

FACS XVIII – 18th Meeting of the French American Chemical Society

June 12 – 16, 2022

FINAL PROGRAM

Sunday: June 12, 2022

5:15 p.m. Welcome Message and Opening Remarks (**Drs. Williams, Snapper and Blanchard**)

5:30 p.m. **Program Session 1:** Program Chair: **Dr. Nicolas Blanchard**, FACS French Co-Chair

Advances of Catalysis and Biocatalysis for Drug Design

5:30 – 5:55 Keynote Lecture 1 and Discussion **L.-C. Campeau**
Problems You Didn't Know You Had: Tales from the Process Chemistry Hood

5:55 – 6:20 Keynote Lecture 2 and Discussion **Alison Narayan**
Biocatalysis and Complex Molecule Synthesis

6:20 – 6:45 Keynote Lecture 3 and Discussion **Davide Audisio**
Late-Stage Carbon Isotope Labeling

6:45 – 7:10 Keynote Lecture 4 and Discussion **Sheryl Wiskur**
Understanding Intermolecular Interactions that Control Isothiourea Catalysis

7:10 p.m. Adjourn

7:15 – 9:30 p.m. Welcome Mixer

Monday: June 13, 2022

7:00 – 8:00 a.m. Buffet Breakfast

8:00 a.m. **Program Session 2:** Program Chair: **Dr. Thomas Bannister**, Scripps, Florida

Enantioselective Reactions as an Approach to Increased Specificity

8:00 – 8:55 Plenary Lecture 1 and Discussion **Stellios Arseniyadis**
Direct and Highly Enantioselective Access to γ -Butenolides Through an Untapped C5-Selective Allylation of Siloxyfurans: An Expedient Entry into O-Terpenoidal Natural Products

8:55 – 9:50 Plenary Lecture 2 and Discussion **Huw Davies**
Collaborative Approach for Catalyst-Controlled Site-Selective and Enantioselective C-H Functionalization

9:50 – 10:10 a.m. Break

10:10 – 10:35 Keynote Lecture 5 and Discussion **Erica Benedetti**
Asymmetric Transfer Hydrogenation: A Highly Efficient Strategy to Access Planar Chiral [2.2]Paracyclophanes and Expand Their Range of Applications

10:35 – 11:30 Plenary Lecture 3 and Discussion **Jean Suffert**
The Magic of the 4-Exo-Dig Cyclocarbopalladation: How to Produce Complexity

11:30 – 11:55 Keynote Lecture 6 and Discussion **Nicholas Magnus**
Diastereoselective Pictet–Spengler Based Synthesis of a D1 Potentiator

12:00 p.m. Adjourn (Lunch in the Emeline Dining Room)

1:10 p.m. **Program Session 3:** Program Chair: **Dr. Morgan Donnard**, Assoc. Professor, Univ. of Strasbourg

Creating Molecular Complexity for Increased Selectivity

1:10 – 2:05 Plenary Lecture 4 and Discussion **Marisa Kozlowski**
Oxygen Driven Fragment Coupling for the Synthesis of Natural Products and Antibacterials

2:05 – 2:30 Keynote Lecture 7 and Discussion **Oliver Thiel**
Molecular Complexity as a Driver for Innovation in Pharmaceutical Process Development

2:30 – 2:55 Keynote Lecture 8 and Discussion **Adrien Quintard**
From Multi-Catalyzed Transformations to Smart Materials

3:00 p.m. Adjourn

4:30 – 6:30 p.m. Poster Session A

7:00 – 9:00 p.m. Plated Dinner in the Emeline Dining Room

Tuesday: June 14, 2022

7:00 – 8:00 a.m. Buffet Breakfast

8:00 a.m. **Program Session 4:** Program Chair: **Dr. Nicholas Magnus**, Eli Lilly

Natural Products as Leads for Oncology and Infectious Disease

8:00 – 8:55 Plenary Lecture 5 and Discussion **Louis Barriault**
Total Synthesis of Complex Polyoxygenated Diterpenes and Photoredox Transformations

8:55 – 9:50 Plenary Lecture 6 and Discussion **Dale Boger**
Vinblastine: Synthetic and Mechanistic Studies

9:50 – 10:10 a.m. Break

10:10 – 11:05 Plenary Lecture 7 and Discussion **David Sarlah**
Methodology-Driven Synthesis of Anticancer Natural Products

11:05 – 12:00 Plenary Lecture 8 and Discussion **Erwan Poupon**
From Metabolomics to Bio-inspired Total Synthesis: Deciphering Molecular Complexity of Natural Substances
ANNOUNCEMENTS

12:00 p.m. Adjourn for Lunch (Caravel Deli in Emeline Dining Room)

Power Lunch Roundtable: Professor Marisa Kozlowski and Dr. Cathy Evans (Relay Therapeutics) will chair this discussion of issues confronting a new generation of women and underrepresented individuals. Special seating has been reserved for those who have expressed interest in attending.

1:10 p.m. **Program Session 5:** Program Chair: **Dr. Carina Sanchez**, Senior Scientist, Novartis Institutes for Biomedical Research

New Targets and Novel Approaches

1:10 – 2:05 Plenary Lecture 9 and Discussion **Maria Duca**
Targeting Non-Coding RNAs with Synthetic Small Molecules for Therapeutic Innovation

2:05 – 3:00 Plenary Lecture 10 and Discussion **Boris Vauzeilles**
Detecting Pathogens and Reactive Oxygen Species Using Chemical Biology

3:00 – 3:25 Keynote Lecture 9 and Discussion **Fabien Rodier**
A Journey in Sanofi Route Scouting Programs – Technology and Science Driven Approach

3:25 p.m. Adjourn

4:30 – 6:30 p.m. FACS XVIII “Tastings Event”* and Poster Session B

*A tasting of French wines and American craft cheeses. Wines for this tasting event have been donated without consideration for any in-kind reciprocity. Alcohol must be served exclusively by licensed Emeline personnel.

7:00 p.m. Dinner (Conferees will be free to partake of the varied offerings within the Charleston Historic District.)

Wednesday, June 15, 2022

7:00 – 8:00 a.m. Buffet Breakfast

8:00 a.m. **Program Session 6:** Program Chair: **Dr. Seva Rostovtsev**, Director, FMC Corporation

Advances in Heterocyclic Chemistry and Novel Pharmacophores

8:00 – 8:25 Keynote Lecture 10 and Discussion **Alex Radosevich**
Synthetic Methods Driven by the P(III)/P(V) Redox Couple

8:25 – 9:20 Plenary Lecture 11 and Discussion **Sami Lakhdar**
Mechanistically Driven Development of Carbon–Carbon & Carbon–Heteroatom Bond Forming Reactions

9:20 – 10:15 Plenary Lecture 12 and Discussion **John Vederas**
Synthesis of Cyclic Bioactive Peptides, Their Analogs and Unusual Amino Acid Building Blocks

10:15 – 10:30 a.m. Break

10:30 – 11:25 Plenary Lecture 13 and Discussion **Marine Desage-El Murr**
Interfacing Redox Catalysis with the Metalloenzymatic Reactivity Toolbox

11:25 – 12:20 Plenary Lecture 14 and Discussion **Nicholas Meanwell**
Inhibitors of HIV-1 Maturation

12:20 p.m. Adjourn for Lunch (Caravel Deli in Emeline Dining Room)

1:30 p.m. **Program Session 7:** Program Chair: **Dr. Xianglin Shi**, Chief Technology Officer, Leal Therapeutics
Molecules as Sensors and Probes

1:30 – 1:55 Keynote Lecture 11 and Discussion **Martin Schnermann**
Harnessing Cyanine Chemistry for Dynamic & Multicolor Imaging

1:55 – 2:50 Plenary Lecture 15 and Discussion **Mike VanNieuwenhze**
Use of Fluorescent D-Amino Acids for the Study of Peptidoglycan Biosynthesis and Bacterial Cell Division

2:50 – 3:15 Keynote Lecture 12 and Discussion **Kevin Meyer**
Creating a New Class of Fungicides

3:20 p.m. Adjourn (Free time to explore Historic Charleston)

7:00 p.m. Conference Banquet in Emeline Dining Room

Thursday: June 16, 2022

7:00 – 8:00 a.m. Buffet Breakfast

8:00 a.m. **Program Session 8:** Program Chair: **Dr. Ángel Morales-Ramos**, Scientific Leader, GSK
Translation Sustainability in Process Research

8:00 – 8:25 Keynote Lecture 13 and Discussion **Nick Desrosiers**
Process Chemistry Development for the EZH2 Inhibitor PF-06821497

8:25 – 8:50 Keynote Lecture 14 and Discussion **Laurent Petit**
Process Development of a Novel Route to Rilpivirine Hydrochloride – From Lab Scale to Pilot Scale

8:50 – 9:15 Keynote Lecture 15 and Discussion **Carina Sanchez**
Adventures in Synthetic Innovation: A Chiral Synthesis of NVP-LNP023

9:15 – 10:25 a.m. Break (Remove luggage from hotel rooms for checkout.)

10:30 a.m. **Program Session 9:** Program Chair: **Dr. Khalida Shamim**, Therapeutics Development
Branch, NCATS

New Technologies to Accelerate Drug Discovery

10:30 – 10:55 Keynote Lecture 16 and Discussion **Amanda Dombrowski**
Enabling and Accelerating Drug Discovery with High-Throughput Chemistry

10:55 – 11:50 Plenary Lecture 16 and Discussion **Laure Haberkorn**
Accelerating the Design-Make-Test-Analyse Cycle, Which Technologies to Use and for What Purpose?

12:00 – 12:30 p.m. Conference Closing and Concluding Remarks