



## UVM Tackles COVID-19: Research Progress and Perspectives One Year into the Pandemic

March 18, 2021, 8:30-12:00

### Agenda summary:

- 8:30-8:35 Welcome, Introductions and Instructions (Drs. **Beth Kirkpatrick and Kristen Pierce**)
- 8:35-8:45 **Mark A. Levine, MD** - State of Vermont Commissioner of Health
- 8:50-9:20 Keynote address: "**How COVID-19 Has Changed the Field of Infectious Disease Modeling**"  
**Caroline Buckee, PhD**. Associate Professor of Epidemiology and Associate Director, Center for Communicable Disease Dynamics, Harvard T.H. Chan School of Public Health
- 9:30-9:50 Break
- 9:50-11:45 Research Presentations, Six Breakout rooms  
Group 1: Clinical and Translational Research  
Group 2: Epidemiology and Public Health, Section 1  
Group 3: Epidemiology and Public Health, Section 2  
Group 4: Basic Science  
Group 5: Modeling  
Group 6: Environment/Climate/Ecology
- 11:45-12:00 Discussion and Closing Comments, Larner College of Medicine (LCOM) Senior Associate Dean of Research, **Gordon Jensen MD, PhD** and LCOM Dean, **Rick Page MD**

Meeting link:

Join Zoom Meeting

<https://uvmcom.zoom.us/j/92176176931>

By phone:

+1 646 876 9923

Meeting ID: 921 7617 6931

Find your local number: <https://uvmcom.zoom.us/j/92176176931>

## **Break-out Groups and Research Talks:**

### **Group 1: Clinical/Translational Research:**

#### **Moderator: Kristen Pierce, MD**

9:50-10:05: "Presentation of Autopsy Findings of COVID Cases and Discussion of Available Tissue" Sharon Mount, MD, Professor - Department of Pathology & Laboratory Medicine, UVMMC and LCOM

10:10-10:25: "Longitudinal Assessment of Lung Function in COVID-19 Patients", Katherine Menson, DO (Presenter). Assistant Professor - Department of Medicine, UVMMC and LCOM and David A. Kaminsky, MD. Professor - Department of Medicine, UVMMC and LCOM

10:30-10:45: "An Agnostic Approach to Map the Human anti-SARS-CoV2 antibody Repertoire," Jason Botten, PhD. Associate Professor - Department of Medicine, LCOM

10:50-11:00: Short break

11:00-11:15: "Highlights from the AstraZeneca COVID-19 Phase III Vaccine Trial at UVM/UVMMC" Kristen Pierce, MD, Professor – Department of Medicine, UVMMC and LCOM

11:20-11:35: "UVMMC Clinical Trials of Heparin Anticoagulation" Mary Cushman, MD. Professor - Department of Medicine, UVMMC and LCOM

11:40-11:45: Return to Closure session, full group

### **Group 2: Epidemiology and Public Health, Section 1**

#### **Moderator: Beth Kirkpatrick, MD**

9:50-10:05: "Employee Health Data on COVID-19" Cindy Noyes, MD. Associate Professor - Department of Medicine, UVMMC and LCOM

10:10-10:25: "Perinatal Women's Plan to Receive the COVID Vaccine and Vaccinate Their Children" Leigh-Anne Cioffredi, MD. Assistant Professor - Department of Pediatrics, UVMMC and LCOM

10:30-10:45: "The Impact of COVID-19 on Food Security and Systems Across Scales" Meredith Niles, PhD. Assistant Professor - Department of Nutrition & Food Sciences, CALS

10:50-11:00: Short break

11:00-11:15: "COVID-19 Diagnostics - Building the Airplane in Flight" Emily Bruce, PhD. Assistant Professor - Department of Microbiology and Molecular Genetics, LCOM

11:20-11:35: "A School-based Longitudinal Serosurvey of SARS CoV-2 Antibodies in Vermont Children" Associate Professor - Ben Lee, MD. Department of Pediatrics, UVMMC and LCOM

11:40-11:45 Return to Closure session, full group

### **Group 3 Epidemiology and Public Health, Section 2 (Moderator: Jason Bates, PhD)**

9:50-10:05: "Vascular Endothelial Dysfunction and Risk of COVID-19 in a Biracial US Cohort: Cardiovascular Research Institute OF Vermont - Early Career Advisory Committee Grant" Debora Kamin Mukaz, PhD. Postdoctoral Associate - Department of Medicine, LCOM

10:10-10:25: "Functional Antibodies are Induced Across the COVID-19 Spectrum" Sean Diehl, PhD. Associate Professor - Department of Microbiology and Molecular Genetics, LCOM

10:30-10:45: "Impact of COVID-19 Preventative Measures on 2019-2020 Influenza Season in Vermont" Prasanna Kumar and Taylor Marquis. MD Candidates, LCOM

10:50-11:00 Short break

11:00-11:15: "COVID Impacts on Refugee Communities in Vermont" Pablo Bose, PhD. Associate Professor - Department of Geography, CAS

11:20-11:35: "Results From the Survey on Vermont's COVID-19 Guidelines - Assessing Adherence Among VT Residents and Visitors" Christine Vatovec, PhD. Research Assistant - LCOM and Lecturer - Rubenstein School of Environment and Natural Resources

11:40-11:45: Return to Closure session, full group

#### **Group 4: Basic Science**

**Moderator: Chris Huston, MD**

9:50-10:05: "SARS-CoV2 Causes Genomic Stability in Vero Cells" Nimrat Chatterjee, PhD. Assistant Professor - Department of Microbiology and Molecular Genetics, LCOM

10:10-10:25: "Mechanisms of SARS-CoV2 Induced Type 2 Alveolar Epithelial Cell Pathogenesis" Daniel Weiss, MD. Professor – Department of Medicine, UVMCC and LCOM and Markus Thali, PhD. Professor - Department of Medicine and Microbiology and Molecular Genetics, LCOM

10:30-10:45: "Effects of COVID-19 Blood on Mesenchymal Stromal Cell Actions" Daniel Weiss, MD and Renee Stapleton, MD. Professors - Department of Medicine, UVMCC and LCOM

10:50-11:00: Short break

11:00-11:15: "Examining the Molecular Basis of SARS Host Immune Responses" Dev Majumdar, PhD. Assistant Professor - Department of Surgery, LCOM

11:20-11:35: "A Cautionary Tale: Laboratory Contamination With SARS-CoV-2 Noninfectious DNA Can Result in False Positive PCR-based Surveillance Testing" Dmitry Kremontsov, MD. Assistant Professor - Department of Biomedical and Health Sciences, CNHS

11:40-11:45: Return to Closure session, full group

#### **Group 5: Modeling**

**Moderator: Caroline Buckee, PhD**

9:50-10:05: "Spatially Explicit Agent Based Model for COVID-19: A Student Driven Research Project" John Hanley, PhD. Staff Scientist - Department of Microbiology and Molecular Genetics, LCOM

10:10-10:25: "Vermont Conversation Lab: Story Listening Study" Robert Gramling, MD, DSc. Professor - Department of Family Medicine, UMMC and LCOM

10:30-10:45: "Development and External Validation of a Machine Learning Tool to Rule Out COVID Among Adults in the ER" Tim Plante, MD. Assistant Professor - Department of Medicine, UVMCC and LCOM

10:50-11:00: Short break

11:00-11:15: "Ghost Turbulence, the Imperceptible Force Driving Airborne Transmission of COVID-19" Yves Dubief, PhD. Associate Professor - Department of Mechanical Engineering, CEMS

11:20-11:35: "Simulating Mediator Trajectories from COVID Patients with the Cellular Immunity Agent Based Model and Introduction to the NIH Multiscale Modeling Consortium Viral Pandemics Working Group" Gary An, MD. Professor - Department of Surgery, UVMCC and LCOM

11:40-11:45: Return to Closure session, full group

### **Group 6: Environment/Climate/Ecology**

**Moderator: E. Ross Colgate, PhD**

9:50-10:05: "The Effect of COVID-19 on US Seafood and Fisheries" Easton White, PhD. Former Research Associate - Department of Biology, CAS

10:10-10:25: "Food Related Pro-Environmental Behaviors During the COVID Pandemic" Emily Morgan Belarmino, PhD, MPH. Assistant Professor - Department of Nutrition and Food Sciences, CALS

10:30-10:45: "The Importance of Non-Material Ecosystem Services During COVID: Where, When and How Nature Has Supported Human Wellbeing During Pandemic Times" Rachelle Gould, PhD. Assistant Professor - Rubenstein School of Natural Resources and Brendan Fisher, PhD. Professor - Rubenstein School of Natural Resources

10:50-11:00: Short break

11:00-11:15: "Wastewater Surveillance for COVID-19 and Community Health Assessment" Appala Raju Badireddy, PhD. Assistant Professor - Department of Civil and Environmental Engineering, CEMS

11:20-11:35: "Preserve a Voucher Specimen! The Critical Need for Integrating Natural History Collections in Infectious Disease Studies" Bill Kilpatrick, PhD. Professor Emeritus - Department of Biology, CAS

11:40-11:45 Return to Closure session, full group

#### Abbreviations:

CALS: College of Agriculture and Life Sciences

CAS: College of Arts and Sciences

CEMS: College of Engineering and Mathematical Sciences

CNHS: College of Nursing and Health Sciences

LCOM: Larner College of Medicine

UVMCC: University of Vermont Medical Center