

Workshop on Multi-Cellular Engineered Living Systems: Research, Applications, Regulations, and Ethics: Tentative Agenda

June 1-3, 2021

Virtual (Zoom and Gather Town)

Organizing Committee

- **Chairperson:** Roger Kamm, MIT
- Caroline Lowenthal, MIT
- Matthew Sample, Harvard University

June 1, 2021

1:00 pm to 1:10 pm	Welcome and Introduction <i>Ron Weiss, MIT</i>
1:10 pm to 1:40 pm	Opening Keynote: The Promise of M-CELS <i>Roger Kamm, MIT</i>
1:40 pm to 1:45 pm	Break
1:45 pm to 3:00 pm	Session 1: The Federal Perspective on M-CELS Research <i>Fred Kronz, NSF</i> <i>Kyung Sung, FDA</i> <i>Nas Zahir, NCI</i> <i>Paul Sheehan, DARPA</i> <i>Sohi Rastegar, NSF</i> <i>Session Chair: Dave Rampulla, NIBIB (moderator)</i>
3:00 pm to 3:10 pm	Break
3:10 pm to 4:15 pm	Session 2: Parallel Sessions 1. Breakthrough Technologies and Societal Needs <i>Anjelica Gonzalez, Yale</i> <i>Melissa Kemp, Georgia Tech</i> <i>Ron Weiss, MIT</i> <i>Session Chair: Milica Radisic, University of Toronto</i> 2. Organoids, Developmental Biology, and Moral Considerability <i>Joseph Wu, Stanford</i> <i>Matthew Sample, McGill</i> <i>Paola Arlotta, Harvard</i> <i>Session Chair: Jianping Fu, University of Michigan</i>
4:15 pm to 5:15 pm	Session 3: Clinical Translation <i>Kelly Stevens, University of Washington</i> <i>Michael Helmrath, Cincinnati Children's Hospital</i> <i>Valerie Gouon-Evans, BU</i> <i>Session Chair: Joseph Wu, Stanford</i>

5:15 pm to 5:20 pm

Introduction to Gather Town

5:20 pm to 6:00 pm

Virtual Networking Session in Gather Town

June 2, 2020

10:30 am to 11:15 am

Keynote

Bruce Tromberg, Director, NIBIB

Introduced by Rashid Bashir, UIUC

11:15 am to 11:25 am

Break

11:25 am to 12:25 pm

Session 4: Parallel Sessions

1. Emergence, Cell Population Behavior, and Biosecurity

Jianping Fu, University of Michigan

Megan Palmer, Stanford

Todd McDevitt, Gladstone Institutes

Session Chair: Celeste Nelson, Princeton

2. Bioeconomy, Tech Transfer, Equity, IP, and Competitiveness

Hemmie Chang, Foley Hoag

Mary Maxon, Lawrence Berkeley National Laboratory

Robert Mulroy, Partner Therapeutics

Session Chair: Sohi Rastegar, NSF

12:25 pm to 12:35 pm

Break

12:35 pm to 1:45 pm

Session 5: Parallel Sessions

1. Application Areas: Biological Robotics, Sensors, and Devices

Adam Feinberg, CMU

Ritu Raman, MIT

Sung Jin Park, Emory

Taher Saif, UIUC

Session Chair: Kit Parker, Harvard

2. Application Areas: Health and Human Well-Being

Beth Pruitt, UCSB

Danilo Tagle, NCATS

Jose Lebron, Merck

Linda Griffith, MIT

Session Chair: Kimberly Homan, Genentech

1:45 pm to 2:15 pm

Lunch

2:15 pm to 3:15 pm

Session 6: Parallel Sessions

1. Public Engagement: Techniques for Bi-Directional Conversations with the Public about M-CELS

David Sittenfeld, Museum of Science

Mahmud Farooque, ASU

Natalie Kuldell, BioBuilder/MIT

Session Chair: Jason Delborne, NC State University

	<p>2. Manufacturing for M-CELS <i>Kaiming Ye, SUNY Binghamton</i> <i>Tom Bollenbach, ARMI</i> <i>Wei Sun, Tsinghua University</i> <i>Session Chair: Krishnendu Roy, Georgia Tech</i></p>
3:15 pm to 3:25 pm	Break
3:25 pm to 4:25 pm	<p>Session 7: Training the Future M-CELS Workforce <i>Manu Platt, Georgia Tech</i> <i>Maribel Vazquez, Rutgers University</i> <i>Rashid Bashir, UIUC</i> <i>Session Chair: Ritu Raman, MIT</i></p>
4:25 pm to 4:30 pm	Break
4:30 pm to 5:30 pm	Student Poster Session in Gather Town

June 3, 2021

10:30 am to 11:15 am	<p>Keynote <i>Joni Rutter, Acting Director, NCATS</i> <i>Introduced by Ron Weiss, MIT</i></p>
11:15 am to 11:20 am	Break
11:20 am to 12:20 pm	<p>Session 8: Regulatory Policy, Equity, and Standardization <i>Peter Marks, FDA</i> <i>Richardae Araojo, FDA</i> <i>Sheng Lin-Gibson, NIST</i> <i>Session Chair: Karissa Adkins, Sanofi</i></p>
12:20 pm to 12:30 pm	Break
12:30 pm to 1:30 pm	<p>Session 9: Parallel Sessions</p> <ol style="list-style-type: none"> <p>1. Beyond Health: Applications in Plants, Insects, and Agriculture <i>Don Ort, UIUC</i> <i>June Medford, Colorado State</i> <i>Kevin Esvelt, MIT</i> <i>Session Chair: Nicola Patron, Earlham Institute</i></p> <p>2. Communication Strategies for M-CELS Researchers <i>Carolyn Johnson, Washington Post</i> <i>Leah Ceccarelli, University of Washington</i> <i>Pep Pamies, Nature Biomedical Engineering</i> <i>Session Chair: Philip Ball, Science Writer</i></p>
1:30 pm to 2:00 pm	Lunch

2:00 pm to 3:00 pm

Session 10: Bioengineering Ethics: Connecting Lab and Society for the Next Decade of M-CELS

Sandra Soo-Jin Lee, Columbia University

Rosemarie Hunziker, Connexon Life Sciences Consulting

Nils Hoppe, Leibniz University Hannover

Session Chair: Insoo Hyun, Harvard

3:00 pm to 3:30 pm

Closing Remarks: The Future of M-CELS and Next Steps

Insoo Hyun, Harvard