

HCA Asia 2024 Meeting / Agenda

Tue **Dec 03**

8:30 AM - 9:00 AM GMT +8 / **12:30 AM - 1:00 AM** Your local time (30 Min)

Registration

9:00 AM - 9:05 AM GMT +8 / **1:00 AM - 1:05 AM** Your local time (5 Min)

Welcoming Remarks

 Grand Hall A



Prof. Angela Wu

Group Leader
Hong Kong University of Science and Technology
Speaker

9:05 AM - 9:55 AM GMT +8 / **1:05 AM - 1:55 AM** Your local time (50 Min)

Session 1: State of the HCA Consortium

 Grand Hall A

Session Chair: **Angela Wu**

1. **Aviv Regev** (virtual) and **Sarah Teichmann** (virtual) *State of the HCA*
2. **Jay W. Shin** and **Shyam Prabhakar** *Overview of the HCA Asia and HCA Diversity Task Force*



Prof. Angela Wu

Group Leader
Hong Kong University of Science ...
Moderator



Dr. Jay Shin

Senior Group Leader
A*STAR GIS
Speaker



Aviv Regev

Principal Investigator
Genentech, Human Cell Atlas
Speaker



Shyam Prabhakar

Senior Group Leader
Genome Institute of Singapore
Speaker



Sarah Teichmann

Principal Investigator
Cambridge Stem Cell Institute, H...
Speaker

Sponsored By:



9:55 AM - 10:40 AM GMT +8 / 1:55 AM - 2:40 AM Your local time (45 Min)

Keynote 1

📍 Grand Hall A

Chair: **Shyam Prabhakar**

Alexandra-Chloé Villani *Update on the Atlas Assembly*



Shyam Prabhakar
Senior Group Leader
Genome Institute of Singapore
Moderator



Alexandra-Chloe Villani
Principal Investigator
Massachusetts General Hospital,...
Keynote

10:40 AM - 11:00 AM GMT +8 / 2:40 AM - 3:00 AM Your local time (20 Min)

Refreshment Break

11:00 AM - 11:50 AM GMT +8 / 3:00 AM - 3:50 AM Your local time (50 Min)

Session 2: Emerging Technologies

📍 Grand Hall A

Session Chairs: **Alistair Forrest** and **Lan Jiang**

1. **Yanyi Huang** *Multiplexed Profiling of RNA In-Situ through Single-round of Imaging in Three-Dimensional Tissue*
2. **Hirofumi Shintaku** *Nano-electrokinetic Transcriptomics to Link Gene Expressions to Single-cell Behaviors*
3. **Gang Cao** *Integrating Single-cell Spatial-omics with Connectome*



Prof. Alistair Forrest
Principal Investigator
Harry Perkins Institute of Medica...
Moderator



Hirofumi Shintaku
Principal Investigator
RIKEN
Speaker



Prof. Lan Jiang
Principal Investigator
China National Center for Bioinfo...
Moderator



Prof. Gang Cao
Shenzhen Institute of Advanced ...
Speaker



Prof. Yanyi Huang
Professor
Peking University
Speaker

12:00 PM - 1:20 PM GMT +8 / 4:00 AM - 5:20 AM Your local time (1 Hour, 20 Min)

Lunch Break + Exhibitor Viewing

 Grand Hall B

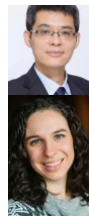
1:20 PM - 2:10 PM GMT +8 / 5:20 AM - 6:10 AM Your local time (50 Min)

Session 3: Computational Advances

 Grand Hall A

Session Chairs: **Xuegong Zhang** and **Jiguang Wang**

1. **Xuegong Zhang** *Large Cellular Models as Future Cell Atlas Foundation Models*
2. **Boxiang Liu** *Integration and Annotation of Spatial Multi-omic Data with DIRAC*
3. **Drew Neavin** *Ancestry Annotation from Single-cell Data Quantifies Diversity in Single-cell Consortia*



Prof. Jiguang WANG

Principal Investigator
HKUST
Moderator



Dr. Drew Neavin

Postdoctoral Associate
Garvan Institute of Medical Rese...
Speaker



Prof. Xuegong Zhang

Principal Investigator
Tsinghua University
Speaker



Prof. Boxiang Liu

Assistant Professor
National University of Singapore
Speaker

2:10 PM - 2:30 PM GMT +8 / 6:10 AM - 6:30 AM Your local time (20 Min)

Refreshment Break

2:29 PM - 3:30 PM GMT +8 / 6:29 AM - 7:30 AM Your local time (1 Hour, 1 Min)

Concurrent Breakout Discussion 1: HCA New Directions

- Topic #1: Spatial Biology (**Grand Hall A**)
- Topic #2: Data Management and Access (**Function room**)
- Topic #3: Diversity (**Pre-function area**)
- Topic #4: Diseases (**Idea Lab**)

3:30 PM - 3:50 PM GMT +8 / 7:30 AM - 7:50 AM Your local time (20 Min)

Refreshment Break

3:50 PM - 4:05 PM GMT +8 / 7:50 AM - 8:05 AM Your local time (15 Min)

CZI's Talk

📍 Grand Hall A

Chair: **Partha Majumder**

Jonah Cool *Accelerating Immune Cell Research Through Cross-Institutional Collaboration*



Prof. Partha Majumder
Distinguished Professor
John C. Martin Center for Liver Re...
Moderator



Dr. Jonah Cool
Science Officer, Program Lead
Chan Zuckerberg Initiative
Speaker

4:05 PM - 4:35 PM GMT +8 / 8:05 AM - 8:35 AM Your local time (30 Min)

Lightning Talks by Selected Day 1 Poster Presenters

📍 Grand Hall A

Chair: **Senjuti Saha**

1. **Kaile Wang** *Detection of Rare Cell Populations by High-throughput Single Cell DNA and Multi-omics Sequencing*
2. **Yun Li (Lan Jiang)** *UDA-seq: Advancing Multimodal Single-Cell Sequencing at the Population Scale*
3. **Yong Wang** *ClusterMatch Aligns scRNA Data via Multi-scale Cluster Stable Matching*
4. **Rongting Huang** *Comprehensive Benchmarking of Copy Number Alterations Analysis Methods for Single-cell and Spatial Transcriptomic Data*
5. **Jean Lee** *Genetic Dissection of Hirschsprung's Disease Pathophysiology*
6. **Chi Wai Yip** *Single Cell Bimodal Analyses Reveal the Mode of Activity of Transcription Factors on Enhancers and Promoters*



Senjuti Saha
Director & Scientist
Child Health Research Foundation
Moderator



Prof. Yong Wang
Principal Investigator
Academy of Mathematics and Sy...
Speaker



Dr. Chi Wai Yip
Research Scientist
RIKEN
Speaker



Dr. Kaile wang
Center for excellence in Molecula...
Speaker



Miss. Rongting HUANG
The University of Hong Kong
Speaker



Prof. Lan Jiang
Principal Investigator
China National Center for Bioinfo...
Speaker



Miss. Jean Lee
Graduate Student
Seoul National University College...
Speaker

4:35 PM - 5:05 PM GMT +8 / 8:35 AM - 9:05 AM Your local time (30 Min)

Report Back from Breakout Discussion 1

📍 Grand Hall A

HCA New Directions

Topic #1: Spatial Biology

Topic #2: Data Management and Access

Topic #3: Diversity

Topic #4: Diseases



Shyam Prabhakar

Senior Group Leader
Genome Institute of Singapore
Speaker



Dr. John Randell

Chief Alliance Officer
Human Cell Atlas
Speaker



Dr. Piero Carninci

Team Leader
RIKEN Laboratory for Integrative ...
Speaker



Prof. Alistair Forrest

Principal Investigator
Harry Perkins Institute of Medica...
Speaker



Senjuti Saha

Director & Scientist
Child Health Research Foundation
Speaker



Dr. Jay Shin

Senior Group Leader
A*STAR GIS
Speaker



Alexandra-Chloe Villani

Principal Investigator
Massachusetts General Hospital,...
Speaker



Dr. Kian Hong Kock

Scientist
Genome Institute of Singapore (G...
Speaker

5:05 PM - 5:15 PM GMT +8 / 9:05 AM - 9:15 AM Your local time (10 Min)

Day 1 Closing Remarks

📍 Grand Hall A



Prof. Angela Wu

Group Leader
Hong Kong University of Science and Technology
Speaker

5:15 PM - 6:15 PM GMT +8 / 9:15 AM - 10:15 AM Your local time (1 Hour)

Day 1 Poster Session + Reception

📍 Grand Hall B

Poster presenters here.

Wed Dec 04

8:30 AM - 9:00 AM GMT +8 / 12:30 AM - 1:00 AM Your local time (30 Min)

Registration

9:00 AM - 9:05 AM GMT +8 / 1:00 AM - 1:05 AM Your local time (5 Min)

Welcome Day 2

📍 Grand Hall A



Prof. Angela Wu

Group Leader
Hong Kong University of Science and Technology
Speaker

9:05 AM - 9:50 PM GMT +8 / 1:05 AM - 1:50 PM Your local time (12 Hours, 45 Min)

Keynote 2

📍 Grand Hall A

Chair: **Alistair Forrest**

Jean Yang: *Translational and Analytical Potential of Spatially Resolved Gene Expression Prediction from Histology Images*



Prof. Alistair Forrest

Principal Investigator
Harry Perkins Institute of Medica...
Moderator



Prof. Yee Hwa (Jean) Y...

Principal Investigator
The University of Sydney
Keynote

9:50 AM - 10:40 AM GMT +8 / 1:50 AM - 2:40 AM Your local time (50 Min)

Session 4: Neuroscience / Neurobiology

 Grand Hall A

Session Chairs: **Jay W. Shin** and **Ralf Jauch**

1. **Hiromichi Suzuki** *Uncovering the Pathogenesis of Brain Tumors Through the Analysis of Cell of Origin and Genetic Alterations*
2. **Junil Kim** *Single-nucleus and Spatial Transcriptomic Analysis Identified Molecular Features of Neuronal Heterogeneity and Distinct Glial Responses in Parkinson's Disease.*
3. **Jimmy Lee** *Shared Molecular Vulnerabilities of Human Cortical Neurons in C9ORF72 Amyotrophic Lateral Sclerosis*



Dr. Jay Shin
Senior Group Leader
A*STAR GIS
Moderator



Prof. Junil Kim
Principal Investigator
Soongsil University
Speaker



Prof. Ralf Jauch
Principal Investigator
HKU
Moderator



Dr. Jimmy Lee
Postdoctoral Associate
Wellcome Sanger Institute
Speaker



Dr. Hiromichi Suzuki
Principal investigator
National Cancer Center Japan
Speaker

10:40 AM - 11:10 AM GMT +8 / 2:40 AM - 3:10 AM Your local time (30 Min)

Lightning Talks by Selected Day 2 Poster Presenters

 Grand Hall A

Chair: **Senjuti Saha**

1. **Shota Sasagawa (Hidewaki Nakagawa)** *Spatial Transcriptomics and Genomics of Non-tumor Disease Tissues*
2. **Hyungtai Sim** *Systemic CD8+ T Cell Effector Signature Predicts Prognosis of Lung Cancer Immunotherapy*
3. **Bingjie Chen** *Somatic Evolution during Life and Postmortem: the Enigma of Cellular Evolution Beyond Death*
4. **Jinmeng Jia** *Critical Cells and Regulators for Plaque Instability in Pan-vascular Atherosclerosis*
5. **Kian Hong Kock** *Single-cell Analysis of Human Diversity in Circulating Immune Cells*
6. **Jeongha Lee** *Integrated Analysis of Korean COVID-19 Multi-omics Data for eQTLs Reveals Genetic Mechanisms Underlying Severity Determination Against Virus Infection*



Senjuti Saha
Director & Scientist
Child Health Research Foundation
Moderator



Prof. Bingjie Chen
Professor
Guangzhou Medical University
Speaker



Ms. Jeongha Lee
Graduate Student
Seoul National University
Speaker



Dr. Shota Sasagawa
RIKEN
Speaker



Ms. Jinmeng Jia
Research Associate
Tsinghua University
Speaker



Mr. Hyungtai Sim
Seoul National University
Speaker



Dr. Kian Hong Kock
Scientist
Genome Institute of Singapore (G...
Speaker

11:10 AM - 11:25 AM GMT +8 / 3:10 AM - 3:25 AM Your local time (15 Min)

Refreshment Break

11:24 AM - 12:25 PM GMT +8 / 3:24 AM - 4:25 AM Your local time (1 Hour, 1 Min)

Concurrent Breakout Discussion 2: HCA Asia Flagships

Topic #1: Spatial/Cancer **(Grand Hall A)**

Topic #2: Infectious and Autoimmune Diseases **(Function room)**

Topic #3: Single-cell QTL **(Pre-function area)**

Topic #4: Skin and Microbiome **(Idea Lab)**

12:25 PM - 1:15 PM GMT +8 / 4:25 AM - 5:15 AM Your local time (50 Min)

Lunch Break

 Grand Hall B

1:15 PM - 2:15 PM GMT +8 / 5:15 AM - 6:15 AM Your local time (1 Hour)

Day 2 Poster Session

 Grand Hall B

Poster presenters here.

2:15 PM - 2:45 PM GMT +8 / 6:15 AM - 6:45 AM Your local time (30 Min)

Report Back from Breakout Discussion 2

 Grand Hall A

HCA Asia Flagships

Topic #1: Spatial/Cancer

Topic #2: Infectious and Autoimmune Diseases

Topic #3: Single-cell QTL

Topic #4: Skin and Microbiome



Prof. Yee Hwa (Jean) Y...

Principal Investigator
The University of Sydney
Speaker



Dr. Ponpan Matangkas...

Principal Investigator
Mahidol University
Speaker



Dr. Jay Shin

Senior Group Leader
A*STAR GIS
Speaker



Prof. JONGEUN PARK

Principal Investigator
KAIST
Speaker



Shyam Prabhakar

Senior Group Leader
Genome Institute of Singapore
Speaker



Prof. Hyun Je Kim

Principal Investigator
Seoul National University
Speaker



Yukinori Okada

Team leader
RIKEN Center for Integrative Med...
Speaker



Prof. Joseph Powell

Principal Investigator
Garvan Institute of Medical Rese...
Speaker

2:45 PM - 3:35 PM GMT +8 / 6:45 AM - 7:35 AM Your local time (50 Min)

Session 5: Birth to Death: Development, Aging and Degeneration

 Grand Hall A

Session Chairs: **Mu He** and **Jonathan Loh**

1. **Zhenyu Xiao** *Deciphering Early Human Embryonic and Placental Development through Single-cell Omics*
2. **Jong-Eun Park** *Quasi-spatial Single-cell Transcriptome Based on Physical Properties Defines Early Aging Associated Niche in Liver Tissue*
3. **Kathy Cheah** *Understanding the development and degeneration of the human intervertebral disc*



Prof. Mu He

Principal Investigator
The University of Hong Kong
Moderator



Prof. JONGEUN PARK

Principal Investigator
KAIST
Speaker



Dr. Yuin Han Loh

Principal Investigator
Institute of Molecular and Cell Biol...
Moderator



Prof. Kathryn Cheah

Group Leader
The University of Hong Kong
Speaker



Prof. Zhenyu Xiao

Beijing Institute of Technology
Speaker

3:35 PM - 3:50 PM GMT +8 / 7:35 AM - 7:50 AM Your local time (15 Min)

Refreshment Break

3:50 PM - 4:40 PM GMT +8 / 7:50 AM - 8:40 AM Your local time (50 Min)

Session 6: Cancer

📍 Grand Hall A

Session Chairs: **Stephanie Ma** and **Yukinori Okada**

1. **Alfred Cheng** *Single-cell Dynamics of Tumor Ecosystem Reveals Novel Immunotherapeutics for Hepatocellular Carcinoma*
2. **Hae-Ock Lee** *Multimic Insights into Immunotherapy Targets in Lung Cancer*
3. **Hue Mai La** *Mapping the Pancreatic Cancer Tumour Microenvironment through Integration of Single-nucleus Profiling and Spatial Transcriptomics*



Prof. Stephanie Ma

Professor
The University of Hong Kong
Moderator



Hae-Ock Lee

Principal Investigator
The Catholic University of Korea
Speaker



Yukinori Okada

Team leader
RIKEN Center for Integrative Med...
Moderator



Dr. HUE MAI LA

Research Fellow
UNIVERSITY OF MELBOURNE
Speaker



Prof. Alfred Cheng

Professor
The Chinese University of Hong K...
Speaker

4:40 PM - 5:50 PM GMT +8 / 8:40 AM - 9:50 AM Your local time (1 Hour, 10 Min)

Session 7: Immunology and Infectious Diseases

📍 Grand Hall A

Session Chairs: **Ponpan Matangkasombut** and **Michael Chan**

1. **Jonathan Loh** *Single-cell and Spatial Cartography of Immune Tissues*
2. **Ponpan Matangkasombut** *Systematic Single-cell Immune Profile in Human Natural Dengue Virus Infection*
3. **Yogesh Hooda** *Single Cell Analysis of the Nasal Mucosa of Children during Respiratory Infections*
4. **Joseph Powell** *Single-cell Genomics Meets Human Genetics*



Prof. Michael Chan

Principal Investigator
The University of Hong Kong
Moderator



Dr. Yogesh Hooda

Child Health Research Foundation
Speaker



Dr. Yuin Han Loh

Principal Investigator
Institute of Molecular and Cell Biol...
Speaker



Prof. Joseph Powell

Principal Investigator
Garvan Institute of Medical Rese...
Speaker



Dr. Ponpan Matangkas...

Principal Investigator
Mahidol University
Speaker

5:50 PM - 6:00 PM GMT +8 / 9:50 AM - 10:00 AM Your local time (10 Min)

Closing Remarks

📍 Grand Hall A



Prof. Angela Wu

Group Leader
Hong Kong University of Science ...
Speaker



Dr. John Randell

Chief Alliance Officer
Human Cell Atlas
Speaker

