

SYMPOSIUM ANNOUNCEMENT

Reactivity and Mechanism in Chemical and Synthetic Biology

Pacificchem 2020, Honolulu (pacifichem.org)

December 18-20, 2020

The application of physical organic chemistry and mechanistic thinking to the investigation of biological systems provides a strong intellectual framework for understanding the molecular logic of the chemical transformations that occur in living organisms. In turn, these ideas have driven methodological advances in protein engineering, drug discovery, in the evolution of enzymes capable of catalyzing novel reactions, and in the creation of organisms with use in a wide variety of industrial applications. Furthermore, the principles of reactivity have formed the basis for the design and application of new chemical tools to probe biological function in both health and disease. This symposium will bring to light timely and significant results from studies focused on the use of small molecules in studying and manipulating biological systems, and the creation of microorganisms with novel chemical capabilities (e.g., enzyme mechanisms and inhibitor design principles, activity profiling in proteomes, alteration of biosynthetic pathways for creating new chemical entities, and the design and implementation of expanded genetic alphabets within microorganisms). We will identify and showcase young researchers alongside more established names in this field, and the program will include a dedicated session to highlight to work of younger investigators, including post-doctoral researchers.

Dec. 19, 2020 (08:00-12:00)

Biosynthetic Pathways: Chemical Logic and Enzyme Mechanism

Takayoshi Awakawa	University of Tokyo, Japan
Stephen Bearne	Dalhousie University, Canada
Rebecca Butcher	University of Florida, USA
Jodie Johnston	University of Canterbury, New Zealand
Hsiao-Ching Lin	Academia Sinica, Taiwan
Emily Parker	University of Canterbury, New Zealand
Avena Ross	Queen's University, Canada
Yi Tang	University of California Los Angeles, USA

Dec. 19, 2020 (13:00-17:00)

Mechanism in Activity-Based Protein Profiling and the Development of Imaging

Fumihiko Ishikawa	Kindai University, Japan
Colin Jackson	Australian National University, Australia
John Kozarich	ActivX Biosciences, Inc., USA
Joelle Pelletier	Université de Montréal, Canada
John Pezacki	University of Ottawa, Canada
Weihong Tan	Hunan University, China

Dec. 19, 2020 (19:00-21:00)

Young Researchers' Symposium

Dec. 20, 2020 (08:00-12:00)

Organic Chemistry and Biology of Expanded Genetic Alphabets

Steven Benner	Foundation for Applied Molecular Evolution, USA
Piet Herdewijn	REGA Institute, Belgium
Ichiro Hirao	A*STAR Institute, Singapore
Takayuki Katoh	University of Tokyo, Japan
Patrick O'Donoghue	Western University, Canada
Floyd Romesberg	Synthorx, Inc., USA

Lecture slots are available in all three mini-symposia for which speakers will be selected based on their contributed abstracts. Postdoctoral research associates are strongly encouraged to submit abstracts to participate in the Young Researchers' Symposium. In addition, there will be a poster session in the evening of Friday, December 18. Abstracts must be submitted using the online submission system:

<https://pacifichem2020.abstractcentral.com>

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