

SCIENTIFIC AND ETHICAL

# Frontiers in Understanding Human Development

WEDNESDAY, NOVEMBER 4, 2020

 <https://irm.med.upenn.edu/event/frontiers/>



## AM Schedule

9:00 AM

### Welcome and Introductions

*Jonathan Epstein, MD, Executive Vice Dean and Chief Scientific Officer, Perelman School of Medicine*  
*Ralph Brinster, VMD, PhD, Richard King Mellon Professor of Reproductive Physiology, Penn Vet*  
*Ken Zaret, PhD, IRM Director*

### Session 1

### "Frontiers of embryonic development research"

*Moderator: Ken Zaret, PhD, IRM Director*

9:15- 9:35

### Janet Rossant, PhD (University of Toronto/Hospital for Sick Kids)

*Lineage commitment in the mouse blastocyst and its derived stem cells*

9:35-9:45

*Discussion*

9:45-10:05

### Magdalena Zernicka-Goetz, PhD (University of Cambridge/Caltech)

*Building embryos from stem cells in vivo and in vitro*

10:05-10:15

*Discussion*

10:15-10:27

### Nicolas Plachta, PhD (University of Pennsylvania)

*Imaging how the mouse embryo forms*

10:27-10:35

*Discussion*

10:35-10:50

**Break**

10:50-11:02

### Kurt Barnhart, MD (University of Pennsylvania)

*Fetal tissue use in OBGYN: Hurdles and opportunities*

11:02-11:10

*Discussion*

11:10-11:45

### Panel Discussion with Session 1 Speakers and Audience

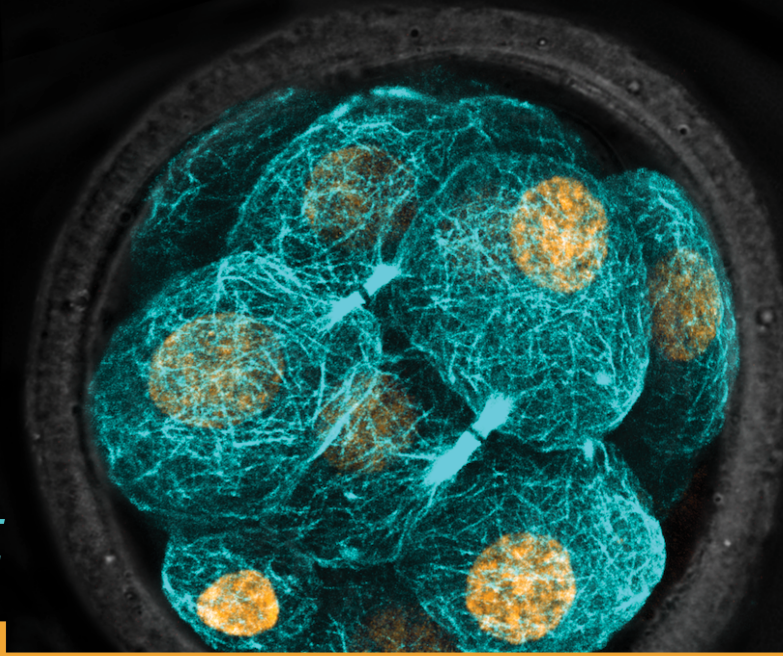
11:45-12:00

### Lightning Talks from Graduate Students & Postdocs

*Akshata Almad, PhD- A RETRO look at the inherited neurodevelopmental diseases Aicardi Goutières Syndrome*

*Louis Prah, PhD- Spatial patterning of Ret-GDNF signaling in model ureteric epithelial tissues*

*Wenchao Qian- A spatial gradient of cell size regulates genome activation and vertebrate early development*



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## PM Schedule

### Session 2

#### **"Approaches & Ethics for the Future of Developmental Biology"**

*Moderator: Chris Lengner, PhD*

1:00-1:20

**Jianping Fu, PhD (University of Michigan)**

*Bottom-up synthetic embryology for understanding early human development*

1:20-1:30

*Discussion*

1:30-1:42

**Kathleen O'Neill, MD, MTR (University of Pennsylvania)**

*Exploring scientific and ethical questions in uterus transplantation*

1:42-1:50

*Discussion*

1:50-2:02

**Kotaro Sasaki, MD, PhD (University of Pennsylvania)**

*Germ cell derivation from pluripotent stem cells*

2:02-2:10

*Discussion*

2:10-2:25

**Break**

2:25-2:37

**Guo-li Ming, MD, PhD (University of Pennsylvania)**

*Modeling human hippocampal neurogenesis using brain organoids*

2:37-2:45

*Discussion*

2:45-3:05

**Insoo Hyun, PhD (Case Western University/Harvard School of Medicine)**

*Why does ethics matter for the future of developmental biology?*

3:05-3:15

*Discussion*

3:15-3:50

**Panel Discussion with Session 2 Speakers and Audience**

3:50-4:00

**Closing Remarks**

*Chris Lengner, PhD, IRM Associate Director*

4:00-4:30

**Informal "Happy Hour"**