National Institutes of Health
Brain Research through Advancing Innovative Neurotechnologies®
(BRAIN) Initiative
Workshop on Research with Human Neural Tissue

Agenda
March 28, 2018
NIH Campus
Building 31, 6th floor C wing, room 6

9:00 AM  Welcome and Opening Remarks
Walter Koroshetz, MD, NINDS

Session 1: Research with ex vivo brain tissue
9:15 AM  Panel Presentations
Moderator:
James Eberwine, PhD, University of Pennsylvania

Panelists:
Jonathan Ting, PhD, Allen Institute for Brain Science
Anna Devor, PhD, University of California, San Diego
Nenad Sestan, MD, PhD, Yale University

10:00 AM  Discussion
- What scientific questions are best addressed through use of ex vivo brain tissue?
- What advances have been made using these models and what advances are on the horizon?
- Are there technical limitations for these models?
- Would the use of tissue from animals be informative? If so, what approaches would promote harmonization of model systems research with human tissue research?

10:30 AM  BREAK

Session 2: Research with human cerebral organoids
11:00 AM  Panel Presentations
Moderator:
Arnold Kriegstein, MD, PhD, University of California, San Francisco

Panelists:
Sergiu Pasca, MD, Stanford University
Paola Arlotta, PhD, Harvard University
Rusty Gage, PhD, Salk Institute for Biological Studies
11:30 AM Discussion
- What scientific questions are best addressed through use of human cerebral organoids?
- What advances have been made using these models and what advances are on the horizon?
- What are the technical limitations for these models?
- Would it be informative to leverage animal models?

12:00 PM LUNCH

Session 3: Ensuring the responsible conduct of research with human neural tissue
1:00 PM Panel Presentations
Moderator: Nita Farahany, JD, PhD, Duke University

Panelists:
James Bernat, MD, Geisel School of Medicine at Dartmouth
David DeGrazia, PhD, George Washington University and NIH
Laurie Zoloth, PhD, University of Chicago

1:45 PM Discussion
- What methods exist for assessing the maturity of neural circuitry in brain models and the functional significance of that circuitry?
- What neuroethical questions do these models raise?
- How might existing oversight structures be leveraged to evaluate and/or mitigate these issues, both today and as the technologies advance?
- Are there particular experimental outcomes that should be avoided?
- What roles do various stakeholders have in promoting accurate understanding of this kind of research?

2:45 PM BREAK

3:15 PM Panel Presentations - continued
Moderator: Hank Greely, JD, Stanford University

Panelists:
Insoo Hyun, PhD, Case Western Reserve University
Jeantine Lunshof, PhD, Harvard University
Jonathan Moreno, PhD, University of Pennsylvania

4:00 PM Discussion - continued

5:00 PM Wrap-Up and Concluding Remarks
Joshua Gordon, MD, PhD, NIMH

5:15 PM Adjourn