



## Workshop of the ESF COST project MultiGlycoNano CM1102

Hotel Pyramida Prague, Conference Room III (FINAL PROGRAMME, March 14, 2013)

16:30 – 17:00 **Coffee Break** *Hotel Restaurant*

### SESSION2

#### Carbohydrate synthesis and multivalency

Chairperson: *Stefan Oscarson*, Ireland

17:00 – 17:20 **Carlo Unverzagt**, Germany

„Synthesis and conjugation of multiantennary *N*-glycan azides”

17:20 – 17:40 **Jitka Moravcová**, Czech Republic

„C-Glycoside functionalized multivalent ligands as potent inhibitors of DC-SIGN lectin“

17:40 – 18:00 **Thisbe K. Lindhorst**, Germany

„Photosensitive multivalent glycomimetics”

18:00 – 18:20 **Reko Leino**, Finland

“Immunostimulatory glycoclusters derived from  $\beta$ -(1→2)-linked oligomannosides: Recent progress from *in vitro* and *in vivo* studies”

18:20 – 18:40 **Stéphane P. Vincent**, Belgium

“Glycofullerenes as antiadhesive molecules and glycosyltransferase inhibitors”

18:40 – 19:30 **POSTER SESSION I** (all posters will be displayed)

#### Free evening

19:30 Core Group meeting TBA

## Workshop of the ESF COST project MultiGlycoNano CM1102

Hotel Pyramida Prague, Conference Room III (FINAL PROGRAMME, March 14, 2013)

### Saturday, 20<sup>th</sup> April

09:00 – 18:00 **Registration** Hotel Pyramida Prague, Reception Foyer

#### Programme

Conference Room III

##### SESSION 3

##### Carbohydrate-protein interactions

Chairperson: *Lothar Elling*, Germany

09:00 – 09:40 **James C. Paulson**, USA (*Keynote Lecture*)

„Siglec ligand decorated nanoparticles for in vivo targeting of immune cells”

09:40 – 10:00 **Anne Imberty**, France

„Influence of lectin valency on surface avidity and glycolipid dynamics in membranes”

10:00 – 10:20 **Michele Fiore**, France

„Tetravalent glycoconjugate with nanomolar affinity to wheat germ agglutinin”

10:20 – 10:40 **Franck Fieschi**, France

„Langerin, a C-type lectin from dendritic cells, can switch from a Ca<sup>2+</sup>-dependent to a Ca<sup>2+</sup>-independent binding mode as a function of the glycans”

10:40 – 11:20 **Coffee Break** Hotel Restaurant

##### SESSION 4

##### Carbohydrate-nucleic acids interactions; materials

Chairperson: *Jean-Louis Reymond*, Switzerland

11:20 – 11:40 **Cristina Vicent**, Spain

„Sugar-oligoamides: Chemical tools to study carbohydrate- and glycoprotein-DNA recognition”

11:40 – 12:00 **José M. García Fernández**, Spain

„Glycotargeted gene delivery with cyclodextrins: Making bridges between nucleic acids and lectins”

12:00 – 12:20 **Roland J. Pieters**, The Netherlands

“Potent divalent inhibitors containing rigid spacer units”

12:20 – 12:40 **Matthew I. Gibson**, UK

„Materials for Glycomics and as Glycomimetics”

12:40 – 13:00 **Aloysius Siriwardena**, France

„Carbohydrate-decorated nanodiamonds for effective sensing and disruption of bacterial and lectin-mediated interactions with glycans”

## Workshop of the ESF COST project MultiGlycoNano CM1102

Hotel Pyramida Prague, Conference Room III (FINAL PROGRAMME, March 14, 2013)

13:00 – 14:00 **Lunch** *Hotel Restaurant*

14:00 – 15:00 **POSTER SESSION II** (All posters will be displayed)  
coffee and drinks will be served

### **SESSION 5**

#### **Glycomaterials in the medicinal applications**

Chairperson: *Roland Pieters*, The Netherlands

15:00 – 15:20 **Barbara Richichi**, Italy

„Adhesion-targeted therapies in cancer: Modulation of melanoma cells motility and adhesion induced by carbohydrate-based multivalent scaffolds”

15:20 – 15:40 **Daniel J. Williamson**, United Kingdom

„Sortase-mediated modification of carbohydrate binding proteins for drug delivery”

15:40 – 16:00 **Velasco-Torrijos Trinidad**, Ireland

„Facile approach towards synthetic glycolipids: Potential as soft materials and antimicrobial agents”

16:00 – 16:20 **Mikkel B. Thygesen**, Denmark

„New tools for deciphering plant-microbe interactions involving lipochitin oligosaccharides”

16:20 – 16:40 **Francesco Peri**, Italy

„Immunomodulating properties of TLR4-active cationic and anionic amphiphiles”

## Workshop of the ESF COST project MultiGlycoNano CM1102

Hotel Pyramida Prague, Conference Room III (FINAL PROGRAMME, March 14, 2013)

16:40 – 17:00 **Coffee Break** Congress Hall Foyer

### SESSION 6

#### Carbohydrate structures and multivalency

Chairperson: *Cristina Nativi*, Italy

17:00 – 17:20 **Martina Lahmann, Stefan Oscarson**, UK; Ireland

„Synthesis of Lewis b-containing glycoconjugates for investigations of *Helicobacter pylori* binding to human glycan receptor structures”

17:20 – 17:40 **Antonio M. Baptista**, Portugal

„Studying the structure of peptide dendrimers by molecular dynamics simulations: branch length, charge, pH and glycosylation”

17:40 – 18:00 **Yelena Wainman**, United Kingdom

„Imaging cell surface glycosylation *in vivo* using bioorthogonal ‘double-click’ chemistry”

18:00 – 18:30 **Seunghwan Lee**, Denmark

„Bovine submaxillary mucin (BSM) films: Interaction with lectins and unique non-fouling properties”

20:00

**Social Dinner:** Restaurant Senses, Hotel Prague Castle Lindner,  
[http://www.lindner.de/en/hotel\\_prague\\_castle/](http://www.lindner.de/en/hotel_prague_castle/) (ca 10 min walk, 550 m)

## Workshop of the ESF COST project MultiGlycoNano CM1102

Hotel Pyramida Prague, Conference Room III (FINAL PROGRAMME, March 14, 2013)

### Sunday, 21<sup>st</sup> April

#### Programme

Conference Room III

#### SESSION 7

#### Carbohydrates and multivalency

Chairperson: *Olivier Renaudet*, France

09:00 – 09:20 **Francesco Sansone**, Italy

„Incorporation of a calixarene-based glucose functionalised bolaamphiphile in lipid bilayers for multivalent lectin recognition”

09:20 – 09:40 **Andrea Koerdt**, Austria

„Impact of the S-Layer and its glycosylation status on the attachment to a surface and the subsequent biofilm formation of *Tannerella forsythia*”

09:40 – 10:00 **Miguel Machuqueiro**, Portugal

„pH dependent conformational study of a synthetic receptor for molecular recognition of carbohydrates”

10:00 – 11:00 **Management Committee Meeting**

11:00 – 12:00 **Meeting of the Working groups**

13:00 **Departure**

## **Workshop of the ESF COST project MultiGlycoNano CM1102**

*Hotel Pyramida Prague, Conference Room III (FINAL PROGRAMME, March 14, 2013)*

### **Poster Presentations at the Workshop of the ESF COST project MultiGlycoNano CM1102**

*Hotel Pyramida Prague, Conference Room III*

**1. Palmioli Alessandro**, Italy

„Selective targeting of C-type Lectin receptors with multivalent glycomimetic antagonists”

**2. Vojtěch Spiwok**, Czech Republic

„Prediction of puckering equilibria in pyranose sugars using metadynamics”

**3. Rocio Risquez-Cuadro**, Spain

„Multivalent sp<sup>2</sup>-iminosugars as glycosidase inhibitors and lectin ligands”

**4. Olivier Renaudet**, France

„Extending the scope of oxime ligation: synthesis of large cyclopeptide-based glycodendrimers and binding assays with lectins”

**5. Juraj Kona**, Slovakia

„How to improve predictive accuracy of a QSAR model for the design of inhibitors of sugar processing enzymes with transition metal ion co-factors”

**6. Barbara La Ferla**, Italy

„Glycomimetics conjugated nanoparticles: tools and diagnostic-therapeutic agents”

**7. Dirk Heyl**, Germany

„Glyco-conjugated acetylenedicarboxamides: promising tools for glyco-decoration of nanocubes and other scaffolds”

**8. Alberto Maria Marzaioli**, Italy

„Preparation of glycoconjugates having oligosaccharide moiety from bacterial source”

**9. Luis Filipe**, Portugal

„Peptide dendrimers conformational determinants: insights from molecular dynamics simulations”

**10. Oscar Francesconi**, Italy

„Molecular recognition of carbohydrates: a comparison of binding efficacy between pyrrole and pyridine as H-bonding groups for saccharidic hydroxyls”

**11. Shane O'Sullivan**, Ireland

„Towards the synthesis of glycoclusters based on  $\alpha$ -GlcNAc as anti-infective agents”

**12. Sophia Böcker**, Germany

„Fluorescent SNAP-tag galectin-3 fusion protein as a novel tool in glycobiology”

**13. Jani Rahkila**, Finland

„Immunostimulatory oligovalent  $\beta$ -(1 $\rightarrow$ 2)-mannosides: Synthetic studies on the linker length”

## Workshop of the ESF COST project MultiGlycoNano CM1102

Hotel Pyramida Prague, Conference Room III (FINAL PROGRAMME, March 14, 2013)

### 14. Gaëlle Michaud, Switzerland

„Synthesis of fluorescently labeled peptides to study the mechanism of a bacterial oligosaccharyltransferase”

### 15. Myriam Bergmann, Switzerland

„Multivalent glycopeptide dendrimers as potent inhibitors of *Pseudomonas aeruginosa* biofilms”

### 16. J. Garcia Hartjes, The Netherlands

„Getting One-on-One with cholera toxin: Pentavalent ganglioside calixarenes”

### 17. Bastian Lange, Germany

„En route to keratan sulfate like glycan structures: Characterization of novel 6-O-sulfated GlcNAc analogues as acceptors for human  $\beta$ 1,4-galactosyltransferase-I”

### 18. Ruben R. Rosencrantz, Germany

“Controlling multivalent glycan presentation - Immobilized glycoconjugate brushes on silica surfaces”

### 19. Chung-Yi Wu, Taiwan

„Carbohydrate-based vaccines for breast cancer”

### 20. Kim Seonghun, Korea

„Development of an engineered *Saccharomyces cerevisiae* strain for production of a Man<sub>9</sub>GlcNAc<sub>2</sub> glycan and glycosylated fluorescent protein substrates for glycosidase and glycosyltransferase activity assays”

### 21. Orla McCabe, Ireland

„Investigations into the binding specificity of a fucose-recognising *Aspergillus* lectin”

### 22. Mark Long, UK

“Synthesis of <sup>13</sup>C labelled lewis b hexasaccharides for NMR-binding studies”

### 23. Liam M. Nelligan, UK

“Synthesis of human milk oligosaccharides for NMR studies”