12th International Symposium on Polymer Therapeutics:
From Laboratory to Clinical Practice

28th - 30th May 2018
Centro de Investigación Príncipe Felipe
Valencia, Spain
Day 1. Monday 28th May

9.30 - 11.00 Registration and Poster Mounting

Welcome: M.J. Vicent (CIPF) and Deborah J. Burks (Director, CIPF)

Opening Remarks
Chairman: M.J. Vicent
11.00 TBD

The Importance of Rationally Designed Polymer-based Combination Therapy

Plenary
Chairman: Maria J. Vicent and Chun Li
11.30 Mitragotri, Samir (Harvard Univ., USA) Engineering polymer drug conjugates to improve combination chemotherapy

12.15 - 12.30 Zelikin, Alexander N. (Aarhus Univ., Denmark) Macromolecular (pro)drugs: long-acting and/or broad spectrum antiviral agents

13.00 - 13.15 Short talk (5 x 3 mins)

13.15 - 14.30 Lunch and Poster Session I

Polymer Therapeutics in the Clinics I
Chairmen: Marianne B. Ashford and Mano Manoharan
14.30 Svenson, Sonke (NanoCarrier US, LLC) Anticancer Polymeric Micelles: from preclinical to clinical settings
15.00 Rijcken, Cristianne (Cristal Therapeutics, The Netherlands) CriPec® nanomedicines: The translational path from preclinical to clinical studies

New Synthetic and Physicochemical Characterisation Approaches I
Chairman: Cameron Alexander and Vicent J. Nebot
15.30 Amir, Roey J. (Tel Aviv Univ., Israel) Designing enzymatically degradable polymeric amphiphiles with high molecular precision
16.00 Lu, Hua (Peking Univ., China) Macrocyclization of Site-Specific Protein-Poly(α-amino acid) Conjugates
16.30 Behrens, Carsten (Novo Nordisk, Denmark) Extending the circulating half-life of clot factors by conjugation to the natural carbohydrate polymer heparosan

17.00 - 17.30 Coffee Break and Posters

New Synthetic and Physicochemical Characterisation Approaches II
Chairman: Alessio Malfanti and Matthias Barz
17.30 – 17.45 Malkoch, Michael (KTH Royal Institute of Technology, Sweden) Heterogeneous Rupturing Polyester Dendrimers
17.45 - 18.00 Sanchis, Joaquin (Monash, Univ. Australia) Supramolecularly Assembled Cyclic Peptide Nanotubes as Modulable Carriers in Drug Delivery
18.00-18.15 Short talks selected from Abstracts (5 x 3 min)

**New Imaging Technologies. Companion Diagnostics**
Chairman: Lorenzo Albertazzi and Ronit Satchi-Fainaro

18.15 Barz, Matthias (Univ. Mainz, Germany) Polypept(o)ides for Radio Imaging and Therapy: Labeling Nanoparticles by In Vivo Click Chemistry

18.45 Alexander, Cameron (Nottingham Univ. UK) NMR and optical signalling of responsive polymer therapeutics and sensors

19.15 - 20.15 Poster Session II

20.45 Welcoming Dinner at the 'Oceanografic'

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**Day 2. Tuesday 29th May 2018**

**Tools to better understand Polymer Dynamics and Cell Trafficking**

*Plenary*

Chairmen: Giuseppe Battaglia and Nicola Tirelli

8.45 Schnitzer, Jan E. (PRISM, USA) Overcoming key barriers to precision delivery, imaging and therapy

9.30 Albertazzi, Lorenzo (IBEC, Spain) Super resolution imaging to understand polymer dynamics and cell trafficking

10.00 Jones, Arwyn (Cardiff Univ., UK) Activating endocytosis and modifying the intracellular traffic of drug delivery vectors

10.30-10.45 Tirelli, Nicola (Fondazione Istituto Italiano di Tecnologia, Italy) Hyaluronic acid as a responsive carrier and as a targeting agent; the good and the bad deeds.

10.45 - 11.15 Coffee break and Posters

**Polymer Therapeutics in the Clinics II**

Chairmen: Marianne B. Ashford and Sonke Svenson

11.15 Manoharan, Muthiah (Mano) (Alnylam Pharmaceuticals, USA) Delivery of Chemically modified siRNAs for human therapeutics: From Principles to Patients

11.45 Li, Chun (The University of Texas MD Anderson Cancer Center, USA) A Hindsight Reflection on the Clinical Studies of Poly(L-Glutamic acid)-Paclitaxel

12.15 - 13.30 Round Table Discussion. I. Chair: Marianne B. Ashford (AstraZeneca, UK) with Muthiah (Mano) Manoharan (Alnylam Pharmaceuticals, USA), Alberto A. Gabizon (Shaare Zedek Medical Center/Hebrew University, Israel), Javier Garcia Cogorro (Columbus Venture Capital, Spain), and Luigi Calzolai (European Commission) - Translating Polymer Therapeutics into Clinical Reality: Challenges and Opportunities

13.30 - 14.30 Lunch and Poster Session III
**Tumor Microenvironment as Target**

*Plenary*

Chairmen: Alexander V. Kabanov and Alberto A. Gabizon

14.30 Mooney, David J. (Harvard Univ., USA) Building Immunity with Biomaterials [Speaker partly sponsored by RSEQ-Chemical Biology Division]

15.15 Zamboni, William C. (UNC, USA) Bi-directional interactions between polymers and the immune system: translational studies from the lab screens to patients

15.45 Satchi-Fainaro, Ronit (Tel Aviv Univ., Israel) Identifying molecular signatures of tumor dormancy as a basis for the rational design of precision nanomedicines

16.15-16.30 Nuhn, Lutz (Max-Planck-Institute for Polymer Research, Germany) pH-degradable Immune Modulating Nanogels for Cancer Immunotherapy

16.30-16.45 Besenius, Pol (Johannes Gutenberg-University Mainz, Germany) Design of Glycopeptide-decorated multicomponent supramolecular polymers for antitumor vaccines

16.45-17.00 Florindo, Helena (Univ Lisbon, Portugal) A Novel Multifunctional Polypeptide-Based Nanosystem As An Anti-Cancer Immunotherapeutic Approach For Melanoma

17.00 - 17.30 Coffee Break and Posters

**Functional Biomarkers for Polymer Therapeutics I**

Chairmen: Hamid Ghandehari and Twan Lammers

17.30 Matsumura, Yasuhiro (Nat. Cancer C. Hospital East, Japan) Cancer stromal targeting (cast) therapy based on cancer induced blood coagulation

18.00 Yokoyama, Masayuki (Jikei Univ., Japan) A polymeric micelle magnetic resonance imaging (MRI) contrast agent reveals blood–brain barrier (BBB) permeability for macromolecules in cerebral ischemia-reperfusion injury.

18.30 - 19.00 Short talk (10 x 3 mins)

19.00 - 20.30 Poster Session IV (Refreshments will be provided)

20.45 Speakers Dinner

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**Day 3. Wednesday 30th May**

**Issues and Controversies on PEG Safety**

*Plenary*

Chairmen: Mary Bossard and Gianfranco Pasut

9.00 Turecek, Peter (Shire, Austria) State of the art of safety of Polyethylene Glycol (PEG) in biologicals: from myths and mysteries to scientific reality

10.15 - 11.15 Round Table Discussion. II. Chairs: Gianfranco Pasut (Univ. Padova, Italy), Mary Bossard (Nektar Therapeutics, USA), Jan-Jaap Verhoef (Utrecht University, The Netherlands), Peter Turecek (Shire, Austria) and Deborah Charych (Nektar Therapeutics, USA) - Issues and Controversies on PEG Safety

11.15 - 11.45 Coffee Break and Posters

**Functional Biomarkers for Polymer Therapeutics II**

**Chairmen:** Ana Armiñan

11.45 Janát-Amsbury, Margit (Univ. Utah, USA) The importance to use Adequate Translational Preclinical Models in Polymer Therapeutics

12.15 Lammers, Twan (Aachen Univ., Germany) Nano- and micro-scale polymer therapeutics for image-guided drug targeting to tumors

12.45 - 13.15 Short talk (10 x 3 mins)

13.15 - 14.00 Lunch and Poster Session V

**Polymer Therapeutics Towards Novel Molecular Targets**

**Chairman:** Pradeep Dhal and Inma Conejos-Sanchez

14.00 Kabanov, Alexander V. (UNC Chapel Hill, USA) Intranasal delivery of N-terminal modified leptin-pluronic conjugate for treatment of obesity

14.30 Rannard, Steve P (Univ. Liverpool, UK) Controlling drug release from non-aqueous environments: towards vitreoretinopathy treatment

15.00 Whittaker, Michael (Monash Univ., Australia) Exploring the Synthesis and Utility of Oxytocin-Polymer Conjugates

15.30 Wagner, Michael (Sanofi-Aventis, Germany) Next Generation Polymers for Half-life Prolongation of Peptides & Proteins for Diabetes Therapy

16.00 Prizes for best Poster and Oral Communications

**Concluding Remarks**

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