderbilt Transplant Center

10:20 – 10:45 am  
“CRISPR/Cas Gene Targeting: What can CRISPR do for you”  
Douglas Mortlock, Ph.D.  
Research Assistant Professor of Molecular Physiology and Biophysics

10:45 am – 12:15 pm  
Poster Session/Lunch

12:15 - 12:35 pm  
“Spatio-temporal regulation of epithelial transformation by mistrafficking of the EGFR ligand, epiregulin”  
Bhuminder Singh, Ph.D.  
Research Assistant Professor of Medicine

12:35 – 12:55 pm  
“Lrig1 regulates ontogeny of smooth muscle-derived subsets of interstitial cells of cajal”  
Jumpei Kondo, M.D., Ph.D.  
Postdoctoral Fellow

12:55 – 1:20 pm  
“Functional deficits in ganglionated bowel due to “classic” Hirschsprung disease mutations in ENS progenitors”  
Michelle Southard Smith, Ph.D.  
Associate Professor of Medicine  
Associate Professor of Cell and Developmental Biology

1:20 – 1:30 pm  
Break

1:30 - 2:30 pm  
Keynote Speaker  
“The cellular origin and behavior of enteric neural progenitors”  
Hideki Enomoto, M.D.  
Professor of Physiology and Cell Biology  
Division of Neural Differentiation and Regeneration  
RIKEN Center for Developmental Biology, Kobe University, Japan
Vanderbilt Digestive Disease Research Center (VDDRC) Retreat

Epithelial Integrity

Agenda

Monday, April 14, 2014 – 11:00 a.m. – 5:00 p.m.
Student Life Center – Board of Trust Room

11:00 – 11:40 am  Lunch/Poster Viewing Session

11:40 – 11:45 am  Welcome
Richard M. Peek, Jr., MD
Mina Cobb Wallace Professor of Medicine and Cancer Biology
Director, Vanderbilt Digestive Disease Research Center

11:45 am – 12:05 pm  Presentation: “Chemical biology of Curcumin”
Claus Schneider, PhD
Assistant Professor of Pharmacology

12:05 – 12:25 pm  Presentation: “Structures and functions of the Clostridium difficile toxins A and B”
D. Borden Lacy, PhD
Associate Professor of Biochemistry and Pathology, Microbiology & Immunology

12:25 – 12:45 pm  Presentation: “MMP13 contributes to development of pancreatitis in obese mice”
Michael Van Saun, PhD
Research Assistant Professor of Surgery and Cancer Biology

12:45 – 1:05 pm  Presentation: “Calprotectin modulates Helicobacter pylori’s Type IV secretion system”
Holly Algood, PhD
Assistant Professor of Medicine and Pathology, Microbiology & Immunology

1:05 – 1:25 pm  Presentation: “Gastric Cancer in Latin America: Biomarkers and Prevention”
Douglas Morgan, MD, MPH
Associate Professor of Medicine

1:25 – 2:25 pm  Cores & Pilot/Feasibility Poster Presentation

2:25 – 2:45 pm  Presentation: “Therapeutically modified gut bacteria inhibit high-fat diet induced obesity”
Sean Davies, PhD
Assistant Professor of Pharmacology

2:45 – 3:05 pm  Presentation: “Regulation of intestinal development by probiotics-potential mechanisms of action”
Fang Yan, MD, PhD
Research Associate Professor of Pediatrics

3:05 – 3:25 pm  Presentation: “Microbiome and immune regulation in the neonatal intestine”
Hendrik Weitkamp, MD
Assistant Professor of Pediatrics

3:25 – 3:45 pm  Presentation: “Darwin’s blind spot: The microbial making of animals”
Seth Bordenstein, PhD
Associate Professor of Biological Sciences and Pathology, Microbiology & Immunology

3:45 – 4:00 pm  Break

4:00 – 5:00 pm  KEYNOTE
Presentation: “The role of the microbiome in enteric disease and asthma”
B. Brett Finlay, OC, OBC, FRSC, FCAHS
Michael Smith Laboratories
Professor of Biochemistry and Molecular Biology and Microbiology & Immunology
University of British Columbia, Vancouver
Vanderbilt Digestive Disease Research Center (VDDRC) Retreat 2012-2013  
*Growth, Proliferation and Apoptosis*

**Agenda**

**Tuesday, April 16, 2013 – 12:00 p.m. – 5:00 p.m.**  
Student Life Center – Board of Trust Room

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<th>Time</th>
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| 12:00 pm – 12:30 pm | **Lunch/Welcome:** Richard M. Peek, Jr., M.D.  
Mina Cobb Wallace Professor of Medicine and Cancer Biology  
Director, Vanderbilt Digestive Disease Research Center          |                                                                            |
| 12:30 – 12:50 pm | **Presentation:** “Loss of E-cadherin and TGFβ receptor II results in invasive squamous cell carcinoma *in vivo*”  
Claudia D. Andl, Ph.D.  
Assistant Professor of Surgery and Cancer Biology                  |                                                                            |
| 12:50 – 1:10 pm  | **Presentation:** "Exosome function in colon cancer"  
Jeffrey L. Franklin, Ph.D.  
Research Assistant Professor of Cell and Developmental Biology      |                                                                            |
| 1:10 – 1:30 pm   | **Presentation:** “Role of Claudin-2 in Intestinal Homeostasis and Inflammation: It’s Complex”  
Amar B. Singh, Ph.D.  
Assistant Professor of Surgery and Medicine                          |                                                                            |
| 1:30 – 1:50 pm   | **BREAK**                                                                                 |                                                                            |
| 1:50 – 2:50 pm   | **Cores & Pilot/Feasibility Poster Presentation**                                         |                                                                            |
| 2:50 – 3:10 pm   | **Presentation:** "Macrophage function in colonic tissue repair - role of MMP10"  
Barbara M. Fingleton, Ph.D.  
Assistant Professor of Cancer Biology                              |                                                                            |
| 3:10 – 3:30 pm   | **Presentation:** “MTGs from translocations to cancer associated mutations: the expanding role of transcriptional co-repressors in the gut”  
Christopher S. Williams, M.D., Ph.D.  
Assistant Professor of Medicine and Cancer Biology                  |                                                                            |
| 3:30 – 3:50 pm   | **Presentation:** “Howard Spiro Lied to Me”  
James R. Goldenring, M.D., Ph.D.  
Paul W. Sanger Chair in Experimental Surgery  
Professor of Surgery and Cell and Developmental Biology            |                                                                            |
| 3:50 – 4:00 pm   | **BREAK**                                                                                 |                                                                            |
| 4:00 – 5:00 pm   | **KEYNOTE**  
**Presentation:** “Scaling Factors: differentiation and dedifferentiation, stem cells and cancer”  
Jason C. Mills, M.D., Ph.D.  
Associate Professor, Division of Gastroenterology, Department of Medicine, Department of Pathology & Immunology, Department of Developmental Biology  
Washington University School of Medicine, St. Louis, Missouri       |                                                                            |
Vanderbilt Digestive Disease Research Center (VDDRC) Retreat 2011-2012
Inflammation and obesity with emphasis on the VDDRC Gastrointestinal Physiology, Obesity and Metabolism Program

Agenda

Wednesday, April 11, 2012 – 11:00 a.m. – 4:00 p.m.
Student Life Center – Board of Trust Room

11:00 am – 11:30 pm  
**Lunch/Welcome:**  
Richard M. Peek, Jr., MD  
Mina Cobb Wallace Professor of Medicine and Cancer Biology  
Director, Vanderbilt Digestive Disease Research Center

11:30 – 11:50 pm  
**Presentation:** “Metabolic Imprinting of Dopamine Neurotransmission in Obesity”  
Aurelio Galli, PhD  
Professor of Molecular Physiology and Biophysics

11:50 – 12:10 pm  
**Presentation:** “Obesity, Inflammation and Nervous System Function”  
Kate Ellacott, PhD  
Assistant Professor of Molecular Physiology and Biophysics

12:10 – 12:30 pm  
**Presentation:** “Role of the foregut in Nutrition and Metabolism”  
Robyn Tamboli, PhD  
Research Assistant Professor of Surgery

12:30 – 12:50 pm  
**Presentation:** “Molecular Determinants of Tumor Progression In A Steatotic Liver Microenvironment”  
Lee Gorden, MD  
Associate Professor of Medicine  
Associate Professor of Cancer Biology

12:50 – 12:55 pm  
**BREAK**

12:55 – 1:30 pm  
**Cores & Pilot/Feasibility Poster Presentation**

1:30 – 1:50 pm  
**Presentation:** “Sex-Differences in Fatty Liver and Obesity-Related Cardiovascular Risk”  
John Stafford, MD, PhD  
Assistant Professor of Medicine, Molecular Physiology and Biophysics

1:50 – 2:10 pm  
**Presentation:** “Dietary Fat and Obesity: Are all fats created equal?”  
Kevin Niswender, MD  
Assistant Professor of Medicine  
Assistant Professor of Molecular Physiology and Molecular Biology

2:10 – 2:30 pm  
**Presentation:** “ER Stress-Mediated Apoptosis as a Mechanism to Maintain and Restore Adipose Tissue Macrophage Homeostasis”  
Alyssa Hasty, PhD  
Associate Professor of Molecular Physiology and Biophysics

2:30 – 2:50 pm  
**Presentation:** “The DDRC and The Mouse Metabolic Phenotyping Center Team Up: Bariatric Surgery and More”  
David Wasserman, PhD  
Annie Mary Lyle Chair  
Professor of Molecular Physiology and Biophysics  
Director, Mouse Metabolic Phenotyping Center

2:50 – 3:00 pm  
**BREAK**

3:00 – 4:00 pm  
**KEYNOTE**  
**Presentation:** “The Role of Melanocortin Signaling in the Efficacy of Bariatric Surgery”  
Roger Cone, PhD  
Joe C. Davis Chair in Biomedical Science  
Professor of Molecular Physiology and Biophysics  
Chair of the Department of Molecular Physiology and Biophysics
Vanderbilt Digestive Disease Research Center (VDDRC) Retreat 2010 - 2011

VDDRC Retreat January 24, 2011
Student Life Center, Board of Trust
Emphasis: Gastrointestinal Development and Function

11:30 am – 12:00 pm  Lunch/Welcome:
Richard M. Peek, Jr., MD
Mina Cobb Wallace Professor of Medicine and Cancer Biology
Director, Vanderbilt Digestive Disease Research Center

12 – 12:25 pm  Presentation: “Serosal mesothelium in development and repair”
David M. Bader, PhD
Gladys Parkinson Stahlman Professor of Cardiovascular Research
Professor of Medicine, Cell and Developmental Biology

12:25 – 12:50 pm  Presentation: “Unraveling the molecular factors that regulate intrahepatic bile duct morphogenesis and maintenance”
Stacey Huppert, PhD
Assistant Professor of Cell and Developmental Biology

12:50 – 1:15 pm  Presentation: "Molecular Imaging of Digestive Diseases: Research strategies and opportunities"
Henry Charles Manning, PhD
Assistant Professor of Radiology and Radiological Sciences, Biomedical Engineering and Neurological Surgery

1:15 – 1:25 pm  BREAK

1:25 – 2:10 pm  Cores & Pilot/Feasibility Poster presentation

2:10 – 2:35 pm  Presentation: "New insights on brush border function and assembly"
Matthew Tyska, PhD
Associate Professor of Cell and Developmental Biology

2:35 – 3:00 pm  Presentation: "Influence and timing of arrival of murine neural crest on pancreatic beta cell development and maturation"
Patricia Labosky, PhD
Associate Professor of Cell and Developmental Biology and Pharmacology

3:00 – 3:25 pm  Presentation: “Gastrointestinal Issues in Children with Autism Spectrum Disorders”
Kent Williams, MD
Assistant Professor of Pediatrics

3:25 – 3:50 pm  Presentation: “Disruption of Enteric Neural Crest Lineages - A new mechanism contributing to Hirschsprung Disease”
Michelle Southard-Smith, PhD
Associate Professor of Medicine and Cell and Developmental Biology

3:50 – 4:00 pm  BREAK

4:00 – 5:00 pm  KEYNOTE
Presentation: “Enteric nervous system development: recent progress and future challenges”
Vasillis Pachnis, MD, PhD
Head of Molecular Biology
MRC National Institute for Medical Research
The Ridgeway, Mill Hill, London
Vanderbilt Digestive Disease Research Center (VDDRC) Retreat 2009 - 2010

VDDRC Retreat April 19, 2010
Student Life Center, Board of Trust
Emphasis: Epithelial Integrity Program

11:30 – 12:00 pm  Lunch/Welcome:
Richard M. Peek, Jr., M.D.
Mina Cobb Wallace Professor of Medicine and Cancer Biology
Director, Vanderbilt Digestive Disease Research Center

12:00 – 12:25 pm  Presentation: “A Novel Mechanism for Oxidative Stress and Helicobacter pylori – Associated Gastric Cancer Risk”
Keith Wilson, M.D., Professor of Medicine and Cancer Biology

12:25 – 12:50 pm  Presentation: “New Insights into Helicobacter pylori VacA toxin”
Tim Cover, M.D., Professor of Medicine, Division of Infectious Diseases

12:50 – 1:15 pm  Presentation: “The Battle for Metal between Staphylococcus aureus and its Host”
Eric Skaar, Ph.D., M.P.H., Associate Professor of Microbiology and Immunology

1:15 – 1:25 pm  BREAK

1:25 – 2:10 pm  Cores & Pilot/Feasibility Poster Presentation

2:10 – 2:35 pm  Presentation: “Probiotic Prevention of Intestinal Inflammation and Barrier Disruption: Impact on Digestive Health”
Fang Yan, M.D., Ph.D., Research Associate Professor, Division of Pediatrics
Gastroenterology, Hepatology and Nutrition

2:35 – 3:00 pm  Presentation: “Fundamental Mechanisms Underlying the Development of the Human Antibody Response to Rotavirus”
James E. Crowe Jr., M.D., Professor of Pediatrics, Microbiology and Immunology

3:00 – 3:25 pm  Presentation: “Is Rotavirus Gone? Vaccine Successes”
Kathy M. Edwards, M.D., Sarah H. Sell Chair in Pediatrics, Vanderbilt Vaccine Research Program

Terence Dermody, M.D., Professor of Pediatrics, Microbiology and Immunology

3:50 – 4:00 pm  BREAK

4:00 – 5:00 pm  KEYNOTE
Presentation: “Norovirus Vaccine Development: A Bench to Bedside Story”
Mary Estes, Ph.D., Cullen Endowed Chair of Molecular and Human Virology
Departments of Molecular Virology and Microbiology and Medicine
Baylor College of Medicine
12:00 p.m. - 1:00 p.m. Lunch/Welcome:  
D. Brent Polk, M.D.  
Richard M. Peek, Jr., M.D.

1:00 p.m. - 1:45 p.m. Presentation: The Colonic Stem Cell  
Robert H. Whitehead, MSc, Ph.D.  
Research Professor, Departments of Medicine, Cell and Developmental Biology and Cancer Biology

1:45 p.m. - 2:30 p.m. Presentation: Regulation of Pancreatic Development by the FoxM1 Transcription Factor  
Maureen Gannon, Ph.D.  
Associate Professor of Medicine, Molecular Physiology and Biophysics, and Cell and Developmental Biology

2:30 p.m. - 3:00 p.m. Presentation: Neural Crest Stem Cells and Lineage Analysis in the Enteric Nervous System  
Michelle Southard-Smith, Ph.D.  
Associate Professor of Medicine and Cell and Developmental Biology

3:00 p.m. - 3:30 p.m. Cores and Pilot/Feasibility Poster Presentations

3:30 p.m. - 3:45 p.m. Presentation: Levels of Notch Signaling Regulate the 3D Architecture of Intrahepatic Bile Ducts in Mice  
Stacey S. Huppert, Ph.D.  
Assistant Professor, Department of Cell and Developmental Biology  
Pilot & Feasibility Award Recipient

3:45 p.m. - 4:00 p.m. Presentation: The Erbb4 Receptor Tyrosine Kinase Promotes Colon Epithelial Cell Survival And Transformation  
Mark R. Frey, Ph.D.  
Research Instructor, Division of Pediatric Gastroenterology, Hepatology, and Nutrition  
Pilot and Feasibility Award Recipient

4:00 p.m. - 5:00 p.m. Keynote Speaker  
Presentation: The Expansion of Mutant Stem Cells: The Beginning of Cancer  
Sir Nicholas Wright, M.D., Ph.D., M.A., D.Sc.  
Professor of Investigative Pathology, Bart’s and the London, Queen Mary’s School of Medicine and Dentistry, UK  
Group Leader, Histopathology Unit  
Cancer Research UK London Research Institute, UK
Vanderbilt Digestive Disease Research Center (VDDRC) Retreat 2007 - 2008

VDDRC Retreat April 28, 2008
Student Life Center, Ballroom A
Emphasis: Epithelial-Microbial Interaction in Gastrointestinal Health and Disease

12:00 p.m. – 1:00 p.m.  Lunch / Welcome
D. Brent Polk, M.D.
Richard M. Peek, Jr., M.D.

1:00 p.m. – 1:30 p.m.  Presentation: The Natural History of Helicobacter pylori Infection
Pelayo Correa, M.D.
Ann Potter Wilson Professor of Medicine
Division of Adult Gastroenterology

1:30 p.m. – 2:00 p.m.  Presentation: Role of Arginine in Colonic Inflammation
Keith Wilson, M.D.
Professor of Medicine and Cancer Biology
Director of Research and Fellowship Training Program
Division of Adult Gastroenterology

2:00 p.m. – 2:30 p.m.  Presentation: Role of Secreted Bacterial Proteins in Helicobacter pylori Infection
Timothy Cover, M.D.
Professor of Medicine
Division of Adult Infectious Disease

2:30 p.m. – 3:00 p.m.  Cores and Pilot/Feasibility Poster Presentations

3:00 p.m. – 3:30 p.m.  Presentation: The Battle for Metal Between Staphylococcus aureus and its Host
Eric Skaar, Ph.D.
Assistant Professor
Microbiology and Immunology Department

3:30 p.m. – 3:45 p.m.  Presentation: A Novel Role for the Enterocyte Brush Border in Mucosal Barrier Function
Matthew Tyska, Ph.D.
Assistant Professor
Cell and Developmental Biology

3:45 p.m. – 4:00 p.m.  Presentation: Lactobacillus rhamnosus GG-derived Soluble Proteins Prevent Intestinal Inflammation Through Activation of Epidermal Growth Factor Receptor Signaling Pathway
Fang Yan, M.D., Ph.D.
Research Assistant Professor
Division of Pediatric Gastroenterology, Hepatology and Nutrition