

## 2018 TEXAS PROTEIN FOLDERS & FUNCTION MEETING

# PROGRAM

### Friday April 13, 2018

4:00 PM Arrival and Registration

6:00 PM Dinner

7:30 PM **Introduction**

7:35 PM Speaker 1: **Jiquiang (Lanny) Ling** (UTHSC Houston) “**Rewiring Protein Synthesis: from Population to Single Cells**”

8:10 PM Keynote speaker 1: **Axel Brunger** (Stanford University) “**Molecular mechanisms of neurotransmitter release**”

9:10 PM Social, Discussion, and S'mores

### Saturday April 14, 2018

8:00 AM Breakfast

9:00 AM Speaker 2: **Lydia Contreras** (UT Austin) “**Understanding in vivo function of global regulatory proteins that exert post-transcriptional control**”

9:35 AM Short talks (12 minutes each)

- Short talk 1: **Omneya Nassar** (UTMB) “**Discovery of a 40-year-old sequence error unveils new understanding of allosteric ligand binding to glutamate dehydrogenase**”
- Short talk 2: **Danielle Boss** (Tulane) “**Changes in protein structure and stability influence antigen presentation and priming of CD4+ T-cells**”
- Short talk 3: **Juan C. Gonzalez-Rivera** (UT Austin) “**Molecular basis of the interplay of RNA post-transcriptional modifications with the exonuclease Polynucleotide Phosphorylase (PNPase)**”
- Short talk 4: **Ian J. Campbell** (Rice University) “**Using synthetic biology to study and control ferredoxin electron transfer in cells**”

10:35 AM Group photo then Coffee break

11:00 AM Speaker 3: **Sun Qing** (Texas A&M) “**Biomolecular scaffolds for enhanced biomass processing and cancer marker detection**”

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- 11:35 AM Speaker 4: **Tim Palzkill** (Baylor College of Medicine) “**Structure, Function and Evolution of the Antibiotic Resistance Enzyme NDM-1  $\beta$ -lactamase**”
- 12:10 PM Lunch
- 4:30 PM Posters and Social
- 6:00 PM Dinner
- 7:10 PM Speaker 5: **Jason Slinker** (UT Dallas) “**Electrochemical DNA Devices for Biomolecule Sensing and Monitoring Biological Activity**”
- 7:45 PM Speaker 6: **David Barondeau** (Texas A&M) “**Structure and Mechanism of the Human Fe-S Cluster Biosynthetic Complex**”
- 8:20 PM Keynote speaker 2: **George Phillips** (Rice University) “**Time-resolved crystallography: Beyond static snapshots**”
- 9:20 PM Social, Discussion, and S'mores

### Sunday April 15, 2018

- 8:00 AM Breakfast
- 9:10 AM Speaker 7: **Sheel Dodani** (UT Dallas) “**Optical Imaging Tools to Elucidate the Roles of Anions in Cellular Signaling**”
- 9:45 AM Short talks (12 minutes each)
- Short talk 5: **David C. Marciano** (Baylor College of Medicine) “**CRISPR-FRT: Targeting shared sites in a knock-out collection for off-the-shelf genome editing**”
  - Short talk 6: **Denis Odokonyero** (Texas A&M) “**Comparison of *Alicyclobacillus acidocaldarius* OSBS to its promiscuous NSAR/OSBS relatives**”
  - Short talk 7: **Jing Zhang** (UT Southwestern) “**Disease is a wonky protein**”
  - Short talk 8: **Avik Bhattacharya** (Tulane) “**CD4+ T-cell Epitope Prediction using Antigen Structure**”
- 10:45 AM Coffee break

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11:00 AM Short talks (12 minutes each)

- Short talk 9: **Asuka A Orr** (Texas A&M) “**Sequestration of Amyloidogenic Proteins: Understanding  $\beta$ -wrapin Function and Designing Novel  $\beta$ -Wrapins with Improved Binding Affinities**”

- Short talk 10: **Sai Vamshi R. Jonnalagadda** (Texas A&M) “**Computational Methods for the Design of Functional Amyloid Materials**”

11:30 AM Speaker 8: Michael Latham (Texas Tech) “**A dynamic allosteric pathway underlies Rad50 ABC ATPase function in DNA repair**”

12:05 PM Lunch and Departure