



North East Regional IDeA Conference 2017

August 16-18, 2017

Sheraton Hotel, Burlington, Vermont

Wednesday, August 16, 2017

2:00 – 9:00 PM Registration Desk Hours of Operation
(Diamond Foyer)

5:00 - 6:00 PM Reception and Poster Session I Set up
(Emerald Promenade)

6:00 – 6:15 PM Welcoming Remarks
(Emerald I-III Ballrooms)

- UVM President Thomas Sullivan
- UVM Provost David Rosowsky, PhD
- Judith Van Houten, PhD, Director, Vermont Genetics Network
- Ralph Budd, MD, Director, Vermont Center for Immunology and Infectious Diseases, UVM College of Medicine

6:15 – 7:30 PM Plated Dinner
(Emerald I-III Ballrooms)

7:30 – 9:00 PM Poster Session I (Undergraduate students and Cores)
(Emerald Promenade)

Thursday, August 17, 2017

7:00 AM – 5:30 PM Registration Desk Hours of Operation
(Diamond Foyer)

7:00 – 8:15 AM Breakfast, Career Tables for interested students, Poster Session II Set-up
(Exhibition Hall)
Corine Farewell, DVM, UVM Tech Transfer Office
“Technology Transfer”
Tim Hunter, MS, Biotek; and Yolanda Nesbeth PhD, Celdara Medical
“Biotech Career”

Charles Irvin, PhD, UVM College of Medicine, Director, Vermont Lung Center; and Ralph Budd, MD, UVM College of Medicine, Director, Vermont Center for Immunology & Infectious Diseases

"Academic Career"

Yanping Liu, MD, PhD, NIGMS; and W. Fred Taylor, PhD, Acting Director, Center for Research Capacity Building, NIH:

"Scientific Careers in Government"

Karen Spach, PhD, Senior Medical Writer, Envision Pharma Group:

"Scientific Writing"

Daniel Kolker, PhD, United States Patent and Trademark Office

"Patent Assessment"

8:30 – 9:45 AM

Opening Remarks
(Emerald I-III Ballrooms)

NIGMS staff:

- Yanping Liu, MD, PhD, Program Director, NIGMS
"Overview of Programs in the Center for Research Capacity Building"
- Arina Kramer, Grants Specialist at the Center for Research Capacity Building, NIGMS
"IDeA Post Award Management"

9:45 - 10:00 AM

Break and Refreshments
(Emerald Promenade)

10:00 – 12:00 noon

Concurrent Sessions –

1. Core Presentations of resources available to NERIC investigators (Emerald III Ballroom) Chair, Ralph Budd, MD, University Distinguished Professor of Medicine, The University of Vermont Larner College of Medicine
 - Eric Kmiec, PhD, Helen F. Graham Cancer Center & Research Institute, Newark, DE
"CRISPR-based Gene Editing in Biomedical Research"
 - Youngwook Ahn, PhD, Brown University Transgenics and Gene-Targeting Facility
"CRISPR/Cas9 Mouse Preparation"
 - Bongsup Cho, PhD, Coordinator INBRE and Professor, The University of Rhode Island
"Expanding Bioinformatic Core: 3D Printing of Molecules and Viruses!"
 - Nagib Ahsan, PhD, Brown University
"Proteomics Core Facility"
 - Calvin Vary, PhD, Maine Medical Research Institute
"Lipidomics"
 - Dwight Matthews, PhD, University of Vermont
"Metabolomics and 13C-labeling"

2. Entrepreneurship Workshop: "How to Turn your Innovative Ideas into Reality"

(Emerald II Ballroom)

- Mercedes Rincón, PhD, University of Vermont
"Welcome to the I-Trep program for IDeA states"
- Keynote speaker, Mathew Portnoy, PhD, Overall HHS SBIR/STTR Program Manager, NIH Program Manager, NIH Office of Extramural Programs
"Why You Should Apply for SBIR/STTR Grants"
- Pitch Presentations
 - Voot Yin, PhD, MDI Biological Laboratory
 - Qian Chen, PhD, The Warren Alpert Medical School of Brown University/Rhode Island Hospital
- Round tables (20 minutes each, choose three)
 - Daniel Kolker, PhD, Supervisory Patent Officer, USPTO; and MaryDilys Anderson, PhD, Esq, Finch & Maloney PLLC
"Assessing your Invention and Intellectual Property"
 - Samantha Roach-Gerber, VCET; and Erik Monsen, PhD, University of Vermont
"How to Pitch-How to Sell Your Idea"
 - Cairn Cross, Fresh Tracks Venture
"Funding Through VC, Angels"
 - Mathew Portnoy, PhD, NIH SBIR Program; and Yolanda Nesbeth, PhD, Celdara Medical
"Funding Through SBIR/STTR"
 - Sarah O'Connell Kalil, COO, Boston Microfluidics; and Tanya Kanigan, PhD, COO, Genomic Expression Inc.
"Setting Up Your Startup"
 - Tina Thornton, PhD, University of Vermont
"I-Trep Program Opportunities"

3. INBRE Program (Emerald I Ballroom)

- 10:00 – 11:00 AM - Sharon O'Connor, MS, MBA, Internal Evaluation Manager, Dartmouth College, New Hampshire INBRE
"INBRE Program Evaluation"
- 11:00-12:00 PM - Elizabeth Ambos, PhD, Executive Officer, Council on Undergraduate Research
"Building Undergraduate Research Access and Equity: Scaling, Scaffolding, Assessment, and Partnerships"

10:30 – 11:30 AM

COBRE/INBRE Business Grant Managers Meeting with Arina Kramer, Grants Specialist at the Center for Research Capacity Building, NIGMS (Carlton Boardroom)

12:00 – 1:30 PM

U.S. Senator Patrick Leahy (Exhibition Hall)

Lunch and Networking (Exhibition Hall)

VGN Baccalaureate Partner Institution Meeting (Carlton Boardroom)

1:30 - 3:30 PM

Concurrent Scientific Sessions (solicit themes from PIs and from abstracts received)

Development/Genetics (Emerald I Ballroom): Chair, Bruce Stanton, PhD, Professor of Microbiology and Immunology, Geisel School of Medicine, Dartmouth

- Featured Speaker: Vicki Losick, PhD, MDI Biological Laboratory
"Wound Healing the Fruit Fly Way"
- Featured Speaker: Jodi Camberg, PhD, University of Rhode Island
"Remodeling Protein Architectures Leads to Big Changes in Cell Physiology"
- Santina Snow, MDI Biological Laboratory
"The Role of Specific Tissues in Coordinating Changes in Organismal Growth, Longevity and Resilience to Stress in Response to Reduced mRNA Translation in C. Elegans"
- Aaron Brown, PhD, Maine Medical Center Research Institute
"A Novel Human Pluripotent Stem Cell-Derived Model of Beige Adipogenesis for Development of Anti-Obesity Therapies"
- Larissa Williams, PhD, Bates College
"The Transcription Factor, Nuclear Factor, Erythroid 2 (Nfe2), is a Regulator of the Oxidative Stress Response During Danio Rerio Development"
- Michaela Reagan, PhD, Tufts University
"3D Tissue Engineered Design of Bone Marrow Adipose Tissue to Investigate the Influence of Myeloma on Adipocytes and Adipogenesis"

Cancer (Emerald III Ballroom): Chair: Mercedes Rincon, PhD, Professor of Medicine, The University of Vermont Larner College of Medicine

- Featured Speaker: Patrycja Dubielecka, PhD, Brown University
"Beyond JAK/STAT: Signaling Pathways Contributing to the Pathogenesis of Myeloproliferative Neoplasms"
- Sonali Barwe, PhD, Alfred I. DuPont Hospital for Children
"Disseminated Patient-Derived Xenograft Models for Preclinical Testing of New Drugs for Pediatric Leukemia"
- Mark Perfetto, University of Delaware
"ADAM9 Cleaves EphrinB1 to Regulate Canonical Wnt Signaling and Colorectal Cancer Cell Migration"
- Con Sullivan, PhD, University of Maine
"A Role for the Tumor Necrosis Factor-Alpha-Induced Protein 8-like 1 Gene in Cancer and Inflammation"

- Sigrid Langhans, PhD, Nemours/Alfred I DuPont Hospital for Children
"Beta-Hairpin Peptide Hydrogels as Scaffolds for 3D High-Throughput Screening in Drug Discovery"
- Andrea Villanti
"Characteristics of Young Adult Cigarette Smokers in the U.S.: Findings from the 1st Wave of the PATH Study, 2013-2014"

Infectious Diseases and Immunology I (Emerald II Ballroom): Chair, William Green, PhD, Professor of Microbiology and Immunology, Geisel School of Medicine, Dartmouth

- Featured Speaker: William Landesman, PhD, Green Mountain College
"Drivers of Variation in the Ixodes Scapularis Microbiome"
- Jason Shapiro, MD, Alpert Medical School, Brown University
"Immunoglobulin-A Coated Bacteria Represent a Unique Subset of the Microbiome in Patients with Inflammatory Bowel Disease"
- Md Mahmudul Hasan, University of Vermont
"Motility of E. Histolytica Through Host Extracellular Matrix: Involvement of Invadosome-like Actin Structures"
- Rajiv Jumani, University of Vermont
"Identification and Pharmacokinetic-Pharmacodynamic Modeling of a Piperazine-Based Drug Lead for Cryptosporidiosis"
- Hacene Boukari, PhD, Delaware State University
"Tracking HIV Viruses in Human Cervical Mucus"
- Victoria DeVault, University of Vermont
"Natural Genetic Variation within a 0.1Mbp Genetic Interval on Chromosome 1 Regulates NKT Cell Development and Function"

3:30 – 3:45 PM Break and Refreshments (Emerald Promenade)

3:45 – 4:45 PM Keynote Lecture (Emerald III Ballroom)

- Jason McLellan, PhD, Geisel School of Medicine at Dartmouth
"Developing New Therapeutic Interventions to RSV Infection by Inhibiting the Metamorphosis of the RSV Fusion Glycoprotein"

4:45 – 6:00 PM Poster Session II (Emerald III Promenade)

Graduate students and Postdoctoral Fellows

5:30 – 6:30 PM NIH COBRE and INBRE PI Meeting
(Universal Amphitheater)

6:00 PM Dinner on your own in Burlington

Friday, August 18, 2017

8:00 – 9:00 AM Breakfast

(Exhibition Hall)

9:00 – 10:00 AM

Cool ideas from IDeA programs (Emerald III Ballroom) Chair, Charles Irvin, PhD, Professor of Medicine, The University of Vermont Larner College of Medicine

- Bruce Stanton, PhD, Professor of Microbiology and Immunology, Geisel School of Medicine, Dartmouth
"Leveraging COBRE Resources with Philanthropy"
- Marie Stuart, MD, PI of SCD COBRE Program, Director of Hematology Research A.I. DuPont Hospital for Children
"Single Disease Centered COBREs...A Novel Approach"
- W. Kelley Thomas, PhD, Professor, Dept. Molecular, Cellular and Biomedical Sciences, University of New Hampshire
"Early Undergraduate Experiences in Bioinformatics"

10:00 – 12:00 noon

Concurrent Scientific Sessions

Neuroscience (Emerald I Ballroom): Chair, Melissa Harrington, PhD, Vice President for Research, Delaware State University

- Featured Speaker: Matthew E. R. Butchbach, PhD, University of Delaware
"Characterization of Small Molecule Neuroprotectants for Spinal Muscular Atrophy"
- Featured Speaker: Andrew Kennedy, PhD, Bates College
"Targeting the Tet Enzymes to Enhance Cognition"
- Neal Mecum, University of Vermont
"Lacrimal Gland Excision in Male and Female C57BL/6 Mice Causes Pain- and Anxiety-like Behavior"
- Michael Dash, PhD, Middlebury College
"Synaptic Depotentiation Reduces Sleep Need"
- Leslie Johnson, PhD, Johnson State College
"More than Just 'Baby Weight': Perceived Postpartum Weight Bias and Well-Being in First-Time Mothers"

Infectious Diseases and Immunology II (Emerald III Ballroom): Chair, Ralph Budd, MD, University Distinguished Professor of Medicine, The University of Vermont Larner College of Medicine

- Michael Secinaro
"Glycolysis Primes Effector T Cells for Death Through the Induction of Caspase-3 Activity"
- Melissa Maginnis, PhD, University of Maine
"Characterization of Cellular Factors Required for JC Polyomavirus Invasion of Host Cells"
- Abbas Raza, University of Vermont

"Sex-Specific Regulation of CNS Autoimmunity by the Signal Lymphocytic Activation Molecule (Slam) Locus"

- Danielle Dube, PhD, Bowdoin College
"Discovery of Genes Required for Glycoprotein Biosynthesis in the Gastric Pathogen Helicobacter Pylori"
- Scott Rusin, Dartmouth College
"Identification of Candidate CK2 Substrates in Mitosis by Quantitative Phosphoproteomics"

Bioinformatics, Computational Biology, Complex Systems (Emerald II Ballroom): Chair, Cathy Wu, PhD, Edward G. Jefferson Chair of Bioinformatics & Computational Biology, University of Delaware

- Featured Speaker: Benjamin King, PhD, University of Maine
"Micro RNA Co-Expression Network Dynamics of Pseudomonas Aeruginosa in Zebrafish Danio Rerio"
- Featured Speakers: Dr. Malcolm D'Souza and Dr. Derald Wentzien from Delaware INBRE Wesley College
"Undergraduate Data Science Research Projects Form an Integral Component of the Wesley College Science and Mathematics Curriculum"
- Shawn Polson, PhD, University of Delaware
"Markers to Metagenomes and Back Again: Bioinformatics advances toward understanding microbial viruses"
- Edward Lyman, PhD, University of Delaware
"Computational Approaches to GPCR Drug Discovery: The Membrane as a Therapeutic Target"
- Cathy Wu, PhD, University of Delaware
"Big Data to Knowledge: Integrative Literature Mining and Panomics Analysis for Kinase Cancer Drug Analytics"

12:00 – 1:00 PM Lunch and Networking - Box lunches
(G's Restaurant)

1:00 PM Conference concludes