WEDNESDAY, NOVEMBER 4th

9:00 Welcome and Introduction, Paula Cohen, Associate Vice Provost for Life Sciences, Cornell University
9:05 Welcome from Augustine Choi, Stephen and Suzanne Weiss Dean of Weill Cornell Medicine and Provost for Medical Affairs, Cornell University
9:10 Welcome from Mike Kotlikoff, Provost, Cornell University

9:15 – 11:25 SESSION 1: Clinical Science and Epidemiology
Chair: Doug Nixon (WCM)
Rapporteur: Carrie Johnston (WCM)

9:15-9:30 Roy Gulick (WCM): Current clinical situation, treatment, and prevention
9:30-9:33 Questions
9:41-9:43 Questions
9:51-9:53 Questions
9:53-9:58 Break
10:13-10:16 Questions
10:24-10:26 Questions
10:26-10:41 Michael Satlin (WCM): Impact of Viral Load on Outcomes of Hospitalized Patients with COVID-19
10:41-10:44 Questions
10:52-10:54 Questions
10:54-11:02 Jiwon Kim (WCM): Cardiovascular Imaging for COVID-19: Insights Gained and Future Directions
11:02-11:04 Questions
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>11:04-11:07</td>
<td>*Claudio Zanettini (WCM): Influenza Vaccination and COVID-19 Mortality in the USA: an ecological study</td>
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<td>11:10-11:25</td>
<td>Open Discussion</td>
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<td>11:25-11:30</td>
<td>BREAK</td>
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<td>11:30 – 1:44</td>
<td>SESSION 2: Molecular Virology and Host Biology</td>
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<td>11:30-11:45</td>
<td>Susan Daniel (Ithaca): New antiviral strategies and screening tools for coronavirus built on knowledge of the fusion peptide structure-function relationship with its host</td>
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<td>11:45-11:48</td>
<td>Questions</td>
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<td>11:56-11:58</td>
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<td>12:13-12:16</td>
<td>Questions</td>
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<td>12:16-12:19</td>
<td>*Luis Pedro Iñiguez Rábago (WCM): Increased Hypoxia Gene Signature in SARS-CoV-2 infection</td>
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<td>12:19-12:22</td>
<td>*Tiffany Tang (Ithaca): Evaluation of furin-mediated fusion activation via the SARS-CoV-2 S1/S2 site</td>
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<td>12:22-12:27</td>
<td>Break</td>
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<td>12:42-12:45</td>
<td>Questions</td>
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<td>12:45-12:53</td>
<td>Heidi Stuhlmann (WCM): Impact of SARS-CoV-2 on placentation</td>
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<td>12:53-12:55</td>
<td>Questions</td>
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<td>12:55-12:58</td>
<td>*Manvendra Singh (Ithaca): Transcriptomic profiling of coronavirus entry factors during pregnancy suggests risk of placental SARS-CoV-2 infection peaks at mid-gestation and is increased with preeclampsia</td>
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<td>12:58-1:06</td>
<td>Jack Freed (Ithaca): The activity of SARS-CoV-2 fusion peptide is Ca2+ dependent and the dependency is highly specific</td>
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<td>1:06-1:08</td>
<td>Questions</td>
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**SESSION 3: Vaccines, Anti-Virals, and other Therapeutics**

Chair: Deborah Fowell (Ithaca)
Rapporteur: Hector Aguilar-Carreno (Ithaca)

1:08-1:23  **Michael Corley (WCM):** Interplay between SARS-CoV-2 viral proteins and the innate immune system

1:23-1:26  Questions

1:26-1:29  **Melody Y. Zeng (WCM):** Gut microbiome-derived short-chain fatty acids confer protection against SARS-CoV-2 infection

1:29-1:44  Open Discussion

1:44-2:13  LUNCH

**2:13 – 4:25**  

Hector Aguilar-Carreno (Ithaca): Novel SARS-CoV-2 vaccine candidates tested in rodent models of disease

2:28-2:31  Questions

2:31-2:39  **Pengbo Zhou (WCM):** Small Molecule Inhibitor Rewires Cellular Protein to Augment its Anti-viral Activity against SARS-CoV-2

2:39-2:41  Questions

2:41-2:56  **Shuibing Chen (WCM):** Human Pluripotent Stem Cells derive Organoids, COVID-19 and Drug Screen

2:56-2:59  Questions

2:59-3:07  **Kristen Marks (WCM):** Clinical trials of SARS-CoV2 Vaccines: What We Can (and Cannot) Expect to Know by Year's End

3:07-3:09  Questions

3:09-3:14  Break

3:14-3:29  **Luis Schang (Ithaca):** A workflow to identify broad spectrum antiviral molecules active against SARS CoV-2/ COVID19, from screen to animal models

3:29-3:32  Questions

3:32-3:40  **Matt DeLisa (Ithaca):** A synthetic immunology toolbox for rapid development of human antibodies against SARS-CoV-2

3:40-3:42  Questions

3:42-3:57  **Chris Mason (WCM):** Spatial transcriptome and shotgun profiling of COVID-19 patients at admission and autopsy

3:57-4:00  Questions
Ailong Ke (Ithaca): Neutralize SARS-CoV-2 using engineered tri-ACE2 receptor decoys

Open Discussion

BREAK

SESSION 4: The Materials/Biology/Virology interface: new tools and innovative strategies for understanding, diagnosing, and treating SARS-CoV-2
Chair: Chris Mason (WCM)
Rapporteur: Chris Mason (WCM)

Iwijn De Vlaminck (Ithaca): A liquid biopsy for COVID-19

Lois Pollack (Ithaca): Finding the structure of a therapeutic target: the frameshifting pseudoknot in the SARS-CoV-2 genome

Harel Weinstein (WCM): Illuminating the molecular dynamics of the SARS-CoV-2 Spike interaction with membranes to discover viral entry inhibitors

Guillaume Lambert (Ithaca): Enhanced CRISPR-Based Detection of SARS-CoV-2 Using Optimized RNA Targets

William Katt (Ithaca): Structural insights into allosteric inhibitors of glutaminase, an important target for COVID-19 treatment

Josh Turse (Ithaca): SARS-CoV-2 Nucleic Acids May Confound Surveillance


Open Discussion

ADJOURN FOR THE DAY
8:30-8:35  Welcome  
Praveen Sethupathy, Co-Chair of the Organizing Committee,  
Director, Cornell Center for Vertebrate Genomics

**8:35 - 10:40**  SESSION 5: One Health Perspectives  
Chair: Alex Travis (Ithaca)  
Rapporteur: Daryl Van Nydam (Ithaca)

8:35-8:45  Alex Travis (Ithaca): Introduction

8:45-9:00  Gary Whittaker (Ithaca): Bats, cats and proteases: activation of the coronavirus spike protein and the redirection of viral tropism and virulence  
Questions

9:00-9:03


9:18-9:21


9:29-9:31

9:31-9:36  Break

9:36-9:44  Katie Fiorella (Ithaca): Feedbacks from human health to household reliance on natural resources during the COVID-19 pandemic

9:44-9:46


10:01-10:04

10:04-10:19  Oliver Gao (Ithaca): Air Quality and Health Implications of COVID-19 in California and Post-COVID Mobility in NYC Re-opening

10:19-10:22

10:22-10:25  *Alison Stout (Ithaca): Serosurveillance of SARS-CoV-2 in Cats presenting to an Animal Health Hospital in New York City

10:25-10:40  Open Discussion

10:40-10:45  BREAK

10:45 – 1:10  SESSION 6: Social Sciences and Modeling  
Chair: Maria Fitzpatrick (Ithaca)  
Rapporteur: Peter Enns (Ithaca)
10:45-11:00  Nathaniel Hupert (WCM): Modeling Pandemics, or, How A Little Math Can Change the World
11:00-11:03  Questions
11:03-11:11  Aditya Vashistha (Ithaca): Examining Health Misinformation in Low-Resource Environments
11:11-11:13  Questions
11:28-11:31  Questions
11:31-11:46  Peter Frazier (Ithaca): Mathematical modeling for reopening Cornell
11:46-11:49  Questions
11:55-12:00  Break
12:00-12:15  Sarah Kreps (Ithaca): The politics of COVID-19 public health policies
12:15-12:18  Questions
12:18-12:26  Gen Meredith (Ithaca): Multiple Methods to Support COVID-19 Prevention on Campus
12:26-12:28  Questions
12:28-12:43  Monika Safford (WCM): Models to guide clinical care
12:43-12:46  Questions
12:55-1:10  Open Discussion
1:10-1:40  LUNCH
1:40 – 3:20  SESSION 7: Variations in response to SARS-CoV-2 and Disease Interactions
Chair: Praveen Sethupathy (Ithaca)
Rapporteur: Cedric Feschotte (Ithaca)

1:55-1:58 Questions

2:06-2:08 Questions

2:08-2:11 *Mirella Salvatore (WCM): Harnessing human covid-19 cohorts and immune-omics integration for disease predictions

2:11-2:16 Break

2:16-2:31 Olivier Elemento (WCM): Decoding COVID-associated immune responses in blood and tissue using single cell analyses
2:31-2:34 Questions

2:34-2:42 Ilana Brito (Ithaca): Superinfections, the microbiome and COVID-19
2:42-2:44 Questions

2:44-2:59 Haiyuan Yu (Ithaca): A 3D Structural Interactome to Explore the Impact of Evolutionary Divergence, Population Variation, and Small-molecule Drugs on SARS-CoV-2-Human Protein-Protein Interactions
2:59-3:02 Questions

3:02-3:05 *Maureen Hanson (Ithaca): Long-haul COVID19—possible relationship to Myalgic Encephalomyelitis/Chronic Fatigue Syndrome

3:05-3:20 OPEN DISCUSSION

3:20-3:30 BREAK

3:30-5:30 NOTE: THIS SESSION IS OPEN TO CURRENT CORNELL EMPLOYEES ONLY (FROM ANY CAMPUS)
Brainstorming & Discussion Forum
Chairs: Paula Cohen and Gary Koretzky

5:30 Closing Remarks & End of Summit
Gary Koretzky, Vice Provost for Academic Integration

*Flash talk, selected from abstracts