5TH ANNUAL UC DAVIS CHEMICAL BIOLOGY RETREAT

2019

SEPTEMBER 5-6, 2019 • GRANLIBAKKEN TAHOE

725 Granlibakken Road, Tahoe City, CA 96145

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HAVE A QUESTION OR NEED SUPPORT DURING THE REREAT?

FOR RETREAT SPECIFIC QUESTIONS PLEASE CONTACT ALEX LOPEZ
IN PERSON OR BY PHONE (530-754-1249)
FOR LODGING INQUIRIES PLEASE CONTACT GRANLIBAKKEN STAFF

RETREAT AGENDA

Thursday, September 5

LUNCH	12 P.M. - 1 P.M. GRANHALL
WELCOME & INTRODUCTIONS	1:00 P.M. - 1:10 P.M MOUNTAIN ROOM
SESSION I	1:10 P.M. - 2:30 P.M MOUNTAIN ROOM
COFFEE & TEA BREAK	2:30 P.M. - 2:45 P.M MOUNTAIN ROOM
BREAKOUT SESSION I	2:45 P.M. - 3:45 P.M MOUNTAIN ROOM
BREAK/CHECK-IN	3:45 P.M. - 4:45 P.M GRANHALL
SESSION II KEYNOTE TALK	4:45 P.M. - 5:45 P.M MOUNTAIN ROOM
HAPPY HOUR	5:45 P.M. - 7:00 P.M GRANHALL
DINNER	6:00 P.M. - 7:15 P.M GRANHALL
POSTER SESSION & SOCIAL	7:30 P.M. - 9:00 P.M PAVILION (Heaters will be provided)

Friday, September 6

BREAKFAST	7:30 A.M. - 9 A.M. GRANHALL
CAREER PANEL W/ Q&A	8:20 A.M. - 9:00 A.M. MOUNTAIN ROOM (Food permitted)
BREAKOUT SESSION II	9:00 A.M. - 10:00 A.M. MOUNTAIN ROOM
COFFEE & TEA BREAK/CHECK OUT OF ROOMS	10:00 A.M. - 10:40 A.M. MOUNTAIN ROOM
SESSION III	10:40 A.M. - 12:00 P.M. MOUNTAIN ROOM
CLOSING REMARKS & PHOTOS	12:00 P.M. - 12:15 P.M. MOUNTAIN ROOM
LUNCH PICK UP AND DEPART! (HIKING/HOME)	12:15 P.M. - 12:30 P.M. SOLARIUM

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SESSION DETAILS

Thursday, September 5

SESSION I
1:10 P.M. - 2:30 P.M. MOUNTAIN ROOM

1:10 P.M. - 1:30 P.M. Dr. Patrick Shih
1:30 P.M. - 1:50 P.M. Morgan Matson
1:50 P.M. - 2:10 P.M. Ami Rose
2:10 P.M. – 2:30 P.M. SeHee Park

BREAKOUT SESSION I
2:45 P.M. - 3:45 P.M. MOUNTAIN ROOM

Elevator Pitches & Audiences
facilitated by Dr. Sheila David

SESSION II KEYNOTE TALK
4:45 P.M. - 5:45 P.M. MOUNTAIN ROOM

A Chemical Biology Toolbox for RNA Post-Transcriptional Modification and Capture

Dr. Jennifer Heemstra

POSTER SESSION & SOCIAL
7:30 P.M. - 9:00 P.M. PAVILION
(Heaters will be provided)
Please see page 5
for poster information

Friday, September 6

CAREER PANEL W/ Q&A
8:20 A.M. - 9:00 A.M. MOUNTAIN ROOM
(Food permitted)

Dr. Jennifer Heemstra
Dr. Maique Weber Bivatti
Dr. Michael J. Stevenson

BREAKOUT SESSION II
9:00 A.M. - 10:00 A.M. MOUNTAIN ROOM

Ethics in Chemical Biology Research
facilitated by Dr. Andrew Fisher

SESSION III
10:40 A.M. - 12:00 P.M. MOUNTAIN ROOM

10:40 A.M. – 11:00 A.M. Diedra Shorty
11:00 A.M. - 11:20 A.M. Cindy Khuu
11:20 A.M. – 11:40 A.M. Nate Harder
11:40 A.M. – 12:00 P.M. Cindy McReynolds

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FEATURED SPEAKERS

KEYNOTE - Dr. Jennifer Heemstra

Jen received her B.S. in Chemistry from the University of California, Irvine, in 2000. At Irvine, she performed undergraduate research with Prof. James Nowick investigating the folding of synthetic beta-sheet mimics, which instilled in her a love of supramolecular chemistry. Jen then moved to the University of Illinois, Urbana-Champaign, where she completed her Ph.D. with Prof. Jeffrey Moore in 2005 studying the reactivity of pyridine-functionalized phenylene ethynylene cavitands. After a brief stint in industry as a medicinal chemist, she moved to Harvard University to pursue postdoctoral research with Prof. David Liu exploring mechanisms for templated nucleic acid synthesis. In 2010, Jen began her independent career in the Department of Chemistry at the University of Utah, and was promoted to Associate Professor with tenure in 2016. In 2017, Jen and her research group moved to the Department of Chemistry at Emory University. Research in the Heemstra lab is focused on harnessing the molecular recognition and self-assembly properties of nucleic acids for applications in biosensing and bioimaging. Outside of work, Jen enjoys spending time with her husband and two sons, as well as rock climbing, cycling, and running.

Career Panel Q& A - Dr. Maique Weber Biavatti

Graduated in Pharmacy from the Federal University of Paraná (1993), Master in Chemistry from the Federal University of Paraná (1994) and PhD in Chemistry from the Federal University of São Carlos (2001). She is currently a professor at the Federal University of Santa Catarina (UFSC). Editor-in-Chief of the Brazilian Journal of Pharmacognosy (2017 - 2019), Vice-President of the Brazilian Society of Pharmacognosy (2014-2016). Has experience in Pharmacognosy, focusing on Study of Extracts and Substances of species of the Asteraceae family, acting on the following subjects: isolation, characterization and quantification of natural substances. She works in the postgraduate program in Pharmacy, guiding master and doctorate students in projects focused on the research of natural, semi-synthetic and synthetic products with potential biological activity. Participates in the Research Network Natural Products against Neglected Diseases (ResNet NPND), that is a global network of researchers uniting their forces against ND.

Career Panel Q& A - Dr. Michael J. Stevenson

Michael Stevenson obtained a BS in Biochemistry from the University of Washington in 2009 and a PhD in Chemistry from Dartmouth College in 2016 studying the thermodynamics of metals binding to proteins. He was a postdoctoral scholar at Ohio State University where he worked with Professor Hannah Shafaat on designing a light driven artificial hydrogenase mimic. He is currently a postdoctoral scholar working with Professor Marie Heffern focusing on the role of metal ions in regulating and modulating peptide hormones. After this position, he hopes to become a professor at a primarily undergraduate institution where he can build on his understanding of metals in biology.

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POSTERS

RIGOBERTO ARENAS
STRUCTURAL BIOLOGY
Structural Biology of Anthracyclines Metabolism

HANNAH BRINKMAN, CHEMISTRY
Design and Implementation of a High Throughput Screen for ADAR gRNAs for Rett Syndrome

ANDREA M. COLEMAN, CHEMISTRY
Role of Alpha-Actinin in Surface Localization of the L-type Ca2+ Channel Cav1.2

SARAH DISHMAN, CHEMISTRY
Asymmetric Synthesis of Xanthone Natural Products by C-H Insertion of Donor/Donor Rhodium Carbenes

ERIN DOHERTY, CHEMISTRY
Increasing A to I Editing Efficiency of ADAR2 Using Cytidine Analolgs

SAM HARTANTO, STRUCTURAL BIOLOGY
Characterization of the sulfur assimilation complex CysDNC in Mycobacterium tuberculosis

PEISHAN HUANG, BIOPHYSICS
Evaluating the Relationship Between T50 and TM as well as the Performance of Thermal Stability Prediction Tools for an Enzyme Mutant Library

AGYA KARKI, CHEMISTRY
Biochemical Analysis of Adenosine Deaminase Acting on RNA1

ALBERT LIU, BMCDB
Structurally-Guided RuBisCO Engineering Inspired by Novel Metagenomic Protein

ELIZABETH R. LOTSOF
CHEMICAL BIOLOGY
Excision of oxidatively damaged bases in G-quadruplexes by the DNA glycosylases NEIL1 and NEIL3

CALVIN LY, CHEMICAL BIOLOGY
Development of an In Vitro High-Content Imaging Screen for Antidepressants

LEANNA MONTALEONE
BIO-ORGANIC CHEMISTRY
Improving Editing and Binding to Disease Targets with Adenosine Deaminase Acting on RNA (ADAR)

MATTHEW ORELLANA,
BIO-ORGANIC CHEMISTRY
Development of an In Vitro High-Content Imaging Screen for Antidepressants

ELYS RODRIGUEZ, CHEMISTRY
Selectivity and structural understanding of glycosyltransferases to enable protein design efforts towards cardiac glycosides

DR. MICHAEL J. STEVENSON
BIO-INORGANIC CHEMISTRY
Co-authors: Ian C. Farran, Kylie S. Uyeda, Jessica A. San Juan, Marie C. Heffern
Analysis of Metal Effects on C-Peptide Structure and Internalization

RJ TOMBARI, CHEMICAL BIOLOGY
Ex Vivo Analysis of Tryptophan Metabolism Using 19F NMR

ALEXANDER THUY-BOUN
STRUCTURAL BIOLOGY/BIOCHEMISTRY
Structural and Functional investigation of an Adenosine deaminase acting on RNA 2 protein homodimer

XANDER WILCOX, BIOPHYSICAL CHEMISTRY
Expanding the Genome Editing Toolbox: Towards the Development of Targetable Genome Editing with Adenosine Deaminase Acting on RNA (ADARs)

XIAOHONG YANG, CHEMISTRY
'A Bacterial Exo-α-N-Acetylglucosaminidase Shows Potential for Heparin/Heparan Sulfate Structural Analysis

ANGELA ZHANG, BIO-ORGANIC CHEMISTRY
Microbial Production of Human Milk Oligosaccharides

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MENUS

Thursday, September 5

LUNCH

12 P.M. - 1 P.M. GRANHALL

Build Your Own Chopped Salad and Smoothies Lunch Buffet:
Mango Yogurt Naked Juice Smoothie
Strawberry Banana Naked Juice Smoothie
Salad Bar
Nuts: Almonds, Pecans, Pistachios
Telara Rolls, Gluten Free Rolls
Fresh Roasted Cubed Turkey (Dg,Gf)
Sustainable Harvested White Albacore Tuna Salad:
Contains Mayo, Celery, Relish, Hot Sauce, Red Bell Pepper, Black Pepper, Onions
Grilled/Blackened Certified Sustainable Cod (Df, Gf)
Vegan/Gluten Free: Healthy Loaded Sweet Potato Skins: With Onions, Garlic, Bell Peppers, Tomatoes, Black Beans, Vegan Yogurt, Vegan Mozzarella

DINNER

6:00 P.M. - 7:15 P.M GRANHALL

Dinner Buffet
Strawberry Salad
Chopped Kale Salad with Edamame, Carrot and Avocado
BBQ Shrimp/Bell Pepper/Onion/Mushroom Kabobs with a Lime Marinade
BBQ Chicken (GF, DF)
Vegan/Gluten Free BBQ Beyond Italian Spicy Sausages Brochettes
Oven Roasted Sweet Potatoes
Grilled Corn On the Cob (GF, DF)
Fresh Fruits, Lemon Cake
(Contains gluten and dairy) (HT)

Friday, September 6

BREAKFAST

7:30 A.M. - 9 A.M. GRANHALL

Traditional Breakfast Buffet
includes
various proteins (eggs, sausage, etc.)
Baked goods
Hot and cold cereal
Fruit
Cofee, tea juice & more

LUNCH PICK UP AND DEPART! (HIKING/HOME)

12:15 P.M. - 12:30 P.M. SOLARIUM

Labeled bag lunches with sign up sheet the evening prior to confirm any dietary needs again with the lodge
Piece of fruit
Italian sandwich
Bag of chips
Granola bar
Chocolate chip cookie
Water & napkin

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