AGENDA

Day 1.- Monday 23rd May 2022

8.30 - 11.00 Registration. Montage of Posters and Exhibition

11.00 Welcome & Opening Remarks.
   Dr. Javier S. Burgos Muñoz (Consellería de Sanitat, Generalitat Valenciana, SP)
   Dr. Deborah Burks (Director CIPF, SP)
   Dr. María J. Vicent (Conference Chair, CIPF, SP)

Plenary Lecture I
Discussion Leader: Matthias Barz (Univ Leiden, NL)

11.30 Mustafa Diken (BioNTech, DE) mRNA vaccines for cancer and beyond

Rationally-designed Non-Viral Gene Delivery Vectors
Discussion Leader: Julen Oyarzabal (Tyris Therapeutics, SP)

12.15 Daniel Siegwart (UT Southwestern Medical Center, USA) Zwitteronic phospholipidation of cationic polymers facilitates systemic mRNA delivery to the spleen and lymph nodes
12.45 Satoshi Suchida (Kyoto Prefectural University of Medicine, JP) Engineering polymers and mRNA for therapeutic mRNA delivery

13:15 Yao Jin (Ludwig-Maximilians-University Munich, DE) Synthesis and application of spermine-based poly(β-amino Ester)s for siRNA delivery
13.25 Zerong Ma (UNSW Sydney, AUS) Miktoarm star polymer nanoparticles enable siRNA delivery for the treatment of lung cancer
13.35 Stefano Salmaso (Univ Padova, IT) Lipoplex-Mediated Oligonucleotide Delivery: Enhanced Crossing of Cell Barriers
13.40 Gabriela Arias Alpizar (Univ Leiden, NL) Elucidating Nanoparticle Behavior Using Zebrafish
13.45 Anna Scomparin (Univ Turin, IT) Alkylc-Cyclodextrin Cationic Polymers: A Novel siRNA Delivery System for Glioblastoma Therapy

13.50 – 15.15 Lunch and Poster Session I
Engineering Polymer Therapeutics for Immunomodulation
Discussion Leader: Ronit Satchi-Fainaro (Tel Aviv Univ, IL)

15.15 Susan N. Thomas (Georgia Tech, USA) Polymer drug delivery systems for immunotherapeutic drug delivery to the lymphatic system

15.45 Lutz Nuhn (Max Planck Inst. Polymer Research, Mainz, DE) Macromolecule-Based Strategies for Enhancing Immunotherapy Responses By Macrophage Repolarization

16.15 Helena Florindo (Univ Lisbon, PT) Multivalent Anticancer Nanovaccines

16.45 Bárbara Ibarzo Yus (UCL, UK and IBEC, SP) PMPC-PDPA polymersomes in cancer vaccine development

16.55 Liane Moura (iMed. ULisboa, PT) Multivalent branched poly-l-glutamic acid-based nanovaccine sensitizes melanoma to anti-PD1 therapy

17.05 Francesca Mastrotto (Univ Padova, IT) Mannosylated polycations for therapeutic nucleic acid Delivery in cancer vaccination

17.15 – 17.45 Refreshments/ Posters-Exhibition

How can Polymer Therapeutics Improve Global Healthcare? An Interactive Session

17.45 – 19:15 Round Table Discussion: Including topics such as identifying Unmet needs: Drug targets and Diseases, Modalities needs - expanded space; Patient’s needs; Needs on Clinical Translation, such as, Characterization techniques and other capabilities or New advances on disruptive polymer sciences.

Discussion Co-Leaders: Marianne B. Ashford (AstraZeneca, UK) and Manuel Sánchez-Félix (Novartis, USA)

Ruth B. Schmid (Sintef, No)
Cameron Alexander (Univ Nottingham, UK)

19.15 - 20.30 Poster Viewing Poster Session II

20.30 Conference Reception at ‘Palacio de Congresos’ Hall
Day 2. Tuesday 24th May 2022

Plenary Lecture II
Discussion Leader: Andrew Lewis (Quotient Sciences, UK)

9.00 Maria Kavallaris (UNSW, AUS) Precision Diagnostics and Therapeutics for Pediatric Cancers

Tackling Childhood Diseases
Discussion Leaders: Andrew Lewis (Quotient Sciences, UK)

9.45 Maria J. Blanco (Univ Navarra, SP) Nanomedicines for the treatment of Pediatric Cancer
10.15 Mohammed Balogun (CSIR, SA) Rational Design of Polymer Conjugates for the treatment of malaria in children
10.45 Gloria García Palacios (Sanofi, FR) Overview of EU and FDA Pediatric Regulations
11.15 Tetiana Melnyk (CIPF, SP) A Polyglutamate-Based Intranasal Drug Delivery Platform for Pediatric Glioma Treatment.

11.20 – 11.45 Refreshments/ Posters

Tackling Diseases other than Cancer
Discussion Leader: Inmaculada Conejos-Sánchez (CIPF, SP)

11:45 Paco Fernandez-Trillo (Univ Birmingham, UK) Delivery of Antimicrobials through Peptide and Responsive Chemistry
11:55 Patrick Weber (ETH Zürich, SW) Zwitterionic polymer-drug conjugates with lubricating, anti-inflammatory activity for the treatment of osteoarthritis
12:05 Elaine Ferguson (Cardiff Univ, UK) Dextrin conjugation prevents colistin-induced acute kidney injury in mice
12:15 Tommaso Tedeschini (Univ Pavoda, IT) Pegylated peptide-cleavable linkers designed to provide stable and active antibody-drug conjugates.
12:25 Silvia Acosta-Gutierrez (UCL, UK) A Multiscale Study of Phosphorylcoline Driven Cellular Phenotypic Targeting
12:30 Zsuzsa Baranyai (INMA, SP) Antitubercular Drug Delivery with Polysaccharide-Based Nanocarriers
12:35 Alexander Lamoot (Univ Ghent, BE) Lipid Nanoparticles encapsulating PolyI:C A Potent Adjuvant for Recombinant Spike S1 SARS-CoV-2 vaccination
12:40 Antonella Grigoletto (Univ Padova, IT) Stability and in-vivo profile of a new circular site-specific PEGylated G-CSF
Advances of Polymer Therapeutics in the Clinics I
Discussion Leader: Michael Wagner (DE)

12.45 Cristianne Rijcken (Cristal Therapeutics, NL) Conception till Clinical Translation of Core-Crosslinked (CRIPEC®) Polymeric Micelles and Product Diversification

13.15 Michael Bevilacqua (Amicrobe, USA) Amicidins™: Synthetic Biologics Headed into Clinical Trials in Surgery and Trauma

13.45 – 15.00 Lunch and Poster Session III

The EPR effect: An Evolving Concept but a Clinical Reality.
Session in honor of Prof Hiroshi Maeda. Father of the EPR effect and a giant in our field

15.00 – 16:45 Round Table Discussion: Fundamentals of EPR and tumor targeting, on novel insights related to transcytosis, hitchhiking and macrophage retention, on practical aspects of dealing with EPR variability, and on how to move “passively targeted” cancer nanomedicines forward both clinically and industrially.

Discussion Leader: Twan Lammers (RWTH Aachen University Clinic, DE)
   Milles A. Miller (MGH Center Systems Biology, Harvard Med School, USA)
   Khaled Greish (Al-Jawhara Centre, BH)
   Warren Chan (Univ Toronto, CA)

Rationally Design Anticancer Polymer Therapeutics

Discussion Leader: Ana Armiñán (CIPF, SP)

16:45 Fernanda Rodríguez-Otormín (CIPF, SP) A rationally designed polypeptide-based combination conjugate for the treatment of metastatic triple negative breast cancer

16:55 Mariana Bento (iMed Univ Lisboa, PT) Multifunctional Polymeric Nanoplatform to Overcome Pancreatic Cancer Immune Evasion

17:05 Paul Strasser (Johannes Kepler University Linz, Aus) Bottlebrush, High-Molecular-Weight Polyphosphazene-G-Poly (L-Glutamic Acid) As Fully Biodegradable Polymer Therapeutics

17:10 Paz Boix-Montesinos (CIPF, SP) The Development and Characterization of Advanced In Vitro Models for the Evaluation of Polypeptide-Drug Conjugates

17:15 Diana Matias (UCL, UK) Polymersomes With Tunable Avidity to LRP1 In Healthy and Glioma Model

17:20 Carmen Moya-Lopez (Univ Lorraine, FR) Multifunctional PLA/Gelatin Bionanocomposites for Tailored Drug Delivery Systems

17:25 Antoni Serrano (CIPF, SP) Optimization of Preclinically Relevant Three-Dimensional Prostate Cancer Models
17.30 – 17.45 Refreshments/ Posters

Novel Synthetic approaches and Exhaustive Characterisation Techniques

Discussion Leaders: Cameron Alexander (Univ Nottingham, UK)

17:45 Adam Gormley (Rutgers Univ, USA) Discovering Advanced Polymeric Systems by an Automated and AI-Driven Polymer Chemistry Platform.

18.15 Roey Amir (Tel Aviv Univ, IL) Architectural Changes as A Tool For Controlling The Stability and Reactivity Of Polymeric Assemblies.

18.45 Robert Luxenhofer (Helsinki Univ, FI), and Ann-Christin Pöppler (Univ Würzburg, DE) Taking up the chase with NMR Spectroscopy - From structural insights into solid drug-polymer formulations to their fate in biorelevant media.

19.15 Sebastien Rouzeau (Tosoh Biosciences, DE) Polymer therapeutics deserve a better light

19.30 – 21.00 Coffee / Tea Posters

Poster Viewing Poster Session IV. Refreshment will be provided

21.00 Speakers/Discussion Leaders Dinner. Location TBD

Day 3. Wednesday 25th May

Plenary Lecture III
Discussion Leader: María J. Vicent (CIPF, SP)

9.00 Anand Subramony (AstraZeneca, USA) Targeted Nanomedicines Bench to Bedside

Advances of Polymer Therapeutics in the Clinics II
Discussion Leaders: Peter Turecek (Takeda, Austria)

9.45 Marisol Quintero (Highlight Therapeutics, SP) BO-112: local immunotherapy for Advanced tumors. Phase I-II studies.


10.45 – 11.15 Coffee / Tea Posters
Crossing Challenging Biological Barriers and Understanding Cellular Trafficking

Discussion Leader: Giuseppe Battaglia (UCL, UK and IBEC, SP)

11.15 Ronit Satchi-Fainaro (Tel Aviv Univ., IL) Modulating the Brain Immune System
11.45 Daniel Gonzalez-Carter (IBEC, SP) Exploiting the physiology of the blood-brain barrier to generate artificial brain targets for polymeric nanoparticle delivery

12.15 Inmaculada Conejos-Sánchez (CIPF, SP) Treating Neurodegeneration with A Polypeptide-Based Combination Approach Tackling Oxidative Stress and Inflammation Pathways
12.30 Marcelo Calderón (POLYMAT, SP) Multi-responsive nanogels for transmucosal drug delivery
12.45 Alexander N. Zelikin (Aarhus University, Denmark) Polymer therapeutics + albumin and/or antibodies = superior drug carriers

13.00 Christopher Eggers (Promega, USA) Bioluminescence-Based Assays for Monitoring Delivery of Therapeutic Molecules into Live Cells.
13:15 Camilla Pegoraro (CIPF, SP) The Development of Novel Polypeptide-Based Drug Delivery Platforms for Mitochondrial Targeting
13:20 Rafael Miravet Martí (PTS, SP) Poly(sarcosine)-VitE (TPSS) as alternative to poly(ethylene glycol)- VitE (TPGS).

13.25 – 15.00 Lunch and Poster Session V

Do we always need PEG replacement?

Discussion Leaders: Vicent J Nebot (PTS, SP)

15.00 Gianfranco Pasut (Univ Padova, IT) The role and impact of polyethylene glycol on anaphylactic reactions to COVID-19 nano-vaccines
15.30 Matthias Barz (Leiden Univ, NL) Polysarcosine: More than an Alternative to PEG?

16.00 – 17.15 Round Table Discussion. Understanding when PEG and its alternatives should be use.

Discussion Leaders: Gianfranco Pasut (Univ Padova, IT) and Matthias Barz (Leiden Univ, NL)

Vicent J Nebot (PTS, SP)
Ralf Kraehmer (Celares, DE)
Peter Turecek (Takeda, Austria)

17.15 – 17.30 Coffee / Tea
New Imaging Technologies and Targeting Strategies.
Discussion Leader: Alexander Zelikin (Aarhus Univ, DK)

17.30  Fabian Kiessling (Univ Aachen, Germany) Polymer-based Molecular Imaging probes, Theranostics and Companion diagnostics

18.00  Eric Allémann (Université de Genève, SW) Vascular-Targeted Micelles as MRI Contrast Agents For Molecular Imaging

18:30  Valentino Barbieri (UCL, UK) Hybrid Au-polymer vesicles as photoactivated nanomedical devices

18:40  Roman A. Barmin (RWTH Aachen University Hospital, DE) Surfactants to tailor the acoustic response and drug loading capacity of PBCA-based polymeric microbubbles

18:50  Snežana Đorđević (CIPF, SP) Mass Spectrometry Imaging as an Emerging Tool for the Rational Design of Polypeptide-Drug Combination Conjugates

18:55  María Alleva (INMA, SP) Interaction between polysaccharide nanocapsules and biological barrier models

19:00  María Medel (CIPF, SP) The Design of Polypeptide-Based Nanoconjugates as Advanced Theranostics

19.15 Prizes for Best Poster and Oral Communications.
Concluding Remarks

20.30 Gala Dinner. Location TBD