

Data Driven Systems Biology: Harnessing Big Data and Systems Approaches to Decode Complex Biology

March 24-25, 2026.
Life City, Stockholm

Program

March 24

- 11:30** **Registration & Network Lunch**
- 12:30** **Welcome**
Session 1; Systems Immunology
- 12:40** *Enabling technologies for spatial metabolomics: Moving from single cells to 3D-space exploration in mixed reality, Carsten Hopf (CeMOS Center for Mass Spectrometry and Optical Spectroscopy, TH Mannheim, Germany)*
- 13:15** *Spatially resolving B cell clonal dynamics in cancer and beyond, Camilla Engblom (SciLifeLab fellow, KI, Sweden)*
- 13:50** *Learning cellular dynamics of tissues from single-cell and spatial omics, Jean Hausser (SciLifeLab fellow, KI, Sweden)*
- 14:20** **Coffee break**
- 15:05** *Dynamics of immunological tissue architecture linking inflammation with colorectal cancer, Simon Koplev (SciLifeLab fellow, KTH, Sweden)*
- 15:35** **Session 2; Systems Precision Medicine**
- 15:40** *Harnessing Big Data for Network Biology with FunCoup 6, Erik Sonnhammer (Stockholm University, Sweden)*
- 16:15** *From Omics to Mechanisms: Deep Learning Models of Molecular Networks for Precision Cancer Medicine, Avlant Nilsson (DDLs fellow, KI, Sweden)*
- 16:45** Selected abstracts:
Computational comparative genomics with FastOMA and Read2Tree, Sina Majidian, (DDLs fellow, Chalmers, Sweden)
Modelling multi-modal responses to gene expression dosage in single-cell CRISPR screens with bayesDREAM, Leah Rosen, (KTH, Sweden)
OrganoFeed: Where Biology Meets Engineering, Patricia Muñoz (Stockholm University, Sweden)
- 17:15** *End of day and a short walk to Campus Solna*
- 17:30** **Poster session with light food and drinks, Delta, Campus Solna**
- 19:00** **Speakers' Dinner**

March 25

- 8:30 Doors open to the Lecture Hall
- 8:45 **Welcome to Day 2**
Session 3; Predictive models
- 8:50 *Data, Digital Twins and AI*, Alfonso Valencia (ICREA Professor, Barcelona Supercomputing Center, Spain)
- 9:25 *Integrating protein interaction maps and omics for explainable health indicators*, Mika Gustafsson (Linköping University, Sweden)
- 10:00 *That's Gonna Leave a Mark: Computational inference of complex cell features*, Marcel Tarbier (Uppsala University, Sweden)
- 10:30 Coffee break**
- 11:15 *Title TBA*, Lucy Colwell (University of Cambridge, UK)
- 11:50 *Extracting protein-protein interactions from the literature with deep learning-based text mining*, Katerina Nastou (Statens Serum Institut, Denmark)
- 12:20 Selected abstract:
Agent Lens: LLM-Powered Autonomous Agent for Smart Microscopy, Songtao Cheng (KTH, Sweden)
- 12:30 Network Lunch**
- 13:30 End of Conference

Practical information:

Registration onsite on March 24, open from 11:00

Please register using the QR code sent in the email the day before the event. We ask you to wear your name badge during the entire event.

Wi-Fi: Network: ahouse Password: workclub

Lunch and Coffee

Special dietary requirements will be marked. Food and beverages are not allowed in the lecture hall.

The poster session

will take place in Delta, Campus Solna. Light food and drinks will be served. Please hang your poster on any empty poster board as soon as you arrive to Campus Solna after the Conference's first day. Pins will be available.

Cancellations

To minimize empty seats and food waste, cancel your registration if you are unable to attend, or update your lunch selection if your attendance changes. Cancel via the Confirmation email or email events@scilifelab.se.

Additional information: events@scilifelab.se