



AGENDA

February 25, 2021

All times MST.

Welcome

8:30 Murray Wolinsky, Los Alamos National Laboratory

Persistence: a driving application

8:45 Professor Nathalie Balaban, The Hebrew University
Quantitative understanding of antibiotic persistence: evolutionary and clinical consequences

9:30 Dr. Madeline Bolding, Los Alamos National Laboratory
Persistence in cancer

9:50 Dr. Dean Morales, Los Alamos National Laboratory
Persistence in bacteria

10:10 *Discussion*

Visualizing life

10:30 Dr. Tatsuya Morisaki, Colorado State University
Visualizing the central dogma at single-molecule resolution in living cells

11:15 Dr. Scott Hennesly, Los Alamos National Laboratory
RIVOT technology development

11:45 *Discussion*

Computational Approaches

12:30 Dr. Huy Vo, Colorado State University

Measurement Noise and the optimal design of single-cell experiments

- 12:55 Dr. Karissa Sanbonmatsu, Los Alamos National Laboratory
FRET Modeling and transporter simulation
- 1:25 Dr. Luis Aguilera, Colorado State University
A computational framework to study single-molecule canonical and non-canonical translation dynamics
- 1:50 Dr. Shounak Banerjee
Transporter modeling
- 2:10 *Discussion*

Experimental Approaches

- 2:30 Dr. Linda Stephanie Forero-Quintero, Colorado State University
Live-cell imaging reveals the spatiotemporal organization of endogenous RNA polymerase II phosphorylation at a single gene
- 3:15 Dr. Anand Kumar, Los Alamos National Laboratory
Integration and maintenance of unnatural base pairs (UBPS) inside the living cell
- 3:35 Dr. Joshua Corbin, Los Alamos National Laboratory
Synthetic chemistry in support of RIVOT
- 3:55 Professor Doug Shepherd, Arizona State University
*Moving away from the coverslip,
high-speed 3D single molecule imaging using oblique plane microscopy*
- 4:30 Dr. Natalie Pace
FRET Gate for Real-time in vivo transcription

Discussion and wrap-up

- 4:55 *Discussion*