

The 13th Frontiers in Chemistry and Biology Interface Symposium (FCBIS)

<https://www4.chem.umd.edu/webapps/fcbis2020/>



Friday, May 7, 2021

University of Maryland, College Park (UMD)

Symposium Description

The Frontiers in Chemistry and Biology Interface Symposium (FCBIS) is an annual conference in the mid-Atlantic region. This day-long symposium is designed to provide an intimate environment to foster discussions on cutting-edge research at the interfaces of chemistry, biology, and medicine. This year's symposium will focus on the exploitation of *chemical* (synthetic, analytical, and structural) and *biological* approaches to address interesting and important problems at the chemistry-biology-medicine interface. The schedule includes invited and selected talks, a career panel, and poster sessions. There is no charge to attend the symposium and everyone who is interested in research and innovation at the chemistry-biology interface is encouraged to participate.

UMD Symposium Organizing Committee

Department of Chemistry and Biochemistry

T. Kwaku Dayie, Nicole LaRonde, Jinwoo Lee, Peter Nemes, Myles Poulin, Lai-Xi Wang

Symposium Organizing Committee

Johns Hopkins University

Steve Rokita, Dept. of Chemistry

Caren Freel Meyers, School of Medicine, Dept. of Pharmacology & Molecular Sciences

University of Delaware

Brian Bahnon and **Catherine Leimkuhler Grimes**, Dept. of Chemistry & Biochemistry

University of Maryland, Baltimore County

Songon An, Dept. of Chemistry & Biochemistry

University of Maryland, College Park

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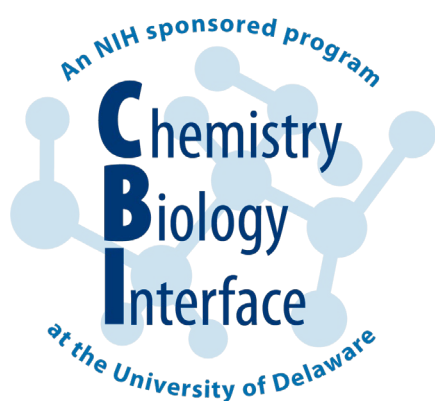
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DEPARTMENT OF
**CHEMISTRY &
BIOCHEMISTRY**

Department of Chemistry and Biochemistry, University of Maryland College Park

Meeting Program

8:30-8:40 am Opening Remarks (Lai-Xi Wang, Prof., U. of Maryland, College Park)

8:40–9:40 AM, Session I

Chair: Peter Nemes, Assoc. Prof., U. of Maryland College Park

- 8:40–9:00 Stephen Fried, Assist. Prof., Johns Hopkins University
“Using Mass Spectrometry to Interrogate the Refoldability of the Proteome.”
- 9:00–9:20 Karl Schmitz, Assist. Prof., University of Delaware
“Cataloging Sequences That Mark Proteins for Destruction in Bacteria”
- 9:20–9:30 Amanda Tallon, Graduate Student, University of Delaware
(Short talk) *“The Activation of Tetrazines by a Genetically Encodable Catalyst for Subsequent Spatially Controlled Bioorthogonal Chemistry Intracellularly”*
- 9:30 – 9:40 Zhigang Lyu, Graduate Student, Temple University
(Short talk) *“Steric-Free Bioorthogonal Labeling of Acetylation Substrates Based on a Fluorine–Thiol Displacement Reaction”*

9:45–10:45 AM, Session II

Chair: Jennifer M. Kavran, Assist. Prof., Johns Hopkins U. Sch. of Publ. Health

- 9:45–10:05 Myles Poulin, Assist. Prof., U. of Maryland College Park
“Chemical and Biochemical Tools to Study the Biosynthesis and Degradation of Biofilm Exopolysaccharides”
- 10:05–10:25 Aaron T. Smith, Assist. Prof., U. of Maryland Baltimore County
“The Involvement of [Fe-S] Clusters in Post-Translational Arginylation”
- 10:25–10:35 Danielle Bautista, Graduate Student, Johns Hopkins U.
(Short talk) *“Enzymatic Reduction of Nitroaromatics Containing aQMs for Biological Alkylation”*
- 10:35–10:45 Casey Londergan, Prof., Haverford College
(Short talk) *“The Probe-ing Question: How Does Tyrosine Nitration Affect Alpha-Synuclein Lipid Binding?”*

10:45–10:55 Break

10:55–11:25 AM, Keynote Lecture

Christina Woo, PhD, Associate Professor, Harvard University
“Targeted Protein Sequestration”

Chair: Lai-Xi Wang, Prof., U. of Maryland College Park

11:30 AM–12:15 PM, Poster Session I
(Odd Numbered Posters)

12:15–1:00 Lunch and Career Panel

Theodore Kwaku Dayie, Prof., U. Maryland, College Park (Presiding)
Michelle Bond, Program Director, National Institutes of Health
Lisa Jones, Assoc. Prof., U. Maryland, Baltimore, School of Pharmacy
Herman Sintim, Program Director, National Science Foundation
Daron Freedberg, Senior Scientist, Food and Drug Administration
Regan Leblanc, Research Scientist, Vertex Pharmaceuticals

1:05 PM–1:50 PM, Poster Session II
(Even Numbered Posters)

2:00–3:00 PM, Session III

Chair: Catherine Grimes, Prof., U. of Delaware

- 2:00–2:20 Ling Hao, Assist. Prof., George Washington University
“Developing Mass Spectrometric Strategies for Chemical and Enzymatic Biotinylation in Neurodegeneration”
- 2:20–2:40 Pratyush Tiwary, Assist. Prof., U. of Maryland College Park
“Predicting Drug Dissociation Pathways and Resistance Mutations with AI-Augmented Molecular Dynamics”
- 2:40–2:50 Morgan Dasovich, Graduate Student, Johns Hopkins U.
(Short talk) *“Chemoenzymatic Strategies for Exploring ADP-ribosylation”*.
- 2:50–3:00 Aleksia Barka, Undergraduate student, U. of Pennsylvania
(Short talk) *“Molecular Basis for Discrimination of DNA and RNA Deamination by the Base-editing Enzyme APOBEC3A”*

3:05–4:05 PM, Session IV

Chair: Songon An, Assoc. Prof., U. of Maryland, Baltimore County

- 3:05–3:25 Mark Sellmyer, Assist. Prof., U. of Pennsylvania, School of Medicine
“Imaging Bacterial Infection: From the Bench to the Clinic”
- 3:25–3:45 Jordan L. Meier, Senior Investigator, National Cancer Institute
“New Insights into Acetylation & Oncometabolites from Chemoproteomics”
- 3:45–3:55 Tian Qiu, Graduate Student, U. of Chicago
(Short talk) *“Chemical Approaches to Probe the Regulation of Mitochondrial S-Palmitoylation”*

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3:55–4:05 Joel S. Freundlich, Assoc. Prof., Rutgers U.
(Short talk) “*Engineering Platforms for Infectious Disease Research*”

4:05–4:15 *Break*

4:15–4:45 PM, Keynote Lecture

Jun O. Liu, Prof., Johns Hopkins U. School of Medicine
“*Rapamycin-inspired Macrocycles As New Chemical Probes and Drug Leads*”

Chair: Jinwoo Lee, Assist. Prof., U. of Maryland College Park

4:45–4:55 PM, Poster Awards, Conclusion Remarks

Theodore Kwaku Dayie, Prof., University of Maryland, College Park