



# PepMat 2013

Peptide Materials for Biomedicine  
and Nanotechnology

*PepMat 2013 – October 28<sup>th</sup> – 31<sup>st</sup> 2013, Sorrento (Italy)*

*Monday, October 28th, 2013*

15:00 Registration (onwards)

18.00 Conference Opening

18.20 Opening Lecture

**O1** H. Matsui - New York University, N.Y., USA (Invited)

Reconfigurable 3D Superstructures from Collagen-Mimicking Peptides with Inorganic Materials  
and the Application of Peptide Re-Assembly Energy for Autonomous Motors

19.00 Welcome Cocktail

*Tuesday, October 29<sup>th</sup>, 2013*

## **Peptide Materials**

### **Peptide Self-Assembly. Chair: Claudio Toniolo**

9.00 **O2** I. W. Hamley - Reading University, UK

Self-Assembling Amphiphilic Peptides: Nanostructures and Applications in Biomedicine

9.50 **O3** M. Reches - The Hebrew University, Jerusalem, Israel

Co-Assembly of Short Peptide into Biomolecular Necklaces

10.10 **O4** F. Gobeaux - CNRS, Gif-sur-Yvette, France

Structural Role of Counterions Adsorbed on Peptide Nanotubes: Controlling their Diameter and  
their Number of Walls

10.30 *Coffee Break*

### **Peptide Self-Assembly. Chair: Carlos Aleman**

11.00 **O5** A. Saiani - University of Manchester, UK (Keynote)

Self-Assembling Peptides: From Fibres to Networks

11.30 **O6** E. Frezza - University of Padua, Italy

Chiral Self-Assembly of Porphyrin-Peptide Conjugates Investigated by Molecular Dynamics  
Simulations

11.50 **O7** G. Bocchini - University of Tor Vergata, Rome, Italy

Helical Chirality and Peptide Aggregation from Nano- to Meso-Scale: A Perspective from  
Molecular Dynamics Simulations

12.10 **O8** K. Pulka - University of Bordeaux, France

Site Selective Anion Recognition and Anion-Induced Assemblies Using Mixed  
Oligourea/Guanidine Helical Foldamers

12:30 *Conference Lunch*



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## **Peptide Materials for Opto/Electronic Applications. Chair: Mariano Venanzi**

14.00 **O9** G. Rosenman - Tel Aviv University, Israel (Keynote)

Bioorganic Nanodots: Physics and Applications

14.30 **O10** A. Moretto - University of Padua, Italy

Helical Peptide-Functionalized Gold Nanoparticles

14.50 **O11** C. P. Sousa – Federal University of ABC, Santo André, Brasil

Development of Peptide Matrices for Oxygen Reduction

15.10 *Poster Presentation A1 (8x3m) P1-P8*

15.35 *Coffee Break*

## **Peptide Interactions with Materials. Chair: Giovanni Marletta**

16.00 **O12** V. Humblot - Université Pierre et Marie Curie, Paris, France

Covalent Grafting of Chiral Antimicrobial Peptides on Gold-Modified Surfaces: Adhesion vs Antibacterial Effect

16.20 **O13** P. Sozzani - University of Milano Bicocca, Italy

Dipeptide Porous Crystals as Gas Absorptive Materials and Polymerization Nanoreactors

16.40 **O14** S. Kogikoski - Federal University of ABC, Santo André, Brasil

PCL/PANI Nanofibers Doped with N-Acetyl-L-Cysteine

17.00 *Poster Presentation A2 (9x3m) (P9-P17)*

17.30-18.30 *Poster Session A*

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*Wednesday, October 30<sup>th</sup>, 2013*

## **Peptides in Nanomedicine**

### **Peptides for Drug Delivery. Chair: Paolo Rovero**

9.00 **O15** V. Castelletto - Reading University, UK (Keynote)

Self-Assembly of a Peptide Amphiphile Containing L-Carnosine and its Mixtures with a Multilamellar Vesicle Forming Lipid

9.30 **O16** C. Marques - University of Strasbourg, France

Interactions of Elastin-like Polypeptides with Lipid Membranes

9.50 **O17** M. Dathe - Leibniz Institute of Molecular Pharmacology, Berlin, Germany

Membrane-Recognising and -Translocating Lipopeptides: Tools for the Development of Efficient Target Specific Carrier Systems

10.10 **O18** D. Kalafatovic - University of Strathclyde, Glasgow, UK



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MMP-9 Triggered Reconfiguration of Supramolecular Peptide Amphiphiles for Controlled Release

10.30 *Coffee Break*

## **Peptide for Drug Delivery. Chair: Shunsaku Kimura**

11.00 **O19** B. Bechinger – University of Strasbourg, France (Keynote)

Peptide Nano-Complexes for Nucleic Acid Delivery

11.30 **O20** S. Galdiero - University of Naples 'Federico II', Italy

Viral Peptide Targeted Delivery of Nano-Therapeutics

11.50 **O21** W. Alves - Federal University of ABC, Santo André, Brasil

L-Diphenylalanine Microtubes for Intracellular Delivery: Characterization, Release Kinetics and Cytotoxicity

12.10 *Poster Presentation B1 (6x3m) (P18-P23)*

12.30 *Conference Lunch*

## **Peptide Hydrogels & Material Design. Chair: Ian W. Hamley**

14.00 **O22** A. Zamuner - University of Padua, Italy

Self-Assembling Peptide Hydrogels Decorated with Bioactive Molecules for Regenerative Medicine

14.20 **O23** H. Pla - UQC-PCB, Barcelona, Spain

Polymer-Drug Conjugates Based on Polyglutamic Acid for the Treatment of Advanced Colorectal Cancer

14.40 **O24** V. Jayawarna - Biogelx Ltd, Scotland, UK

Short Peptide Hydrogels for Cell Culture

15.00 **O25** M. Galdiero – 2<sup>nd</sup> University of Naples, Caserta, Italy

Viral Machinery as Template for Peptide Material Design

15.20 *Poster Presentation B2 (5x3m) (P24-P28)*

15.35 *Coffee Break*

## **Peptide Biomaterials & Tissue Regeneration. Chair: Burkhard Bechinger**

16.00 **O26** G. Subra - University of Montpellier 1, France (Keynote)

Hybrid Silane-Peptides: Building-Blocks for the Direct Synthesis of Bioorganic-Inorganic Materials

16.30 **O27** A. Pepe - University of Basilicata, Potenza, Italy

Amyloid-Inspired Self-Assembling Peptides

16.50 *Poster Presentation B3 (9x3m) (P29-P37)*

17.20-18.20 *Poster Session B1-B2-B3*



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20.30 *Social Dinner at the Imperial Hotel Tramontano*

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*Thursday, October 31th*

## **Peptide/Polymer Conjugate. Chair: Gil Rosenman**

9:00 **O28** C. Aleman - University of Catalunya, Barcelona, Spain (Keynote)

Peptide-Polymer Conjugates

9.30 **O29** C. Bello - University of Vienna, Austria

Synthesis and Proteomic Studies of Site-Specifically O-Glycosylated MUC1 Variants

9.50 **O30** S. Jebors – University of Montpellier 1, France

Direct Synthesis of Hybrid Peptide Silicon

10.10 **O31** M. S. Liberato - Federal University of ABC, Brasil

Nanocomposites Based on Poly- $\epsilon$ -Caprolactone/L-Diphenylalanine Nanotubes

10.30 *Coffee Break*

## **Farewell Section. Chair: Giancarlo Morelli**

11:00 **O32** S. Kimura - Kyoto University, Japan (Keynote)

Molecular Dipole Engineering: Peptide Nanotubes, Peptide Vesicles, and Peptide Monolayers

11.30 **O33** N. Ashkenasy - Ben-Gurion University of the Negev, Beer Sheva, Israel (Keynote)

Electrical Properties of Peptide Fibril Networks

12.00 Luis Moroder Max Planck Institute of Biochemistry, Martinsried, Germany

Concluding Remarks

12.20 Closing of the Conference