



# 2022 HCA Developmental and Pediatric Cell Atlas Meeting

## Day 1 - 20 November 2022

12:30 PM - 1:00 PM GMT +1 / 6:30 AM - 7:00 AM Your local time (30 Min)

### Registration

12:40 PM - 3:00 PM GMT +1 / 6:40 AM - 9:00 AM Your local time (2 Hours, 20 Min)

### Day 1 Broadcast – part 1

WATCH RECORDING

1:00 PM - 1:05 PM GMT +1 / 7:00 AM - 7:05 AM Your local time (5 Min)

### Welcoming Remarks (Live-streamed)



**Alain Chedotal**  
Principal investigator  
Institut de la Vision  
Speaker

1:05 PM - 2:05 PM GMT +1 / 7:05 AM - 8:05 AM Your local time (1 Hour)

### Plenary Session 1 (Live-streamed)

1. Sarah Teichmann: *State of the HCA Developmental and Pediatric Cell Atlas*
2. Prisca Liberali: *Mechanisms of gastruloids development*
3. Roser Vento Tormo: *Mapping tissues in vivo and in vitro*
4. Anne Grapin-Botton: *Linking transcriptome and functional behaviours using a mix of in vitro and in vivo datasets*



**Alain Chedotal**  
Principal investigator  
Institut de la Vision  
Moderator



**Roser Vento Tormo**  
Group Leader  
Wellcome Sanger Institute  
Speaker



**Sarah Teichmann**  
Head of Cellular Genetics and Se...  
Speaker



**Anne Grapin-Botton**  
Professor  
Max Planck Institute of Molecu...  
Speaker



**Prisca Liberali**  
Group Leader  
Friedrich Miescher Institute for Bi...  
Speaker

2:05 PM - 2:35 PM GMT +1 / 8:05 AM - 8:35 AM Your local time (30 Min)

## "Building blocks towards developmental atlases across time and space" (Live-streamed)



**Sarah Teichmann**  
Head of Cellular Genetics and Se...  
Moderator



**Dana Pe'er**  
Principal Investigator  
Memorial Sloan Kettering  
Keynote

2:35 PM - 3:05 PM GMT +1 / 8:35 AM - 9:05 AM Your local time (30 Min)

## Break

3:05 PM - 4:35 PM GMT +1 / 9:05 AM - 10:35 AM Your local time (1 Hour, 30 Min)

## Breakout Session 1

1. Regulatory mechanisms in development / Understanding cellular decision making during development - Sten Linnarsson and Anne Grapin-Botton

Location: Auditorium

2. Organ, organoids and animal models Part 1 (organoid focus) - Stephane Nedelec and Prisca Liberali

Location: Room 106

3. Developmental disorders - Christel Depienne, Guillaume Canaud and Stéphanie Baulac

Location: Room 108



**Sten Linnarsson**  
Principal Investigator  
Karolinska Institute  
Moderator



**Anne Grapin-Botton**  
Professor  
Max Planck Institute of Molecu...  
Moderator



**Stéphane Nedelec**  
Group Leader  
Institut du Fer à Moulin  
Moderator



**Prisca Liberali**  
Group Leader  
Friedrich Miescher Institute for Bi...  
Moderator



**Christel Depienne**  
Professor  
University Hospital Essen  
Moderator



**Guillaume Canaud**  
Professor  
Hopital Necker Enfants Malades, ...  
Moderator



**Stéphanie Baulac**  
Research Director  
 Inserm  
Moderator

4:30 PM - 8:00 PM GMT +1 / 10:30 AM - 2:00 PM Your local time (3 Hours, 30 Min)

## Day 1 Broadcast – part 2

WATCH RECORDING

4:35 PM - 5:25 PM GMT +1 / 10:35 AM - 11:25 AM Your local time (50 Min)

## Lightning Talks (Live-streamed)

1. Mijo Simunovic: *Recreating post-implantation human embryogenesis, one cell at a time*
2. Jonas Fleck: *Inferring and perturbing cell fate regulomes in human brain organoids*
3. Paulo Czarnewski: *Ongoing efforts on the 1st trimester Human Developmental Cell AtlasG*
4. Heather Etchevers: *Multimodal refinements of the first-trimester human heart atlas*
5. Dorit Hockman: *Exploring Gene Expression and Gene Regulation during Human Brain Maturation*



**Gary Bader**  
Principal Investigator Principal In...  
University of Toronto  
Moderator



**Mijo Simunovic**  
Speaker



**Jonas Fleck**  
Speaker



**Paulo Czarnewski**  
Staff Scientist  
Karolinska Institutet  
Speaker



**Heather Etchevers**  
Group Leader  
INSERM, Aix-Marseille Université  
Speaker



**Dorit Hockman**  
Senior Lecturer  
University of Cape Town  
Speaker

5:25 PM - 7:00 PM GMT +1 / 11:25 AM - 1:00 PM Your local time (1 Hour, 35 Min)

## Reception and Poster Session 1

Poster Session Abstracts and Numbers

## Day 2 - 21 November 2022

8:40 AM - 10:50 AM GMT +1 / 2:40 AM - 4:50 AM Your local time (2 Hours, 10 Min)

## Day 2 Broadcast – part 1

WATCH RECORDING

9:00 AM - 9:05 AM GMT +1 / 3:00 AM - 3:05 AM Your local time (5 Min)

## Welcoming Remarks (Live-streamed)



**Alain Chedotal**  
Principal investigator  
Institut de la Vision  
Speaker

9:05 AM - 9:55 AM GMT +1 / 3:05 AM - 3:55 AM Your local time (50 Min)

## Breakout Session 1 Report Back (Live-streamed)



### Genevieve Almouzni

Team Leader  
Institut Curie  
Moderator



### Stéphane Nedelec

Group Leader  
Institut du Fer à Moulin  
Speaker



### Guillaume Canaud

Professor  
Hopital Necker Enfants Malades, ...  
Speaker



### Sten Linnarsson

Principal Investigator  
Karolinska Institute  
Speaker



### Prisca Liberali

Group Leader  
Friedrich Miescher Institute for Bi...  
Speaker



### Stephanie Baulac

Research Director  
Inserm  
Speaker



### Anne Grapin-Botton

Professor  
Max Planck Institute of Molecu...  
Speaker



### Christel Depienne

Professor  
University Hospital Essen  
Speaker

9:55 AM - 10:10 AM GMT +1 / 3:55 AM - 4:10 AM Your local time (15 Min)

## Break

10:10 AM - 11:40 AM GMT +1 / 4:10 AM - 5:40 AM Your local time (1 Hour, 30 Min)

## Breakout Session 2

1. Clinical genetics: How to use single-cell atlas data to identify disease causing variants in patients? - Mickaël Ménager and Elfride De Baere

Location: Auditorium

2. Regenerative medicine applications of the development and pediatric cell atlas - Paul Riley and Fabien Le Grand

Location: Room 106

3. Organ, organoids and animal models Part 2 (animal model focus) - Matias Simmons and Shahragim Tajbakhsh

Location: Room 108



### Mickael Menager

Group Leader  
Imagine Institute  
Moderator



### Fabien Le Grand

Principal Investigator  
INSERM  
Moderator



### Elfride De Baere

Professor  
Ghent University  
Moderator



### Matias Simons

Professor  
Institute of Human Genetics | Uni...  
Moderator



### Paul Riley

Professor of Regenerative Medici...  
University of Oxford  
Moderator



### Shahragim Tajbakhsh

Principal Investigator  
Institut Pasteur  
Moderator

11:40 AM - 12:10 PM GMT +1 / 5:40 AM - 6:10 AM Your local time (30 Min)

## Break

12:00 PM - 1:30 PM GMT +1 / 6:00 AM - 7:30 AM Your local time (1 Hour, 30 Min)

## Day 2 Broadcast – part 2

WATCH RECORDING

12:10 PM - 12:55 PM GMT +1 / 6:10 AM - 6:55 AM Your local time (45 Min)

## Breakout Session 2 Report Back (Live-streamed)



**Gary Bader**  
Principal Investigator Principal In...  
University of Toronto  
Moderator



**Mickael Menager**  
Group Leader  
Imagine Institute  
Speaker



**Elfride De Baere**  
Professor  
Ghent University  
Speaker



**Paul Riley**  
Professor of Regenerative Medici...  
University of Oxford  
Speaker



**Fabien Le Grand**  
Principan Investigator  
INSERM  
Speaker



**Matias Simons**  
Professor  
Institute of Human Genetics | Uni...  
Speaker



**Shahragim Tajbakhsh**  
Principal Investigator  
Institut Pasteur  
Speaker

12:55 PM - 2:55 PM GMT +1 / 6:55 AM - 8:55 AM Your local time (2 Hours)

## Lunch and Poster Session 2

Poster Session Abstracts and Numbers

2:40 PM - 4:20 PM GMT +1 / 8:40 AM - 10:20 AM Your local time (1 Hour, 40 Min)

## Day 2 Broadcast – part 3

WATCH RECORDING

2:55 PM - 4:15 PM GMT +1 / 8:55 AM - 10:15 AM Your local time (1 Hour, 20 Min)

## Plenary Session 2 (Live-streamed)

1. Edel O'Toole: *Possible insights into pediatric skin diseases from the human pediatric skin atlas*
2. Jian Shu: *Decoding cell fates through single-cell genomics and imaging*
3. Edouard Hannezo: *Topology of the early embryo*
4. Leon Peshkin: *Tabula Rana - Frog Cell Atlas of embryonic development and adult tissues*



**Sten Linnarsson**  
Principal Investigator  
Karolinska Institute  
Moderator



**Edel O'Toole**  
Professor  
Blizard Institute, Queen Mary Uni...  
Speaker



**Jian Shu**  
Assistant Professor  
Massachusetts General Hospital,...  
Speaker



**Edouard Hannezo**  
Professor  
Institute of Science and Technolo...  
Speaker



**Leon Peshkin**  
Principal Investigator  
Harvard University  
Speaker

4:15 PM - 4:45 PM GMT +1 / 10:15 AM - 10:45 AM Your local time (30 Min)

## Break

4:45 PM - 6:15 PM GMT +1 / 10:45 AM - 12:15 PM Your local time (1 Hour, 30 Min)

## Breakout Session 3

1. Developmental origins of health outcomes over a lifespan - Paolo Giacobini and Ines Sequeira  
Location: Auditorium
2. Ethics: Patient and Researcher perspectives - Bartha Knoppers and Sarah Chan  
Location: Room 106
3. The mathematics and physics of human development - Edouard Hannezo and Pierre François Lenne  
Location: Room 108



**Paolo Giacobini**  
Principal Investigator  
INSERM  
Moderator



**Ines Sequeira**  
Principal Investigator  
Queen Mary University of London  
Moderator



**Bartha Maria Knoppers**  
Director  
Centre of Genomics and Policy  
Moderator



**Sarah Chan**  
Principal Investigator  
University of Edinburgh  
Moderator



**Edouard Hannezo**  
Professor  
Institute of Science and Technolo...  
Moderator



**Pierre-François Lenne**  
Principal Investigator  
Marseille Institute of Developme...  
Moderator

6:00 PM - 8:00 PM GMT +1 / 12:00 PM - 2:00 PM Your local time (2 Hours)

## Day 2 Broadcast – part 4

WATCH RECORDING

6:15 PM - 6:45 PM GMT +1 / 12:15 PM - 12:45 PM Your local time (30 Min)

## "Uncovering human specific processes of brain development using cerebral organoids" (Live-streamed)



**Genevieve Almouzni**  
Team Leader  
Institut Curie  
Moderator



**Madeline Lancaster**  
Principal Investigator  
MRC Laboratory of Molecular Bio...  
Keynote

## Day 3 - 22 November 2022

8:40 AM - 2:00 PM GMT +1 / 2:40 AM - 8:00 AM Your local time (5 Hours, 20 Min)

### Day 3 Broadcast



BROADCAST HAS ENDED

9:00 AM - 9:05 AM GMT +1 / 3:00 AM - 3:05 AM Your local time (5 Min)

### Welcoming Remarks (Live-streamed)



**Alain Chedotal**  
Principal investigator  
Institut de la Vision  
Speaker

9:05 AM - 9:55 AM GMT +1 / 3:05 AM - 3:55 AM Your local time (50 Min)

### Breakout Session 3 Report Back (Live-streamed)



**Muzlifah Haniffa**  
Principal Investigator  
Wellcome Sanger Institute  
Moderator



**Bartha Maria Knoppers**  
Director  
Centre of Genomics and Policy  
Speaker



**Pierre-François Lenne**  
Principal Investigator  
Marseille Institute of Developme...  
Speaker



**Paolo Giacobini**  
Principal Investigator  
INSERM  
Speaker



**Sarah Chan**  
Principal Investigator  
University of Edinburgh  
Speaker



**Ines Sequeira**  
Principal Investigator  
Queen Mary University of London  
Speaker



**Edouard Hannezo**  
Professor  
Institute of Science and Technolo...  
Speaker

9:55 AM - 10:40 AM GMT +1 / 3:55 AM - 4:40 AM Your local time (45 Min)

## Plenary Session 3 (Live-streamed)

1. Galabina Yordanova and Ida Zucchi: *One place for all HCA data - The HCA Data Platform and how we can support you*
2. Partha Majumder: *Commitment and Activities of HCA to Promote Equity, and Some Results of HCA-Related Research from India*
3. Bartha Knoppers: *Tracking Ethical Provenance*



**Roser Vento Tormo**  
Group Leader  
Wellcome Sanger Institute  
Moderator



**Galabina Yordanova**  
Product Owner  
European Bioinformatics Institute  
Speaker



**Ms. Ida Zucchi**  
Data curator  
EMBL-EBI  
Speaker



**Partha Majumder**  
Distinguished Professor  
National Institute of Biomedical ...  
Speaker



**Bartha Maria Knoppers**  
Director  
Centre of Genomics and Policy  
Speaker

10:40 AM - 11:10 AM GMT +1 / 4:40 AM - 5:10 AM Your local time (30 Min)

## Break

11:10 AM - 11:40 AM GMT +1 / 5:10 AM - 5:40 AM Your local time (30 Min)

## "Robotics imaging and omics for the next-generation biomedical solutions" (Live-streamed)



**Alain Chedotal**  
Principal investigator  
Institut de la Vision  
Moderator



**Ali Erturk**  
Principal Investigator  
Helmholtz  
Keynote

11:40 AM - 12:10 PM GMT +1 / 5:40 AM - 6:10 AM Your local time (30 Min)

## Directions of the HCA Developmental and Pediatric Cell Atlases (Live-streamed)



**Genevieve Almouzni**  
Team Leader  
Institut Curie  
Speaker



**Gary Bader**  
Principal Investigator Principal In...  
University of Toronto  
Speaker



**Alain Chedotal**  
Principal investigator  
Institut de la Vision  
Speaker



**Muzlifah Haniffa**  
Principal Investigator  
Wellcome Sanger Institute  
Speaker



**Partha Majumder**  
Distinguished Professor  
National Institute of Biomedical ...  
Speaker

12:10 PM - 12:15 PM GMT +1 / 6:10 AM - 6:15 AM Your local time (5 Min)

## Closing Remarks (Live-streamed)



**Alain Chedotal**  
Principal investigator  
Institut de la Vision  
Speaker