Cell-Cell Symposium Program

Wednesday-Thursday, April 16-17

California NanoSystems Institute, UCLA 570 Westwood Plaza, Building 114 Los Angeles, CA 90095



Theme: Bridging Single-Cell Analysis and Spatial Biology to Uncover Cell-Cell Interactions

Key Goals:

- Advancing assay development to study cell-cell
 Interactions
- Tackling bioinformatics and data analysis challenges in spatial and single-cell research
- Hands-on Nanovial technology workshop to empower researchers in experimental design and data collection

Day 1: Symposium

10:00-10:30 AM	Arrival and Registration

Morning Sessions

10:30 AM - 10:45 AM Welcome and Opening Remarks

- Brief introduction to the symposium's goals and themes
- Thanks to our sponsors
- Chairperson/Organizer: Dino Di Carlo, Heather Wright

10:45 AM - 12:15 PM Session 1: Assay Development and Applications

- Chair: Nathan Lewis
- Talks (15–20 min each): Nathan Lewis (University of Georgia)

Rong Lu (University of Southern California)

Xiaojing Gao (Stanford University)

 Panel Discussion (30 min): Current Challenges and Future Directions in Cell-Cell Assay Development

12:15 PM - 1:45 PM Lunch Break (1 hour 30 min)

Afternoon Sessions

1:45 PM - 3:15 PM Session 2: Bioinformatics and Data Analysis Challenges

- Chair: Jessica Li
- Talks (15–20 min each):
 - Jessica Li (University of California, Los Angeles)

Qing Nie (University of California, Irvine)

Matt Thomson (California Institute of Technology)

- Panel Discussion (30 min): Overcoming Data Analysis Challenges and Data Needs
- 3:15 PM 3:30 PM Break
- 3:30 PM 5:00 PM Social Hour
 - Goal: Facilitate informal interactions among attendees to foster collaborations

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Day 2: Hands-On Nanovial Workshop

9:00 AM - 12:00 PM Nanovial Workshop (3–4 hours)

- Introduction to Nanovial Technology for Cell-Cell Interaction Studies
 - Instructors: Sevana, Justin, Heather
 - Topics covered:
 - Experimental design for studying cell-cell interactions
 - Protocols for using nanovials
 - Data collection and troubleshooting
- Experimental Sessions (2-3 hours):
 - Small groups focus on specific experimental steps
 - Loading multiple cells on nanovials
 - Flow cytometry, imaging cytometry, and gating of nanovials

12:00 PM - 1:00 PM Lunch Break

1:00 PM - 2:00 PM Closing Workshop

- Closing Workshop Session:
 - Workflow questions
 - Collaborative troubleshooting of participant-submitted challenges
 - Brainstorming on future applications

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