

# 37<sup>th</sup> EPS

European  
Peptide  
Symposium

# 14<sup>th</sup> IPS

International  
Peptide  
Symposium

25 - 29 August 2024



## PROGRAMME

Florence, Italy



**SUNDAY, 25 AUGUST 2024**

**AUDITORIUM | 17:00-20:00**  
**OPENING CEREMONY**

- 17:00** **Anna Maria Papini & Paolo Rovero** (Symposium Chairs)  
**Knud Jensen** (European Peptide Society President)  
Opening remarks
- 17:15** **Christian Becker** (Journal of Peptide Science) & **Thomas Trier-Mork** (Wiley)  
Journal of Peptide Science Best Paper Award 2023
- 17:30** **Florine Cavelier** (EPS Executive Committee) & **Jordi Piro**, BCN Peptide  
Miklós Bodanszky Award to **Cesar de la Fuente**
- 17:40** **Beate Koksch** (EPS Executive Committee)  
Leonidas Zervas Award to **Ashraf Brik**
- 17:50** **Ashraf Brik** (Technion-Israel Institute of Technology, Haifa, Israel)  
**AL1** ZERVAS Award Lecture: Ubiquitin signaling: chemistry, biology and drug discovery
- 18:20** **Knud Jensen** (EPS President) & **Linda Haugaard-Kedström**, Polypeptide Laboratories  
Josef Rudinger Memorial Award to **Fernando Albericio**
- 18:30** **Fernando Albericio** (University of Kwa-Zulu Natal, South Africa)  
**AL2** Rudinger Award Lecture: Solid-phase peptide synthesis as a combination of resins, protecting groups, coupling reagents in a proper solvent
- 19:10** **Knud Jensen** (EPS President) & **Linda Haugaard-Kedström**, Polypeptide Laboratories  
Josef Rudinger Memorial Award to **David Andreu**
- 19:20** **David Andreu** (Pompeu Fabra University, Spain)  
**AL3** Rudinger Award Lecture: Snapshots and reflections from travels across diverse peptide landscapes



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## MONDAY, 26 AUGUST 2024

### AUDITORIUM | 08:30-09:10

- OL1 **Morten Meldal** (University of Copenhagen, Denmark)  
Opening Plenary Lecture

Welcome address by **Alessandra Petrucci**, Rector of the University of Florence

### AUDITORIUM | 09:10-10:30

#### PLENARY SESSION 1 - INNOVATION IN PEPTIDE CHEMISTRY I

Chairs: **Helma Wennemers** (ETH Zurich, Switzerland) & **Joel Schneider** (National Cancer Institute, USA)

- 09:10 **Philip E. Dawson** (Scripps Research, USA)

L01 Synthesis of peptides and macromolecular conjugates while adsorbed to a solid support

- 09:30 **Beate Koksch** (Institute of Chemistry and Biochemistry, Freie Universität

L02 Berlin, Germany)

Fluoropeptides as biodegradable biopolymers

- 09:50 **William Lubell** (Université de Montréal, Canada)

L03 Tetrasubstituted benzotriazepinones act as  $\beta$ -turn mimics without sterogenic carbons exhibiting allosteric modulation of the urotensin II receptor

- 10:10 **Hiroaki Suga** (The University of Tokyo, Japan)

L04 Generation of neobiologics derived from macrocyclic peptides by Lass Graft technology

- 10:30 Coffee break

11:10

MONDAY, 26 AUGUST 2024

**AUDITORIUM | 11:10-13:30**

**PLENARY SESSION 2 - INNOVATION IN PEPTIDE CHEMISTRY II**

Chairs: Beate Koksch (Freie Universität Berlin, Germany) & Fernando Albericio (University of Kwa-Zulu Natal, South Africa)

**11:10** Stephen Kent (University of Chicago, USA)

L05 Fundamental aspects of SPPS - prospects for the Green future

**11:30** Wendy Hartsock (Arazel Bio, USA)

L06 Biocatalysis for green manufacturing of amino acids

**11:50** Mattan Hurevich (The Hebrew University of Jerusalem, Israel)

L07 Accelerated solid-phase synthesis as a tool to explore post-translationally modified peptides

**12:10** Oliver Seitz (Humboldt-Universität zu Berlin, Germany)

L08 Synthesis of multiply post-translationally modified multi tandem repeat peptides for biological interrogation

**12:30** Lunch

**13:30**

**AUDITORIUM | 13:30-15:30**

**PARALLEL SESSION 1 - NOVEL TECHNOLOGIES FROM INDUSTRY**

Chairs: Wendy Hartsock (Arazel Bio, USA), Christina Schroeder (Genentech, USA) & Ved Srivastava (Perpetual Medicine, USA)

**13:30** Yvonne Angell (WuXi TIDES, Hong Kong)

L09 Mastering and accelerating bispecific peptide-conjugates: unveiling success strategies

**13:50** Jonathan M. Collins (CEM Corporation, USA)

L10 Massive waste reduction for solid phase peptide synthesis

**14:10** Hossain Saneii (AAPPTec LLC, USA)

L11 Good bye DMF, good bye DCM and welcome true green chemistry

**14:30** Markus Löweneck (SENN Chemicals AG, Switzerland)

L12 Advantages and strategies for successful implementation of LPPS

**14:50** Amit Mehrotra (Biotage AB, Sweden)

L13 New technologies enabling high-throughput peptide library production: simpler, faster, and greener

**15:10** Robert Zitterbart (Protein Technologies AB, Sweden)

L14 Navigating through advanced and greener synthesis and purification technology to prepare for the new era of peptide therapeutics



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## MONDAY, 26 AUGUST 2024

### SALA VERDE | 13:30-15:30

### PARALLEL SESSION 2 - EMERGING PEPTIDE-BASED TECHNOLOGIES I

Chairs: Marta De Zotti (University of Padova, Italy) & Xuechen Li (The University of Hong Kong, Hong Kong)

13:30 Sophie Faure (Université Clermont Auvergne, CNRS, France)

L16 Bio-inspired design of cationic amphipathic peptoid foldamers for targeting planktonic and biofilm-embedded bacteria

13:45 Juan Del Valle (University of Notre Dame, USA)

L17 Beyond N-methylation: synthesis, structure, and function of N-aminopeptides

14:00 Origène Nyanguile (HES-SO Valais-Wallis, Institute of Life Sciences,

L18 Switzerland)

A novel site selective antibody conjugation technology

14:15 Hiroshi Murakami (Nagoya University, Japan)

L19 Antibody-like proteins targeting proteins and small molecules

14:30 Yuji Ito, (Kagoshima University, Japan)

L20 tCAP conjugate: an affinity peptide-based antibody conjugation system to generate highly functional antibody

14:50 Baptiste Ausseedat (Chemitope Glycopeptide, USA)

L21 Charting the landscape of synthetic glycopeptides

| 15:30-17:00

### POSTER SESSION 1

(see pages 22-53)

**MONDAY, 26 AUGUST 2024**

**AUDITORIUM | 17:00-19:30**

**PARALLEL SESSION 3 - INNOVATION IN PEPTIDE CHEMISTRY III**

**Chairs: Yan-Mei Li (Tsinghua University, China) & Claudiu Supuran (University of Florence, Italy)**

- 17:00 Hironobu Hojo** (Institute for Protein Research, Osaka University, Japan)  
**L22** Diselenide metathesis reaction in peptides

- 17:20 Istvan Mandity** (Semmelweis University, Hungary)  
**L23** Greening of peptide synthesis by the utilization of continuous-flow technology

- 17:40 Norman Metanis** (The Hebrew University of Jerusalem, Israel)  
**L24** Through the looking glass:: Functional ambidexterity of an ancient nucleic acid-binding protein

- 18:00 Lara R. Malins** (Australian National University, Australia)  
**L25** Advances in late-stage peptide modification chemistry: inspiration from nature

- 18:20 Xuechen Li** (The University of Hong Kong, Hong Kong)  
**L26** Handing difficult peptide/protein synthesis and modification

- 18:40 Thimmaiah Govindaraju** (Jawaharlal Nehru Centre for Advanced Scientific Research, India)  
Peptide inhibitors for combating inflammasome activation in neurodegenerative disorders

- 19:00 Cesar de La Fuente** (University of Pennsylvania, USA)  
**AL4 Bodanszky Award Lecture**  
AI for antibiotic discovery



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## MONDAY, 26 AUGUST 2024

**SALA VERDE | 17:00-19:00**

### **PARALLEL SESSION 4 - INNOVATION IN PEPTIDE CHEMISTRY IV**

**Chairs: Philip Dawson (Scripps Research, USA) & Meritxell Teixidó (Gate2Brain, Barcelona, Spain)**

**17:00 Shlomo Yitzchaik (The Hebrew University of Jerusalem, Israel)**

L28 Peptide-kinase interactions derived electrochemical biosensors

**17:20 Marta De Zotti (University of Padova, Italy)**

L29 Helical peptides able to selectively interact with ions in water: towards a sustainable, peptide-based, wastewater treatment technology

**17:35 Junfeng Zhao (Guangzhou Medical University, China)**

L30 Peptide synthesis using unprotected amino acids

**17:50 Rita Petracca (Utrecht University, Netherlands)**

L31 Shedding light on hidden protein marks - a novel photochemical approach to unveil lysine crotonylation (Kcr)

**18:05 Francesco Merlino (University of Naples Federico II, Italy)**

L32 Ultrasonic-aided sustainable chemical synthesis of biologically active peptides

**18:20 Sonia Cantel (IBMM-UMR5247, France)**

L33 Improving peptides and proteins insights: cutting-edge chemical probes and advanced MALDI-MS techniques for out of range biomarker targeting

**18:40 Shi-Zhong Luo (Beijing University of Chemical technology, China)**

L34 Computer-aided rational design of bioactive peptides with biomedical applications

**TUESDAY, 27 AUGUST 2024**

**AUDITORIUM | 08:15-10:30**

**PLENARY SESSION 3 - THERAPEUTIC PEPTIDES FROM BENCH TO CLINIC I**

Chairs: **Rina Aharoni** (Weizmann Institute, Israel) & **Oliver Seitz** (Humboldt-Universität zu Berlin, Germany)

**08:15 Richard Di Marchi** (Indiana University, USA)

L35 Chemical evolution of macromolecules for multiple therapeutic purposes

**08:40 Mohammed Akhter Hossain** (The Florey, University of Melbourne, Australia)

L36 Design and synthesis of insulin, insulin-like peptides and their peptidomimetics

**09:00 Gavin Bennett** (Bicycle Therapeutics Inc, USA)

L37 Bicyclic peptide conjugates: a novel therapeutic modality

**09:20 Elisabetta Bianchi** (IRBM, Italy)

L38 Chemical evolution of lactam constrained macrocycles: oral tricyclic peptide PCSK9 inhibitors for LDL-lowering and coronary heart diseases

**09:40 Atsushi Ohta** (Chugai Pharmaceutical Co., Japan)

L39 Identification of an orally bioavailable cyclic peptide RAS inhibitor guided by drug-like criteria beyond the rule of five

**10:00 Florence Brunel** (Novo Nordisk, USA)

L39 Exploring the evolution of obesity treatments: from GLP-1 agonists to bis polypharmacy approaches

**10:15 Coffee break**

11:00



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## TUESDAY, 27 AUGUST 2024

### AUDITORIUM | 11:00-12:30

### PLENARY SESSION 4 - INNOVATION IN PEPTIDE STRUCTURAL STUDIES

Chairs: Michael Chorev (Mellitus, USA) & Yu-Shan Lin (Tufts University, USA)

**11:00** Yan-Mei Li (Tsinghua University, China)

L40 Structural and mechanical insights of site-specific phosphorylated  $\alpha$ -synuclein fibrils in Parkinson's disease

**11:20** Lukasz Berlicki (Wrocław University of Science and Technology, Poland)

L41 Design and engineering of miniproteins towards functional structures

**11:35** Anne Conibear (TU Wien, Austria)

L42 Chemical and structural biology tools to probe protein posttranslational modifications in disordered proteins

**11:50** Diana Imhof (University of Bonn, Germany)

L43 The revival of Edman degradation for the analysis of multiple disulfide-bonded peptides and proteins

**12:10** Katsumi Matsuzaki (Kyoto University, Japan)

L44 Structural changes of amyloid  $\beta$ -peptide fibrils on neuronal cells

**12:30** Lunch

13:30

### AUDITORIUM | 13:30-14:10

### LUIS MORODER TRIBUTE

Anna Maria Papini, Michael Chorev, William Lubell, and Norbert Sewald

**TUESDAY, 27 AUGUST 2024**

**AUDITORIUM | 14:10-15:40**

**PLENARY SESSION 5 - YOUNG INVESTIGATOR MINI SYMPOSIUM (part I)**

**Chairs:** Florine Cavelier (CNRS, Montpellier, France) & William Lubell (Université de Montréal, Canada)

**14:10 Jessica Cross** (University of Bristol, United Kingdom)

YML01 Allosteric regulation of a molecular motor through de novo protein design

**14:25 Mulate Zerihun Workeneh** (Bar-Ilan University, Israel)

YML02 Peptide-to-macrocyclic: structure-activity relationships studies of P110, excessive mitochondrial fission inhibitor to target cardiovascular disease

**14:40 Luise Franz** (Leibniz Research Institute for Molecular Pharmacology, Germany)

YML03 Cell penetrating peptides for intracellular nanobody delivery to restore F508del cystic fibrosis transmembrane conductance regulator activity

**14:55 Naysilla Dayanara** (University of British Columbia, Canada)

YML04 Chemoselective and regioselective stapling of native unprotected  $\alpha$ -helices via fluorescent isoindole crosslinking (FLICK)

**15:10 Monika Perisic** (University of Vienna, Austria)

YML05 Advanced molecular tools to study the oxytocin receptor

**15:25 Daniela Rojas-Azofeifa** (The University of Queensland, Australia)

YML06 Mending achy-breaky hearts: cyclic peptide TL01 is an enhancer of cardiac intracellular protein-protein interactions and promotes heart contractility

**| 15:40-17:00**

**POSTER SESSION 1**

(see pages 22-53)



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## TUESDAY, 27 AUGUST 2024

**AUDITORIUM | 17:00-19:00**

### **PLENARY SESSION 6 - YOUNG INVESTIGATOR MINI SYMPOSIUM (part II)**

**Chairs: Florine Cavelier (CNRS, Montpellier, France) & William Lubell (Université de Montréal, Canada)**

**17:00 Maria Gallo (Pompeu Fabra University, Spain)**

**YML07** Peptide DRT-017 prevents cognitive impairment associated to medical cannabis pain management

**17:15 Xiyue Leng (University of Bristol, United Kingdom)**

**YML08** Building a new type of protein from antiparallel 310 helical assemblies with noncanonical quaternary amino acids

**17:30 Ben Tombling (Genentech, USA)**

**YML09** Developing high affinity peptide ligands of LRRC15 using machine learning

**17:45 Jannik Paulus (VU University Amsterdam, Netherlands)**

**YML10** RGD mimetic-drug conjugates for selectively targeting  $\alpha\beta 3$ -expressing melanoma cells

**18:00 Kevin Schiefelbein (University of Zurich, Switzerland)**

**YML11** Exploring the chemical space of lasso peptides using enzymatic transformation of chemically synthesized precursors

**18:15 Florian Sanchez (Ludwig-Maximilians-Universität München, Germany)**

**YML12** Aromatic helical oligoamide foldamers as  $\alpha$ -helix extended surface mimetics on coiled-coil NEMO and linear di-ubiquitin complex

**18:30 Carolina C. Buga (University of Lisbon, Portugal)**

**YML13** Unraveling key amino acid residues for the oligomerization and membrane interaction of the Parainfluenza fusion peptide

**1845 Federica Santoro (Università di Napoli Federico II, Italy)**

**YML14** Enhancing peptide-membrane interactions: insights from constrained RW9 analogues

**WEDNESDAY, 28 AUGUST 2024**

**AUDITORIUM | 08:30-10:15**

**PLENARY SESSION 7 - BIOACTIVE PEPTIDES I**

**Chairs: Florence Brunel (Novo Nordisk, USA) & John Wade (University of Melbourne, Australia)**

**08:30 Annette G. Beck-Sickinger (Leipzig University, Germany)**

L45 Chemerin - Identifying ligand-receptor interactions by small cyclic peptides

**08:55 Christian W. Gruber (Medical University of Vienna, Austria)**

L46 Peptidomics: from neuropeptide mining in invertebrates to drug discovery

**09:15 Knud J. Jensen (University of Copenhagen, Denmark)**

L47 The mechanism of his tag acylation

**09:35 Nir Qvit (Bar Ilan University, Israel)**

L48 Pharmacological approach for targeting mitochondrial dysfunction; rational design of a potent protein-protein interaction antagonist

**09:55 Ronald T. Raines (Massachusetts Institute of Technology, USA)**

L49 Lessons from collagen-mimetic peptides

**10:15 Coffee break**

11:00



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## WEDNESDAY, 28 AUGUST 2024

### AUDITORIUM | 11:00-12:30

### PLENARY SESSION 8 - ANTIMICROBIAL AND ANTIVIRAL PEPTIDES

Chairs: Chiara Falciani (University of Siena, Italy) & Katsumi Matsuzaki (Kyoto University, Japan)

**11:00** Roderich Suessmuth (Technische Universität Berlin, Germany)

L50 Peptides as sources for new antibacterial drugs – structures, biosyntheses & mechanisms

**11:20** Mercedes Martín Martínez (Instituto de Química Médica, Spain)

L51 Peptidomimetic inhibitors of SARS-COV-2 main protease

**11:35** Alesia Tietze (University of Gothenburg, Sweden)

L52 Development of peptide-based inhibitors to target virulence factors of Gram-positive bacteria

**11:50** Viji Sarojini (University of Auckland, New Zealand)

L53 Novel lipopeptide antibiotics based on battacin: synthesis and biological investigations

**12:10** Miguel Castanho (University of Lisbon, Portugal)

L54 Reducing the viral load of Zika virus in the brain *in vivo* using broad spectrum peptide-porphyrin conjugates that translocate the blood-brain barrier

**12:30** Lunch

13:30

**WEDNESDAY, 28 AUGUST 2024**

**AUDITORIUM | 13:30-15:30**

**PARALLEL SESSION 5 - BIOACTIVE PEPTIDES II**

**Chairs: Lara Malins (Australian National University, Australia) & Shiroh Futaki (Kyoto University, Japan)**

**13:30 Ikuo Fujii (Osaka Metropolitan University, Japan)**

**L61 A novel class of drug modalities: generation of VEGF-targeting helix-loop-helix peptides for tumor growth inhibition**

**13:50 Kazuyasu Sakaguchi (Hokkaido University, Japan)**

**L56 Functional polypeptides "r-peptides" encoded by latent ORFs in bacterial ribosomal RNAs**

**14:05 Ana Salomé Veiga (University of Lisbon, Portugal)**

**L57 Mechanism of action of a viral-derived and proteolysis-resistant HIV-1 inhibitor peptide targeting the chemokine receptor CXCR4**

**14:20 Annarita Falanga (University of Naples Federico II, Italy)**

**L58 Synthesis of hydroxamate-based peptides and evaluation of their coordination properties with iron(III)**

**14:35 Gregg Fields (Florida Atlantic University, USA)**

**L59 How altered type II collagen processing may contribute to chondrocyte dysfunction and rheumatoid arthritis initiation**

**14:50 Valeria Castelletto (University of Reading, United Kingdom)**

**L60 Self-assembly and cytocompatibility of amino acid conjugates containing a novel water-soluble aromatic protecting group**



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## WEDNESDAY, 28 AUGUST 2024

### SALA VERDE | 13:30-15:30

### PARALLEL SESSION 6 - COMPUTATIONAL APPROACHES TO PEPTIDE DISCOVERY

Chairs: **Elisabetta Bianchi** (IRBM, Italy) & **Mohammed Akhter Hossain** (The Florey, University of Melbourne, Australia)

**13:30** **Ewa Lis** (Koliber Biosciences Inc, USA)

L62 Progress towards improved peptide optimization through machine learning based predictions of potency, stability and permeability.

**13:50** **Claudia Hjørringgaard**, (Gubra A/S, Denmark)

L63 Machine learning guided peptide drug discovery speeds up lead identification as demonstrated with novel GLP-1R agonists

**14:10** **Antonella Di Pizio** (Technical University of Munich, Germany)

L64 Implementing machine learning tools to predict peptide bioactivity: a case study on bitter peptide prediction

**14:30** **Daniela Kalafatovic** (University of Rijeka, Croatia)

L65 Machine learning-guided peptide discovery: are we there yet?

**14:50** **Mark Distefano** (University of Minnesota, USA)

L66 Proteomic analysis in conjunction with peptide libraries and bioinformatic analysis yields new insights into the specificity of protein prenylation and its role in disease

**15:10** **Yu-Shan Lin** (Tufts University, USA)

L67 Structure prediction of cyclic peptides via molecular dynamics and machine learning

| 15:40-17:00

### POSTER SESSION 2

(see pages 54-85)

**WEDNESDAY, 28 AUGUST 2024**

**AUDITORIUM | 17:00-18:55**

**PARALLEL SESSION 7 - PEPTIDE DELIVERY AND MATERIALS I**

**Chairs: Paula Gomes (University of Porto, Portugal) & Giancarlo Morelli (University of Naples Federico II, Italy)**

**17:00 Ikuhiko Nakase (Osaka Metropolitan University, Japan)**

**L68 Functional peptide-modified extracellular vesicles for intracellular delivery and chemical biology**

**17:20 Vera Neves (University of Lisbon, Portugal)**

**L69 What are the main primary sequence characteristics of peptides that penetrate the brain?**

**17:35 Jayanta Chatterjee (Indian Institute of Science, India)**

**L70 Backbone thioamidation to obtain cell-permeable inhibitors of protein-protein interaction**

**17:50 Eric Vivès (University of Montpellier, France)**

**L71 A simple and efficient strategy to induce cellular mRNA uptake using peptide-based nanoparticles**

**18:05 Simone Adorinni (University of Trieste, Italy)**

**L72 Pedone Award of the Italian Peptide Society**

**Hierarchical self-assembly of short peptides and metals into supramolecular gels**

**18:25 Antonella Accardo (University of Naples Federico II, Italy)**

**L73 Peptide materials as supramolecular diagnostic agents**

**18:40 Tao Jiang (Xiamen University, China)**

**L74 Design of responsive, size-transformable peptide fibrils to regulate cellular interactions**



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## WEDNESDAY, 28 AUGUST 2024

### SALA VERDE | 17:00-19:00

### PARALLEL SESSION 8 - THERAPEUTIC PEPTIDES FROM BENCH TO CLINIC II

Chairs: **Ewa Lis** (Koliber Biosciences Inc, USA) & **Knud Jensen** (University of Copenhagen, Denmark)

**17:00 Aleksandra Misicka** (University of Warsaw, Poland)

L75 Development of opioid/melanocortin peptidomimetics as potential therapeutics for use in neuropathic pain

**17:20 Alessandro Angelini** (Ca' Foscari University of Venice, Italy)

L76 A novel combinatorial platform for rapid selection and characterisation of genetically-encoded cyclic peptide structures against a wide range of protein targets

**17:35 Santo Previti** (University of Messina, Italy)

L77 Dual 68Ga-labeled peptide-based radiopharmaceuticals to address tumor heterogeneity

**17:50 Lihu Yang** (UCB, USA)

L78 Discovery of zilucoplan: a potent macrocyclic peptide complement component 5 (C5) inhibitor in acetylcholine receptor antibody-positive generalized myasthenia gravis

**18:05 Chiara Falciani** (University of Siena, Siena)

L79 Branched oncolytic peptides and immunogenic cell death

**18:20 Jane Aldrich** (University of Florida, USA)

L80 Optimizing macrocyclic tetrapeptides for CNS activity

**18:40 Rui Kamada** (Hokkaido University, Japan)

L81 Inhibition of Ser/Thr phosphatase PPM1D induces immunosuppressive subset of neutrophils

**THURSDAY, 29 AUGUST 2024**

**AUDITORIUM | 08:30-10:20**

**PLENARY SESSION 9 - PEPTIDES AND CHEMICAL BIOLOGY**

**Chairs: Aphrodite Kapurniotu (Technical University of Munich, Germany)  
& Stephen Kent (University of Chicago, USA)**

**08:30 Helma Wennemers (ETH Zurich, Switzerland)**

L82 Peptides – Molecular allrounders

**08:55 Christian F.W. Becker (University of Vienna, Austria)**

L83 Zooming into posttranslational modifications by protein semi-synthesis

**09:15 Gosuke Hayashi (Nagoya University, Japan)**

L84 Nucleic acid scaffold-assisted peptide ligation for chemical protein synthesis

**09:35 Ines Neundorf (University of Cologne, Germany)**

L85 Cell-permeable inhibitors of collagen secretion that limit tissue scarring

**09:55 David Craik (University of Queensland, Australia)**

L86 A chemo-enzymatic approach to produce a cyclic analogues of peptide drug leads

**10:20 Coffee break**

11:00

**AUDITORIUM | 11:00-12:20**

**PLENARY SESSION 10 - THERAPEUTIC PEPTIDES FROM BENCH TO CLINIC III**

**Chairs: Annette G. Beck-Sickinger (Leipzig University, Germany) & David Craik (University of Queensland, Australia)**

**11:00 Christian P.R. Hackenberger (FMP Berlin, Germany)**

L87 Next-generation bioconjugation strategies for intra- and extracellular targeting

**11:20 Aphrodite Kapurniotu (Technical University of Munich, Germany)**

L88 Exploiting cross-amyloid interactions to design peptides as inhibitors of pathogenic amyloid self-assembly

**11:40 Markus Muttenthaler (The University of Queensland, Australia)**

L89 New avenues in oral peptide drug development for gut disorders

**12:00 Emel Adaligil (Genentech, USA)**

L90 Developing permable macrocyclic peptides from mRNA display selection by utilizing both NMR and computational methods

**12:30 Lunch**

13:30



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## THURSDAY, 29 AUGUST 2024

### AUDITORIUM | 13:30-15:40

### PLENARY SESSION 11 - YOUNG INVESTIGATORS MINI SYMPOSIUM - FLASH COMMUNICATIONS

Chairs: Christian Becker (University of Vienna, Austria) & Diana Imhof (University of Bonn, Germany)

**13:30 Anna Pepanian** (University of Bonn, Germany)

YIF01 Nucleotide exchange modulation of Gαi/s proteins with linear and bicyclic peptides

**13:35 Nathan Picois** (CY Cergy Paris Université, France)

YIF02 Bimodal use of chiral α-Trifluoromethylalanine in Aib Foldamers: study of the position impact towards the helical screw-sense preference

**13:40 Francesca Albini** (University of Padova, Italy)

YIF03 Multifunctional peptide-cotton conjugate for wound healing

**13:45 Perrine Savoyen** (Université Catholique de Louvain, Belgium)

YIF04 Studying staple peptide interactions with the LDH oligomeric interface

**13:50 Giuseppe Antoniazzi** (ETH Zürich, Switzerland)

YIF05 A lysyl oxidase-sensitive collagen probe for monitoring tissue remodeling

**13:55 Tsz Man Simon Tang** (University of Bath, United Kingdom)

YIF06 Intracellular OaAEPl catalysis for recombinant head-to-tail cyclic protein production

**14:00 Masashi Kuriyama** (Kyoto University, Japan)

YIF07 Identification of a genomic determinant of cytosolic delivery by the attenuated cationic lytic peptide

**14:05 Zhenquan Sun** (The University of Hong Kong, Hong Kong)

YIF08 Chemical syntheses of difficult peptides and proteins by N,O/S-benzylidene (thio)acetals strategy

**14:10 Beatrice Dalla Volta** (Technical University of Munich, Germany)

YIF09 Designed cyclic peptides as inhibitors of amyloid self-assembly and cross-seeding of amyloid-beta peptide and islet amyloid polypeptide

**14:15 Shambhu Deo Chandra** (The University of British Columbia, Canada)

YIF10 Design, synthesis, and biochemical evaluation of amanitin derivatives with novel bioconjugation methodology for potential use in antibody-drug conjugates

**14:20 Sayuri Takeo** (Shizuoka University, Japan)

YIF11 Potential of alkene dipeptide isosteres as turn mimetics and their application to guanine quadruplex-binding RGG peptidomimetics

**THURSDAY, 29 AUGUST 2024**

**AUDITORIUM | 13:30-15:40**

**PLENARY SESSION 11 - YOUNG INVESTIGATORS MINI SYMPOSIUM - FLASH COMMUNICATIONS (cont.)**

**14:25 Marco Cavaco (University of Lisbon, Portugal)**

**YIF12 Design and study of new peptide-based protein-protein inhibitors to tackle triple-negative breast cancer via the suppression of the Wnt/β-catenin pathway**

**14:30 Daniele Volpin (University of Padova, Italy)**

**YIF13 Targeting West Nile virus replicases: NS3 and heterodimers inhibitors**

**14:35 Roisin Leen (University of Galway, Ireland)**

**YIF14 Cyclic sulfamides as reagents for transforming cysteine residues into analogues of posttranslationally modified lysine residues**

**14:40 Elisabetta Rosa (University of Naples Federico II, Italy)**

**YIF15 Peptide-based supramolecular structures as useful tools for biomedical applications**

**14:45 Louis-David Guay (Université Laval, Canada)**

**YIF17 Chemical synthesis and structure-activity study of the antimicrobial lipopeptide brevibacillin and analogues thereof**

**14:50 Yuhui Zhang (The University of Queensland, Australia)**

**YIF18 Improving stability enhances in vivo efficacy of a PCSK9 inhibitory peptide**

**14:55 Fruzsina Bencs (Eötvös Loránd University, Hungary)**

**YIF19 Understanding the interactions involved in the amyloid stability via chiral spectroscopy**

**15:00 Kalpana Kumari (Indian Institute of Technology, India)**

**YIF20 Short catalytic peptides for carbon dioxide sequestration**

**15:05 Burcu Sırma Tarım (İzmir Institute of Technology, Turkey)**

**YIF21 Bioactive self-assembled peptide hydrogels for 3D cancer model YIF01 applications**

**15:10 Erik Otović (University of Rijeka, Croatia)**

**YIF22 A comprehensive machine learning framework for the prediction of therapeutic peptides from small datasets**



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## THURSDAY, 29 AUGUST 2024

### AUDITORIUM | 13:30-15:40

#### PLENARY SESSION 11 - YOUNG INVESTIGATORS MINI SYMPOSIUM - FLASH COMMUNICATIONS (cont.)

**15:15** Kimberley Biggs (Massachusetts Institute of Technology, USA)

**YIF23** In vitro evolution of cyclic peptide inhibitors of acid-sensing ion channel 1a for neuroprotective applications during stroke

**15:20** Jay Hanssens (Maastricht University, Netherlands)

**YIF24** C-terminal peptide modification: merging the Passerini reaction with chemo-enzymatic synthesis

### | 15:40-17:00

#### POSTER SESSION 2

(see pages 54-85)

### AUDITORIUM | 17:00-18:00

#### PLENARY SESSION 12 - PEPTIDE DELIVERY AND MATERIALS II

Chairs: Antonella Accardo (University of Naples Federico II, Italy) & Norbert Sewald (University of Bielefeld, Germany)

**17:00** Joel Schneider (National Cancer Institute, USA)

**L91** A target-oriented approach for materials design and drug delivery

**17:20** Meritxell Teixidó (Gate2Brain S.L., Barcelona, Spain)

**L92** Gate2Brain blood-brain barrier shuttle peptides, from discovery to applications and going beyond small molecules

**17:40** Shiroh Futaki (Kyoto University, Japan)

**L93** Aspects of peptide-mediated protein delivery into cells

### AUDITORIUM | 18:00-18:30

#### CLOSING CEREMONY

**18.00** YIMS and Poster Competition Awards

**18.15** Closing remarks and Handover to Wien 2026

**POSTER SESSION 1 - 26 AND 27 AUGUST 2024**  
**CHEMISTRY OF AMINO ACIDS, PEPTIDES AND PROTEINS**

- P1.001** Deciphering the role of posttranslational modifications on the DNA binding activity of bHLH transcription factors using chemical protein synthesis  
**Muhammad Jbara (Israel)**
- P1.002** Convergent synthesis of peptidomimetic based on a chloroalkene dipeptide isostere and its application to inhibition against amyloid  $\beta$  aggregation  
**Takuya Kobayakawa, Chika Azuma, Kenichi Yamamoto, Kohei Tsuji, Hirokazu Tamamura (Japan)**
- P1.003** Optimization of IEDDA reaction parameters: application in imaging, biology, and therapeutics  
**Rasheda Samiha, Arundhati Nag, Samir Das (USA)**
- P1.004** Identification of reactivity hotspots at the interface of protein–protein interactions  
**Nathalie M. Grob<sup>1,2</sup>, Clint Remarcik<sup>2</sup>, Simon Rössler<sup>2</sup>, Jeffrey Wong<sup>2</sup>, John Wang<sup>3</sup>, Jason Tao<sup>2</sup>, Corey Smith<sup>2</sup>, Andrei Loas<sup>2</sup>, Stephen Buchwald<sup>2</sup>, Dan Eaton<sup>2</sup>, Magdalena Preciado López<sup>2</sup>, Bradley Pentelute<sup>2</sup> (<sup>1</sup>Switzerland, <sup>2</sup>USA)**
- P1.005** Using N-acylation as a disulfide redox lock simplifies chemical protein synthesis  
**Vincent Diemer, Vangelis Agouridas<sup>1;2</sup>, Benoît Snella, Rémi Desmet, Oleg Melnyk (France)**
- P1.006** Deciphering the role of the ser-phosphorylation pattern on the DNA-binding activity of max transcription factor using chemical protein synthesis  
**Nithun Raj V, Yumi Minyi Yao, Shaimaa Habiballah, Xiaoxi Lin, Ariel Afek, Muhammad Jbara (Israel)**
- P1.007** Synthesis of peptide hydrazides: hydrazone resin versus hydrazine 2-CT resin  
**Mariia Leko<sup>1</sup>, Polina Filippova<sup>1</sup>, Karin Rustler<sup>2</sup>, Thomas Bruckdorfer<sup>2</sup>, Sergei Burov<sup>1</sup> (<sup>1</sup>Russian Federation, <sup>2</sup>Germany)**
- P1.008** Thioether-mediated Trp sulfenylation based on npys-chemistry  
**Akihiro Taguchi, Hayate Shida, Yan Cui, Yuma Tokita, Reo Kishi, Shinpei Kasama, Sho Konno, Atsuhiko Taniguchi, Yoshio Hayashi (Japan)**
- P1.009** Facilitating the access to repeat proteins by a novel water-compatible oligomerization method  
**Elliott Roy, Oleg Melnyk, Vincent Diemer (France)**
- P1.010** Unusual amino acid synthesis and iminium chemistry to access novel constrained residues – (hybrid) opioid ligands as a case study  
**Jolien De Neve, Harry Lecomte, Bin Wang, Charlie Hollanders, Frank De Proft, Steven Ballet (Belgium)**



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- Pl.011 Assessment of the bioorthogonality of the nitrile imine 1,3-dipole  
Mhairi Gibson, Keith Livingstone, Jonathan Pettinger, Craig Jamieson (United Kingdom)
- Pl.012 Technetium-99m tricarbonyl complexes containing amino acid derivatives for cancer imaging  
João D. G. Correia, Rúben D. M. Silva, Cristina P. Matos, Catarina G. Pinto, Joana F. Guerreiro, Lurdes Gano, Filipa Mendes (Portugal)
- Pl.013 Development of late-stage acylation methodology of threonine residue enabled by chemoselective acyl transfer followed by desulfurization  
Daiki Sato, Chiho Shinozaki, Masaya Danda, Akira Otaka (Japan)
- Pl.014 Towards the total synthesis of nisin A  
Ilia Perov, Bethan Donnelly, Tyler Mallett, John Vederas (Canada)
- Pl.015 Protein semi-synthetic approach to probe C-terminal hyper-phosphorylation of the Alzheimer-relevant protein Tau  
Bingjia Yan<sup>1</sup>, Léa El Hajjar<sup>2</sup>, Wenyi Li<sup>1</sup>, Caroline Smet-Nocca<sup>2</sup>, Christian P. R. Hackenberger<sup>1</sup> (<sup>1</sup>Germany, <sup>2</sup>France)
- Pl.016 Structural optimization study leading to orally bioavailable cyclic peptides inhibiting an intracellular tough target  
Mikimasa Tanada, Ryuji Hayashi, Mirai Kage, Atsushi Ohta, Hitoshi Iikura, Takuya Shiraishi (Japan)
- Pl.017 Chemical engineering of artificial transcription factors  
Omer Harel, Xiaoxi Lin, Shaimaa Habiballah, Muhammad Jbara (Israel)
- Pl.018 Peptides stabilise DNA four-way junctions  
Eleanor Ivens, Andrew Beekman, Zoë Goddard, Marco Cominetti, Mark Searcey (United Kingdom)
- Pl.019 C-glycosylation of aromatic amino acids through Pd-catalyzed cross-coupling  
Calvin Matula, Norbert Sewald (Germany)
- Pl.020 Efficient peptide thioester synthesis from hydrazides using near-stoichiometric thiol quantities  
Julie Di Adamo, Vincent Diemer, Oleg Melnyk (France)
- Pl.021 Electrostatic assistance of NCL catalysis by 4-mercaptophenylacetic acid  
Nathalie Ollivier, Elliott Roy, Rémi Desmet, Vangelis Agouridas, Vincent Diemer, Oleg Melnyk (France)
- Pl.022 An efficient strategy to bioconjugate disulfide-rich peptides via thiol-maleimide chemistry while preserving their bridging pattern  
Lylia Azzoug, Hervé Meudal, Karine Loth, Séverine Morisset-Lopez, Carlo Pifferi, Vincent Aucagne (France)

## POSTER SESSION 1 - 26 AND 27 AUGUST 2024

- P1.023** Auxiliaries in native chemical ligation: exploring the reactivity landscape with new scaffolds

Sebastian Trunschke, Antonia Feida, Oliver Seitzl (Germany)

- P1.024** How phosphorylation regulates liquid-liquid phase separation of intrinsically disordered proteins

Shachar Bressler<sup>1</sup>, Dana Grunhaus<sup>1</sup>, Amit Aviram<sup>1</sup>, Mattan Hurevich<sup>1</sup>, Inke Nähke<sup>2</sup>, Assaf Friedler<sup>1</sup> (<sup>1</sup>Israel, <sup>2</sup>United Kingdom)

- P1.025** Superfast desulfurization for protein chemical synthesis and modification

Zhenquan Sun, Yihui Cao, Xuechen Li (China)

- P1.026** An iron-catalyzed protein desulfurization method reminiscent of aquatic chemistry

Rémi Desmet, Céline Wichtacz, Aurélie Tasiemski, Vangelis Agouridas, Oleg Melnyk (France)

- P1.027** Chemoselective P-S coupling of aminophospholes to peptides under mild conditions

Emmanuelle Remond, Laure Lienart, Miyanou Rosales-Hurtado, Sébastien Clément, Jean-Alain Fehrentz, Jean-Louis Baneres, Florine Cavelier (France)

- P1.028** Revealing the extracellular function of HMGB1 N-terminal region acetylation assisted by a protein semi-synthesis approach

Tongyao Wei, Jiamei Liu, Can Li (China)

- P1.029** Flow SPPS - Towards greener and more efficient peptide manufacturing

Eike-Fabian Sachs, Oliver Kracker (Germany)

- P1.030** Design of experiments applied in peptide resin cleavage toward efficient process development

Andreas Heindl, Fabian Hogenkamp (Germany)

- P1.031** Synthetic combinatorial OPA-cyclic peptide library

Kin Nam Adrian Chu, Carina Hey Pui Cheung, Xuechen Li (Hong Kong)

- P1.032** Direct synthesis of peptidomimetics containing non-coded amino acids via photocatalytic carbamoylation reaction

Tommaso Gandini, Maria Luisa Gelmi, Raffaella Bucci (Italy)

- P1.033** Unraveling the functional implications of site-specific phosphorylations on heat shock protein 27: a semisynthetic approach

Sabrina Helena Schmied, Somnath Mukherjee, Christian Becker (Austria)

- P1.034** Thiol-yne mediated macrocyclisation and derivatisation strategies

Conor Williams, Susannah Calvert, Dearbhla Tully, Joanna F. McGouran, Eoin Scanlan (Ireland)



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Pl.035 Fmoc solid-phase synthesis of C-terminal diketopiperazine thioester peptides

**Yuya Nakajima, Koki Nakatsu, Gosuke Hayashi, Hiroshi Murakami**  
(Japan)

Pl.036 Synthesis and biological activity of ultra-short antimicrobial peptides bearing a novel non-coded amino acid

**Barbara Biondi<sup>1</sup>, Fernando Formaggio<sup>1</sup>, Cristina Peggion<sup>1</sup>, Andrea Schivo<sup>1</sup>, Teodora Calin<sup>2</sup>, Simona Oancea<sup>2</sup>, Liana Hayriyan<sup>3</sup>, Emma Khachatrian<sup>3</sup>, Ashot Saghyan<sup>3</sup>, Anna Mkrtchyan<sup>3</sup>** (<sup>1</sup>Italy, <sup>2</sup>Romania, <sup>3</sup>Armenia)

Pl.037 Evaluation of the stability of oxytocin and vasopressin under oxidative stress conditions

**Stefano Tartaggia, Claudia Honisch, Martina Rotondo, Paolo Ruzza** (Italy)

Pl.038 Biocatalytic synthesis of dihalogenated tryptophan derivatives

**Bjarne Scharkowski, Nicolai Montua, Simon Gäfe, Hartmut Niemann, Norbert Sewald** (Germany)

Pl.039 Silicon-containing amino acids for <sup>18</sup>F labeling of neuropeptides targeting NTS1 receptor

**Miyanou Rosales-Hurtado, Emmanuelle Remond, Delphine Vimont, Alexis Reinbold, Elif Hindie, Clément Morgat, Florine Cavelier** (France)

Pl.041 Searching for potential inhibitors of the TNF-TNFR2 interaction as a new approach in ovarian cancer therapy

**Gabriela Całka-Kuc, Karolina Sławińska, Sylwia Rodziewicz-Motowidło, Adam Sieradzan, Josef Kučera, Lenka Hernychová, Paweł Niedziałkowski, Marta Spodzieja, Aneta Szymańska** (Czech Republic)

Pl.042 Preclinical development of Myrcludex B derivatives: determination of physicochemical properties

**Tyra Christian, Sabrina Wohlfart, Christian Kleist, Philipp Uhl, Walter Mier** (Germany)

Pl.043 Modified proteins- keratin the next tool for enhanced adhesion

**Flavia Laffleur** (Austria)

Pl.044 Exploring the structure-function relationship of heme binding to blood coagulation factor VIII based on peptide models

**Lorena Kröner, Diana Imhof, Marie-T. Hopp** (Germany)

Pl.045 Peculiarities in peptidoglycan pentapeptide biosynthesis: the first pyridoxal 5'-phosphate independent epimerase enzyme that relies on active site serine residues

**John Vederas, Tess Lamer, Marco van Belkum, Anjalee Wijewardanel** (Canada)

## POSTER SESSION 1 - 26 AND 27 AUGUST 2024

**P1.046** Site-specific post-translational modifications of Tau4  
Dominik Vogl, Christian Becker, Miriam Preissler (Austria)

**P1.047** Synthesis of the natural peptide product fusahexin  
Carmen Bäuerlein, Armin Geyer (Germany)

**P1.048** Production of diverse sets of therapeutically relevant, novel amino acids via biocatalysis  
Jimmy Mann, Tina Boville, David Romney (USA)

**P1.049** Organocatalytic surfactants for direct asymmetric aldol reactions in aqueous media  
Susanta Kumar Behera, Ramesh Ramapanicker (India)

**P1.050** Exploration of a non-typical O-to-O acyl transfer in peptide chemistry: a new epimerization-free approach to peptide C-terminal salicylaldehyde esters  
Zhixiang Zhong, Wang Xia, Han Liu, Xuechen Li (Hong Kong)

**P1.051** New electrochemical method for arylation of cysteine containing peptides  
Shen Linhua, Olivier Monasson, Elisa Peroni, Franck Le Bideau, Samir Messaoudi (France)

**P1.052** N-aminoimidazol-2-one peptide mimic tools for deciphering active conformations  
Yousra Hamdane, Pradeep Chauhan, Suresh Vutla, Darince Truong, Mukandila Mulumba, Huy Ong, William Lubell (Canada)

**P1.053** Photocatalyzed activation of oxaryl thioester precursors  
Grain Benjamin, Chen Wang, Vangelis Agouridas, Oleg Melnyk (France)

**P1.053** A novel approach towards the synthesis of long peptide sequence  
bis Hossain Saneii<sup>1</sup>, Fernando Albericio<sup>2</sup>, Beatriz G. de la Torre<sup>2</sup>, Rajan Sharma<sup>1</sup>, Mostafa Hatam<sup>1</sup>, Farshad Karimi<sup>1</sup>, Sikabwe Noki<sup>2</sup>  
(<sup>1</sup>USA, <sup>2</sup>South Africa)

**P1.053** Chemical stability of new adamantane analogues  
ter Antoniya Stoymirska, Kiril Chuchkov, Petranka Petrova, Radoslav Chayrov, Maya Chochkova, Ivanka Stankova (Bulgaria)

**P1.054** Ring pucker conformational control  
Nassim Maarouf, William D. Lubell (Canada)



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### BIOACTIVE PEPTIDES

**Pl.055** Nature-inspired gallinamides are potent antischistosomal agents: inhibition of the cathepsin B1 protease target and binding mode analysis  
**Petra Spiwokova<sup>1</sup>, Lucie Maresova<sup>1</sup>, Martin Horn<sup>1</sup>, Jindrich Fanfrlik<sup>1</sup>, Adela Jilkova<sup>1</sup>, Pavla Fajtova<sup>1</sup>, Adrian Leontovyc<sup>1</sup>, Radka Houstecka<sup>1</sup>, Lucia Bielikova<sup>1</sup>, Jiri Brynda<sup>1</sup>, Marta Chanova<sup>1</sup>, Helena Mertlikova-Kaiserova<sup>1</sup>, Eduardo Caro-Diaz<sup>2</sup>, Jehad Almaliti<sup>2</sup>, Nelly El-Sakkary<sup>2</sup>, Conor Caffrey<sup>2</sup>, William Gerwick<sup>2</sup>, Michael Mares<sup>1</sup>** (<sup>1</sup>Czech Republic <sup>2</sup>USA)

**Pl.056** Study on interactions of LL-37 human cathelicidin peptide fragment with Cu(II) ion  
**Joanna Makowska, Dariusz Wyrzykowski, Jakub Brzeski, Bogusław Pilarski (Poland)**

**Pl.057** From agrifood waste to functional foods: the role of food by-products-derived bioactive peptides in antioxidant and anti-inflammatory signalling pathway activation  
**Federica Tonolo, Maria Pia Rigobello, Fabio Vianello (Italy)**

**Pl.058** Peptide stapling - Application in antibacterial therapies  
**Monika Wojciechowska, Julia Macyszyn, Michał Burmistrz, Joanna Miszkiewicz, Joanna Trylska (Poland)**

**Pl.059** Translocation-enhancing peptides: facilitating transport of molecules and lipid scrambling across cell membranes  
**Ladislav Bartoš, Robert Vacha (Czech Republic)**

**Pl.060** Parathyroid hormone (PTH) and PTH receptor interaction studies for rational development of novel peptide therapeutics  
**Ashok Khatri (USA)**

**Pl.061** Structure activity relationship study of inhibitory D-peptides against myostatin and activin A  
**Kentaro Takayama, Hideyuki Okamoto, Mariko Saitoh, Kaoru Ikekawa, Sho Konno, Akihiro Taguchi, Atsuhiko Taniguchi, Yoshio Hayashi (Japan)**

**Pl.062** Antimicrobial activity of Histatin 5 based metallopeptides  
**Gabriela Vieira Silva Zolin, Renan Lira de Farias, Saulo Santesso Garrido (Brazil)**

**Pl.063** De novo design of miniproteins binding to PD-L1  
**Juan Lizandra Perez, Natalia Miodowska, Łukasz Berlicki (Poland)**

**Pl.064** Metal complexes of ATCUN-like peptides for sequence-specific DNA cleavage  
**Ivan Unksov, Lena K. Müller, Hanna Zdhanova, Alexander Gräwe, Joshua Stahl, Viktor Stein, Daniel Tietze, Alesia Tietze (Germany)**

## POSTER SESSION 1 - 26 AND 27 AUGUST 2024

- Pl065** RaPID discovery of  $\alpha,\alpha$ -disubstituted  $\alpha$ -amino acid-containing  $\alpha$ -helical peptides targeting the  $\alpha$ -helical interface of peroxisome proliferator-activated receptor gamma  
Maxwell Sigal<sup>1</sup>, Markus Egner<sup>2</sup>, Chikako Okada<sup>1</sup>, Daniel Merk<sup>2</sup>, Toru Sengoku<sup>1</sup>, Takayuki Katoh<sup>1</sup>, Hiroaki Suga<sup>1</sup> (<sup>1</sup>Japan, <sup>2</sup>Germany)
- Pl066** A novel antimicrobial peptide, dermaseptin-SS, with anti-proliferative activity, isolated from the skin secretion of phylomedusa tarsius  
Xiaonan Ma, Chenbang MA, Tao Wang, Yangyang Jiang, Xiaoling Chen, Lei Wang, Mei Zhou, Tianbao Chen (United Kingdom)
- Pl067** Development of peptide-based inhibitors against  $\beta$ -catenin using in silico approach  
Minami Fujita, Amika Kikuchi, Kyohei Arita, Takashi Misawa, Yosuke Demizu (Japan)
- Pl068** Short N-terminal library-derived helical peptides inhibit alpha-synuclein aggregation  
Scott Allen, Jody Mason (United Kingdom)
- Pl069** Targeting protein S-palmitoylation dynamic using cell-permeable peptides  
Katharina Stillger, Ines Neundorf (Germany)
- Pl070** Synthesis and study of modified temporin analogs with unnatural amino acids citrulline and ornithine as potential antibacterial agents  
Nelly Georgieva, Dilyana Dimitrova, Tsvetelina Foteva, Veronica Nemska, Dancho Danalev (Bulgaria)
- Pl071** New unique analogs of anorexigenic cocaine- and amphetamine-regulated transcript peptide (CARTp)  
Andrea Pačesová, Vilém Charvát, Miroslava Blechová, Blanka Železná, Jaroslav Kuneš, Lenka Maletinská (Czech Republic)
- Pl072** Antibacterial and anti-biofilm activity of branched peptides derived from antimicrobial peptides  
Eva Tollapi, Alessandro Rencinai, Giada Meogrossi, Jlenia Brunetti, Silvia Scali, Luisa Bracci, Alessandro Pini, Chiara Falciani (Italy)
- Pl073** AMP32: a short cyclic peptide as an environmentally friendly alternative to counteract late blight symptoms in crops  
Elena Marone Fassolo<sup>1</sup>, Stefano Rosa<sup>1</sup>, Demetrio Marcianò<sup>1</sup>, Andrea Tagliani<sup>1</sup>, Lucia Feni<sup>1</sup>, Vaibhav Srivastava<sup>2</sup>, Silvia Laura Toffolatti<sup>1</sup>, Sara Pellegrino<sup>1</sup>, Vincent Bulone<sup>3</sup>, Simona Masiero<sup>1</sup>, Paolo Pesaresi<sup>1</sup> (<sup>1</sup>Italy, <sup>2</sup>Sweden, <sup>3</sup>Australia)
- Pl074** Novel OP-145 derived antimicrobial peptides with improved blood compatibility  
Altea Topciu, Nermina Malanovic (Austria)



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- Pl.075 Water-soluble longibramide E analogs: synthesis and antibacterial activity**  
**Renato B. Pereira, Ana Gomes, Mariana Ferreira, Paula Gameiro, Paula Gomes (Portugal)**
- Pl.076 Generation of a peptide library from human bone marrow for the discovery and identification of novel bio active bone-marrow derived peptides**  
**Nico Preising<sup>1</sup>, Armando Rodriguez-Alfonso<sup>1</sup>, Merve Karacan<sup>1</sup>, Sebastian Wiese<sup>1</sup>, Dennis Freisem<sup>1</sup>, Fabian Zech<sup>1</sup>, Dietmar Thal<sup>2</sup>, Konstantin Sparrer<sup>1</sup>, Jan Münch<sup>1</sup>, Frank Kirchhoff<sup>1</sup>, Ludger Ständker<sup>1</sup> (<sup>1</sup>Germany, <sup>2</sup>Belgium)**
- Pl.077 Targeting the bacterial DNA replication machinery: from linear peptide ligands to constrained macrocyclic inhibitors of the bacterial sliding clamp**  
**Anaïs Luton, Christophe André, Jérôme Wagner, Dominique Burnouf, Sébastien Goudreau, Laura Mauran-Ambrosino, Guillaume Compain, Gilles Guichard (France)**
- Pl.078 Early diagnosis and treatment of Alzheimer's disease by targeting toxic soluble A $\beta$  oligomers**  
**Shai Rahimipour<sup>1</sup>, Maram Habashi<sup>1</sup>, Sudipta Senapati<sup>1</sup>, Kuldeep Tripathi<sup>1</sup>, Michal Richman<sup>1</sup>, William Lubell<sup>2</sup>, Brigitte Guérin<sup>2</sup> (<sup>1</sup>Israel, <sup>2</sup>Canada)**
- Pl.079 Synthesis and antibacterial activity of new analogues of Aurein 1.2**  
**Nora Angelova, Tsvetelina Foteva, Veronica Nemska, Nelly Georgieva, Dancho Danalev, Emilia Naydenova (Bulgaria)**
- Pl.080 Tackling antibiotic resistance by blocking signalling pathways**  
**Rachel Johnson<sup>1</sup>, Susanne Gebhard<sup>2</sup>, Jody Mason<sup>1</sup> (<sup>1</sup>United Kingdom, <sup>2</sup>Germany)**
- Pl.081 Synthesis and evaluation of  $\beta$ -secretase inhibitory activity of new galantamine derivatives comprising peptide moiety**  
**Emilia Naydenova, Lyubomir T. Vezekov, Valentin Lozanov, Daniela S. Tsekova (Bulgaria)**
- Pl.082 Searching for biologically active peptide fragments of hACE2 interacting with the S1 protein of the SARS-CoV-2 virus**  
**Aleksandra Czerchawy<sup>1</sup>, Manoj Kumar Muthyalu<sup>2</sup>, Beata Kolesińska<sup>1</sup> (<sup>1</sup>Poland, <sup>2</sup>Germany)**
- Pl.083 Engineering MHC recognition and biological kinetics of peptides by novel chemistry**  
**Marius Werner, Christian Klein, Franziska Thomas (Germany)**
- Pl.084 Synthesis of Aza-amanitins leading to enhanced cytotoxicity for targeted cancer therapeutics**  
**Kayla Newell, Katherine Bessai, Juliette Froelich, Mihajlo Todorovic, David Perrin (Canada)**

## POSTER SESSION 1 - 26 AND 27 AUGUST 2024

- Pl.085** In situ mechanistic insight to antibacterial action of membrane-incising  $\beta$ -peptide lamellae  
**Kamal El Battouï, Imola Szigyártó, Sohini Chakraborty, Judit Tóth, Dániel Molnár, Tünde Juhász, Loránd Románszki, Andrea Bodor, Kata Horváti, István Mándity, Zoltán Varga, Judith Mihály, Csenge Lilla Szabó, Szilvia Bősze, Gergő Gyulai, Mayra Quemé, András Wacha, Bálint Jezsó, Tamas Beke-Somfai (Hungary)**
- Pl.086** Lactomodulin-derived peptides: design and bioactivity  
**Ashif Shaikh, Mohammed Aldulaimi, Walaa Mousa, Emilia Oueis (Arab Emirates)**
- Pl.087** Novel peptide inhibitors of SARS-CoV-2 infection  
**Nina Raasch, Lucas Weißenborn, Elie Richel, Simon Schäfer, Heinrich Sticht, Klaus Überla, Jutta Eichler (Germany)**
- Pl.088** Investigation of protein prenylation in cancer cells using cell-permeable peptides  
**Martin Matijass, Merlin Klußmann, Annika Klimpel, Ines Neundorf (Germany)**
- Pl.089** Cyclic peptide modulators of lymphocyte migration for the treatment of autoimmune disorders  
**Jasmin Gattringer, Agnes Weidmann, Kiritkumar B. Jadhav, Christian W. Gruber, Roland Hellinger (Austria)**
- Pl.090** Cytotoxicity and phototoxicity effects of modified temporin analogs with unnatural aminoacids  
**Tsvetelina Foteva, Ivan Iliev, Rositsa Hristova, Dilyana Dimitrova, Veronica Nemska, Nelly Georgieva, Dancho Danalev (Bulgaria)**
- Pl.091** Discovery and characterisation of potent cyclic PCSK9 binding peptides  
**Cecilie Mia Joergensen<sup>1</sup>, Camille Villequey<sup>3</sup>, Louise Walport<sup>1</sup> (<sup>1</sup>United Kingdom, <sup>2</sup>Denmark)**
- Pl.092** Triazole-bridged peptides with enhanced antimicrobial activity and potency against pathogenic bacteria  
**Joshua Grabeck<sup>1</sup>, Jacob Mayer<sup>1</sup>, Axel Miltz<sup>1</sup>, Isabelle Wielert<sup>1</sup>, Denise Meinberger<sup>1</sup>, Michael Quagliata<sup>2</sup>, Michele Casoria<sup>2</sup>, Ines Neundorf<sup>1</sup>, Anna Maria Papini<sup>2</sup>, Andreas Klatt<sup>1</sup>, Berenike Maier<sup>1</sup> (<sup>1</sup>Germany, <sup>2</sup>Italy)**
- Pl.093** Temporin A analogs modified with unnatural amino acids  
**Dilyana Dimitrova, Tsvetelina Foteva, Veronica Nemska, Nelly Georgieva, Dancho Danalev (Bulgaria)**



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- Pl.094 Rational design of a miniprotein to inhibit the oncogenic transcription factor MYC

Brecht Ellenbroek, Jan Pascal Kahler, Damiano Arella, Cherina Lin, Willem Jespers, Sebastian Pomplun (Netherlands)

- Pl.095 Novel, non-covalent peptide furin inhibitors suppressing Zika virus replication

Aleksandra Helbik-Maciejewska, Gabriela Brzuska, Dawid Dębowksi, Agata Gitlin-Domagalska, Andrea Lipińska, Ewelina Król, Krzysztof Rolka (Poland)

- Pl.096 Molecular investigation on peptide regulated Mfn1 and Sirt1 protein interactions in mitochondrial dynamics

Mahesh Kumar Cinthakunta Sridhar, Nir Qvit (Israel)

- Pl.097 Preliminary medicinal chemistry program on a new cardiovascular peptide

Carlos Cuadrod-Higueras, Pablo Esteban-Arderius, Sara Pérez-Martín, María Jesús Pérez de Vega, Ricardo Caballero, Eva Delpon, Diego Núñez-Villanueva, Rosario González-Muñiz (Spain)

- Pl.098 The role of  $\beta$ -hairpins in aggregation of  $\beta$ -amyloid derived peptides

Elisabetta Galluppo, Claudia Honisch, Stefano Tartaggia, Mauro Carraro, Paolo Ruzza (Italy)

- Pl.099 Biological evaluation of new fell analogues as potential PDE4 inhibitors

Veronica Nemska<sup>1</sup>, Boryana Borisova<sup>1</sup>, Marie Cochard<sup>2</sup>, Stephane Gerard<sup>2</sup>, Dancho Danalev<sup>1</sup> (<sup>1</sup>Bulgaria, <sup>2</sup>France)

- Pl.100 Investigation of the role of Mfn2 and Drp1 protein-protein interactions in mitochondrial dynamics and its biological implications in cardiovascular diseases

Hayelom Berhe Dagnaw, Nir Qvit (Israel)

- Pl.101 Peptide and probe: a multifaceted approach to investigate menaquinone-binding peptides

Eilidh Matheson<sup>1</sup>, Roy Van Beekveld<sup>2</sup>, Sarah Gothard<sup>1</sup>, Paolo Innocenti<sup>2</sup>, Nathaniel Martin<sup>2</sup>, Markus Weingarth<sup>2</sup>, Stephen Cochrane<sup>1</sup> (<sup>1</sup>United Kingdom, <sup>2</sup>Netherlands)

- Pl.102 Exploring the physico-chemical properties and immunomodulations of designed antimicrobial peptides in macrophages

Ilayda Akbulut, Tracy Hussell, Jeremy Derrick, Jian Ren Lu (United Kingdom)

- Pl.103 A bio-inspired biomaterial coating for combating infectious bacteria

Dennis Böhner, Annette G. Beck-Sickinger (Germany)

## POSTER SESSION 1 - 26 AND 27 AUGUST 2024

- Pl.104** A series of novel, selective matriptase inhibitors  
Dawid Dębowksi<sup>1</sup>, Aleksandra Helbik-Maciejewska<sup>1</sup>, Agata Gitlin-Domagalska<sup>1</sup>, Malihe Hassanzadeh<sup>2</sup>, Antoine Désilets<sup>2</sup>, Pierre-Luc Boudreault<sup>2</sup>, Richard Leduc<sup>2</sup>, Anna Łęgowska<sup>1</sup>, Krzysztof Rolka<sup>1</sup> (<sup>1</sup>Poland, <sup>2</sup>Canada)
- Pl.105** Total synthesis and semi-synthesis of fluorinated analogues of the antifungal cyclic lipopeptide iturin A  
Periklis Karamanis, Matthew Kiernan, Jimmy Muldoon, Paul Evans, Cormac D. Murphy, Marina Rubini (Ireland)
- Pl.106** Design and antimicrobial activity of short and novel tripeptides  
Ilaria Di Stefano, Silvia Rizzo, Dario Corbisiero, Francesca Bonvicini, Giovanna Angela Gentilomi, Walter Cabri, Tainah Dorina Marforio, Lucia Ferrazzano, Alessandra Tolomelli (Italy)
- Pl.107** In vivo approach to study protein synthesis inhibition of proline-rich antimicrobial peptides by bioorthogonal non-canonical amino acid tagging (BONCAT) method  
Luigi de Pascale, Sabrina Pacor, Mario Mardirossian, Adriana DI Stasi, Alessandro Tossi, Marco Scocchi (Italy)
- Pl.108** Inhibition of *A. Baumannii* ATP phosphoribosyltransferase for the treatment of pneumonia infections  
Emilia Oueis<sup>1</sup>, Ashif Shaikh<sup>1</sup>, Rafael Guimaraes da Silva<sup>2</sup> (<sup>1</sup>United Arab Emirates, <sup>2</sup>United Kingdom)
- Pl.109** Short analogues of cathelicidins PMAP-36 and BMAP-27: structure-activity relationship and stability to proteolysis  
Cristina Peggion, Andrea Schivo, Francesca Albini, Adriana DI Stasi, Barbara Biondi, Mario Mardirossian (Italy)
- Pl.110** HBP-5: a leading heparin-binding peptide with remarkable activity against Gram-negative bacteria  
Roberto Bello Madruga, Daniel Sandín García, Javier Valle, David Andreu, Marc Torrent Burgas (Spain)
- Pl.111** Discovery and development of macrocyclic peptide modulators of the cannabinoid 2 receptor  
Natasa Tomasevic<sup>1</sup>, Fabiola Susanna Emser<sup>1</sup>, Jasmin Gatteringer<sup>1</sup>, Simon Hasinger<sup>1</sup>, Roland Hellinger<sup>1</sup>, Peter Keov<sup>1</sup>, Manuel Felkl<sup>1</sup>, Christian Becker<sup>1</sup>, Jürg Gertsch<sup>2</sup>, Christian W. Gruber<sup>1</sup> (<sup>1</sup>Austria, <sup>2</sup>Switzerland)
- Pl.112** Inhibitory activity and proteolytic stability in human serum of peptide inhibitors of the vascular endothelial growth factor A165/neuropilin-1 complex  
Dagmara Tymecka, Patrycja Redkiewicz, Piotr F.J. Lipiński, Aleksandra Misicka (Poland)



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- Pl.113 Unlocking the potential of conotoxins: chemical synthesis strategies and biological activity  
Yazid Souf, Nicolas Inguimbert, Sébastien Dutertre (France)
- Pl.114 Mucroporin-M1 analogues: synthesis, conformation and structure-activity correlation  
Claudia Storti, Cristina Peggion (Italy)
- Pl.115 Ferrocene-peptide conjugates with potential antitumor activity  
Barbara Biondi, Beatrice Calderaro, Annalisa Bisello, Roberta Cardena, Renato Schiesari, Fernando Formaggio, Saverio Santi (Italy)
- Pl.116 Fragments of fibroblast growth factors useful in regenerative medicine components  
Katarzyna Czerwak-Kwiatkowska, Adrianna Wierzbicka, Dorota Bociaga, Justyna Fraczyk, Beata Kolesińska (Poland)
- Pl.116 bis Novel pyrrolidine derivatives: synthesis of and antiviral activity  
Maya Chochkova<sup>1</sup>, Boyka Stoykova<sup>1</sup>, Yuhuan Li<sup>2</sup>, Antoniya Stoymirska<sup>1</sup>, Petranka Petrova<sup>1</sup>, Galya Ivanova<sup>3</sup>, Ivanka Stankova<sup>1</sup> (<sup>1</sup>Bulgaria, <sup>2</sup>China, <sup>3</sup>Portugal)
- Pl.117 CR22DK-S18G breakthrough: revealing a novel antimicrobial peptide with rifampicin and isoniazid-like potency against mycobacterium tuberculosis – a comprehensive exploration from synthesis to immune modulation and selective action  
Cesar Augusto Roque-Borda<sup>1,2</sup>, Laura Maria Duran Gleriani Primo<sup>1</sup>, Rafaela Melo Pogianelli<sup>1</sup>, Lucas Henrique Domingos da Silva<sup>1</sup>, Isabela Caroline dos Santos<sup>1</sup>, Flávia Aparecida Resende<sup>1</sup>, Henrik Franzyk<sup>2</sup>, Paul Robert Hansen<sup>2</sup>, Fernando Rogério Pavan<sup>1</sup> (<sup>1</sup>Brazil, <sup>2</sup>Denmark)

## PEPTIDE THERAPEUTICS AND CLINICAL APPLICATION

- Pl.118 Lipidized prolactin-releasing peptide analogs: a new tool for potential treatment of obesity, type 2 diabetes and neurodegeneration  
Veronika Strnadová, Martina Peteláková, Andrea Pačesová, Barbora Neprašová, Miroslava Blechová, Blanka Železná, Jaroslav Kuneš, Lenka Maletinská (Czech Republic)
- Pl.119 In silico identification and chemical remodelling of tick protein epitopes for vaccine antigen development  
Stepan Denisov<sup>1,2</sup>, M. Amine Jmel<sup>3</sup>, Wouter Peeters<sup>2</sup>, Michalis Kotsyfakis<sup>3</sup>, Johannes Ippel<sup>2</sup>, Tilman Hackeng<sup>2</sup>, Dijkgraaf Ingrid<sup>2</sup> (<sup>1</sup>United Kingdom, <sup>2</sup>Netherlands, <sup>3</sup>Czech Republic)
- Pl.120 Development of antibody drug conjugates as HIV entry inhibitors  
Yutaro Miura, Kohei Tsuji, Takuya Kobayakawa, Kaho Matsumoto, Takeo Kuwata, Shuzo Matsushita, Hirokazu Tamamura (Japan)

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- Pl.121** Harnessing GPCRs biased signaling: novel macrocyclic analogs for enhanced cardiovascular treatment with reduced side effects  
Kien Tran, Alexandre Murza, Jean-Michel Longpré, Mannix Auger-Messier, Michel Bouvier, Pierre-Luc Boudreault (Canada)
- Pl.122** A novel regulation method of mRNA by recruiting regnase-1 using binding motif-antisense oligonucleotide conjugates  
Masayuki Fujii (Japan)
- Pl.123** Antibacterial, anti-biofilm and anti-inflammatory activities of a novel thrombin-derived antimicrobial peptide and its d-enantiomer  
Dinesh Kumar, Naveen Kumar Radhakrishnan, Yangmee Kim, Song Yub Shin (South Korea)
- Pl.124** Deoxythymidine-based antimicrobial peptidomimetics to combat Odrug-resistance  
Eun Young Kim, Dinesh Kumar, Sung Tae Yang, Song Yub Shin (South Korea)
- Pl.125** Fine-tuning the immune-stimulatory and cancer cell binding properties of immune system engagers (ISErs)  
Hannah Back, Manuel Felk, Christian Becker (Austria)
- Pl.126** Targeted acidosis mediated delivery of antigenic MHC-binding peptides  
Joseph Kelly, Marcos Pires (USA)
- Pl.127** A genetically encoded phage display technique targeting bromodomain protein 9 (BRD9) for discovery of peptide inhibitors  
Gopal Dubey (USA)
- Pl.128** Hybrid synthetic approach and biological characterization of a branched heterodimer for overcoming prostate cancer heterogeneity  
Santo Previti<sup>1</sup>, Sacha Bodin<sup>2</sup>, Emmanuelle Remond<sup>2</sup>, Clément Morgat<sup>2</sup>, Florine Cavelier<sup>2</sup> (<sup>1</sup>Italy, <sup>2</sup>France)
- Pl.129** Epitope-directed peptide screening and machine learning for HER2-targeted antibody-mimetic peptides  
Tetsuya Kadono, Yutaka Saito (Japan)
- Pl.130** Enhancing the gastrointestinal stability of salmon calcitonin through peptide stapling  
Hiba Ghareeb, Norman Metanis (Israel)
- Pl.131** Development and antifungal efficacy of hydrocarbon-stapled peptide analogs based on human antimicrobial peptides for candidiasis therapy  
Hyosuk Yun, Byambasuren Ganbaatar, Chul Won Lee (South Korea)
- Pl.132** Prevention of the spread of virus infection in global societies: anti-SARS-CoV-2 agents learned from HIV researches  
Hirokazu Tamamura, Nobuyo Higashi-Kuwata, Hiroaki Mitsuya, Kohei Tsuji, Takahiro Ishii, Takuya Kobayakawa (Japan)



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## POSTER SESSION 1 - 26 AND 27 AUGUST 2024

- PL133 Bicycle radionuclide conjugates for radioisotope delivery to solid tumors  
**Anusha Regupathy<sup>1</sup>, Johanna Lahdenranta<sup>2</sup>, Ben Blakeman<sup>1</sup>, Francesca Wood<sup>1</sup>, Gemma Mudd<sup>1</sup>, Philip Huxley<sup>1</sup> (<sup>1</sup>United Kingdom, <sup>2</sup>USA)**

- PL134 Development of gut-restricted antibiofilm peptides to target gastrointestinal biofilms  
**Bernhard Jandl, Michaela Lang, Athanasios Makristathis, Christoph Gasche<sup>4;6</sup>, Markus Muttenthaler (Austria)**

- PL135 Identifying epitopes in the sodium leak channel complex that enable inhibition by peptides  
**Emma Beyer, Stephan Pless (Denmark)**

- PL136 Application of membrane-active peptides in management of stromal melts associated with microbial keratitis  
**Jyoti Sood<sup>1</sup>, Sujithra Shankar<sup>1,2</sup>, Sushmita G. Shah<sup>1</sup>, Shikha Yadav<sup>1</sup>, Archana Chugh<sup>1</sup> (<sup>1</sup>India, <sup>2</sup>Singapore)**

- PL137 One-bead-one-compound (OBOC) combinatorial libraries for the discovery of ligands towards SIRP $\alpha$  and checkpoint CD47 proteins  
**Paula Quesada Martínez, Macarena Sánchez Navarro (Spain)**

- PL138 Impaired metabolic phenotyping in mice with deletions of GPR10 and NPFFR2 receptors: implications for lipidized PrRP analog therapy in obesity  
**Veronika Strnadová, Magdalena Škrlová, Jaroslav Kuneš, Lenka Maletinská (Czech Republic)**

- PL139 Latarcins as membrane active peptides for therapeutic applications  
**Sivalingam Ayyanar<sup>1</sup>, Archana Chugh<sup>1</sup>, Prasanjeet Kaur<sup>1</sup>, Nisha Ponnappan<sup>1,2</sup>, Deepthi Poornima Budagavi<sup>1,3</sup> (<sup>1</sup>India, <sup>2</sup>United Kingdom, <sup>3</sup>USA)**

- PL140 Intranasal effects of an analogue of the gliopeptide ODN on energy homeostasis  
**Omayma Dlimi<sup>1</sup>, Karthi Duraisamy<sup>1</sup>, Arnaud Arabo<sup>1</sup>, Léa Killman<sup>1</sup>, Benjamin Lefranc<sup>1</sup>, Amine Bourzam<sup>2</sup>, Nicolas Chartrel<sup>1</sup>, Jérôme Leprince<sup>1</sup> (<sup>1</sup>France, <sup>2</sup>Tunisia)**

- PL141 Synthetic anti-cocaine nano-vaccine successfully prevents cocaine-induced hyperlocomotion  
**Harrison Madge, Suzy Alexander, Armira Azuar, Jiahui Zhang, Prashamsa Koirala, Thomas Burne, Istvan Toth, Rachel Stephenson (Australia)**

- PL142 Enhancing biomedical metal implants with peptides: improved bioactivity and in vitro safety  
**Adrien Mourgot, Farzin Arjmand, Olivier Monasson, Michel Boissiere, Madjid Djemai, Souad Ammar-Merah, Guy Dirras, Elisa Peroni (France)**

## POSTER SESSION 1 - 26 AND 27 AUGUST 2024

- PL143** Machine learning guided peptide drug discovery speeds up lead identification as demonstrated with novel GLP-1R agonists  
Claudia Hjørringgaard, Anita Wester, Jens Christian Nielsen, Mads M. Nygaard, Lisbeth Elster, Silas Rasmussen, Kristoffer Rigbolt, Niels Vrang, Louise S. Dalbøge (Denmark)
- PL144** Development of a HPMC-patch containing RGD and KTTKS peptide sequences for application in tissue healing  
Naiara Maia Pereira, Reinaldo Marchetto (Brazil)
- PL145** Transcriptomic analysis of CETP-derived Seq-1 peptide contained in HB-ATV-8 vaccine in the modulation of steatosis-related liver fibrosis in hepatocytes  
Sandra Calixto-Tlacomulco, Ismael Luna-Reyes, Jessica Ledesma-Aparicio, Blanca Delgado-Coello, Armando Cruz-Rangel, Jaime Mas-Oliva, Juan Pablo Reyes-Grajeda (Mexico)
- PL146** Optimisation of a TREM2 receptor inhibitor peptide  
Claudia Honisch, Martina Rotondo, Elisabetta Galluppo, Stefano Tartaggia, Carmela Gallo, Mario dell'Isola, Dalila Carbone, Emiliano Manzo, Angelo Fontana, Paolo Ruzza (Italy)
- PL147** Developing radiolabeled nanoconjugated DOTA-bombesin derivatives as cancer therapeutics  
Irfan Ullah Khan, Arzoo Fatima Saleem, Muhammad Sohaib, Amira Shami (Pakistan)
- PL148** Combating heart disease: investigating biased signaling pathways of metabolically stable apelin analogues and small molecule agonist in the apelin-APJ system  
Anjalee Wijewardane, Kleinberg Fernandez, John Vederas (Canada)
- PL149** Synthesis and characterization of tumor targeted peptide (TTP) conjugated with magnetic nanoparticles for thermo-ablation  
Sima Alvani Alamdari, Justyna Fraczyk, Joanna Wasko, Anita Plazinska, Beata Kolesińska (Poland)
- PL150** Synthesis and characterisation of phenethyl isothiocyanate conjugated with magnetic nanoparticles modified by tumor targeting peptide (TTP) using in cancer treatment  
Sima Alvani Alamdari, Lukasz Janczewski, Justyna Fraczyk (Poland)
- PL151** Analysis of mannan (polymannose) conjugated with 35-55 immunodominant epitope of myelin oligodendrocyte glycoprotein for the treatment of multiple sclerosis  
Carmen Simal, Areti Gkika, Maria-Eleni Androutsou, Georgia Biniari, Alexios Aletras, Theodore Tselios (Greece)



## POSTER SESSION 1 - 26 AND 27 AUGUST 2024

- PL.152 A nanomolar potency macrocyclic peptide inhibitor of SARS-CoV-2 spike through deep mutational scanning  
Antonius (Twan) Hopstaken, Oliver Debski-Antoniak, Preeti Hooda, Daniel Hurdiss, Seino Jongkees (Netherlands)
- PL.153 Intelligent wound dressing with antimicrobial properties  
Sebastian Kersting, Ohnesorg Sophia, von Nickisch-Rosenegk Markus (Germany)
- PL.154 High throughput phage display screening identified peptide inhibitors targeting the  $\alpha$ -synuclein for Parkinson's disease treatment  
Haiyan Zhou, Zhaohui Liang, Chenyin Wang, Wai Lok Ngai, Chaogu Zheng, Michael K. Chan, Xuechen Li (China)
- PL.155 Linear peptides as IgG-epitope mimetic for allergic immunotherapy against birch pollen  
Alessandro Streuli<sup>1</sup>, Lara Šošić<sup>1</sup>, Marta Paolucci<sup>1</sup>, Agathe Duda<sup>1</sup>, Klaus Eyer<sup>2</sup>, Pål Johansen<sup>1</sup>, Christian Steuer<sup>1</sup> (<sup>1</sup>Switzerland, <sup>2</sup>Denmark)
- PL.156 Development of a SRF inhibitor peptide for the treatment of cardiac fibrosis  
Melissa Meschkewitz, Erika Lisbeth, Richard Neubig (USA)
- PL.157 Exploring molecular details of GPCRs signaling using an ancient oxytocin-like neuropeptide system  
Simon Häsinger, Christian W. Gruber (Austria)
- PL.158 Recent advances in protective vaccines against foot-and-mouth disease virus  
Sira Defaus, Patricia de León, Mar Forner, Rodrigo Cañas-Arranz, Esther Blanco, Francisco Sobrino, David Andreu (Spain)
- PL.159 Targeted tumor therapy with selective short peptide drug ligands by Y1 receptor-mediated shuttling mechanism  
Lea Nußbaum, Anna Kohler, Annette G. Beck-Sickinger (Germany)
- PL.160 Discovery of a novel  $\alpha$ -helical peptide inhibitor of GTP-bound K-Ras(G12D)  
Hannah Comfort, Sarah Ross, Jefferson Revell, Thomas Murray, Carole Urbach, Bethan Archer, Darerca Owen, Helen Mott (United Kingdom)
- PL.161 Peptide inhibitors of protein-protein interactions targeted to SRC homology 2 domains: a combined computational and spectroscopic design approach  
Paolo Calligari, Claudia Storti, Chiara Innamorati, Chiara Fulci, Alessia Damiani, Cristiano Di Stefano, Chiara Cocca, Cristina Peggion, Barbara Biondi, Gianfranco Bocchinfuso, Lorenzo Stella (Italy)
- PL.162 Peptide-based vesicle isolation method for *P. aeruginosa*  
Tania Henriquez, Ismael Castañón, Silvia Scali, Chiara Falciani (Italy)

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- Pl.163** Lipedated SNAPP-stars target and kill multi-drug resistant bacteria within minutes  
**Sara Hadjigol, Sadegh Shabani, Neil O'Brien-Simpson, Greg Qiao (Australia)**
- Pl.164** Antibacterial, anti-inflammatory and anti-biofilm activities of novel short antimicrobial peptides designed from the cecropin A-melittin hybrid antimicrobial peptide, BP100  
**Eun Young Kim, Dinesh Kumar, Sang Hyun Park, Song Yub Shin (South Korea)**
- Pl.165** Study on the stability of new promising antimicrobial peptides against protease activity present in infection sites  
**Clelia Cortese, Giovanni Cappello, Laura Cresti, Virginia Niccolini, Marco Scocchi, Marialuisa Mangoni, Alessandro Pini (Italy)**
- Pl.166** Spotting critical positions in setmelanotide to increase MC4R selectivity by structural activity relationship studies  
**Manuel Christian Troll, Sabine Jyrch, Patrick Scheerer, Peter Kühnen, Heike Biebermann, Annette G. Beck-Sickinger (Germany)**
- Pl.167** Application of magnesium complexes of pegylated lipopeptide intermediates in the manufacturing of semaglutide and tirzepatide APIs  
**Andrea Orlandin, Ivan Guryanov, Chiara Giraldo, Barbara Biondi, Angelo Santoro, Anna Maria D'Ursi, Marco Macis, Antonella Glisenti, Fernando Formaggio, Antonio Ricci, Walter Cabri (Italy)**

## EMERGING PEPTIDE-BASED TECHNOLOGIES

- Pl.169** Metal-peptidic cages – helical oligoprolines generate highly anisotropic nanospaces with emergent isomer control  
**Ben E. Barber, Ellen M.G. Jamieson, Leah E.M. White, Charlie T. McTernan (United Kingdom)**
- Pl.170** Revolutionizing peptide production: introducing an engineered TEV pProtease  
**Roxann Guerrette, Christian Schwarz, Bach-Ngan Wetzel (Germany)**
- Pl.171** Peptide information compression technology (PICT) for GPCR drug discovery using cell-based functional high-throughput screening assays  
**Rumit Maini (USA)**
- Pl.172** Spatio-temporal control of cellular differentiation for cartilage tissue engineering  
**Jules Simonin Garcia, Cécile Echalier, Emmanuel Belamie, Marie Morille, Gilles Subra (France)**
- Pl.173** Development of a novel alternative method for liraglutide production  
**Gabriela R. Barredo-Vacchelli, Jésica A. Rodríguez, Joaquín A. Eloy, Silvia A. Camperi (Argentina)**



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## POSTER SESSION 1 - 26 AND 27 AUGUST 2024

- PLI74 Comparison of in vitro immunogenicity between  $\delta$ -ctenitoxin-Pn2a and epitope-based immunogens  
**Jésica A. Rodríguez<sup>1</sup>, Gabriela R. Barredo-Vacchelli<sup>1,2</sup>, Ariadna M. Birocco<sup>1</sup>, Agustín Blachman<sup>1</sup>, Gerardo Acosta<sup>2</sup>, Fernando Albericio<sup>2,3</sup>, Graciela C. Calabrese<sup>1</sup>, Silvia A. Camperi<sup>1</sup>** (<sup>1</sup>Argentina, <sup>2</sup>Spain, <sup>3</sup>South Africa)
- PLI75 An mRNA-display-based approach for the identification of peptides with exposed C-termini  
**Huawu Yin, Louise Walport** (United Kingdom)
- PLI76 Extracellular-vesicle catch-and-release isolation system using a net-charge invertible curvature-sensing peptide  
**Kenichi Kawano, Yuki Kuzuma, Koichi Yoshio, Kenta Hosokawa, Yuuto Oosugi, Takahiro Fujiwara, Fumiaki Yokoyama, Katsumi Matsuzaki** (Japan)
- PLI78 Peptide-stabilized gold nanoparticles  
**Alzbeta Runova, Helma Wennemers** (Switzerland)
- PLI79 Intracellular peptide library screening for covalent transcription factor inhibitors  
**Andrew Brennan, Jody Mason** (United Kingdom)
- PLI80 A snake toxin-derived positron emission tomography agents for diagnosing renal cell carcinoma  
**Goran Stanajic Petrovic, Khawla Chmeis, Benoit Jego, Dimitri Kereselidze, Pascal Kessler, Denis Servent, Charles Charles Truillet, Nicolas Gilles** (France)
- PLI82 Innovative microfluidic preparation of monodisperse peptidic nanoparticle for ultrasound-guided gene delivery  
**Guy Gouarin, Vicentiu Moraru, Samir Cherkaoui** (Switzerland)
- PLI83 Screening for antimicrobial peptides effect against citrus canker and huanglongbing diseases  
**Beatriz Cristina Pecoraro Sanches, Josiane Cecilia Darolt, Talita Alves dos Santos, Elaine Cristina Martins, Michele Fernanda Souza Dutra, Edson Crusca Junior, Franklin Behlau, Reinaldo Marchetto, Nelson Arno Wulff** (Brazil)
- PLI84 Chemical protein synthesis via PNA scaffold-assisted peptide ligation  
**Sae Suzuki, Shingo Mizushima, Yukino Takeuchi, Gosuke Hayashi, Hiroshi Murakami** (Japan)

## POSTER SESSION 1 - 26 AND 27 AUGUST 2024

- PL.186** Environment-responsive peptide dimers bind and stabilize double-stranded RNA  
**Marvin Albers, Niall M. McLoughlin, Estel Collado Camps, Jannik Paulus, Youri A. Ran, Saskia Neubacher, Sven Hennig, Roland Brock, Tom N. Grossmann (Netherlands)**
- PL.187** Engineered oxalyl thioester-containing proteins empower fast and chemoselective conjugation  
**Francesco Terzani<sup>1</sup>, Grain Benjamin<sup>1</sup>, Benoît Snella<sup>1</sup>, Rémi Desmet<sup>1</sup>, Wiltschi Birgit<sup>2</sup>, Oleg Melnyk<sup>1</sup>, Vangelis Agouridas<sup>1</sup> (<sup>1</sup>France, <sup>2</sup>Austria)**
- PL.188** Electrostatically-assisted sortase A-mediated ligation  
**Chen Wang, Benoît Snella, Oleg Melnyk, Vangelis Agouridas (France)**
- PL.189** Photocontrollable probes for the investigation of neuropeptide signalling  
**Konstantin Raabe<sup>1</sup>, Predrag Kalaba<sup>1</sup>, Xuan Ling Hilary Yong<sup>2</sup>, Erik Keimpema<sup>1</sup>, Victor Anggono<sup>2</sup>, Markus Muttenthaler<sup>1,2</sup> (<sup>1</sup>Austria, <sup>2</sup>Australia)**
- PL.190** Covalent peptide inhibitors targeting his residue as new modalities to block protein-protein interactions  
**Guillaume Compain, Clément Monsarrat, Dominique Burnouf, Jérôme Wagner, Gilles Guichard (France)**
- PL.191** Bind&Bite: covalently stabilized heterodimeric coiled-coil peptides for the site-selective chemical modification of proteins  
**Jannis Beutel, Riccardo Di Vincenzo, Klaus Überla, Jutta Eichler (Germany)**
- PL.192** Development of a trillion-member discovery platform to identify de novo light-responsive cyclic peptides  
**Thomas Jackson, Louise Walport, Matthew Fuchter, Edward Tate (United Kingdom)**
- PL.193** Reshaping of genetically-encoded molecular landscapes in discovery of advanced bioactive macrocycles  
**Ratmir Derda (Canada)**
- PL.194** Protein interface catalysed capture (PICC) to resolve the structure of the tau-PSD95 protein complex  
**Reuben Blades, Gene Hart-Smith, Kanishka Pushpitha, Daryl Ariawan, Muhammad Zenaidee, Lars Ittner, Ole Tietz (Australia)**
- PL.195** In vitro selection of highly N-alkylated cyclic peptides for targeting intracellular protein-protein interactions  
**Takeo Iida, Atsushi Ohta (Japan)**
- PL.196** Exploring Fe(III) heme-binding peptides as heterogeneous biocatalysts with peroxidase-like activity  
**Joey Lukas, Ivona Družeta, Toni Kühl (Germany)**



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- Pl.197 Developing analysis of peptide macrocycles by tandem mass spectrometry  
Zachary P. Gates (Singapore)
- Pl.198 Optimization of a bioluminescence resonance energy transfer-based ligand binding assay for the neuropeptide FF receptor 1  
Hannah Lentschat, Annette G. Beck-Sickinger (Germany)
- Pl.199 Enhancement of *E. coli* growth in stationary phase by coiled-coil peptides  
Natsumi Nakagawa, Ryutaro Tatei, Kodai Ueno, Yuna Nunokawa, Rui Kamada, Kazuyasu Sakaguchi (Japan)

## PEPTIDE CONJUGATES (SUGAR, LIPID, NUCLEIC ACID, AND DRUG)

- Pl.200 Study on the role of helix-stabilized peptides in transporting antisense morpholino oligomers into cells: relationships among helicity, cellular uptake, and antisense activity  
Hiroyuki Takada, Keisuke Tsuchiya, Yosuke Demizu (Japan)
- Pl.201 Cationic lipids modification of natriuretic peptide to increase potency and in vivo stability  
Gerardo Castillo<sup>1</sup>, Yao Yao<sup>1</sup>, Hirofumi Tachibana<sup>2</sup>, Motofumi Kumazoe<sup>2</sup>, Yasutake Tanaka<sup>2</sup>, Takashi Nojiri<sup>2</sup>, Elijah Bolotin<sup>1</sup>, Akiko Nishimoto-Ashfield<sup>1</sup>, Rebecca Geurra<sup>1</sup> (<sup>1</sup>USA, <sup>2</sup>Japan)
- Pl.202 Boron delivery to cancer cells by peptide nanocarriers for boron-neutron capture therapy  
Kin-ya Tomizaki, Takahiro Kayashita, Masayuki Yamasaki (Japan)
- Pl.203 Synthesis strategies for bacteria-derived lipopeptides  
Glenna Swinand, Katherine Bowen, Samir Olatunji, Martin Caffrey, Eoin Scanlan (Ireland)
- Pl.204 Controlled intracellular trafficking and gene silencing by oligonucleotide-signal peptide conjugates  
Masayuki Fujii (Japan)
- Pl.205 Polysaccharides modified with attenuated cationic lytic peptides: formation of microparticles and their use in cytosolic antibody delivery  
Junya Michibata, Yoshihiro Sasaki, Kazunari Akiyoshi, Shiroh Futaki (Japan)
- Pl.206 Targeting post-translational modification of a post-translational modifier; Ubiquitin ADPribosylation  
Gerbrand van der Heden van Noort (Netherlands)

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- Pl.207** Virucidal peptide-based drugs to target influenza  
Francesca Olgiati, Shadi Kordbacheh, Francesco Stellacci (Switzerland)
- Pl.208** Peptide-drug conjugates as a novel approach to antimalarial therapeutics  
Caitlin Gare, Isabella Palombi, Andrew White, Nicole Lawrence, David Craik, Brendan McMorran, Lara Malins (Australia)
- Pl.209** Synthesis of novel cryptophycins: introduction of a polyethylene glycol substituent in unit D  
Ninive Cati, Cedric Dessin, Norbert Sewald (Germany)
- Pl.210** Linkerology of cryptophycin drug conjugates  
Jan-Niklas Bollnow, Cedric Dessin, Norbert Sewald (Germany)
- Pl.211** The series of a new fluconazole-based conjugates with cell penetrating and antimicrobial peptides  
Natalia Ptaszyńska, Daria Łada, Wioletta Brankiewicz, Katarzyna Serbakowska, Jan Lica, Marek Drab, Natalia Maciejewska, Anna Łęgowska, Piotr Szweda, Krzysztof Rolka (Poland)
- Pl.212** Click-to-release-based cryptophycin drug conjugates  
Jona Voss, Cedric Dessin, Norbert Sewald (Germany)
- Pl.213** Strategies for designing hepatocyte-selective carriers using helical peptides as stable scaffolds  
Takahito Ito, Takashi Misawa, Nobumichi Ohoka, Michihiko Aoyama, Takao Inoue, Akiko Ishii-Watabe, Yosuke Demizu (Japan)
- Pl.214** Synthesis and characterization of bioconjugates containing peptide moiety with potential anticancer activity  
Dancho Danalev, Polya Miladinoova, Yordan Todorov, Ivan Iliev (Bulgaria)
- Pl.215** Novel SMDCs with unit D modified cryptophycin as payload  
Dominic Seißenschmidt, Cedric Dessin, Norbert Sewald (Germany)
- Pl.216** Rational design, synthesis and evaluation of mitoxantrone conjugated with mutated gonadotropin releasing hormone for the treatment of hormone-dependent cancer  
Georgia Biniari, Agathi Nteli, Christos Markatos, Vlasios Karageorgos, Alexios Vlamis-Gardikas, George Liapakis, Maria Venihaki, Theodore Tselios, Carmen Simal (Greece)
- Pl.217** New peptide-porphyrin conjugates targeting brain-residing viruses  
Toni Todorovski<sup>1,2</sup>, Giuseppina Guida<sup>1</sup>, Patrizia Janković<sup>2</sup>, Diogo Alexandre de Mendonça<sup>3</sup>, Christine Cruz-Oliveira<sup>3</sup>, Marco Cavaco<sup>3</sup>, Daniela Kalafatović<sup>2</sup>, Sira Defaus<sup>1</sup>, Andrea Thompson Da Poian<sup>4</sup>, Miguel Castanho<sup>3</sup>, David Andreu<sup>1</sup> (<sup>1</sup>Spain, <sup>2</sup>Croatia, <sup>3</sup>Portugal, <sup>4</sup>Brazil)



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- Pl.218 Development of daunomycin-peptide antitumor conjugates containing neurotensin-based homing moiety

**Endre Levente Dókus, Eszter Lajkó, Zsófia Adrienn Szász, László Kőhidai, Gábor Mező (Hungary)**

- Pl.220 Peptide fibrils as nanocarrier for targeted therapy

**Justyna Sawicka, Milena Czeszejko, Ewa Wieczerek, Paweł Niedziałkowski, Tomasz Kulesza, Kamila Kitkowska, Rafał Sqdej, Sylwia Rodziewicz-Motowidło (Poland)**

- Pl.221 De novo semi-synthetic platform for monitoring protein degradation in live cells  
**Mahdi Hasan, Deepanjan Panda, Guy Mann, Ashraf Brik (Israel)**

- Pl.221 Cardiolipin-specific peptides, designed to possess cell-penetrating ability, bis rescue mitochondrial dysfunction

**Gwangsu Shin, Soonsil Hyun, Dongwoo Kim, Yoonhwa Choi, Kyu Hong Kim, Dongmin Kim, Soie Kwon, Seung Hee Yang, Kyeong-Ryoon Lee, Jaehoon Yu (South Korea)**

- Pl.222 N-terminal cysteine as minimalistic handle for dual, site-selective bioconjugation: case study on an anti-HER2 affibody

**Carlo Pifferi, Ana Novak, Florian Kersaudy, Sylvie Berger, Séverine Morisset-Lopez, François Lefoulon, Vincent Aucagne (France)**

- Pl.223 Peptide-based CE-SELEX enables isolation of aptamers that recognize CD20-expressing cells

**Jordan Cossu, Océane Ricloux, Corinne Ravelet, Véronique Martel-Frachet, Eric Peyrin, Didier Boturyn (France)**

- Pl.224 Conjugates containing homing peptide, cell penetrating peptide and a cytostatic or marker potentially useful in the diagnosis or treatment of lung cancer diseases

**Piotr Jedrzejczak, Anna Gajda, Justyna Fraczyk, Beata Kolesińska (Poland)**

**POSTER SESSION 1 - 26 AND 27 AUGUST 2024**  
**PEPTIDE PRODRUGS, TARGETING, DELIVERY AND UPTAKE**

- P1.225** Development of novel amphipathic stapled peptides as DDS carriers for intracellular delivery of nucleic acids  
**Motoharu Hirano, Hidetomo Yokoo, Makoto Oba, Takashi Misawa, Yosuke Demizu (Japan)**
- P1.226** Cell-surface-retained CPP-additives: an effective intracellular delivery strategy for functional cargoes  
**Jan Vincent Arafiles, Jonathan Franke, Christian P. R. Hackenberger (Germany)**
- P1.227** Development of selective peptide-based radiopharmaceuticals for targeted therapy and diagnosis of high malignant cancers  
**Anna Giorgio, Nicola Salvarese, Annarita Del Gatto, Michele Saviano, Cristina Bolzati, Laura Zaccaro (Italy)**
- P1.228** Control of biological processes using metallopeptides  
**Jessica Rodriguez Villar (Spain)**
- P1.229** Improving the delivery efficiency of cell penetrating peptides through the incorporation of modified guanidinium prolines  
**Rahel Heeb, Helma Wennemers (Switzerland)**
- P1.230** Lipophilic prodrug charge masking-insights into new method of peptide prodrugs synthesis conception  
**Agata Gitlin-Domagalska<sup>1</sup>, Anna Olejnik<sup>1</sup>, Natalia Ptaszyńska<sup>1</sup>, Jarosław Ruczyński<sup>1</sup>, Mladenka Glavaš<sup>1,2</sup>, Mikołaj Marszałek<sup>1</sup>, Dawid Dębowski<sup>1</sup>, Aleksandra Helbik-Maciejewska<sup>1</sup>, Anna Łęgowska<sup>1</sup>, Chaim Gilon<sup>3</sup>, Krzysztof Rolka<sup>1</sup> (<sup>1</sup>Poland, <sup>2</sup>Croatia, <sup>3</sup>Israel)**
- P1.231** Amphipathic proline-rich cell penetrating peptides for mitochondria targeting  
**Adeline Schmitt, Helma Wennemers (Switzerland)**
- P1.232** Dual-locked macrocyclic "turn-on" drug for selective and traceless release in cancer cells  
**Dominik Schauenburg, Kuan Seah Ling, Weil Tanja (Germany)**
- P1.233** Optimization of anti-vasoconstricting UT-II-derived biogels  
**Thibault Cauwenbergh<sup>1</sup>, Juliana Dallagnol<sup>2</sup>, David Chatenet<sup>2</sup>, Charlotte Martin<sup>1</sup>, Steven Ballet<sup>1</sup> (<sup>1</sup>Belgium, <sup>2</sup>Canada)**
- P1.234** Development of cell penetrating peptide-based ubiquitin ligase ligand for the development of PROTAC  
**Hidetomo Yokoo, Zhou Dongrui, Yosuke Demizu (Japan)**



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- Pl.235 Development of specific Y5 receptor agonists for cancer targeting  
Lisa Peuker, Sacha Bodin, Emmanuelle Jestin, Clément Morgat, Annette G. Beck-Sickinger (France)
- Pl.236 Design and characterization of CD20 antigen surface for the selection of rituximab peptide mimics  
Océane Ricloux, Chanantida Jongwohan, Jordan Cossu, Liliane Guerente, Didier Boturyn (France)
- Pl.237 Transient bioconjugation of amines for cytosolic delivery of functional protein  
Jonathan Franke, Jan Vincent Arafiles, Christian P.R. Hackenberger (Germany)
- Pl.238 Blood brain barrier - Peptide shuttles for drug delivery into the CNS  
Paula Schwarz, Kiritkumar B. Jadhav<sup>2</sup>, Christian W. Gruber, Roland Hellinger (Austria)
- Pl.239 SAR studies of peptides as homing device for tumor targeting  
Maria Walger<sup>1</sup>, Norbert Sewald<sup>1</sup>, Abiodun Ayo<sup>2</sup>, Pirjo Laakkonen<sup>2</sup> (<sup>1</sup>Germany, <sup>2</sup>Finland)
- Pl.240 Development of novel angiopep-2 conjugates for cancer treatment and diagnosis  
Gábor Mező, Endre Levente Dókus, Diána Vári-Mező, Krisztina Kiss, Ivan Randelović, Lilla Pethő, Zita Képes, István Kertész, György Trencsényi, József Tóvári, Szilvia Bősze (Hungary)
- Pl.241 Systematic determination of the effect of cyclization on peptide permeability into mycobacteria  
Rachita Dash, Marcos Pires (USA)
- Pl.242 Lipophilic prodrug charge masking strategy for novel oxytocin prodrugs production  
Agata Gitlin-Domagalska<sup>1</sup>, Natalia Ptaszynska<sup>1</sup>, Anna Olejnik<sup>1</sup>, Jarosław Ruczyński<sup>1</sup>, Mladenka Glavaš<sup>1,2</sup>, Dawid Dębowksi<sup>1</sup>, Aleksandra Helbik-Maciejewska<sup>1</sup>, Anna Łęgowska<sup>1</sup>, Chaim Gilon<sup>3</sup>, Krzysztof Rolka<sup>1</sup> (<sup>1</sup>Poland, <sup>2</sup>Croatia, <sup>3</sup>Israel)
- Pl.243 Drug-likeness of cyclic peptides beyond rule of 5  
Shojiro Shinohara, Mikimasa Tanada, Yuya Morita, Kazuhiko Nakano, Takuya Shiraishi, Hitoshi Iikura (Japan)
- Pl.244 POM-peptide hybrid against Alzheimer's disease  
Marta Giacomini, Claudia Honisch, Elisabetta Galluppo, Genny Orso, Haihong Yu, Mauro Carraro, Paolo Ruzza (Italy)

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**Pl245** The potential use of peptides in pancreatic cancer

Martina Rotondo, Giovanna Bossio, Sofia Parassia, Andrea Mattarei, Claudia Honisch, Ildakò Szabò, Lucia Biasutto, Paolo Ruzza (Italy)

**Pl246** Evaluation of different spin labels for the study of protein-peptide interaction in cellular extract using electron paramagnetic resonance spectroscopy techniques

Claudia Toso<sup>1</sup>, Giovanni Loprete<sup>1</sup>, Elisabetta Bergantino<sup>1</sup>, Simone Fabbian<sup>1</sup>, Massimo Bellanda<sup>1</sup>, Sylvain Marque<sup>2</sup>, Gerard Audran<sup>2</sup>, Marina Gobbo<sup>1</sup>, Marta De Zotti<sup>1</sup>, Donatella Carbonera<sup>1</sup>, Marco Bortolus<sup>1</sup>, Marilena Di Valentin<sup>1</sup> (<sup>1</sup>Italy, <sup>2</sup>France)

**Pl247** Development of a cell penetrating peptide carrying a biological active HPV16 E6 inhibitory molecule for delivery into cervical cancer cells

Anna Lucia Tornesello<sup>1</sup>, Luisa Dassi<sup>1</sup>, Vincenza De Gregorio<sup>1</sup>, Giorgia Imparato<sup>1</sup>, Marilisa Leone<sup>1</sup>, Wuyuan Lu<sup>2</sup>, Noemy Starita<sup>1</sup>, Andrea Carasuolo<sup>1</sup>, Luigi Buonaguro<sup>1</sup>, Franco Maria Buonaguro<sup>1</sup>, Maria Lina Tornesello<sup>1</sup> (<sup>1</sup>Italy, <sup>2</sup>China)

**Pl248** Intracellular delivery strategies for peptide inhibitors of protein-protein interactions, targeted to the oncogenic phosphatase SHP2

Barbara Biondi, Claudia Storti, Chiara Fulci, Giovannina Rotundo, Marialetizia Motta, Daniele Volpin, Alessia Damiani, Cristiano Di Stefano, Chiara Innamorati, Masha Pellegrino, Marco Tartaglia, Cristina Peggion, Emmanuel De Crespin, Lorenzo Stella (Italy)

**Pl249** The antimicrobial peptide SET-M33: in vivo efficacy and toxicity in different animal species and encapsulation in inhalable polymeric nanoparticles for pulmonary delivery

Laura Cresti, Giovanni Cappello, Clelia Cortese, Virginia Niccolini, Alessandro Pini (Italy)

## PEPTIDE MIMETICS, PEPTOIDS AND PEPTIDE NUCLEIC ACIDS

**Pl250** Affibody-mediated peptide nucleic acid pretargeting for delivery of cytotoxic payloads to HER2 positive carcinoma

Jacob Clinton, Kristina Westerlund, Amelie Eriksson Karlström, Torbjörn Gräslund (Sweden)

**Pl251** Structure-activity relationship study on the P4 structure of macrocyclic BACE1 inhibitors

Kazuya Kobayashi, Momoka Kawakita, Takuya Otani, Yasunao Hattori, Shinya Oishi (Japan)

**Pl252** Rapid synthesis of propargyl- $\gamma$ -modified peptide nucleic acid monomers for late-stage functionalization of oligomers

Emma Watson<sup>1</sup>, Miguel López-Tena<sup>2</sup>, Patrick Romanens<sup>2</sup>, Nicolas Winssinger<sup>2</sup> (<sup>1</sup>Australia, <sup>2</sup>Switzerland)



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Pl.253 Non-enzymatic protein templates amide bond formation and provides catalytic turnover

**Nicolas Brauckhoff, Laura Fang, Anissa Haim, Tom N. Grossmann (Netherlands)**

Pl.254  $\beta$ -sheet mimetics that target the transcriptional coactivator  $\beta$ -catenin  
**Mathias Wendt, Nicholas Pearce, Alejandro Yeste Vazquez, Raya J. Hana, Sven Hennig, Tom N. Grossmann (Netherlands)**

Pl.255 Solid-phase synthesis of peptoids with structure-inducing tert-butyl side chains: a unique challenge finally met  
**Zacharie Bordas, Sophie Faure, Olivier Roy, Claude Taillefumier (France)**

Pl.256 Combinatorial solid phase peptide synthesis of tripeptides on glass slides and thermographic investigation on CO<sub>2</sub>-binding affinity  
**Jessica Jung-Fittkau, Katharina Moro, Josef Diebold, Magnus Schmidt (Germany)**

Pl.257 Tertiary fold stabilization by a flattened proline surrogate  
**Madison Wright, Benjamin Rajewski, Taylor Gerrein, Juan Del Valle (USA)**

Pl.258 Self-assembled peptoid hydrogel as biomaterial ink  
**Il-Soo Park, Jae Hong Kim (South Korea)**

Pl.259 Exploring the potential of CXCR4 mimetic peptides to target cancer cells  
**Showmika Srirangan, Chafia Chiheb, Miriam Franz, Anja Katrin Bosserhoff, Susanne Mühlich, Jutta Eichler (Germany)**

Pl.260 The ornithine-based siderophore as a potential carrier of peptide nucleic acid into *Escherichia coli* cells  
**Uladzislava Tsylents, Michał Burmistrz, Piotr Maj, Monika Wojciechowska, Joanna Trylska (Poland)**

Pl.261 Stepwise chemical control in the formation of beta-peptide assemblies  
**Imola Szgyártó, Kristóf Ferentzi, Kamal el Battouï, Olivér Pavela, András Wacha, Viktor Farkas, Tamas Beke-Somfai (Hungary)**

Pl.262 Low-molecular  $\alpha$ -amino acid-based derivatives as nanocarriers of plant growth regulators  
**Vasilena Kondova, Borislav Anchev, Konstantin Dochev, Daniela S. Tsekova, Mariana Sichanova, Maria Geneva (Bulgaria)**

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Pl.264 From peptides to bioactive lactam-constrained foldamers

Maxime Fillaudeau<sup>1</sup>, Alexandre Messerschmitt<sup>1</sup>, Arie Van der Lee<sup>1</sup>,  
Lubomir Vezenkov<sup>1</sup>, Luc Brunel<sup>1</sup>, Young Kee Kang<sup>2</sup>, Jean Martinez<sup>1</sup>, Baptiste  
Legrand<sup>1</sup>, Muriel Amblard<sup>1</sup> (<sup>1</sup>France, <sup>2</sup>South Korea)

Pl.265 Development of neuropeptides (8-13) analogs as potent NTS1/NTS2 receptor ligands with enhanced effects on a mouse model of Parkinson's disease

Nikolay T. Tzvetkov<sup>1</sup>, Toni Kühl<sup>2</sup>, Maya G. Georgieva<sup>1</sup>, Harald Hübner<sup>2</sup>,  
Maria Lazarova<sup>1</sup>, Polina Petkova-Kirova<sup>1</sup>, Tamara I. Pajpanova<sup>1</sup>, Reni  
Kalfin<sup>1</sup>, Lyubka Tancheva<sup>1</sup>, Aneliya A. Balacheva<sup>1</sup>, Peter Gmeiner<sup>2</sup>, Diana  
Imhof<sup>2</sup> (<sup>1</sup>Bulgaria, <sup>2</sup>Germany)

Pl.266 Synthesis and biological application of a short peptidomimetics based on bacterial cell wall peptidoglycan monomer

Marcela Šišić, Leo Frkanec, Ruža Frkanec (Croatia)

Pl.267 Antimicrobial peptidomimetics against methicillin-resistant *Staphylococcus aureus* (MRSA)

Katarzyna Łada, Maria Dzierżyńska, Agnieszka Gajewicz-Skrętna,  
Łukasz Grabowski, Alicja Węgrzyn, Franciszek Kasprzykowski, Sylwia  
Rodziewicz-Motowidło (Poland)

Pl.268 Synthesis of 5-member heteroaromatics containing peptide backbones: pro and cons of structural constraints induced by amide bond surrogates

Francesco Brenzini Biagioni<sup>1,2</sup>, Anna Maria Papini<sup>2</sup>, Pierre-Yves Renard,  
Karine Porte, Corentin Layec<sup>1</sup> (<sup>1</sup>France, <sup>2</sup>Italy)

Pl.269 Site-directed allosteric perturbation to probe the negative regulation of hypoxia inducible factor-1α

Venczel László Petrovicz, Zsófia Hegedus, Tamás Martinek, István  
Pasztuhov (Hungary)

## PROTEOMICS AND PEPTIDE BIOINFORMATICS - I

Pl.270 PepFuNN: Novo Nordisk open-source toolkit to enable peptide in silico analysis

Rodrigo Ochoa<sup>1</sup>, Kristine Deibler<sup>2</sup> (<sup>1</sup>Denmark, <sup>2</sup>USA)

Pl.271 A peptide database from human feces to foster the discovery of novel bioactive peptides

Armando Rodriguez-Alfonso, Nico Preising, Merve Karacan, Thomas  
Seufferlein, Martin Wagner, Frank Kirchhoff, Jan Münch, Ludger Ständker,  
Sebastian Wiese (Germany)



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- Pl.272 Application of the MALDI-MS and MALDI-IMS technique in the identification of the GPR146 receptor in tissue preparations

Joanna Wasko, Aleksandra Ryk, Wojciech Fendler, Beata Kolesińska (Poland)

- Pl.273 Searching for biomarkers characteristic for severe stage of COVID-19 disease

Aleksandra Czerchawy, Joanna Wasko, Beata Kolesińska (Poland)

- Pl.274 Identification of *delftia lacustris* proteins in response to cadmium stress

Ximena Carolina Pulido, Jefferson Beltran, Maryeimy Varón-López, Cesar Augusto Jaramillo (Colombia)

- Pl.275 Proteins involved in the plant growth promotion of *Pseudomonas orientalis* in the presence of cadmium

Ximena Carolina Pulido, Jefferson Beltran, Maryeimy Varón-López2, Cesar Augusto Jaramillo (Colombia)

- Pl.276 Identification of protease inhibitors from the human peptidome to develop novel antivirals

Armando Rodriguez-Alfonso, Jan Lawrenz, Nico Preising, Merve Karacan, Bernd Schröppel, Rene van Erp, Eberhard Barth, Marion Schneider, Ludger Ständker, Frank Kirchhoff, Jan Münch3, Sebastian Wiese (Germany)

- Pl.277 An advanced database for glycopeptide structure exploration to build glycopeptide structure Hub: GPSHub

Michele Casoria, Marina Macchiagodena, Carla Bazzicalupi, Claudia Andreini, Gianni Cardini, Anna Maria Papini, Marco Pagliai (Italy)

- Pl.278 Machine learning reveals structural properties of monosaccharides and their peptide conjugates

Michele Casoria, Marina Macchiagodena, Carla Bazzicalupi, Claudia Andreini, Gianni Cardini, Anna Maria Papini, Marco Pagliai (Italy)

## STRUCTURAL STUDIES OF PEPTIDES - I

- Pl.279 Mechanistic basis for the role of acidic tail of Rad6 (ubiquitin-conjugating enzyme) in Bre1 (E3 ligase) mediated recognition of histones in *Saccharomyces cerevisiae*

Pawan Yadav, Manish Gupta, Pankaj Kumar, Mohan Kamthan (USA)

- Pl.280 Arginine-rich peptides vs. lysine-rich peptides: interaction with differently charged lipid bilayers

Andreja Jakas, Lea Pašalić, Danijela Bakarić (Croatia)

- Pl.281 Self-assembly of synthetic bioactive sequences

Emma Fenude (Italy)

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**Pl.282** Supramolecular structures of synthetic bioactive sequences and its potential applications  
Emma Fenude (Italy)

**Pl.283** Prediction and simulation of the S100A1ct peptide with a membrane environment  
Tommaso Bartoloni, Manuel Glaser, Rebecca Wade (Germany)

**Pl.285** Engineering stable miniproteins: the journey from computational design to tertiary structure stability  
Natalia Miodowska, Łukasz Berlicki (Poland)

**Pl.286** Enhancing computational peptide therapeutic design with quantum chemistry and quantum computing  
Vikram Mulligan<sup>1</sup>, Tristan Zaborniak<sup>2</sup>, P. Douglas Renfrew<sup>1</sup>, Benjamin Brown<sup>1</sup> (<sup>1</sup>USA, <sup>2</sup>Canada)

**Pl.287** Formation of native disulfide bond patterns in small antifungal proteins and their  $\gamma$ -core optimized analogs  
Györgyi Váradi, László Galgóczy, András Czajlik, Attila Borics, Gábor Bende, Csaba Papp, Zoltán Kele, Gyula Batta, Gábor Tóth K. (Hungary)

**Pl.288** Unraveling structural characteristics of honeycomb amyloid self-assembling peptide: HONEY ASAP!  
Francesca Mazzotta, Ingo Lieberwirth, Jasmina Gačanin (Germany)

**Pl.289** Elucidation of the absolute structures and synthesis of putisolvins  
Daria Morina, Ratchara Kalawong, Gleb Chesnokov, Simon Sieber, Kerstin Möhle, Leo Eberl, Karl Gademann (Switzerland)

**Pl.290** Alanine scanning analysis of the antimicrobial peptide lyp1987 using a template-based approach  
Jomari Fernando, Jacquelyn Peran, Lilibeth Salvador-Reyes, Aaron Joseph Villaraza (Philippines)

**Pl.292** Synthesis and assessment of amyloidogenic activity of the C-peptide fragments  
Joanna Wasko, Beata Kolesińska (Poland)

**Pl.293** High-throughput synchrotron radiation circular dichroism (HT-SRCD) for the screening of G-quadruplex ligands  
Martina Rotondo<sup>1</sup>, Claudia Honisch<sup>1</sup>, Barbara Biondi<sup>1</sup>, Pietro Spanu<sup>1</sup>, Fausta Ulgheri<sup>1</sup>, Giovanni Loriga<sup>1</sup>, Andrea Beccu<sup>1</sup>, Rohanah Hussain<sup>2</sup>, Giuliano Siligardi<sup>2</sup>, Paolo Ruzza<sup>1</sup> (<sup>1</sup>Italy, <sup>2</sup>United Kingdom)



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- Pl.294 Structural insights into peptide recognition of PTH receptor  
Shaima Hashem, Samuel Murail, Pierre Tufféry (France)

- Pl.295 Design and synthesis of a diamino diacid-based short cyclic peptide with tunable self-assembly  
Devki Nandan, Ramesh Ramapanicker (India)

- Pl.296 Effect of lipid peroxidation on protein conformational stability  
Claudia Honisch<sup>1</sup>, Martina Rotondo<sup>1</sup>, Stefano Tartaggia<sup>1</sup>, Rohanah Hussain<sup>2</sup>, Giuliano Siligardi<sup>2</sup>, Paolo Ruzza<sup>1</sup> (<sup>1</sup>Italy, <sup>2</sup>United Kingdom)

- Pl.297 Three-dimensional structure and membrane permeability relationships of cyclopropane-restricted cyclic peptides  
Yuki Yamazaki, Hiroyuki Kumeta, Satoshi Shuto, Mizuki Watanabe (Japan)

- Pl.298 Methyl-based nuclear magnetic resonance methods for characterization of large peptide self-assemblies  
Dörte Brandis, Fanny Kozak, Christian Becker, Dennis Kurzbach (Austria)

- Pl.299 An atomistic view on the mechanism of diatom peptide-guided biomimetic silica formation  
Fanny Kozak<sup>1</sup>, Dörte Brandis<sup>1</sup>, Christopher Pötzl<sup>1</sup>, Ludovica Martina Epasto<sup>1</sup>, Daniela Reichinger<sup>1</sup>, Anton Polyansky<sup>1</sup>, Bojan Zagrovic<sup>3</sup>, Fabian Daus<sup>2</sup>, Armin Geyer<sup>2</sup>, Christian Becker<sup>1</sup>, Dennis Kurzbach<sup>1</sup> (<sup>1</sup>Austria, <sup>2</sup>Germany)

- Pl.300 The differential binding of arrestin-3 finger loop at Y1 and Y2 receptor: a structural perspective  
Varsha Gupta, Matthias Voitel, Jeannette Oetrich, Mateusz Skłodowski, Davide Sala, Anette Kaiser, Matthias Elgeti, Jens Meiler, Daniel Huster, Peter Schmidt, Annette G. Beck-Sickinger (Germany)

- Pl.301 NMR structures of β-amino acid containing miniproteins stabilized by a hydrophobic core  
Ewa Rudzińska-Szostak, Juan Lizandra Perez, Katarzyna Ożga, Łukasz Berlicki (Poland)

- Pl.302 Rational design of polyfluorinated peptide-based materials: self-assembly of an amphiphilic motif  
Maurizio Iannuzzi, Holly Fiedler, Suvrat Chowdhary, Andreas Thünemann, Boris Schade, Elisa Quaas, Roland Netz, Beate Koksch (Germany)

- Pl.303 Let's do the twist - Chiral information transfer in supramolecular peptide complexes  
Danielle Liebnitz (United Kingdom)

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### PEPTIDE MATERIALS - I

**P1.304 Peptide based hydrogels for 3D bioassays**

**Greta Bergamaschi, Roberto Frigerio, Giulia Lodigiani, Andrea Pizzi,  
Alessandro Gori, Marina Cretich (Italy)**

**P1.306 Tailoring the self-assembly of cyclic peptide scaffolds for prostate cancer imaging**

**Fatima Amanda Santillan Espinoza, Len Luyt (Canada)**

**P1.307 Computational/experimental symbiosis in the design of supramolecular peptide architectures**

**Ivan Sasselli (Spain)**

**P1.308 Peptide membranes from de novo designed helix-loop-helix peptides**

**Thomas Heim, Franziska Thomas (Germany)**

**P1.309 Multimaterial 3D laser printing of cell-adhesive and cell-repellent hydrogels**

**Niklas Schwegler, Tanisha Gebert, Maria Villiou, Federico Colombo,  
Barbara Schamberger, Christine Selhuber-Unkel, Franziska Thomas, Eva Blasco (Germany)**

**P1.310 Ultrasound-assisted formation of therapeutic peptide microcapsules**

**Erica Belforte<sup>1</sup>, Francesca Cavalieri<sup>1</sup>, Hilda Garay Perez<sup>2</sup>, Mariano Venanzi<sup>1</sup>(<sup>1</sup>Italy, <sup>2</sup>Cuba)**

**P1.311 Self-assembling peptides decorated with  $\pi$ -expanded electron donors**

**Laura Brüchle, Thomas Heim, Milan Kivala, Franziska Thomas (Germany)**

**P1.312 Crosslink reaction of  $\alpha$ -/ $\omega$ -substituted diacrylate polyethylene-glycol in Fmoc-FF hydrogel matrices**

**Carlo Diaferia, Paolo Pellegrino, Giancarlo Morelli, Rosaria Rinaldi,  
Antonella Accardo (Italy)**

**P1.313 Innovative strategies for sustainable materials: developing protein-based bioplastics from rapeseed by-products for a circular economy**

**Sara Aquilia, Michele Pinna, Anna Maria Papini, Luca Rosi, Francesco Ciardelli, Claudia Bello (Italy)**

**P1.314 Self-assembled peptides for biomimetic mineralization and enamel repair**

**Yue Li, Rong Chang, Yong-Xiang Chen (China)**



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- Pl.315 Cationic amphiphilic peptide-based delivery platforms for negatively charged active pharmaceutical ingredients including short interfering RNA  
Mariangela Rosa, Carlo Diaferia, Antonella Accardo, Giancarlo Morelli (Italy)
- Pl.316 Synthesis of peptidomimetics using diaryl- $\beta$  amino acids for the preparation of smart materials  
Dulce Alitzel Quintana Romero<sup>1</sup>, Raffaella Bucci<sup>1</sup>, Merve Gul<sup>2</sup>, Maria del Mar Pérez Madrigal<sup>2</sup>, María Luisa Gelmi<sup>1</sup>, Carlos Aleman<sup>2</sup> (<sup>1</sup>Italy, <sup>2</sup>Spain)
- Pl.317 Conformational and self-assembly studies of a protein-mimetic peptide from *Pseudomonas aeruginosa* YeaZ protein  
Elettra Fasola, Giulia Alboreggia, Stefano Pieraccini, Francesco Oliva, Fatima Ezzahra Agharbaoui, Michela Bollati, Giovanni Bertoni, Sandro Recchia, Marcello Marelli, Umberto Piarulli, Sara Pellegrino, Silvia Gazzola (Italy)
- Pl.318 A comparative study between phenylglycine and phenylalanine derived peptide hydrogels  
Jolien Bertouille, Ulrich Hennecke, Charlotte Martin, Ana V. Cunha, Steven Ballet (Belgium)
- Pl.319 Peptides stapling as a tool for improving molecular recognition of C-reactive protein  
Katarzyna Szot-Karpińska<sup>1</sup>, Marta Lubos<sup>2</sup>, Natalia Cwalina<sup>1</sup>, Jan Pícha<sup>2</sup>, Jakub Kaminský<sup>2</sup>, Jiří Jiráček<sup>2</sup>, Magdalena Majewska<sup>1</sup>, Magdalena Narajczyk<sup>1</sup>, Joanna Niedziółka-Jönsson<sup>1</sup> (<sup>1</sup>Poland, <sup>2</sup>Czech Republic)
- Pl.320 A structural sight on peptides forming stable LLPS: a combined experimental and computational investigation  
Gianfranco Bocchinfuso<sup>1</sup>, Francesca Cavalieri<sup>1</sup>, Annachiara Ferrara<sup>1</sup>, Hilda Garay Perez<sup>2</sup>, Marco Savioli<sup>1</sup>, Mariano Venanzi<sup>1</sup> (<sup>1</sup>Italy, <sup>2</sup>Cuba)
- Pl.321 From synthesis to application: peptide-functionalized nanoformulations for biomedical applications  
Shubhi Joshi, Gaurav Verma, Avneet Saini (India)
- Pl.322 Sustainable development of cross-linked protein and peptide-based films from rapeseed meal to innovative elastic materials  
Sara Aquilia, Michele Pinna, Luca Rosi, Anna Maria Papini, Francesco Ciardelli, Claudia Bello (Italy)

**POSTER SESSION 2 - 28 AND 29 AUGUST 2024**  
**CHEMISTRY OF AMINO ACIDS, PEPTIDE AND PROTEINS - II**

**P2.001** A chemical pathway to SUMO protease-resistant mimics of SUMOylated peptides and proteins

**El hadji Cisse, Mélanie Chenon, Skander Abboud, Pierre Prieu-Serandon, Stéphane Charpentier, Hélène Bénédicti, Marcin Suskiewicz, Vincent Aucagne (France)**

**P2.002** Suspension Bead Loading (SBL): an economical protein delivery platform to unveil URM1 behavior into live cells

**Reem Mousa, Abhishek Saha, Yam Alalouf, Mahdi Hasan, Guy Mann, Shaswati Mandal, Ashraf Brik (Israel)**

**P2.003** Synthesis and conformational analysis of  $\beta,\beta$ -diaryl- $\alpha$ -amino acids: on the way to molecular gearing

**Timo Zimmer, Armin Geyer (Germany)**

**P2.004** A green peptide synthesis protocol for improving peptide production: a new approach

**Luana Lastella, Barbara Biondi, Ivan Guryanov, Fernando Formaggio, Marco Macis, Antonio Ricci (Italy)**

**P2.005** A rapid and efficient photochemical modification strategy for late-stage peptide and protein functionalization

**Mengqian Zhang, Yan-Mei Li (China)**

**P2.006** Development of new fluorescent peptide-based probes for the specific recognition of the  $\alpha\beta42$  oligomer species

**Norbert Sewald<sup>1</sup>, Nicolo Tonali<sup>2</sup>, Steven Panek<sup>1</sup> (<sup>1</sup>Germany, <sup>2</sup>France)**

**P2.008** Novel Dmb-based protecting groups for side chain amino groups of amino acids

**Raimund Maier, Karin Rustler, Thomas Bruckdorfer, Udo Kalejs, Vilnis Liepins, Stephan Pritz, Kai Holland-Nell (Germany)**

**P2.009** Chemical biology of intrinsically disordered proteins domains

**Alexis Jouin, Vladimir Torbeev (France)**

**P2.010** Palladium-mediated S-arylation and S-allylation for late-stage peptide functionalisation and protein conjugation

**Ross Ballantine, Ameni Hadj Mohamed, Mingxiang Zhu, Aromal Asokan, Shen Linhua, Mélanie Chenon, Ana Novak, Vincent Robert, Séverine Morisset-Lopez, Mouad Alami, Massimiliano Beltramo, Carlo Pifferi, Vincent Aucagne, Samir Messaoudi (France)**



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- P2.011 Total synthesis of nanobodies for targeted cancer therapy  
Keziah Poggenpoel, Kevin Beijerling, William Kelton, Margaret Brimble, Iman Kavianinia (New Zealand)

- P2.012 Green synthesis of a novel primary amine protecting group for solid-phase peptide synthesis  
C.J. Aguilar, Sujay Prabakar, Mak Sarwar, Margaret Brimble, Iman Kavianinia (New Zealand)

- P2.013 New opportunities for side-chain functionalization of halogenated amino acids  
Laura Cerveson, Norbert Sewald (Germany)

- P2.014 Sculpting cavities into coiled-coil proteins to accommodate ligands of different size and shape  
Katarzyna Ozga, Joel J. Chubb, Rokas Petrenas, Derek N. Woolfson (United Kingdom)

- P2.015 Efficient and glycoeconomic synthesis of densely clustered mucin glycopeptides  
Arseniy Galashov, Ekaterina Kazakova, Oliver Seitz (Germany)

- P2.016 Expansion of chemical toolbox to generate and investigate protein pyrophosphorylation  
Atharva Patharkar, Dorothea Fiedler (Germany)

- P2.017 Targeting LAT1 with technetium(I)-labeled tryptophan derivatives for SPECT imaging  
Ruben Silva, Cristina P. Matos, Catarina G. Pinto, Joana F. Guerreiro, Lurdes Gano, Filipa F. Mendes, João D. G. Correia (Portugal)

- P2.018 Applications of thiol-ene and thiol-yne chemistry for peptide stapling and bioconjugation  
Inés Rabadán González<sup>1</sup>, Joshua McLean<sup>1</sup>, Nikitas Ostrovitsa<sup>1</sup>, Sheila Fitzgerald<sup>1</sup>, Andrea Mezzeta<sup>2</sup>, Lorenzo Guazzelli<sup>2</sup>, Donal O'Shea<sup>1</sup>, Eoin Scanlan<sup>1</sup> (Ireland, <sup>2</sup>Italy)

- P2.019 Elevated temperature chromatography for improved purification of hydrophobic and long sequences  
Colin Simpson, Drew Cesta, Sandeep Singh, Jon Collins (USA)

- P2.020 Enzymatic peptide and protein bromination: the BromoTrp tag  
Nicolai Montua, Norbert Sewald (Germany)

- P2.021 Combining quaternary ammonium compounds and peptides - its application to antimicrobials and beyond  
Rolland Lin<sup>1</sup>, Brian Northrop<sup>2</sup>, Margaret Brimble<sup>1</sup>, Alan Cameron<sup>1</sup> (New Zealand, <sup>2</sup>USA)

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P2.022 Fluorescent amino acids with large Stokes-shift  
Nicolas Schnatmann, Norbert Sewald (Germany)

P2.023 Propargylamine amino acids as constrained Nε-substituted lysine mimetics  
Kevin Van holsbeeck, Elsocht Mathias, Steven Ballet (Belgium)

P2.024 Synthesis and structural characterization of trifluoromethylated tetrahydroisoquinolines as new constrained aromatic amino acid surrogates  
Lilian Loison<sup>1</sup>, Steven Ballet<sup>2</sup>, Thierry Brigaud<sup>1</sup>, Simon Gonzalez<sup>1</sup> (<sup>1</sup>France, <sup>2</sup>Belgium)

P2.025 Exploring the structure and reactivity of cysteine enethiolates  
Ardra Karthika, Eddie Myers (Ireland)

P2.026 Application of a new green protocol in solid-phase peptide synthesis: identification of a new green solvent mixture compatible with ETT/TBEC  
Giovanni Vivenzio, Maria Carmina Scala, Pietro Campiglia, Marina Sala (Italy)

P2.027 Peptides and peptidomimetics blocking TNF/TNFR2 as a new strategy of immune checkpoint inhibition  
Karolina Ślawińska, Gabriela Całka-Kuc, Marta Spodzieja, Adam Sieradzan, Sylwia Rodziewicz-Motowidło (Poland)

P2.028 On-resin hydrothiolation towards peptide ligation and macrocyclization  
Nikitas Ostrovitsa, Joshua McLean, Eoin Scanlan (Ireland)

P2.029 Modular access to structurally defined ubiquitin chains  
Moritz Urschbach, Susanne Huhmann, Luca Ferrari, Dominik Vogl, Gerhard Niederacher, Sascha Martens, Christian Becker (Austria)

P2.030 A radical approach to peptide/protein modification, and peptide macrocyclization  
Rhys Griffiths, Fran Smith, Declan Meehan, Diyuan Li, Joanna Lee, Nicholas Mitchell (United Kingdom)

P2.031 Synthesis of constrained amino acids by mild Pictet-Spengler cyclisation  
Charity D. Yongo-Luwawa, Kajumee Bora Bhowal, Lylia Dif-Yaiche, Will Maclean, Omer Sayane Landry N'Dri, Chitra Pandiparambil Sadanandhan, Darince Truong, Zoé Villeneuve Zoé Villeneuve, Xiaozheng Wei, William Lubell (Canada)

P2.032 Biomimetic total synthesis of marine cyclic peptide natural products and their bioactive analogs  
Dona Mariya Vincent, Rajesh Viswanathan (India)



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P2034 New backbone protecting groups for enhanced Fmoc SPPS  
Sam Paravizzini, John Karas, Craig Hutton (Australia)

P2035 Exploring innovative liquid-phase peptide synthesis strategies with silane-containing molecules

Naoki Nishizawa, Akihiro Nagaya, Shota Murase, Yuji Mimori, Michiharu Handa, Ayumu Matsuda, Yutaka Kobayashi, Haruaki Kurasaki, Cary Douglas, Keiichi Masuya (Japan)

P2036 Synthesis and application of proteins and peptides with diverse phosphorus-containing modifications  
Yong-Xiang Chen (China)

P2037 Influence of tryptophan insertion on the fibrillation capacity and antimicrobial efficacy of  $\beta$ -hairpin antimicrobial peptides

Dhanya Mahalakshmi Murali, Jian Xu, Dai Thien Nhan Tram, P.L. Rachel EE (Singapore)

P2039 NMR-based investigation of intrinsically disordered regions of modular proteins for tailored drug-design

Angela Sofia Tino, Marco Schiavina, Michael Quagliata, Roberta Pierattelli, Anna Maria Papini, Isabella Caterina Felli (Italy)

P2040 Cyclic antimicrobial peptides guanidino-based analogues of temporin L

Ida Boccino, Rosa Bellavita, Maria Rosa Loffredo, Floriana Cappiello, Bruno Casciaro, Marialuisa Mangoni, Francesco Merlino, Paolo Grieco (Italy)

P2041 Gla-diators against calcification

Stijn Agten, Dennis Suylen, Anouk Gentier, Schurgers Leon, Tilman Hackeng (Netherlands)

P2042 Design and synthesis of peptide modulators of Gai/s proteins

Anna Pepanian, Sabriye Aydoğdu, F. Ayberk Binbay, Diana Imhof (Germany)

P2043 Deciphering Tau misfolding: utilizing  $\beta$ 2,2-amino acid-based peptidomimetic foldamers as a chemical model system for mechanistic investigation

Davide Di Lorenzo<sup>1,2</sup>, Sandrine Ongeri<sup>2</sup>, Nicolo Tonali<sup>2</sup> (<sup>1</sup>Germany, <sup>2</sup>France)

P2044 Development of mild methodology for synthesizing oxazole-containing peptides

Zainab Bello, Allison Clarke, Adam Pickett, Carlie Charron (Canada)

P2045 Synthesis of macrocyclic thiolactone peptides via radical acyl thiol-ene

Alby Benny, Eoin Scanlan (Ireland)

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P2.046 Divalent metal ions-directed release of C-terminally modified peptides at 60 °C under mild conditions

Rebeca Garcia Moura, Thiago de Souza Freire, M Teresa Machini (Brazil)

P2.047 Exploring the three-dimensional structures and activity relationships of N-methyl and N-desmethyl analogues of cyclodepsipeptide destruxin E

Takayuki Doi, Hiroshi Sato, Hiroshi Nakagawa, Masahito Yoshida (Japan)

P2.048 Green solvents and safe reagents in SPPS taking advantage of induction heating and automation: synthesis and HPLC-free purification of difficult sequences

Lorenzo Pacini<sup>1</sup>, Manoj Kumar Muthyala<sup>2</sup>, Oleg Marder<sup>3</sup>, Luísa Aguiar<sup>2</sup>, Robert Zitterbart<sup>2</sup>, Paolo Rovero<sup>1</sup>, Anna Maria Papini<sup>1</sup> (<sup>1</sup>Italy, <sup>2</sup>USA, <sup>3</sup>Israel)

P2.049 Simple one-pot peptide cleavage and spontaneous macrocyclization through Paal-Knorr-like reactions using 2,5-dialkylfuran derivatives

Alex Manicardi<sup>1,2</sup>, Atiruj Theppawong<sup>1</sup>, Marleen van Troys<sup>1</sup>, Annemieke Madder<sup>1</sup> (<sup>1</sup>Belgium, <sup>2</sup>Italy)

P2.050 Sustainable scale-up of GLP-1 agonist peptides through green solid phase peptide synthesis

Lorenzo Pacini<sup>1</sup>, Manoj Kumar Muthyala<sup>2</sup>, Robert Zitterbart<sup>2</sup>, Paolo Rovero<sup>1</sup>, Anna Maria Papini<sup>1</sup> (<sup>1</sup>Italy, <sup>2</sup>USA)

P2.051 Searching for peptide inhibitors of TNFR2/TNF complex formation using a virtual "phage display"

Paulina Stencel, Artur Giełdoń, Beata Gromadzka, Sylwia Rodziewicz-Motowidło, Marta Spodzieja (Poland)

P2.052 Overcoming sustainability challenges of peptide synthesis with flow chemistry and machine learning

Kristóf Ferentzi, Adrienn Kiss, Viktor Farkas, András Perczel (Hungary)

P2.053 Gamma carboxylation of glutamic acid as a functional handle for peptide and protein conjugation

Matthew Aronoff (USA)

P2.054 Core-shell type resins for SPPS

Kwanwoo Kim, Joon-Su Kong, Seok-In Kim, Yoon-Sik Lee (South Korea)

P2.054 Automated and economical SPPS synthesis of 1 to 10,560 peptides overnight

bis Hossain Saneii, Rajan Sharma, Farshad Karimi, Mostafa Hatam (USA)



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### BIOACTIVE PEPTIDES - II

P2.055 Nature inspired unique antimicrobial peptides from Chilean marine sediments

**Luisa Beyer<sup>1</sup>, Ann-Britt Schäfer<sup>1</sup>, Agustina Natalia Undabarrena Canusso<sup>2</sup>, Inger Mattsby-Baltzer<sup>1</sup>, Daniel Tietze<sup>1</sup>, Elin Svensson<sup>1</sup>, Alexandra Stubelius<sup>1</sup>, Michaela Wenzel<sup>1</sup>, Beatriz Cámara<sup>2</sup>, Alesia Tietze<sup>1</sup>** (<sup>1</sup>Sweden, <sup>2</sup>Chile)

P2.056 The role of the quorum sensing peptide PlnA in the gut microbiome-sarcopenia axis

**Amélie Descamps<sup>1</sup>, Anton De Spiegeleer<sup>1,4</sup>, Liesbeth Crombez<sup>1</sup>, Morten Kjos<sup>2</sup>, Evelien Wynendaele<sup>1</sup>** (<sup>1</sup>Belgium, <sup>2</sup>Norway)

P2.058 Unlocking mango's peptide potential: exploring bioactive peptides in pulp and peel

**Mahya Bahmani, Michelle L. Colgrave, Cassandra L. Pegg, Angéla Juhász** (Australia)

P2.059 Alca, a cyclotide extracted and isolated from *Allexis cauliflora* (Violaceae): synthesis and biological activities

**Olivier Ndogo Eteme, Letícia Oliveira Catarin Nunes, Marcela Nunes Argentin, Norival Santos-Filho, Ilana Lopes Baratella da Cunha Camargo, Eduardo Festozo Vicente** (Brazil)

P2.060 Microporous scaffold-mediated myeloid cell activation in situ for robust peptide-based cancer vaccine

**Shao-Hua Zhuo, Wen-Hao Li, Jing-Yun Su, Yan-Mei Li** (China)

P2.061 Bugs, plants and peptides: unleashing the power of chemical ecology for sustainable crop protection

**Aurelien Bigot, Quentin Kaas** (Switzerland)

P2.062 The "Sand in a gearbox" effect of antimicrobial peptides: beyond pore formation on model membranes and real bacteria cells

**Daniela Roversi, Zahra Vaezi<sup>1,2</sup>, Annalisa Bortolotti, Cristiano Di Stefano, Simone Bonacorsi, Valerio Santucci, Christopher Aisenbrey<sup>3</sup>, Mohinimohan Konai<sup>4</sup>, Yash Acharya<sup>4</sup>, Roya Khosravi-Far<sup>5</sup>, Burkhard Bechinger<sup>3</sup>, Jayanta Haldar<sup>4</sup>, Lorenzo Stella<sup>1</sup>** (<sup>1</sup>Italy, <sup>2</sup>Iran, <sup>3</sup>France, <sup>4</sup>India, <sup>5</sup>Israel, <sup>6</sup>USA)

P2.063 Site-directed scanning mutagenesis reveals specific residues that enhance both the enduring stability and insecticidal efficacy of the cyclotide kalata B1

**Yen-Hua Huang<sup>1</sup>, Zhihao Jiang<sup>1</sup>, Kuok Yap<sup>1,2</sup>, Aurelien Bigot<sup>2</sup>, Quentin Kaas<sup>2</sup>, Conan Wang<sup>1</sup>, David Craik<sup>1</sup>** (<sup>1</sup>Australia, <sup>2</sup>Switzerland)

## POSTER SESSION 2 - 28 AND 29 AUGUST 2024

- P2.064** Design and structural analysis of fluorinated polyproline-type foldamers and their ability to interact with membrane models  
**Chloé Cayrou, Simon Gonzalez, Karine Guitot, Delphine Ravault, Françoise Illien, Sylvie Noinville, Astrid Walrant, Thierry Brigaud, Olivier Lequin, Sandrine Ongeri, Grégory Chaume (France)**
- P2.065** Cyclic peptides as connexin43 and pannexin1 inhibitors  
**Debora Iaculli<sup>1</sup>, Arthur Lamouroux<sup>1</sup>, Malaury Tournier<sup>2</sup>, Jade Montgomery<sup>2</sup>, Mathieu Vinken<sup>1</sup>, Brenda R. Kwak<sup>2</sup>, Steven Ballet<sup>1</sup> (<sup>1</sup>Belgium, <sup>2</sup>Switzerland)**
- P2.066** Antimicrobial peptidomimetics: design, synthesis, and surface binding  
**Marc Mathieu (Switzerland)**
- P2.067** New insights into antibacterial and antitumor effects of structurally versatile amino acid-based and non-proteinogenic compounds  
**Martina I. Peeva, Maya G. Georgieva, Aneliya A. Balacheva, Svetoslav Dimov, Nikolay T. Tzvetkov (Bulgaria)**
- P2.068** Synthesis and delivery of cell permeable P53 transactivation domain  
**Moath Yousef, Vladimir Torbeev (France)**
- P2.069** Antiviral evaluation of new synthetic bioconjugates based on GA-Hecate: a new class of antivirals targeting different steps of Zika virus replication  
**Paulo Ricardo da Silva Sanches<sup>1</sup>, Ricardo Sanchez Velazquez<sup>2</sup>, Mariana Nogueira Batista<sup>3</sup>, Giuditta Delorenzo<sup>2</sup>, Cintia Bittar Oliva<sup>3</sup>, Paula Rahal<sup>1</sup>, Arvind Patel<sup>2</sup>, Eduardo Cilli<sup>1</sup> (<sup>1</sup>Brazil, <sup>2</sup>United Kingdom, <sup>3</sup>USA)**
- P2.070** Evaluation of antimicrobial and anticancer properties of peptides derived from melittin: design, synthesis and studies of mechanisms of action  
**Letícia Oliveira Catarin Nunes, Louise Fiametti, Geovana Navegante, Maria Carolina Oliveira De Arruda Brasil, Valeria Valente, Lucas Rodrigues, Marcela Nunes Argentin, Vitória Candido, Ilana Lopes Baratella da Cunha Camargo, Eduardo Cilli, Norival Santos-Filho (Brazil)**
- P2.071** Development of a retro-inverso tetrapeptide collagen modulator as anti-aging active principle  
**Fosca Errante, Marco Pallecchi, Gianluca Bartolucci, Elena Frediani, Francesca Margheri, Lisa Giovannelli, Anna Maria Papini, Paolo Rovero (Italy)**
- P2.072** Phosphopeptides as tools to probe the recognition of the RNA-Polymerase II C-Terminal domain by phospho-specific antibodies  
**Emanuele Piemontese, Alina Herfort, Oliver Seitz (Germany)**
- P2.073** Development of novel peptide ligands with improved selectivity and pharmacological properties for complement system receptors  
**Richard Clark, Declan Gorman, Xaria Li, Joshua Dent, Cedric Cui, Han Siean Lee, Jenny Fung, John Lee, K. Johan Rosengren, Trent Woodruff (Australia)**



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P2074 Peptide and peptide polymer synergy in combatting antimicrobial resistance

**Sara Hadjigol, Connagh Redmond, Sadegh Shabani, Greg Qiao, Neil O'Brien-Simpson (Australia)**

P2075 Exploring the therapeutic potential of papiliocin and its analogs against carbapenem-resistant *Acinetobacter baumannii*-induced sepsis: novel antibacterial and anti-inflammatory mechanisms

**Minwon Son, Byeongkwon Kim, Yangmee Kim (South Korea)**

P2076 A BMP-2-derived bioactive peptide conjugated to chitosan improves osteoblast proliferation and antibacterial properties of membranes for oral surgery

**Cristian Balducci, Annj Zamuner, Martina Todesco, Andrea Bagno, Antonella Pasquato, Giovanna Iucci, Federica Bertelà, Chiara Battocchio, Luca Tortora, Eriberto Bressan, Luca Sacchetto, Paola Brun, Monica Dettin (Italy)**

P2077 Targeting cancer by transmembrane peptides and ionic liquid carriers

**Helal AbuJubara<sup>1</sup>, Pankaj Bharmoria<sup>2</sup>, Samantha Alvarez<sup>1</sup>, Enoch Appiah<sup>1</sup>, Volkan Sayin<sup>1</sup>, Alesia Tietze<sup>1</sup> (<sup>1</sup>Sweden, <sup>2</sup>Spain)**

P2078 Characterization of aurora-A activation and allosteric regulation by TACC-3 peptidomimetics

**Diana Gimenez-Ibanez, Jennifer Miles, Richard Bayliss, Megan Wright, Andrew J. Wilson (United Kingdom)**

P2079 Bioactive peptides in functional foods can mitigate stress behaviors in zebrafish (*Danio rerio*)

**Ana S. Silva-Herdade, Lara Carvalho, Adriana Rolim, Wilson Pinto, Bruno Reis, Luís Conceição, Benjamin Costas, Miguel Castanho (Portugal)**

P2080 Synthesis, conformational analysis and biological activity evaluation of novel antiviral peptides blocking the SARS-CoV-2 cell-entry

**Michael Quagliata, Maria Alfreda Stincarelli, Andrea Di Santo, Lorenzo Pacini, Feliciano Real-Fernandez, Rosaria Arvia, Silvia Rinaldi, Anna Maria Papini, Simone Giannechini, Paolo Rovero (Italy)**

P2081 Multiple lysine substitutions in the peptaibol trichogin GA IV enhance the antibiotic activity against plant pathogenic *Pseudomonas syringae*

**Alexia Mattellone, Marta De Zotti, Ivan Baccelli, Fodil Sihem, Simone Luti, Silvio Tundo, Rita Musetti, Luca Sella, Francesco Favaron (Italy)**

P2082 Cyclic cystine knot peptides are first in class inhibitors of prolyl oligopeptidase with leishmanicide activities

**Roland Hellinger, Jasmin Gattringer, Paula Schwarz, Maria Ramón, Christian W. Gruber (Austria)**

## POSTER SESSION 2 - 28 AND 29 AUGUST 2024

- P2.083** Synthesis, characterization and biological activity evaluation of a dual-drug based on the antibacterial peptide lugdunin functionalized with the carbonic anhydrase sulfonamide inhibitor acetazolamide  
**Michael Quagliata<sup>1</sup>, Francesco Brenzini Biagioni<sup>1,2</sup>, Simone Giovannuzzi<sup>1</sup>, Viviana De Luca<sup>1</sup>, Clemente Capasso<sup>1</sup>, Alessio Nocentini<sup>1</sup>, Claudiu T. Supuran<sup>1</sup>, Paolo Rovero<sup>1</sup>, Anna Maria Papini<sup>1</sup>** (<sup>1</sup>Italy, <sup>2</sup>France)
- P2.084** Alanine scan analysis structural and functional insights into NBC3709 peptide, a short peptides derived from rabbit cathelicidin (CAP18)  
**Mónica Aróstica<sup>1</sup>, Fanny Guzmán<sup>1</sup>, Gerardo Acosta<sup>1</sup>, Fernando Albericio<sup>1</sup>, Miguel Viñas<sup>1</sup>, Josep Sierra<sup>1</sup>, Luis Mercado<sup>2</sup>** (<sup>1</sup>Spain, <sup>2</sup>Chile)
- P2.085** Phosphorylation and GlcNAcylation of the RNA polymerase II C-Terminal domain and their effect on recognition by Pin1 and Protein Phosphatase 1  
**Alina Herfort, Emanuele Piemontese, Corina Maller, Maja Köhn, Oliver Seitz** (Germany)
- P2.086** How a single non-conventional amino acid can modify the effectiveness of amphibian antimicrobial peptides  
**Maria Rosa Loffredo, Bruno Casciaro, Giacomo Cappella, Rosa Bellavita, Floriana Cappiello, Francesco Merlino, Paolo Grieco, Alfonso Carotenuto, Lorenzo Stella, Marialuisa Mangoni** (Italy)
- P2.087** Development of bioactive peptides of cosmetic interest through environmentally sustainable processes  
**Lucrezia Sforzi<sup>1</sup>, Fosca Errante<sup>1</sup>, Joanna Makowska<sup>2</sup>, Paolo Rovero<sup>1</sup>, Anna Maria Papini<sup>1</sup>** (<sup>1</sup>Italy, <sup>2</sup>Poland)
- P2.088** Thermodynamic and kinetic effects on the activity and selectivity of antimicrobial peptides  
**Federico Carneri<sup>1</sup>, Emiliano Franci<sup>1</sup>, Cassandra Troiano<sup>1</sup>, Giuseppe Giaquinto<sup>1</sup>, Antonio Leoci<sup>1</sup>, Daniela Roversi<sup>1</sup>, Maria Rosa Loffredo<sup>1</sup>, Yoonkyung Park<sup>2</sup>, Angelo Toto<sup>2</sup>, Stefano Gianni<sup>1</sup>, Marialuisa Mangoni<sup>1</sup>, Henrik Franzky<sup>3</sup>, Lorenzo Stella<sup>1</sup>** (<sup>1</sup>Italy, <sup>2</sup>South Korea, <sup>3</sup>Denmark)
- P2.089** Engineering *Saccharomyces cerevisiae* to produce class IIa bacteriocins  
**Michelle Rossouw, Rosemary Anne Cripwell, Ross Vermeulen, Anton Du Preez van Staden, Gerhardt Coetzee, Carla Louise Ritter, Willem Heber (Emile) van Zyl, Leon Milner Theodore Dicks, Marinda Viljoen-Bloom** (South Africa)
- P2.090** Codon optimisation and accessory proteins enhance pediocin PA-1 production in *Saccharomyces cerevisiae*  
**Bianca Campbell, Michelle Rossouw, Rosemary Anne Cripwell, Marinda Viljoen-Bloom** (South Africa)
- P2.091** Modifications of the miniprotein sequences for enhanced affinity to PD-1: tailoring inhibitors of the PD-1/PD-L1 interaction  
**Paweł Nocień, Łukasz Berlicki** (Poland)



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P2.092 Modulating quorum sensing using native signalling molecules  
Iben Jensen, Benjamin Svejdal Bejder, Hanne Ingmer, Christian Adam Olsen (Denmark)

P2.093 Design of fluorinated Aib foldamers: synthesis, structural study and capacity to interact with amyloid proteins  
Marine Pietri, Olivier Monasson, Julia Kaffy, Elisa Peroni, Sandrine Onger, Grégory Chaume, Nathalie Lensen (France)

P2.094 Antimicrobial peptides with varied chemical compositions trigger hyperpolarization of the bacterial membrane  
Anasztazia Hetenyi, Kaushik Nath Bhaumik, Reka Spohn, Anett Dunai, Lejla Daruka, Csaba Pal, Tamás Martinek (Hungary)

P2.095 Synthetic glucosylated peptide antigens of the bacterial protein adhesin of nontypeable *Haemophilus influenza* to detect antibodies in multiple sclerosis  
Francesca Nuti<sup>1</sup>, Feliciana Real-Fernandez<sup>1</sup>, Hermon Berhane Tesfay<sup>1</sup>, Poriah Strauss<sup>2</sup>, Rina Ahroni<sup>2</sup>, Mattan Hurevich<sup>2</sup>, Paolo Rovero<sup>1</sup>, Anna Maria Papini<sup>1</sup> (<sup>1</sup>Italy, <sup>2</sup>Israel)

P2.097 Synthesis and antitumor effect of new peptide derivatives with beta-secretase inhibitory activity  
Lyubomir T. Vezenkov, Snejina Popova, Rositsa Mihaylova, Daniela S. Tsekova (Bulgaria)

P2.098 Design, synthesis, and biological activity of tumor necrosis factor alpha peptides for adalimumab recognition  
Feliciana Real-Fernandez, Andrea Di Santo, Kalina Kirilova Kirilova, Silvia Rinaldi, Gabriele Simonini, Paolo Rovero (Italy)

P2.099 Computational design of ultrashort peptide inhibitors for the RBD of the SARS-CoV-2 S-protein  
Pengfei Pei (China)

P2.100 In vitro effect of the acidic pH on the susceptibility of the antimicrobial peptide Esc(1-21) against respiratory pathogens in cystic fibrosis lung environment  
Giacomo Cappella, Maria Rosa Loffredo, Bruno Casciaro, Floriana Cappiello, Arianna Turchini, Marialuisa Mangoni (Italy)

P2.101 Identifications and antiparasitic activity of peptides from epidermal mucus of Chilean aquaculture fish  
Fanny Guzman<sup>1</sup>, Claudio Alvarez<sup>1</sup>, Teresa Toro<sup>1</sup>, Juan Cumillaf<sup>1</sup>, Belinda Vega<sup>1</sup>, Maria Tapia<sup>1</sup>, Tanya Román<sup>1</sup>, Constanza Cardenas<sup>1</sup>, Valentina Cordoba<sup>1</sup>, Fernando Albericio<sup>2</sup>, Paula Santana<sup>1</sup> (<sup>1</sup>Chile, <sup>2</sup>Spain)

## POSTER SESSION 2 - 28 AND 29 AUGUST 2024

- P2.102 Computer-aided rational design of bioactive peptides with biomedical applications

Shizhong Luo (China)

- P2.103 Bismaleimidohexane-stapled anoplin analogs

Magdalena Bobier, Aaron Joseph Villaraza, Portia Mahal Sabido  
(Philippines)

- P2.104 Glycine- and histidine-rich peptides derived from shepherin I: study of candidacidal activity, metal-chelating properties and mode of action

Gustavo Nunes<sup>1</sup>, Lohanna Lopes<sup>1</sup>, Ernani Lacerda<sup>1</sup>, Carlos Marques<sup>2</sup>, Breno Espósito<sup>1</sup>, M. Teresa Machini<sup>1</sup> (<sup>1</sup>Brazil, <sup>2</sup>France)

- P2.105 Enzymatic approaches to the synthesis of Aib-containing peptides for phytosanitary applications

Luca Sella<sup>1</sup>, Francesco Favaron<sup>1</sup>, Antonio Ricci<sup>1</sup>, Ana Toplak<sup>2</sup>, Marta De Zotti<sup>1</sup>, Chiara Dalla Torre<sup>1</sup> (<sup>1</sup>Italy, <sup>2</sup>Netherlands)

- P2.106 Antiparasitic peptides with potential activity against *Caligus rogercresseyi*

Tanya Román, Fanny Guzman, Constanza Cardenas, Paula Santana, Claudio Alvarez (Chile)

- P2.107 Recombinant protein engineering – synthetically enhanced protein therapeutics for Myc targeting

Jan Pascal Kahler, Brecht Ellenbroek, Sebastian Pomplun (Netherlands)

- P2.108 Cecropin A-melittin B hybrid CA (1-7) M (2-9) analogs with improved antimicrobial activity, low toxicity, and good protease stability

Jessica Mhlongo<sup>1</sup>, Talia Chetty<sup>1</sup>, Ayman Waddad<sup>1</sup>, Fernando Albericio<sup>1,2</sup>, Beatriz Garcia de la Torre<sup>1</sup> (<sup>1</sup>South Africa, <sup>2</sup>Spain)

- P2.109 Optimizing ham curing process: impact of overripening and the use of nitrifying salts on peptide bioactivity

Noelia Hernández Correas, Cindy Bande-De León, Adela Abellán Guillén, Teresa Muela Clemente, Eva Salazar Serna, Jose María Cayuela García, Luis Tejada Portero (Spain)

- P2.110 Functional and structural understanding of the angiotensin II receptor type 1 (AT1R) biased signaling

Margot Hadjadj, Alexandre Murza, Brian Holleran, Yoon Namkung, Stéphane Laporte, Richard Leduc, Mannix Auger-Messier, Pierre-Luc Boudreault (Canada)

- P2.111 Molecular determinants of the anti-amyloid function of the cross-interaction of the human cathelicidin LL-37 with islet amyloid polypeptide

Valentina Armiento, Hendrik Wunderlich, Max Schneider, Aphrodite Kapurniotu (Germany)



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- P2.112 Synthesis and in vitro screening for antibacterial and antitumour potential of new lactoferricin B20-30 analogues

**Tamara Pajpanova, Dimana Dimitrova<sup>2</sup>, Tatyana Dzimbova, Viktor Sándor, Silvia Mihaylova, Ferenc Kilar (Hungary)**

- P2.114 Use of alternative curing salts in the cured ham production process. Effect on the generation of bioactive peptides

**Cindy Bande-De León, Noelia Hernández Correas, Manuel Hernández Lorca, Pablo Gómez San Miguel, Gregorio Molina Valero, Estefanía Bueno Gavilá, María Dolores Gil Martínez (Spain)**

- P2.115 Chimeric peptides and glycopeptides derived from minimal motifs of buforine and bovine lactoferricin: synthesis, characterization and evaluation of antibacterial activity

**Sofia Daza, Juan Esteban Reyes, Zuly Rivera, Javier García, Ricardo Fierro (Colombia)**

- P2.116 Development of a potent and specific peptide inhibitor for the E. coli MazF toxin

**L.R. Pizzolato-Cezar, Phelipe Vitale, Roberto K. Salinas, M. Teresa Machini (Brazil)**

- P2.117 Peptides derived from the RRWQWRMKKLG sequence: evaluation of antibacterial activity against *S. aureus* and *E. coli* strains

**Kelin Johana Cuero, Ricardo Fierro, Aura Leal, Zuly Rivera, Javier García (Colombia)**

- P2.118 Structure-activity studies of preptin and its analogues or fragments

**Lucie Mrázková, Marta Lubos, Jakub Kaminský, Jiří Jiráček, Lenka Žáková (Czech Republic)**

- P2.119 A versatile insulin analogue with extremely high potency for both insulin and insulin-like growth factor 1 receptors

**Jiří Jiráček, Irena Šelicharová, Marta Lubos (Czech Republic)**

- P2.120 Buforin-derived synthetic peptides with potential applications in medicine

**Dana Maria Copolovici, Cristian Moisa, Andreea Lupitu, Florina Bojin, Oana Gavriliuc, Mihaela Dochia, Dorina Chambre, Lucian Copolovici (Romania)**

- P2.121 Exploring antimicrobial peptides: a new frontier in cancer treatment innovation

**Lucian Copolovici, Cristian Moisa, Andreea Lupitu, Dorina Chambre, Dana Maria Copolovici (Romania)**

**POSTER SESSION 2 - 28 AND 29 AUGUST 2024**  
**PEPTIDE THERAPEUTICS AND CLINICAL APPLICATION - II**

**P2.122** High level soluble expression of human glucagon-like peptide-1 (GLP-1) analogue as a recombinant peptide in *E. coli*  
**Sushmita Sushmita, Esha Shukla, Gaurav Pandey (India)**

**P2.123** Peptide-based ionic liquids for non-healing wounds: in vivo data from a mouse model of diabetic ulcers  
**Ana Gomes<sup>1</sup>, Ricardo Ferraz<sup>1</sup>, Mariana Ferreira<sup>1</sup>, Jéssica da Silva<sup>1</sup>, Inês Teixeira<sup>1</sup>, Daniela Calheiros<sup>1</sup>, Cátia Teixeira<sup>2</sup>, Teresa Gonçalves<sup>1</sup>, Ermelindo Leal<sup>1</sup>, Paula Gameiro<sup>1</sup>, Eugénia Carvalho<sup>1</sup>, Paula Gomes<sup>1</sup> (<sup>1</sup>Portugal, <sup>2</sup>USA)**

**P2.124** Combining peptide fragments for the high-throughput generation and screening of large libraries  
**Anne Zarda, Xingwang Deng, Edward Will, Christian Heinis (Switzerland)**

**P2.125** Construction and use of medical devices for the selective removal of bacteria and endotoxins from biological fluids  
**Giovanni Cappello, Laura Cresti, Clelia Cortese, Alessandro Pini (Italy)**

**P2.126** Peptides designed based plant original cyclic scaffold facilitate rheumatoid arthritis diagnosis  
**Mingshu Zhang<sup>1</sup>, Liyan Mei<sup>1,2</sup>, Sunithi Gunasekera<sup>1</sup>, Helena Idborg<sup>1</sup>, Per-Johan Jakobsson<sup>1</sup>, Ulf Göransson<sup>1</sup> (<sup>1</sup>Sweden, <sup>2</sup>China)**

**P2.127** Highway to cell: internalization of CFTR-stabilizing peptides as potent cystic fibrosis treatment  
**Clémentine Teko-Agbo<sup>1</sup>, Quentin Seisel<sup>1</sup>, Eric Vivès<sup>1</sup>, Dean R. Madden<sup>2</sup>, Magali Taulan-Cadars<sup>1</sup>, Prisca Boisguérin<sup>1</sup> (<sup>1</sup>France, <sup>2</sup>USA)**

**P2.128** Effects of peptide labeling on fluorescence binding assays to Src homology 2 domains: the case of protein-protein interactions inhibitors of the oncogenic phosphatase SHP2  
**Sara Bobone, Chiara Fulci, Chiara Innamorati, Alessia Damiani, Claudia Storti, Paolo Calligari, Daniela Roversi, Luca Pannone, Simone Martinelli, Gianfranco Bocchinfuso, Fernando Formaggio, Cristina Peggion, Barbara Biondi, Lorenzo Stella (Italy)**

**P2.129** BrainBike peptidomimetic enables efficient transport of antibody derivatives across brain endothelium  
**Maria C. Lucana, Cristina Díaz-Perlas, Benjamí Oller-Salvial (Spain)**

**P2.130** Semisynthesis of stabilised insulin analogues  
**Rong Xu, Briony Forbes, Christoph Hagemeyer, John Karas (Australia)**

**P2.131** Peptide-based inhibitors of HVEM/LIGHT complex: theoretical and experimental approach  
**Piotr Ciura<sup>1</sup>, Marta Spodzieja<sup>1</sup>, Katarzyna Węgrzyn<sup>1</sup>, Sylwia Rodziewicz-Motowidło<sup>1</sup>, Paweł Krupa<sup>1</sup>, Pamela Smardz<sup>1</sup>, Peter Steinberger<sup>2</sup>, Adam Sieradzan<sup>1</sup> (<sup>1</sup>Poland, <sup>2</sup>Austria)**



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P2.132 Halogenated cyclic RGD-peptides with excellent affinity towards  $\alpha$ V $\beta$ 6 integrin

Beate Nachtigall, Norbert Sewald (Germany)

P2.133 Development of supramolecular anticoagulants with on-demand reversibility

Millicent Dockerill<sup>1</sup>, Daniel Ford<sup>2</sup>, Angerani Simona<sup>1</sup>, Imala Alwis<sup>2</sup>, Luke Dowman<sup>2</sup>, Ripoll Jorge<sup>3</sup>, Rhyll Smythe<sup>2</sup>, Joanna Liu<sup>2</sup>, Pedro Pereira<sup>3</sup>, Shaun Jackson<sup>2</sup>, Richard Payne<sup>2</sup>, Nicolas Winssinger<sup>1</sup> (<sup>1</sup>Switzerland, <sup>2</sup>Australia, <sup>3</sup>Portugal)

P2.134 Adalimumab and anti-adalimumab antibodies: a novel method of detection and quantification in human sera based on surface plasmon resonance technique

Andrea Di Santo, Fosca Errante, Manuela Capone, Alessandra Vultaggio<sup>4</sup>, Matteo Accinno, Lorenzo Cosmi, Francesco Annunziato, Anna Maria Papini, Paolo Rovero, Felicana Real-Fernandez

(Italy)

P2.135 Development of albumin-binding cyclic peptides to extend the circulatory half-life of therapeutic molecules

Sara Linciano, Ylenia Mazzocato, Zhanna Romanyuk, Alessandro Angelini (Italy)

P2.136 Innovative liquid chromatographic-mass spectrometric technologies to identify and purify biologically active antibody-drug conjugates

Margherita Marino<sup>1</sup>, Paolo Rovero<sup>1</sup>, Walter Mier<sup>2</sup>, Hendrik Rusche<sup>2</sup>, Anna Maria Papini<sup>1</sup> (<sup>1</sup>Italy, <sup>2</sup>Germany)

P2.137 Optimization and characterization of novel antimicrobial peptides for use in poultry production

Alana Babcock, Shaeleen Mihalynuk, Vanessa Thompson, Darcy Sutherland, Amelia Richter, Hossein Ebrahimikondori, Chenkai Li, Anat Yanai, Teagan Parkin, Inanc Birol, Fraser Hof, Caren Helbing (Canada)

P2.138 Development of cyclic peptide inhibitors of cancer-associated serine proteases

Ylenia Mazzocato, Alessandro Angelini (Italy)

P2.139 Designing peptides that bind 14-3-3 $\epsilon$  and inhibit cutaneous squamous cell carcinoma

Sandor Lovas, Seraphine Kamayirese, Laura A. Hansen (USA)

P2.140 High-throughput permeability assay for discovery of cell penetrating peptides

Hanna Stokes, Noora Azadvari, Parisa Hosseinzadeh (USA)

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- P2.142** Development of an Equipotent NaV1.1 and NaV1.7 inhibitor for the treatment of chronic visceral pain  
**David Eagles, Glenn King, Fernanda Cardoso, Markus Muttenthaler, Stuart Brierley (Australia)**
- P2.143** UL144-derived peptides as modulators of the BTLA/HVEM signaling pathway  
**Magdalena Lipińska, Piotr Ciura, Sylwia Rodziewicz-Motowidło, Anna Wardowska<sup>3</sup>, Marta Spodzieja (Poland)**
- P2.144** Study of beta-turn peptide fibrillation in hydrogels and its antimicrobial impact  
**Peiyan Yu, P.L. Rachel EE (Singapore)**
- P2.145** Peptide nanonets as antimicrobial and anti-inflammatory agents  
**P.L. Rachel EE, Dai Thien Nhan Tram, Jian Xu, Wai Shiu Fred Wong, Rajamani Lakshminarayanan (Singapore)**
- P2.146** Protein-protein interactions: unraveling the link between HTLV-1 Tax-1 oncoprotein and human drosophila discs large tumor suppressor  
**Wael El Yazidi Mouloud<sup>1</sup>, B. Maseko Sibusiso<sup>1</sup>, Brammerloo Yasmine<sup>1</sup>, Van Molle Inge<sup>1</sup>, Sogues Castrejon Adria<sup>1</sup>, Charlotte Martin<sup>1</sup>, Remaut Han<sup>1</sup>, Steven Ballet<sup>1</sup>, Volkov Oleksandr<sup>1</sup>, Twizere Jean-Claude<sup>1,2</sup> (<sup>1</sup>Belgium, <sup>2</sup>United Arab Emirates)**
- P2.147** Mapping the journey: exploring the biodistribution and sustained release of the peptide macrocycle [D-Trp]CJ-15,208 by means of peptide hydrogels  
**Ines Robberechts<sup>1</sup>, Julie Heremans<sup>1</sup>, Jane Aldrich<sup>2</sup>, Sophie Hernot<sup>1</sup>, Steven Ballet<sup>1</sup>, Charlotte Martin<sup>1</sup> (<sup>1</sup>Belgium, <sup>2</sup>USA)**
- P2.148** ESC peptides for novel therapeutics against *Pseudomonas aeruginosa* pulmonary infections: beyond antimicrobial activity  
**Maria Rosa Loffredo<sup>1</sup>, Floriana Cappiello<sup>1</sup>, Bruno Casciaro<sup>1</sup>, Giacomo Cappella<sup>1</sup>, Ivana d'Angelo<sup>1</sup>, Loretta Ferrera<sup>1</sup>, Francesca Ungaro<sup>1</sup>, Yuanpu Peter Di<sup>2</sup>, Marialuisa Mangoni<sup>1</sup> (<sup>1</sup>Italy, <sup>2</sup>USA)**
- P2.149** Developing stabilizers of the interaction between 14-3-3 and hDM2 or hDMX  
**Niamh Parkinson, Andrew J. Wilson (United Kingdom)**
- P2.150** Synthesis and antimicrobial activity of hybrid peptides as dual inhibitor of intracellular targets in ESKAPE pathogens  
**Aman Kumar Mahto, Mohammad Shahar Yar, Rikeshwer Prasad Dewangan (India)**



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- P2.151 Development of IgY antibodies against snake venom phospholipases A2 for neutralizing viper venom

**Vasiliki Moulasioti, Evgenia Fotou, Thomas Daftsiros, Ilias Strachinis, Vassilios Moussis, Dioniessios Sgouras, Vassilios Tsikaris (Greece)**

- P2.152 Disrupting the RANK-TRAF6 interface: a novel approach for bone metastases treatment

**Sofia Martins<sup>1</sup>, Cátia Rosa<sup>1</sup>, Marco Cavaco<sup>1</sup>, Rita Melo<sup>1</sup>, David Andreu<sup>2</sup>, Javier Valle<sup>2</sup>, Vera Neves<sup>1</sup>, Miguel Castanho<sup>1</sup>, João D. G. Correia<sup>1</sup> (<sup>1</sup>Portugal, <sup>2</sup>Spain)**

- P2.153 Blocking the HVEM/LIGHT complex formation – a new strategy for the treatment of autoimmune diseases

**Bartosz Bigielmajer<sup>1</sup>, Piotr Ciura<sup>1</sup>, Adam Sieradzan<sup>1</sup>, Peter Steinberger<sup>2</sup>, Anna Wardowska<sup>1</sup>, Marta Spodzieja<sup>1</sup> (<sup>1</sup>Poland, <sup>2</sup>Austria)**

- P2.154 Targeting MRGPRX2 with venom peptide P17: a therapeutic avenue for DSS-induced colitis

**Karthi Duraisamy<sup>1,2</sup>, Mukesh Kumar<sup>2</sup>, Abdullah Nawabjan<sup>2</sup>, Emily Lo<sup>2</sup>, Ming Hui Lin<sup>2</sup>, Benjamin Lefranc<sup>1</sup>, Elsa Bonnafé<sup>1</sup>, Michel Treilhou<sup>1,3</sup>, Hani El-Nezami<sup>2,3</sup>, Billy K C Chow<sup>2</sup>, Jérôme Leprince<sup>1</sup> (<sup>1</sup>France, <sup>2</sup>Hong Kong, <sup>3</sup>Finland)**

- P2.155 Dual functionality of novel hepcidin genes in the gilthead seabream (*sparus aurata*): iron regulation and antibacterial response

**John Alberto Serna Duque, Laura Garcia Navarro, Claudia Marin Parra, Alberto Cuesta Peñafiel, Maria Angeles Esteban Abad (Spain)**

- P2.156 Design and synthesis of peptide conjugates for developing anti-campylobacter jejuni IgY antibodies

**Evgenia Fotou, Vasiliki Moulasioti, Elisavet Avramidou, Vassilios Moussis, Vasileios Tsiouris, Vassilios Tsikaris (Greece)**

- P2.157 Design and synthesis of opioid-neurotensin hybrid peptidomimetics: analgesics with reduced side effect profiles

**Jolien De Neve<sup>1</sup>, Mohsen Hosseini<sup>1</sup>, Santo Previti<sup>1</sup>, Esau Vangeloven<sup>1</sup>, Dirk Tourwe<sup>1</sup>, Jean-Michel Longpré<sup>2</sup>, Philippe Sarret<sup>2</sup>, Steven Ballet<sup>1</sup> (<sup>1</sup>Belgium, <sup>2</sup>Canada)**

- P2.158 Fight-TB: design of novel vaccine antigens to fight tuberculosis

**Marina Sala, Giovanni Barra<sup>2</sup>, Maria Carmina Scala, Pietro Campiglia, Rita Berisio, Alessia Ruggiero (Italy)**

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- P2.159 Targeting glioblastoma with novel peptide-drug radiolabeled conjugate  
Evgenia Fotou, Stavroula Kyrkou, George Alexiou, Athanasios Kyritsis, Savvas Thalasselis, Penelope Bouziotis, Vassilios Moussis, Andreas Tzakos (Greece)
- P2.160 Analyzing the toxicity mechanism of molecules targeting the amyloid peptide by NMR-pharmacometabolomics  
Angelo Santoro, Michela Buonocore, Carmen Marino, Enza Napolitano, Manuela Grimaldi, Anna Maria D'Ursi (Italy)
- P2.161 Advances on the green synthesis of etelcalcetide  
Koula Achilleos, Andreas Sergides, Styliana Mirallai, Charalambos Ioannou, Vicky Nicolaïdou, Christos Petrou, Christakis Sergides, Yiannis Sarigiannis (Cyprus)
- P2.162 Designed peptides as nanomolar inhibitors of self- and cross-seeded amyloid self-assembly of alpha-synuclein  
Simon Hornung, Denise Naltsas, Dominik Vogl, Beatrice Dalla Volta, Beatrice Marcon, Juergen Bernhagen, Aphrodite Kapurniotu (Germany)
- P2.163 Synthesis and characterization of the transmembrane domains of proteins from SARS-CoV-2 to identify novel druggable coronavirus targets  
Timothy Reichart (USA)
- P2.164 Exploiting the features of short peptides to recognize specific cell surface markers  
Michela Buonocore<sup>1</sup>, Angelo Santoro<sup>1</sup>, Enza Napolitano<sup>1</sup>, Elena Ciaglia<sup>1</sup>, Matteo Santin<sup>2</sup>, Anna Maria D'Ursi<sup>1</sup> (<sup>1</sup>Italy, <sup>2</sup>United Kingdom)
- P2.166 Lasso grafted cyclic peptide inhibitors of coagulation proteases as novel therapeutic leads  
Liam Calvey<sup>1</sup>, Daniel Ford<sup>1</sup>, Sarah Fry<sup>1</sup>, Charlotte Frank<sup>1</sup>, Toby Passioura<sup>1</sup>, Jorge Rozada<sup>2</sup>, Pedro Pereira<sup>2</sup>, Hiroaki Suga<sup>3</sup>, Richard Payne<sup>1</sup> (<sup>1</sup>Australia, <sup>2</sup>Portugal, <sup>3</sup>Japan)
- P2.167 Obtaining, optimizing, and evaluating the activity of anticancer LfcinB-derived peptides on in vitro models against melanoma  
Karla Geraldine Rodriguez Mejia<sup>1</sup>, Jose David Mendoza Mendoza<sup>1</sup>, Javier García<sup>1</sup>, Zuly Rivera<sup>1</sup>, Joel Edmundo Lopez Meza<sup>2</sup>, Ricardo Fierro<sup>1</sup> (<sup>1</sup>Colombia, <sup>2</sup>Mexico)
- P2.168 Development and optimization of a counterion exchange methodology for peptides with antibacterial activity  
Amalia Giselle Lopez Sanchez, Kelin Johana Cuero, Ricardo Fierro, Zuly Rivera, Javier García (Colombia)



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P2.169 Design and characterization of a multistage peptide-based vaccine bis platform to target *Mycobacterium tuberculosis* infection

**Chiara Bellini<sup>1</sup>, Emil Vergara<sup>2</sup>, Fruzsina Bencs<sup>1</sup>, Szilvia Bősze<sup>1</sup>, Denis Krivić<sup>3</sup>, Bernadett Bacsa<sup>3</sup>, Sára Eszter Surguta<sup>1</sup>, József Tóvári<sup>1</sup>, Rajko Reljic<sup>2</sup>, Kata Horváti<sup>1</sup>** (<sup>1</sup>Hungary, <sup>2</sup>United Kingdom, <sup>3</sup>Austria)

## EMERGING PEPTIDE-BASED TECHNOLOGIES - II

P2.170 Redox, steady, go: unleashing the catalytic potential of cysteine-rich peptides

**Patrizia Janković, Toni Todorovski, Daniela Kalafatovic** (Croatia)

P2.171 Engineering mRNA display for GPCR drug discovery - De novo discovery of cyclic peptide GLPIR binders

**Esther Meron, Mads M. Nygaard, Martin R. Madsen, Ulrike Leurs, Mikkel Christensen-Dalsgaard, Morten Lundh, Joseph M. Rogers** (Denmark)

P2.172 Novel functionalized acylation reagents for Gly- and Lys-His tag acylation

**Delphine Nørgaard Møller, Mikkel Thygesen, Kasper Sørensen, Knud Jensen** (Denmark)

P2.173 KLVFF peptide functionalization of graphene oxide as suitable Aβ biomarker detection platform

**Rita Turnaturi, Giuseppina Sabatino, Giuseppe Di Natale, Giuseppe Nocito, Angela Scala, Viviana Scuderi, Simona Filice, Antonino Mazzaglia, Silvia Scalese, Giuseppe Pappalardo** (Italy)

P2.174 On-resin synthesis and modification of novel heterocyclic peptides

**Ciaran McGrory, Eddie Myers** (Ireland)

P2.175 Use of green solid phase peptide synthesis to obtain tripeptide-83

**Maria Carolina Oliveira De Arruda Brasil, Cleverson Rogerio Princival, Vinicius Kuchenbecker, Edson Katekawa, Wagner Vidal Magalhães, Eduardo Cilli** (Brazil)

P2.176 Affinity peptide extraction using small-molecule, thermoresponsive zwitterionic liquid materials

**Yen-Ho Chu, Yu-Hsin Chung** (Taiwan)

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- P2.177 WRAP-based nanoparticles for siRNA-cocktail delivery: the sound of silence

Irene Pezzati, Giulia Di Gregorio, Karidia Konate, Sandrine Faure, Pascal De Santa Barbara, Eric Vivès, Prisca Boisguérin, Sebastien Deshayes (France)

- P2.178 Optimization of pDNA delivery by WRAP cell-penetrating-peptide
- Karidia Konate, Sebastien Deshayes, Eric Vivès, Sandrine Faure, Prisca Boisguérin, Pascal De Santa Barbara (France)

- P2.179 The arduous journey to expand the genetic code for in vitro translation of non-standard peptides
- Alexis Richaud, Hiroaki Suga (Japan)

- P2.180 Application of coumarin-type chemiluminophore toward in vivo detection
- Yukie Nohara, Keiko Taniguchi, Hiromi Ii, Shun Masuda, Hiroko Kawakami, Masakatsu Matsumoto, Susumu Nakata, Toshiyuki Sakai, Taku Yoshiya (Japan)

- P2.181 Development of novel automated solid phase peptide synthesizers ensuring economic, effective, scalable and green synthesis
- Krisztina Kiss, Soma Ránk, László Molnár (Hungary)

- P2.182 Adhesion peptide-functionalized, biobased microgels precise pesticide delivery control
- Abdulkadir Yayci, Felix Jakob, Alexander Boes, Andrij Pich, Tim Sassmann (Germany)

- P2.183 Discovery and characterization of a short peptide possessing a latent warhead undergoing intramolecular cyclization in the aqueous environment
- Riku Katsuki, Taki Masumi (Japan)

- P2.184 mRNA selection of engineered ubiquitin that bind to MDM2
- Gregoire Philippe, Hiroaki Suga (Japan)

- P2.185 Separation and detection of lead ions in environmental water using peptidyl beads
- Shuhei Yoshida, Koki Yoshida, Takaaki Tsuruoka, Kenji Usui (Japan)

- P2.186 A fishing technology of glycated peptides
- Francesca Nuti<sup>1</sup>, Margherita Marino<sup>1</sup>, Patrycja Ledwon<sup>1,2</sup>, Rafal Latajka<sup>2</sup>, Annunziata Lapolla<sup>1</sup>, Michael Chorev<sup>3</sup>, Paolo Rovero<sup>1</sup>, Anna Maria Papini<sup>1</sup>  
(<sup>1</sup>Italy, <sup>2</sup>Poland, <sup>3</sup>USA)

- P2.187 Bicyclic peptides as melanocortin 3 receptor antagonists – Synthesis, biochemical profiling, and machine learning-guided optimization
- Angelika Christensen, Morten Meldal, Kilian Conde-Frieboes<sup>2</sup>, Christian A. Olsen (Denmark)



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P2.188 Fully automated, programmable, solid-phase synthesis and modifications of peptides in a chemical processing unit  
Jacopo Zero, Tristan Tyler, Leroy Cronin (United Kingdom)

P2.189 Fabrication of nanopores composed of beta-sheet peptides  
Fumihiro Kayamori, Kenji Usui, Takuto Kariya, Yoshio Hamada, Daisuke Sato, Zugui Peng, Izuru Kawamura, Ryuji Kawano (Japan)

P2.190 The multifaceted usefulness of calcium-regulated affinity molecules  
Malin Jönsson, Marit Möller, Julia Scheffel, Emma Larsson, Sara Kanje, Daniella Hamnqvist, Magnus Wolf-Watz2, Sophia Hober (Sweden)

P2.191 Peptide-based coacervates as evolutionary roads of catalytic function  
David Reis, Ana Sofia Pina Pina, Pedro Matos Pereira Pereira, Leonor Morgado Morgado (Portugal)

P2.192 New supramolecular tools to advance pharmaceutical peptide/protein biotechnology  
Severin Schneebeli, Kyle Colston, Kyle Faivre, Daijing Nie, Ke Xu, Brenson Jassim, Nils Baledamire, Zahraa Alawadly (USA)

P2.193 High-throughput untargeted peptidome profiling reveals ischemic stroke-specific proteolysis changes in plasma  
Andreas Zellner, Steffen Tiedt, Chien-Yun Lee (Germany)

P2.194 Introducing a modular all-in-one platform for rapid peptide synthesis and purification  
Robert Zitterbart, Stephan Lüdtke, Dominik Sarma (Sweden)

P2.195 Beyond peptides: unveiling the versatility of peptide synthesizers in the production of therapeutic oligonucleotides  
Robert Zitterbart, Dominik Sarma (Sweden)

P2.196 The first endocrine-disrupting chemical inhibiting a coactivator peptide's binding  
Masaki Iwamoto, Takahiro Masuya, Kota Aramaki, Ayami Matsushima (Japan)

P2.196 Efficient synthesis of three-helix bundle proteins using ligase-mediated bis trimerization of HIV-1 fusion inhibitor T20 on a dendrimer scaffold  
Xiaohong Zhang, Yiyin Xia, Chuan-Fa Liu and James P. Tam (Singapore)

P2.196 Broaden the applications of peptidyl asparaginyl ligases  
Xia Yiyin, Hongxia Li, Jiayong Liu, James P. Tam and Liu Chuan-Fa (Singapore)

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### PEPTIDE CONJUGATES (SUGAR, LIPID, NUCLEIC ACID, AND DRUG) - II

- P2.197 PYY peptides and Fc-PYY conjugates selectively agonise Y2R  
Elise Bernard<sup>1</sup>, Siobhan O'Brien<sup>1</sup>, Nicole Burmeister<sup>1</sup>, Jacqueline Naylor<sup>1</sup>, Stephanie Oldham<sup>2</sup>, Arthur Suckow<sup>2</sup>, Hamid Salari<sup>2</sup>, Maria A. Bednarek<sup>1</sup>  
(<sup>1</sup>United Kingdom, <sup>2</sup>USA)
- P2.198 Tuning immune cell biology with macrocyclic glycopeptides  
Ryoji Yoshisada, Nadia van der Meijs, Sandra van Vliet, Seino Jongkees  
(Netherlands)
- P2.199 Stability of neuropeptide Y receptor 2 agonists in biological fluids  
Ronny Müller, Eva-Maria Jülke, Annette G. Beck-Sickinger (Germany)
- P2.200 Pipeline for development of acylated peptide based CGRP receptor antagonist with extended half-life for migraine treatment  
Jens Bjelke Kristensen, Lisbeth Elster, Morten Lundh, Martin Kræmer, Ditte Jensen, Ulrike Leurs, Jens Christian Nielsen, Henrik H. Hansen, Niels Vrang, Jacob Jelsing, Matilda Degen, Kristian A. Haanes (Denmark)
- P2.201 Peptide-conjugates derived from bacterial ParE toxin: synthesis and biological studies  
José Gregorio Martín Bedoya, Naiara Maia Pereira, Reinaldo Marchetto (Brazil)
- P2.202 Identification and characterization of small molecule NOD2 activators  
Liora Wittle, Karl Ocius (USA)
- P2.203 Influence of hydrophobic moieties on the formation and stability of collagen heterotrimers  
Maša Stopinšek, Valdrin Islami, Giuseppe Antoniazzi, Philipp Bittner, Renato Zenobi, Helma Wennemers (Switzerland)
- P2.204 New leishmanicidal compounds via bioconjugation of a cell penetrating peptide and guanidine  
João Victor Marcelino de Souza, Natália Caroline Silva Costa, Luana Ribeiro dos Anjos, Maria Carolina Oliveira De Arruda Brasil, Eduardo Rene Perez Gonzales, Marcia A.S. Graminha, Eduardo Cilli (Brazil)
- P2.205 Peptides as homing devices in drug conjugates  
Waldemar Meiser<sup>1</sup>, Abiodun Ayo<sup>2</sup>, Pirjo Laakkonen<sup>2</sup>, Norbert Sewald<sup>1</sup>  
(<sup>1</sup>Germany, <sup>2</sup>Finland)
- P2.206 Targeting Zika virus reservoirs in mice brain with peptide-porphyrin conjugates  
Christine Cruz-Oliveira<sup>1</sup>, Diogo Alexandre de Mendonça<sup>1</sup>, Lorena O. Fernandes-Siqueira<sup>2</sup>, Toni Todorovski<sup>3</sup>, Ana S. Silva-Herdade<sup>1</sup>, Daniel Gavino-Leopoldino<sup>2</sup>, Beatriz Vieira-da-Silva<sup>1</sup>, Tiago Santos<sup>1</sup>, António Camarão<sup>1</sup>, Javier Valle<sup>3</sup>, Iris Cadima-Couto<sup>1</sup>, Vera Neves<sup>1</sup>, Ana Salomé Veiga<sup>1</sup>, Iranaia Assunção-Miranda<sup>2</sup>, Andrea Thompson Da Poian<sup>2</sup>, David Andreu<sup>3</sup>, Miguel Castanho<sup>1</sup> (<sup>1</sup>Portugal, <sup>2</sup>Brazil, <sup>3</sup>Spain)



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P2.207 Exploring novel peptide-based natural products as a payload for the generation of antibody and peptide-assisted targeted cancer therapy

Chan<sup>1</sup>, Mak Sarwar<sup>1</sup>, Jeanine Giarolla Vargas<sup>2</sup>, João Vitor da Silva<sup>2</sup>, Margaret Brimble<sup>1</sup>, Iman Kavianinia<sup>1</sup> (<sup>1</sup>New Zealand, <sup>2</sup>Brazil)

P2.208 Bispecific DNA-peptide conjugates for targeting cancer cells  
Pritam Ghosh, Huyen Dinh, Oliver Seitz (Germany)

P2.209 Memantine and adamantine KLVFF conjugates: synthesis, A $\beta$  interaction and effects on recognition memory in mice

Giuseppe Pappalardo, Eleonora Bocchieri, Stefania Zimbone, Maria Laura Giuffrida, Giuseppe Di Natale, Giuseppina Sabatino, Graziella Vecchio, Santina Chiechio (Italy)

P2.210 SNAr reactions with cysteine - Click-reactions for bioconjugations

Niklas Henrik Fisher, Sergei Nikitin, Morten Melda, Frederik Diness (Denmark)

P2.211 Glycopeptides as synthetic antigenic probes for MOG antibody-associated disease

Silvia Bracci<sup>1</sup>, Feliciana Real-Fernandez<sup>1</sup>, Christine Patte-Mensah<sup>2</sup>, Christian Klein<sup>2</sup>, Nicolas Collongues<sup>2</sup>, Paolo Rovero<sup>1</sup>, Anna Maria Papini<sup>1</sup> (<sup>1</sup>Italy, <sup>2</sup>France)

P2.212 Designing self-assembling lipopeptide for tissue regeneration

Dhriti Santosh Shenoy<sup>1</sup>, Lauren Roberts<sup>2</sup>, Michela Pesenti<sup>1</sup>, Stefania Crespi<sup>1</sup>, Sara Pellegrino<sup>1</sup> (<sup>1</sup>Italy, <sup>2</sup>France)

P2.213 Optimizing biological activity of lactoferricin-derived peptides: conjugation with non-peptidic motifs as a strategy

Daniel Castellar, Zuly Rivera, Javier García, Ricardo Fierro (Colombia)

P2.215 Introducing novel titanium binding peptides; effect of the sequence of amino acids on their adsorption energy to TiO<sub>2</sub>

Roja Rahmani, Alexander P Lyubartsev (Sweden)

P2.216 Peptides conjugated to sugars as therapeutics for ebola and cancer disease

Fayna Garcia-Martin, Oscar Suarez, J. Héctor Busto, Jesús Manuel Peregrina, Francisco Corzana (Spain)

P2.217 Synthetic strategies to prepare novel bioactive lysine and peptide conjugates with triazolium derivatives

Claudia Bello<sup>1</sup>, Michał Jewginski<sup>2</sup>, Patrycja Ledwon<sup>1,2</sup>, Francesca Nuti<sup>1</sup>, Paolo Rovero<sup>1</sup>, Rafal Latajka<sup>2</sup>, Anna Maria Papini<sup>1</sup> (<sup>1</sup>Italy, <sup>2</sup>Poland)

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P2.218 Vancomycin polycationic peptide conjugate with improved antimicrobial activity and pharmacokinetics

Eric Mühlberg, Sabrina Wohlfart, Tyra Christian, Florian Umstätter, Tobias Hertlein, Knut Ohlsen, Stefan Zimmermann, Walter Mier, Philipp Uhl (Germany)

P2.219 Obtaining peptide-resorcinarene conjugates by Michael thiol-maleimide addition reaction and evaluation of their antibacterial potential

Victor Alfonso Niño Ramirez, Mauricio Maldonado, Zuly Rivera, Javier García (Colombia)

P2.220 Application of thiosemicarbazone-peptide conjugates as inhibitor of NDM-1  
Michał Jewgiński, Waldemar Goldeman, Rafal Latajka (Poland)

## PEPTIDE PRODRUGS, TARGETING, DELIVERY AND UPTAKE - II

P2.221 RGD peptide naphthalimide conjugates for drug delivery and imaging therapy

Laura Ramirez Lazaro<sup>1</sup>, Isabel Abánades Lázaro<sup>2</sup>, Harlei Martin<sup>1</sup>, Thorfinnur Gunnlaugsson<sup>1</sup>, Eoin Scanlan<sup>1</sup> (<sup>1</sup>Ireland, <sup>2</sup>Spain)

P2.222 Influence of aza-glycine substitution on the internalization of penetratin  
Karima Tarchoun<sup>1</sup>, Dóra Soltész<sup>1</sup>, Viktor Farkas<sup>1</sup>, Ho-Jin Lee<sup>1</sup>, Ildikó Szabó<sup>2</sup>, Zoltán Bánóczi<sup>1</sup> (<sup>1</sup>Hungary, <sup>2</sup>USA)

P2.223 Molecular design for cytosolic delivery of antibodies using an intracellular delivery peptide

Yoshimasa Kawaguchi, Shiroh Futaki (Japan)

P2.224 Synthesis and characterization of nucleolin receptor recognizing F3 peptide fragment-drug conjugates

Bettina Basa, Diána Vári-Mező, Kata Nóna Enyedi, József Tóvári, Szilvia Bősze, Krisztina Kiss, Gábor Mező (Hungary)

P2.225 Leuprorelin peptide drug complexes with permeability enhancers to increase bioavailability

Deborah Shalev, Adel Penhasi (Israel)

P2.226 Design and synthesis of peptide binders for methicillin resistance *Staphylococcus aureus* bacteria detection

Yaara Zandany (Israel)

P2.227 Exploring nasal application of peptides for the modulation of food intake

Eva-Maria Jülke, Benginur Özbay, Kerstin Immig, Karin Mörl, Ingo Bechmann, Annette G. Beck-Sickinger (Germany)



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P2.228 Phosphopeptides as improved bone targeting agents

Jamous Mazen, Barbara Roether, Walter Mier, Haberkorn Uwe (Germany)

P2.229 Novel cyclotide POP modulator as a research tool for synucleinopathy therapeutics

Maria Ramón, Christian W. Gruber, Roland Hellinger (Austria)

P2.230 Activatable multivalent cell-penetrating peptide conjugates for selective drug delivery

Nicolas Lindholm, Moritz List, Maik Tretbar, Annette G. Beck-Sickinger (Germany)

P2.231 Site-specific conjugation of cell-penetrating peptides: a strategy to ameliorate antibody therapy

Niklas van den Bergh, Verena Merke, Sabrina Wohlfart, Philipp Uhl, Walter Mier (Germany)

P2.232 Novel prodrugs of HIV-1 protease inhibitor with an N-amidinoglycine moiety

Yoshio Hamada, Kenji Usui (Japan)

P2.233 Exploring the versatile nature of dehydropeptides self-assembly: cellular interaction studies

André Carvalho<sup>1</sup>, Meihui Yi<sup>2</sup>, Weiyi Tan<sup>2</sup>, José A. Martins<sup>1</sup>, Paula M. Ferreira<sup>1</sup>, Bing Xu<sup>2</sup> (<sup>1</sup>Portugal, <sup>2</sup>USA)

P2.234 Peroxisome targeting with fluorescent cell penetrating peptides

Christine Krofta, Sven Thoms, Norbert Sewald (Germany)

P2.235 Surface peptide-modified black phosphorus nanosheets: a novel multifunctional nanoadjuvant

Tianyang Wang, Wen-Hao Li, Xuefeng Yu, Yan-Mei Li (China)

P2.236 Non-ionic surfactants for the solubilisation of lipopeptides and enhancement of their biological activity

Kata Horváti, Ágnes Ábrahám, Gergő Gyulai, Judith Mihály, Andrea Horváth, Orsolya Dobay, Éva Kiss (Hungary)

P2.238 Nanobody CDR3 loop peptidomimetic improves binding on living *Acinetobacter baumannii*

Kevin Van Holsbeeck, Breine Anke, Charlotte Martin, Mannes Morgane, Pardon Els, Steyaert Jan, Remaut Han, Van der Henst Charles, Steven Ballet (Belgium)

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P2.239 High throughput analysis of molecule accumulation in mammalian cells  
Sobika Bhandari, George Ongwael (USA)

P2.240 Electrostatically modulated peptide-based drug delivery against resistant cancer  
Yvonne Christian, Vibin Ramakrishnan (India)

P2.241 Novel viral peptide-based tandemized carriers: structure prediction and in vitro evaluation  
Katalin Uray<sup>1</sup>, Martin Krátký<sup>2</sup>, Jiří Horčic<sup>2</sup>, Levente Lakatos<sup>1</sup>, Előd Méhes<sup>1</sup>, Bálint Jezsó<sup>1</sup>, Jarmila Vinšová<sup>2</sup>, Szilvia Bősze<sup>1</sup> (<sup>1</sup>Hungary, <sup>2</sup>Czech Republic)

P2.242 Small additive molecules to enhance the effective accessibility of delivered nucleic acid by cell-penetrating peptide  
Geeta Arya, Ly Porosk, Chigozie Nkwocha, Margus Pooga (Estonia)

P2.243 Tailoring theranostics to target gliomas  
Andreas Tzakos, Stavroula Kyrkou, Vasileios-Panagiotis Bistas, Murugan Chinnarasua, Vassilios Moussis, George Alexiou (Greece)

P2.244 Fluorogenic cell surface labelling using fluorescent molecular rotor-labelled peptide-boronic acid conjugates as viscosity sensors  
Alen Koçak, Pritam Ghosh, Oliver Seitz (Germany)

P2.245 Mechanism of antibacterial action of nisin Z-loaded solid lipid nanoparticles  
Poonam Ratrey, Shayon Bhattacharya, Damien Thompson, Sarah Hudson (Ireland)

P2.246 New computational insight into the mechanism of oral peptide drug formulations  
Kyle Colston, Severin Schneebeli (USA)

## PEPTIDE MIMETICS, PEPTOIDS AND PEPTIDE NUCLEIC ACIDS - II

P2.247 Synthesis and application of  $\beta$ -amino  $\gamma$ -lactams in the study of interleukin 1 receptor modulating peptides  
Charity D. Yongo-Luwawa, Zoé Villeneuve, William Lubell, Sylvain Chemto (Canada)

P2.248 Targeting transcription factor – coactivator interactions using binding motif mimetics  
Zsofia Hegedus, Mark Tresztian, Vencel László Petrovicz, Istvan Pasztuhov, Tamás Martinek (Hungary)

P2.249 Aza-tryptophan versus aza-isotryptophan in peptide chemistry  
Xiaozheng Wei, William Lubell (Canada)



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P2.250 Development of cyclopropane-based foldamers mimicking protein secondary structures

**Makoto Nagata, Nanase Ochiai, Megumi Watanabe, Koh Takeuchi, Satoshi Shuto, Mizuki Watanabe (Japan)**

P2.252 Light-fueled peptidic foldamers: from chemical evolution to protein surface mapping

**Eva Bartus, Attila Tököli, Edit Weber, Péter Péter Ábrányi-Balogh, Ferenc Bogár, Dóra Karancsiné Menyhárd, Márton Gadanecz, András Perczel, György Keserű, Tamás Martinek (Hungary)**

P2.253 Gq protein peptidomimetics as allosteric modulators of the ghrelin receptor

**Mannes Morgane<sup>1</sup>, Esaü Vangeloven<sup>1</sup>, Charlotte Martin<sup>1</sup>, Marjorie Damian<sup>2</sup>, Sonia Cantel<sup>2</sup>, Jean-Alain Fehrentz<sup>2</sup>, Julie Kniazeff<sup>2</sup>, Jean-Louis Baneres<sup>2</sup>, Steven Ballet<sup>1</sup> (<sup>1</sup>Belgium; <sup>2</sup>France)**

P2.255 A reductive amination approach for the synthesis of catalytic peptide foldamers

**Matteo Pollastrini, Alessandro Moretto (Italy)**

P2.256 Amide-to-alkene substitution for overcoming intramolecular acyl transfer challenges in peptides

**Tetsuo Narumi, Daichi Toyama, Chihiro Iio, Kohei Sato, Nobuyuki Mase, Kentaro Takayama (Japan)**

P2.257 PNA-based probes for DARPin-mediated pretargeting of malignant tumors

**Kristina Westerlund, Maryam Oroujeni, Alexander van Deventer, Zhengyue Wang, Jacob Clinton, Anna Orlova, Vladimir Tolmachev, Amelie Eriksson Karlström (Sweden)**

P2.258 Rational design of novel peptidomimetics against influenza a virus: biological and computational studies

**Maria Carmina Scala, Mariangela Agamennone, Magda Marchetti, Fabiana Superti, Pietro Campiglia, Marina Sala (Italy)**

P2.259 Development of peptide nucleic acids-based molecules targeting non-canonical nucleic acids structures

**Matilde Rossi, Paola Gratteri, Anna Maria Papini, Carla Bazzicalupi (Italy)**

P2.260 Macrocyclic mimetics of suppressor of cytokine signaling 1 (SOCS1)

**Alessia Cugudda, Sara La Manna, Daniele Florio, Daniela Marasco (Italy)**

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P2.261 Optimization of a promising inhibitor of TMPRSS2 as a an early treatment option againts COVID-19

Alice Gravel-Trudeau, Antoine Désilets, Pierre-Luc Boudreault, Richard Leduc, Gary R. Whittaker, Hector Aguilar-Carreno, Francois Jean (Canada)

P2.262 Modulation of the antagonistic properties of an insulin mimetic peptide by disulfide bridge modifications

Marta Lubos, Jan Pícha, Irena Selicharová, Jiří Žák, Lenka Žáková, Jiří Jiráček (Czech Republic)

P2.263 Combinatorial libraries of bipodal insulin receptor binders

Irena Selicharová, Marta Lubos, Jiří Jiráček (Czech Republic)

P2.264 Designed EVH1 inhibitors derived from synthetic diproline mimetics rigidified in a polyproline type II helix conformation

Felix Bluem, H.-G. Schmalz (Germany)

P2.265 Optimizing the automated synthesis of peptide nucleic acids

Luísa Aguiar, Robert Zitterbart, Manoj Kumar Muthyalu, Stephan Lüdtke (Sweden)

## PROTEOMICS AND PEPTIDE BIOINFORMATICS - II

P2.266 Artificial intelligence-driven design of  $\beta$ -secretase 1 inhibitors

Marko Njirjak, Daniela Kalafatovic, Goran Mauša (Croatia)

P2.267 Application of deep learning imputation to peptide bioactivity and property prediction

Samar Mahmoud<sup>1</sup>, Himani Tandon, Matthew Segall<sup>1</sup>, Ruibo Zhang<sup>2</sup>, Robert Thompson<sup>1</sup>, Jeffrey Schubert<sup>2</sup>, Dipannita Kalyani<sup>2</sup>, Dan Sindhikara<sup>2</sup>  
(<sup>1</sup>United Kingdom, <sup>2</sup>USA)

P2.268 PICKAPEP – Visualization and calculation of peptidomimetics made easy

Vanessa Erckes, Clemens Isert, Mattis Hilleke, Christian Steuer  
(Switzerland)

P2.270 Mapping peptide interactomes using an organic energy transfer photocatalyst

Leander Crocker, Judith Muechler, Jan Vincent Arafiles, Christian Stieger, Christian P.R. Hackenberger (Germany)

P2.271 Interpretable machine learning-based models for the rational design of antibacterial peptides against *Escherichia coli* and *Staphylococcus aureus*

Remmer Salas, Portia Mahal Sabido, Ricky Nellas (Philippines)



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P2.274 Metalloproteins investigation for the development of new inhibitors  
Matteo Orlandi, Marina Macchiagodena, Piero Procacci, Fabrizio Carta, Claudio T. Supuran, Marco Pagliai (Italy)

P2.275 Deep learning for peptide classification: from data to effective models  
Goran Mauša (Croatia)

P2.276 Scoring the synthesizability of any novel non-natural amino acid  
Gökçe Geylan, Mikhail Kabeshov, Samuel Genheden, Thierry Kogej, Ola Engkvist, Leonardo De Maria (Sweden)

## STRUCTURAL STUDIES OF PEPTIDES - II

P2.277 Chemoenzymatic synthesis of protein pseudo-[2]rotaxane  
Elodie Soehnlen, Vladimir Torbeev, Judit Osz, Natacha Rochel-Guiberteau (France)

P2.278 Characterization of beta-turns in peptides by electronic circular dichroism spectroscopy: a joint theoretical and experimental study  
Sébastien Menant, Vincent Tognetti, Mattia Migliore, Andrea Bonvicini, Laurent Joubert, Laure Guilhaudis, Hassan Oulyadi, Isabelle Milazzo (France)

P2.279 Mechanistic and structural insights into the inhibition of FXIIIa: design of novel anticoagulants  
Ivan P. Bogdanov<sup>1</sup>, Arijit Biswas<sup>2</sup>, Diana Imhof<sup>2</sup>, Nikolay T. Tzvetkov<sup>1</sup> (<sup>1</sup>Bulgaria, <sup>2</sup>Germany)

P2.280 Can large scale structural modeling be applied to peptide screening and deorphanization?  
Pierre Tufféry, Shaima Hashem, Jérôme Leprince (France)

P2.281 Impact of backbone N-amination on parallel  $\beta$ -sheet stability  
Syrah Starnes, Juan Del Valle (USA)

P2.282 Amyloid formation control: how GLP-1 analog polypeptide hormones form reversible functional amyloids  
András Perczel, Horváth Dániel, Dúrvanger Zsolt, Szabolcs Szániszló, Viktor Farkas (Hungary)

P2.283 How do disulfide, thioacetal and lanthionine-bridges influence the conformations of macrocyclic peptides?  
Billy Darling<sup>1</sup>, Lianne Wieske<sup>2</sup>, Declan Cook<sup>1</sup>, Abil Aliev<sup>1</sup>, Laurent Caron<sup>1</sup>, Emily Humphrys<sup>1</sup>, Angelo Mendes Pinto De Figueiredo<sup>2</sup>, Flemming Hansen<sup>1</sup>, Mate Erdelyi<sup>2</sup>, Alethea Tabor<sup>1</sup> (<sup>1</sup>United Kingdom, <sup>2</sup>Sweden)

## POSTER SESSION 2 - 28 AND 29 AUGUST 2024

**2.284** Characterizing bradykinin-derived membrane-sensing peptides through molecular dynamics

Carlo Guardiani, Alberto Giacomello (Italy)

**P2.285** Effect of antifreeze activity and lipid interaction of tryptophan scanning of 11-residue lysine homopeptide

Roberto Rojas<sup>1</sup>, Mónica Aróstica<sup>1</sup>, Constanza Cardenas<sup>1</sup>, Fernando Albericio<sup>2</sup>, Felipe Aguilar<sup>1</sup>, Fanny Guzman<sup>1</sup> (<sup>1</sup>Chile, <sup>2</sup>Spain)

**P2.286** Structural ensemble of peptide-induced membrane poration by heterogeneous magainin peptides

Bing Zan<sup>1,2</sup>, Jakob Ulmschneider-Mayer<sup>2</sup>, Martin Ulmschneider<sup>1</sup> (<sup>1</sup>United Kingdom, <sup>2</sup>China)

**P2.287** In-silico application of structure prediction to peptide mechanism of action

Isaac Tucker<sup>1,2</sup>, Glenn King<sup>1</sup>, Natalie Saez<sup>1</sup>, Evelyne Deplazes<sup>1</sup>, Lachlan Rash<sup>1</sup>, Ben Cristofori-Armstrong<sup>1</sup>, Elena Budusan<sup>1</sup> (<sup>1</sup>Australia, <sup>2</sup>USA)

**P2.288** Helical peptides bearing dual triplet-spin/fluorescent labels enable the first parallel distance measurements by electron spin resonance and Förster resonance energy transfer

Marta De Zotti<sup>1</sup>, Arnau Bertran<sup>2</sup>, Chiara Dalla Torre<sup>1</sup>, Jack Sawyer<sup>2</sup>, Derren Heyes<sup>2</sup>, Sam Hay<sup>2</sup>, Christiane Timmel<sup>2</sup>, Marilena Di Valentin<sup>1</sup>, Alice Bowen<sup>2</sup> (<sup>1</sup>Italy, <sup>2</sup>United Kingdom)

**P2.289** Antiparallel  $\beta$ -double helices from  $\alpha,\gamma$ -hybrid peptides

Puneeth Kumar D R<sup>1</sup>, Gijo George<sup>2</sup>, Uddipan Bhattacharya<sup>2</sup>, Gopi Hosahudya N.<sup>2</sup> (<sup>1</sup>Germany, <sup>2</sup>India)

**P2.290** Aromatic-aromatic interactions as an intrinsic modulator of amyloid formation

Artem Pavlov, Beate Koksch (Germany)

**P2.291** Structure-activity relationship study of  $\beta$ -hairpin peptides

Aparna Palakkurussi Rathessan, Suvrat Chowdhary, Johannes Kupke, Marcus Fulde, Beate Koksch (Germany)

**P2.292** Novel insights from point mutations of the most amyloidogenic region of Nucleophosmin 1

Daniele Florio, Alessia Cugudda, Sara La Manna, Daniela Marasco (Italy)

**P2.293** Mechanistic studies of the lipid bilayer interactions of the cyclic lipodepsipeptide tolaasin

Benjámin Kovács<sup>1</sup>, Tünde Juhász<sup>1</sup>, Niels Geudens<sup>2</sup>, Jose Martins<sup>2</sup>, Tamás Beke-Somfai<sup>1</sup> (<sup>1</sup>Hungary, <sup>2</sup>Belgium)



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P2.294 Molecular dynamics insights into AT1 receptor variants: towards the design of potent biased agonists

**Malihe Hassanzadeh, Audrey Collette, Brian Holleran, Stéphane Laporte, Richard Leduc, Pierre-Luc Boudreault (Canada)**

P2.295 Structural analysis of a peptide-based simplified model reproducing SARS-CoV-2 S RBD/ACE2 binding site

**Michela Buonocore, Rosanna Lucignano, Angelo Santoro, Anna Maria D'Ursi, Delia Picone (Italy)**

P2.296 Planar aggregation of the influenza viral fusion peptide alters membrane structure and promotes poration

**Richard Pastor, Amy Rice, Paul Blank, Joshua Zimmerberg (USA)**

P2.297 Elucidating structural determinants of Hexokinase interaction with the VDAC mitochondrial channel using an N-terminal minireporter peptide

**Michael Timme<sup>1</sup>, Sebastian Bieker<sup>1</sup>, Nils Woge<sup>1</sup>, Dina Hassan<sup>1</sup>, Chelsea Brown<sup>2</sup>, Ladislav Bartos<sup>3</sup>, Robert Vácha<sup>3</sup>, Siewert J. Marrink<sup>2</sup>, Joost C. M. Holthuis<sup>1</sup>, Manuel N. Melo<sup>4</sup> (<sup>1</sup>Germany, <sup>2</sup>Netherlands, <sup>3</sup>Czech Republic, <sup>4</sup>Portugal)**

P2.298 Unlocking HIV's secrets: synthesis of histone H3K36Me3 to investigate LEDGF protein binding to modified nucleosomes using cryo-electron microscopy

**Ramesh Chingle, Samanthreddy Kedika, Tao Jing, Dmitry Lyumkis, Terrence Burke Jr. (USA)**

P2.299 Structural studies of chameleonic cyclic peptides with drug delivery applications

**K. Johan Rosengren (Australia)**

P2.300 Elucidating the role of phosphoserines in Tau protein by combined computational and synthetic methods

**Martina Tuberti, Fintan Kelleher, Gemma K. Kinsella (Ireland)**

P2.301 Theoretical and biological studies of oxytocin containing conformationally fixed analogue of Tyrosine Tic(OH) (7-Tetrahydroisoquinoline carboxylic acid)

**Michael Lebl, Jakub Kaminský, Jiří Jiráček (Czech Republic)**

P2.302 Application <sup>19</sup>F and paramagnetic resonance enhanced NMR measurements for structural analysis of the equine herpesvirus in DPC micelle

**Natalia Karska, Sylwia Rodziewicz-Motowidło, Igor Zhukov (Poland)**

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### PEPTIDE MATERIALS - II

P2.303 *Staphylococcus aureus* functional amyloids catalyze degradation of  $\beta$ -lactam antibiotics

**Elad Arad<sup>1</sup>, Kasper B. Pedersen<sup>2</sup>, Orit Malka<sup>1</sup>, Sisira Mambram Kunnath<sup>1</sup>, Nirmod Golan<sup>1</sup>, Polina Aibinder<sup>1</sup>, Birgit Schiøtt<sup>2</sup>, Maytal Landau<sup>3</sup>, Raz Jelinek<sup>1</sup>** (<sup>1</sup>Israel, <sup>2</sup>Denmark, <sup>3</sup>Germany)

P2.304 Tailor-made catalytic peptides for antibiotics degradation  
**Sisira Mambram Kunnath, Elad Arad, Raz Jelinek (Israel)**

P2.305 Can we improve coarse-grained simulations of peptide self-assembly and aggregation by cluster analysis inputs?

**Marko Babić, Daniela Kalafatovic (Croatia)**

P2.306 Design and exploration of tubular assemblies of hybrid cyclic peptides  
**Souvik Panda Mahapatra (India)**

P2.307 Antimicrobial and cell-adhesive peptide-based hydrogels for biomedical applications

**Nabila Mehwish, Patricia López-Gómez, Maria Pau Ginebra, Carles Mas Moruno (Spain)**

P2.308 Light-mediated oxidation of cysteine derivatives for crosslinking proteinaceous materials

**Matthew Murray, Eddie Myers (Ireland)**

P2.309 De novo design of collagen-like peptides for cell-based technologies

**Maryana Baran<sup>1</sup>, Eileen Gentleman<sup>1,2</sup>, Maxim Ryadnov<sup>1</sup>** (<sup>1</sup>United Kingdom, <sup>2</sup>Switzerland)

P2.310 Self-assembling dipeptides as vehicles for the delivery of peptide therapeutics

**Anastassia Rissanou, Anna Mitraki, Peter Divanach, Eirini Fanouraki, Vagelis Harmandaris (Greece)**

P2.311 Unveiling the potential of a novel synthetic peptide DP1 and its nanoconjugates for biomedical applications

**Avneet Saini (India)**

P2.312 A biomolecular learning system from complex peptide networks

**Kübra Kaygisiz, Maithreyi Ramakrishnan, Rein V. Ulijn (USA)**



25 - 29 August 2024  
Florence, Italy

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## POSTER SESSION 2 - 28 AND 29 AUGUST 2024

P2.313 Can RADA16-I hybrids be utilized for culturing cells participating in skeletal muscle reconstruction?

Maria Dzierżyńska, Martyna Fularczyk, Justyna Sawicka, Zuzanna Michalska, Anna Ostaszewska, Kacper Bielak, Izabela Kulig, Agnieszka Morawska, Justyna Morytz, Edyta Brzóska-Wójtowicz, Karolina Archacka, Iwona Grabowska-Kowalik, Małgorzata Zimowska-Wypych, Maria Ciemerych-Litwinienko, Sylwia Rodziewicz-Motowidło (Poland)

P2.314 Self-assembly of histidine-containing peptides and applications

Chrysanthi Pinelopi Apostolidou, Chrysoula Kokotidou, Varvara Platania, Vasilis Nikolaou, Georgios Landrou, Emmanouil Nikoloudakis, Georgios Charalambidis, Maria Chatzinikolaidou, Athanassios G. Coutssolelos, Anna Mitraki (Greece)

P2.315 Tuning the assembly of proteins and peptides in lipid bilayers

Sebastian Jimenez Millan, Ivan Sasselli, Armando Maestro (Spain)

P2.316 Search for cell adhesion beta-sheet peptides using molecular descriptors and statistical analysis of data from thioflavin T assay and CD measurements

Taisei Terao, Tomohiro Umetani, Akira Takekawa, Fumihiro Kayamori, Kenji Usui (Japan)

P2.317 Design, synthesis, and microscopic analysis of amphiphilic peptide biomaterials

Bapan Pramanik (United Kingdom)

P2.318 Design of fluorinated peptide-based hydrogels for sustained drug release

Aurélie Honfroy<sup>1,2</sup>, Jolien Bertouille<sup>1</sup>, Thibault Cauwenbergh<sup>1</sup>, Ana-Maria Turea<sup>1</sup>, Nathalie Lensen<sup>2</sup>, Sophie Hernot<sup>1</sup>, Grégory Chaume<sup>2</sup>, Thierry Brigaud<sup>2</sup>, Steven Ballet<sup>1</sup>, Charlotte Martin<sup>1</sup> (<sup>1</sup>Belgium, <sup>2</sup>France)

P2.319 Single glycans shape viscoelastic and biological properties of a mucin-inspired peptide hydrogel

Jonas Proksch, Marlene Dal Colle, Frederick Heinz, Robert F. Schmidt, Jacqueline Gottwald, Stephan Block, Martina Delbianco, Bettina G. Keller, Michael Gradzielski, Ulrike Alexiev, Beate Koksch (Germany)

P2.320 Self-assembly and antimicrobial activity of lipopeptides containing lysine-rich tripeptides

Ian Hamley, Valeria Castelletto, Anindya Sundar Adak (United Kingdom)

## ACKNOWLEDGEMENTS

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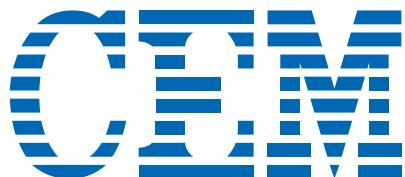
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