PROGRAMME

MONDAY, 5 FEBRUARY

09.00-11.00h Registration
10.00-10.30h Welcome coffee
10.30-10.45h OPENING
Ignacio Alfonso, IQAC-CSIC, Barcelona
David Andreu, Pompeu Fabra University, Barcelona

10.45-13.00h SESSION I
Co-chairs: Maria José Camarasa and Ernest Giralt

10.45-11.30h PLENARY LECTURE
Mechanistic and cellular insight into medically-relevant glycosidases: conformations, itineraries and destinations
Gideon J. Davies, Department of Chemistry, University of York, UK

11.30-12.00h INVITED LECTURE
The total synthesis of proteins by solid phase ligation
Oleg Melnyk, CNRS & Pasteur Institute, University of Lille, France

12.00-12.30h ORAL COMMUNICATIONS
GEQB PhD Thesis Award
OC1- Jessica Rodríguez: Specific recognition and modification of DNA using synthetic systems
OC2- Jimena Fernández-Carneado: Quality by design in industrial manufacturing of long peptides (20-50 AA) by SPPS

12.30-13.00h INVITED LECTURE
Glycochemistry and molecular recognition: rational and combinatorial approaches
Juan Luis Asensio, IQOG-CSIC, Madrid, Spain

13.00-14.30h Lunch break

14.30-16.00h SESSION II
Co-chairs: Miriam Royo and Óscar Millet

FLASH COMMUNICATIONS
FC1- Alexandra Bertrán: Design and synthesis of selective MMP-9 inhibitors for the treatment of epilepsy.
FC2- David Bouzada: Synthesis and study of the viral gp23.1 hexamer as a scaffold for nanotechnological applications
FC3- Antonio Di Maio: Novel multivalent structures to functionalize proteins and surfaces for lectin interaction studies
FC4- Jacobo Gómez González: Peptide-directed self-assembly of DNA-binding helicates
FC5- Salvador Guardiola: Toward new inhibitors of the EGF-EGFR interaction: design of metabolically stable cyclic peptides
FC6- Carles Mas-Moruno: Peptidic-based platforms and peptidomimetics as biomolecular tools to harness cell behavior on biomaterials
FC7- João Medeiros-Silva: Insight to the nisin-lipid II pore in native membranes with atomic resolution – a Solid-state NMR study
FC8- Manuel Montalbán-López: The enterocin AS-48, prototype of head-to-tail cyclized bacterial antimicrobial peptides
FC9- Filipa D. Oliveira: Exosomes as drug delivery systems in metastatic breast cancer
FC10- Valle Palomo: In situ-click chemistry: an ideal target based approach for the generation of multitarget drugs
FC11- Clara Pérez-Peinado: Mechanisms of bacterial membrane permeabilization of snake venom-derived peptides crotalicidin (Ctn) and Ctn[15-34]
FC12- José J. Reina: Glycosyl aldehydes as new scaffolds in the synthesis of glycoconjugates for protein selective recognition and cell targeting
FC13- Fernanda Rodríguez-Otormin: Design of polymer therapeutics as combination therapy for the treatment of triple negative breast cancer
FC14- Pablo Tovillas: β2-Glycosyl amino acids from chiral isoserine sulfamidates
FC15- Mónica Varese: Beyond homochirality in peptide sequences
FC16- Philippe Vassault: A flexible SPE/LC/MS/MS platform for simultaneous quantification of multiple amyloid peptides in cerebrospinal fluid
10.45-13.00h  
SESSION V  
Co-chairs: Sonsoles Martín-Santamaría and Nuno Santos

08.30-10.15h  
SESSON IV  
Chair: Paula Gomes

08.30-09.15h  
PLENARY LECTURE  
Synthetic proteins: DNA and carbohydrate mediated assembly of artificial proteins and nanoassemblies  
Knud J. Jensen, Department of Chemistry, University of Copenhagen, Denmark

09.15-09.45h  
INVITED LECTURE  
Stem cell-niche interactions in the adult mouse brain  
Isabel Fariñas, Departamento de Biología Celular and CIBERNED, Universidad de Valencia, Spain

09.45-10.15h  
INVITED LECTURE  
Peptide-conjugated nanomaterials for biomedical applications  
Lino Silva Ferreira, University of Coimbra, Portugal

10.15-10.45h  
Coffee-break

10.45-12.00h  
SESSION III  
Co-chairs: Meritxell Teixidó and José Luis Mascareñas

10.45-11.15h  
INVITED LECTURE  
Labelling peptides with activatable fluorophores for enhanced live cell imaging  
Marc Vendrell, University of Edinburgh, UK

11.15-12.00h  
ORAL COMMUNICATIONS  
OC3- Albert Escobedo: A stabilizing role of side-chain to main-chain hydrogen bonds in polyQ Helices  
OC4- Roberto Quesada: Anion transport and supramolecular medicinal chemistry  
OC5- Xavier Vila-Farrés: Human microbiome inspired new antimicrobial peptides

16.00-16.30h  
Coffee-break

16.30-18.30h  
SESSION III  
Co-chairs: Meritxell Teixidó and José Luis Mascareñas

16.30-17.00h  
INVITED LECTURE  
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17.45-18.30h  
PLENARY LECTURE  
Synthesis, biological activity and therapeutic potential of azapeptide allosteric CD36 modulators of macrophage-driven inflammation  
William Lubell, University of Montreal, Canada

18.30-19.15h  
EPI & GEQB business (Marie Curie and Charles Darwin rooms)
OC7- Sira Defaus: Expanding the potential and multivalency of the B2T synthetic peptide vaccine against foot-and-mouth disease virus

OC8- Gonzalo Jiménez-Oses: Accelerating discovery in chemical biology by computation

12.00-12.30h INVITED LECTURE
mRNA fate is controlled by highly regulated RNA-binding proteins
Irene Díaz-Moreno, Instituto de Investigaciones Químicas (IIQ), ciccCartuja, Universidad de Sevilla – CSIC, Sevilla, Spain

12.30-13.00h ORAL COMMUNICATIONS
OC9- Vera Neves: Novel peptide delivery systems for blood brain barrier translocation with a focus on Alzheimer’s disease
OC10-Stefano Tomassi: Drifting in the N-terminal Region of CXCL12: from where we started to where we arrived

13.00-14.30h Lunch break

14.30-16.00h SESSION VI
Co-chairs: Maria Jesús Vicent and Miguel Castanho

14.30-15.00h INVITED LECTURE
Antimicrobial, anticancer and internalization properties of cyclic gomesin: a membrane link
Sónia Henriques, Institute of Molecular Bioscience, University of Queensland, Australia

15.00-15.30h INVITED LECTURE
Challenging diagnostic multiplexation threats through nanobiotechnological approaches
Pilar Marco, IQAC-CSIC, Barcelona, Spain

15.30-16.00h ORAL COMMUNICATIONS
OC11- Ignacio Delso: New inhibitors of human O-GlcNAc transferase: spectroscopic, computational and biological studies

OC12-Susana Dias: Novel membrane-targeting antibacterial peptides derived from viral capsid proteins

16.00-16.30h Coffee-break

16.30-18.15h SESSION VII
Co-chairs: May Morris and Francisco Corzana

16.30-17.15h ORAL COMMUNICATIONS
OC13- Ruth Pérez-Fernández: Protein-directed dynamic libraries: insights into real-time chemical processes
OC14-Gemma Triola: Quantitative profiling of protein S-acylation
OC15-Daniel Pulido: Design of a true bivalent ligand with picomolar binding affinity for a G protein-coupled receptor (GPCR) homodimer

17.15-17.45h INVITED LECTURE
The use of cell-penetrating peptides to study the structure and function of G protein-coupled receptor oligomers
Leonardo Pardo, Autonomous University of Barcelona, Spain

17.45-18.15h INVITED LECTURE
Artificial mimetic systems for molecular recognition in bioengineering
Cecilia Roque, New University of Lisbon, Portugal

20.00-22.00h Gala dinner
Restaurant Marítim
Moll d’Espanya, 4 - Barcelona

All ticket holders welcome.
Extra dinner tickets can be bought from the Meeting secretariat at the venue on Monday, 5 February.
A transportation service will be provided to attend the Gala dinner.
**WEDNESDAY, 7 FEBRUARY**

08.30-10.15h  **SESSION VIII**  
Co-chairs: Anna Grandas and Amadeu Llebaria

08.30-09.00h  **INVITED LECTURE**  
**GEQB Young Researcher Award**  
Understanding the role of glycoconjugates as key molecules for cell survival and communication in prokaryotes and eukaryotes  
**Alba Silipo**, Department of Chemical Sciences, University of Naples Federico II, Italy

09.00-09.30h  **INVITED LECTURE**  
Inhibition of host-pathogen protein interaction networks: a promising avenue for new antibiotics  
**Marc Torrent**, Autonomous University of Barcelona, Spain

09.30-10.15h  **ORAL COMMUNICATIONS**  
**OC16- Emilio Lence**: Novel pathway of protein haptenation by β-lactams, a key step in antibiotic photoallergy  
**OC17-Marisa Juanes**: Supramolecular recognition and selective lectin uptake by cell penetrating glycopeptides  
**OC18-Jean-Marc Billod**: Applying computational methods to understand Toll-like Receptor 4 activation mechanisms

10.15-10.45h  **Coffee-break**

10.45-13.30h  **SESSION IX**  
Co-chairs: Gemma Fabriás and Jesús Jiménez-Barbero

10.45-11.15h  **INVITED LECTURE**  
Unravelling the antibiofilm activity and mechanism of action of pepR  
**Ana Salomé Veiga**, Institute of Molecular Medicine, University of Lisbon, Portugal

11.15-11.45h  **ORAL COMMUNICATIONS**  
**OC19- Macarena Sánchez-Navarro**: Towards a protein replacement therapy for Friedreich ataxia: modifying frataxin with blood-brain barrier peptide shuttles  
**OC20-Mantas Liutkus**: Towards artificial light harvesting systems

11.45-12.15  **INVITED LECTURE**  
Dendrimeric structures as a tool in biomedicine  
**Ezequiel Pérez-Inestrosa**, Department of Organic Chemistry, University of Málaga, IBIMA, Spain

12.15-12.45  **INVITED LECTURE**  
Catalysis by natural and engineered glycosidases  
**Carme Rovira**, Department of Chemistry, University of Barcelona, Spain

12.45-13.30h  **PLENARY LECTURE**  
Phenotypic and chemotactic targeting  
**Giuseppe Battaglia**, Department of Chemistry and Department of Chemical Engineering, University College London, UK

13.30-13.45h  **FLASH & POSTER AWARDS**  
**CLOSING**  
**Ignacio Alfonso**, IQAC-CSIC, Barcelona  
**David Andreu**, Pompeu Fabra University, Barcelona

13.45-15.00h  **Lunch**