Thursday, March 21, 2019

9:30 am – 1:00 PM
Advisory Board Meeting
Scientific, Corporate and Faculty Advisory Boards
University Hall Room 306

Workshops – RNA Institute, Life Sciences Research Building University at Albany

8:00 am – 2:30 pm
Nanoswitch-mediated detection of micro-RNAs
Ken Halvorsen, RNA Institute, University at Albany
Life Sciences Research Building, Room 1079

10:30 am – 2 pm
Gradient Fractionation
Gabriele Fuchs, Department of Biological Sciences, University at Albany
Fuchs Lab: Life Sciences Research Building Room 2027

8:45 am – 2 pm
RNA simulations
Alan Chen, Department of Chemistry, University at Albany
Paul Whitford, Department of Physics, Northeastern University
Massry Center for Business, BB 119

9:00 am – 2 pm
Epitranscriptomics
Dan Fabris, Department of Chemistry, University at Albany
Qishan Lin, Research, Associate Professor, University at Albany
Life Sciences Research Building, Room LSRB 1074

9:00 am – 2pm
Sequencing Technologies
Morgan Sammons, Department of Biological Sciences, University at Albany
Location: Life Sciences Research Building 1143

12 pm – 1pm
Workshop Lunch
Lunch will be provided for workshop participants in the life sciences research building

Performing Arts Center (PAC) – Main Theater, University at Albany

11:00 – 5:00 pm
Registration
Performing Arts Center Lobby

1:00 – 3:00 pm
Light Refreshments
Lecture Center Hall
1:00 – 3:00 pm Poster Sessions (Lecture Center Hall)
(1:00 – 2:00 pm) Poster Session I
(2:00 – 3:00 pm) Poster Session II

3:00 – 3:10 pm Trainee Presentation Welcome Remarks
Performing Arts Center, Main Theater
Prash Rangan, University at Albany, SUNY

Trainee Presentation Session I
Chair: Justin Waldern, University at Albany

3:10 – 3:25 pm Selected Speaker, Hyaeyeong Kim, Weill Cornell Medical College
“Imaging metabolite dynamics in live cells using corn, a fluorogenic homodimer RNA reporter”

3:25 – 3:40 pm Selected Speaker, Pooja Yadav, UT Health San Antonio
“RNA demethylase ALKBH5 regulates osteosarcoma growth and chemosensitivity”

3:40 – 3:55 pm Selected Speaker, Patricia Garay, University of Michigan
“Nascent RNA sequencing reveals neuronal activity-dependent transcription start sites”

3:55 - 4:10 pm Selected Speaker, Ying Tang, Rutgers NJ Medical School
“Impact of microRNAs on renal disease induced calcification”

4:10 – 4:30 pm Coffee Break (Performing Arts Center Lounge)

Trainee Presentation Session II
Chair: Shane Breznak, University at Albany

4:30 – 4:45 pm Selected Speaker, Kimberly Harris, Yale University
“Identification of large noncoding RNA-protein interactions and their effects on stress response in bacteria”

4:45 – 5:00 pm Selected Speaker, Chen Bao, School of Medicine and Dentistry University of Rochester
“mRNA stem-loops can induce ribosome pausing by hindering A-site tRNA binding”

Distinguished Keynote Presentation

5:05 – 5:15 pm Welcome Remarks
Elga Wulfert, Interim Provost and Vice President for Academic Affairs,
University at Albany
Patrick Blatt, Graduate Student, University at Albany

5:20 – 6:15 pm Distinguished Keynote
Craig Mello, University of Massachusetts Medical School
“RNA-guided inheritance in C. elegans”

7:00 pm – 8:30 pm Symposium Dinner
Albany Pump Station, 19 Quackenbush Square, Albany NY 12207
6th Annual Symposium on RNA Science and its Applications
The Language of RNA in Disease and Development
March 21 - 22, 2019

Friday, March 22, 2019

Performing Arts Center, Main Theater, University at Albany

7:30 – 8:45 am Registration: Performing Arts Center – Downstairs Lounge
Continental Breakfast: Performing Arts Center – Futterer Lounge
Poster Set-Up: Lecture Centers

8:45 – 8:55 am Opening Remarks
Andrew Berglund, Director, The RNA Institute

Session 1 Regulatory RNAs
Chair: Joan Curcio, Wadsworth Center, NYSDOH; University at Albany

8:55 – 9:25 am Keynote: Gisela Storz, National Institutes of Health
“Astonishing diversity and redundancy in small RNA-mediated regulation”

9:25 – 9:55 am Keynote: Elçin Ünal, University of California, Berkeley
“LUTI mRNAs: a fresh perspective on gene regulation”

9:55 – 10:10 am Selected Speaker, Joseph Wade
“Nus factors prevent premature transcription termination of bacterial CRISPR arrays”

10:10 – 10:30 am Coffee Break (Performing Arts Center – Futterer Lounge)

Session 2 RNA Chemistry
Chair: Jia Sheng, Department of Chemistry, University at Albany

10:30 – 11:00 am Keynote: Eric Kool, Stanford University
“Small molecule reactive probes of RNA”

11:00 – 11:30 am Keynote: Matt Disney, The Scripps Research Institute
“Translating RNA sequence into lead small molecule medicines”

11:30 – 11:45 am Selected Speaker, Xiaohui Qu, Memorial Sloan Kettering Cancer Center
“A high-resolution in vitro single-molecule assay for eukaryotic cap-dependent initiation kinetics”

11:45 – 12:00 pm Selected Speaker, Sara Rouhanifard, Northeastern University
“ClampFISH detects individual nucleic acid molecules using click chemistry-based amplification”

12:00 – 2:00 pm Lunch Break (Lecture Center Hall)

12:00 – 2:00 pm Poster Sessions (Lecture Center Hall)
Poster Session I
(1:00 – 2:00 pm)  Poster Session II

Session 3  RNA Focus in Disease Research
Chair: Bijan Dey, The RNA Institute, University at Albany

2:00 – 2:30 pm  Keynote: Eliezer Calo, Massachusetts Institute of Technology
“DNA-PK leverages non-coding RNA binding to regulate nucleolar functions”

2:30 – 3:00 pm  Keynote: Charles Thornton, University of Rochester Medical Center
“RNA as perpetrator and victim in myotonic dystrophy”

3:00 – 3:15 pm  Selected Speaker, Jill Kreiling, Brown University
“The mir-465 family is upregulated with age and attenuates growth hormone signaling”

3:15 – 3:35 pm  Coffee Break
Futterer Lounge, PAC

Session 4  RNA Modifications and Machines
Chair: Jason Herschkowitz, Cancer Research Center, School of Public Health, University at Albany

3:35 – 4:05 pm  Keynote: Cara Pager, Department of Biological Science, University at Albany
“RNA modifications fine-tune viral gene expression”

4:05 – 4:35 pm  Keynote: Wendy Gilbert, Yale Center for RNA Science and Medicine
“Thousand-fold regulation of translation initiation by transcript leader features”

4:35 – 4:50 pm  Selected Speaker, Maksim Royzen, Chemistry Department, University at Albany
“Bio-orthogonal chemistry-based method for labeling of cellular RNA”

4:50 – 5:05  Selected Speaker, Nilesh Banavali, Wadsworth Center, NYSDOH; Department of Biomedical Sciences, University at Albany
“A Cryo-EM-derived Structural Ensemble of Zn-deficient Ribosomes Implicated in Mycobacterial Hibernation”

5:15 – 7:00 pm  Closing Reception (Futterer Lounge)
Remarks: Joan Curcio, Melinda Larsen and Tom Begley
Cocktails and hors d’oeuvres
Awards and prizes

Symposium Organizing Committee:
Joan Curcio and Melinda Larsen (Co-chairs), Tom Begley, Bijan Dey, Jason Herschkowitz, Prashanth Rangan, and Jia Sheng