

European Peptide Symposium







25 - 29 August 2024 Satellite Workshops 30 - 31 August 2024

### Florence, Italy- 2024

### **WORKSHOP 1**

# Applications of computational AI/ML in peptide research with a roadmap to peptide drug and material development.

FRIDAY 30 August 2024	
10:00 - 12.00	ML approaches
	Moderators: Emel Adaligil, Genentec and Ewa Lis, Koliber Bio
	Ved Srivastava, Perpetual Medicines Roadmap to peptide drug development in Al Era
	Ewa Lis, Koliber Bio Introduction to Machine Learning
	Goran Mauša, University of Rijeka Breaking misconceptions in applying machine learning to peptides materials
	Hirokazu Tamamura, Tokyo University Development of anti-HIV agents targeting HIV-Gag proteins using in silico screening
12:00 - 13:30	Lunch
13:30 - 15:30	Practical session
	Marko Njirjak and Erik Otovic, University of Rijeka Overcoming antibiotic resistance: a machine learning pipeline for antimicrobial peptide discovery
15:30 - 16:00	Coffee Break
16:00 - 18:00	Demo / practical session
	<b>Tatjana Braun and João Rodrigues</b> , Schrödinger Peptide and Macrocycle Design using Schrödinger's Computational Modeling Platform

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SATURDAY 3	1 August 2024
	MD / structure-based approaches
09:00 - 10:30	Moderators: <b>YuShan Lin</b> , Tuffts University and <b>Marco Pagliai</b> , University of Florence
	YuShan Lin, Tuffts University
	Molecular Dynamics intro and talk
	Sereina Riniker, ETH Zurich
	Structure-based design
10:30 - 11:00	Coffee Break
11:00 - 11:30	Leonardo de Maria, Astra Zeneca Generative models for peptide therapeutic optimization
	Marko Babic, University of Rijeka  Effects of cluster analysis inputs for peptide self-assembly and aggregation simulations.
11.30 - 12.00	Close of workshop

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# WORKSHOP 2 Embracing innovation and sustainability in peptide synthesis

FRIDAY 30 Au	FRIDAY 30 August 2024	
10:00 - 11:15	Wendy Hartsock, AralezBio Opening	
	<b>Fernando Albericio</b> , University of KwaZulu-Natal A History of Peptide Synthesis Part 1	
	Stephen Kent, University of Chicago A History of Peptide Synthesis Part 2	
	<b>Timothy Reichart</b> , Hampden-Sydney College <i>Group Discussion</i>	
11:15 - 11:50	Innovation in Synthesis	
	Jonathan Collins, CEM Challenging the Norms of Peptide Synthesis	
	<b>Timothy Reichart</b> , Hampden-Sydney College Folding-assisted ligation	
	<b>Timothy Reichart</b> , Hampden-Sydney College <i>Group Discussion</i>	
12:00 - 13:30	Lunch	
13:30 - 14:20	Sweet Science: Glycans in peptide science	
	<b>Mattan Hurevich,</b> The Hebrew University of Jerusalem Glycan and peptide synthesis: differences, parallels and crossover of ideas	
	<b>Baptiste Aussedat,</b> Chemitope Glycopeptide  Building Bridges: The Intersection of Peptide and Glycan Chemistry in  Glycopeptide Innovation	
	<b>Timothy Reichart</b> , Hampden-Sydney College <i>Group Discussion</i>	
14:35 - 15:25	Sustainability in Peptide Science Part 1	
	<b>Luísa Aguiar</b> and <b>Robert Zitterbart</b> , Gyros Protein Technologies Green innovation on trial: How to improve the ecological impact of your peptide synthesis today	
	Timothy Reichart, Hampden-Sydney College Group Discussion	



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15:30 - 16.00	Coffee Break
16:00 - 16:20	Lars Holmberg and Łukasz Frankiewicz, PeptiSystems Flowthrough SPPS with integrated PAT – sustainable technology to reduce PMI and make smart process decisions
	Timothy Reichart, Hampden-Sydney College Group Discussion
16.30 - 18:00	Fernando Albericio, University of KwaZulu-Natal 1st Panel Replacing reagents in SPPS (DMF, Fmoc, TFA, DCM); replacing SPPS?

SATURDAY	SATURDAY 31 August 2024	
	Spotlight on LPPS	
9:00 - 9:25	Wendy Hartsock, AralezBio	
	Opening	
	Markus Löeweneck, Senn Chemicals AG Advantages and strategies for successful implementation of LPPS	
	Advantages and strategies for successful implementation of Li 1 3	
	Wendy Hartsock, AralezBio Group Discussion	
	Sustainability in Peptide Science Part 2	
09:30 - 10.20	Stephen Kent, University of Chicago Fundamental Aspects of SPPS and Native Chemical Ligation for Efficient Peptide Synthesis	
	William Lubell, Université de Montréal N- to C-Peptide Synthesis is Arguably the Future for Sustainable Production	
	Wendy Hartsock, AralezBio	
	Group Discussion	
10:30 - 11.00	Coffee Break	
	Innovations in Peptide Science Part 2	
11:00 - 11:20	Philip Dawson, Scripps Research Institute Chemical manipulation of immobilized macromolecules	
	Wendy Hartsock, AralezBio Group Discussion	
	Stephen Kent, University of Chicago 2nd Panel The future of the solid support. What will replace ChemMatrix?	
11:30 - 12:30	Stephen Kent, University of Chicago Challenges from the audience	
	Wendy Hartsock, AralezBio Close of Day 2	





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### **WORKSHOP 3**

# Navigating entrepreneurship and technology transfer in peptide discovery and development

10:00 - 10:15	Opening Giorgia Giovannetti, University of Florence Ines Neundorf, University of Cologne
10:15 - 12:00	Marco Pierini, Maria Raffaella Martina and Fosca Errante, University of Florence Bernadett Simon, University of Cologne Technology Transfer strategies in the University of Cologne and University of Florence. Insight on peptide discovery and development.
12:00 - 13:30	Lunch
13:30 - 14:00	Stefano Pegoraro, Bachem  Market Intelligence in the era of anti-obesity peptide therapeutics - A CDMO perspective
14:00 - 14:30	Charlotte Ungerth, RELIFE Definisse Key Peptide 1 - a true breakthrough innovation in anti-ageing treatments
14:30 - 15:00	Ved Srivastava, Perpetual Medicines Peptide-Drugs for Metabolic Disease: From Innovation to Market
15:00 - 15:30	Aphrodite Kapurniotu, TU Munich and Jürgen Bernhagen, LMU Munich Peptide drugs for cardiovascular diseases
15:30 - 16:00	Coffee Break
16:00 - 16:30	Stefania Colarusso, IRBM Our journey as peptide drug hunters at IRBM
16:30 - 17:00	Ikuo Fujii, Osaka Metropolitan University Post-antibody drugs: Generation of a novel class of drug modalities based on molecular-targeting helix-loop-helix (HLH) peptides
17:00 - 17:30	Meritxell Teixido, Gate2Brain Gate2Brain entrepreneurial journey towards patients
17:30 - 18:00	Michael Chorev, Mellitus LLC Challenges in developing a novel diagnostic test for diabetes based on CD59 as a disease relevant biomarker



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9:00 - 9:30	Rina Aharoni, Weizmann Institute of Science The story of the peptide-copolymer Glatiramer Acetate (Copaxone) in the treatment of multiple sclerosis: from Bench to Bed side
9:30 - 10:00	István Mándity, Semmelweis University & HUN-REN Research Centre for Natural Sciences Success and pitfalls in drug research in academia
10:00 - 10:30	Richard Moakes, Birmingham University  Novel anti-scarring eye drops: a view from bench to bedside
10:30 - 11:00	Coffee Break
11:00 - 12:30	Round Table discussion István Mándity, Aphrodite Kapurniotu, Jürgen Bernhagen
12:30	Closing remarks and end of workshop