

# Programme

## Faraday Discussion 166: Self-assembly of biopolymers 16-18 September, 2013 Bristol, UK

### Monday 16 September

11:00	<b>Registration</b>
12:00	<b>Lunch</b>
12.45	<b>Welcome and Introductions</b> Session chair: Ian Hamley
13.00 <b>Paper 1</b>	<b>Introductory Lecture:</b> Samuel Stupp <i>Northwestern University, USA</i>
<b>Session 1</b>	<b>Self-Assembly of DNA and RNA materials</b> Session chair: Ian Hamley
14:00 <b>Paper 2</b>	<b>Ion specific effects in bundling and depolymerisation of taxol-stabilized microtubules</b> Daniel J Needleman, Miguel A Ojeda-Lopez, Uri Raviv, Herbert P Miller, Youli Li, Chaeyeon Song, Stuart C Feinstein, Leslie Wilson, Myung Chul Choi and Cyrus Safinya* <i>University of California Santa Barbara, USA</i>
<b>Paper 3</b>	<b>Phototriggered cargo release from virus-like assemblies</b> Melanie Brasch, Ilja K Voets, Melissa S T Koay and Jeroen Cornelissen* <i>University of Twente, The Netherlands</i>
15:00	Close of Session & Afternoon Tea
<b>Session 2</b>	<b>Self-assembly of peptides and polymer/protein conjugates</b> Session chair: Jan van Hest
15:30 <b>Paper 4</b>	<b>Atomistic organization and characterization of tube-like assemblies comprising peptide-polymer conjugates: computer simulation studies</b> Oscar Bertran, David Curc3, David Zanuy and Carlos Alem3n* <i>Universitat Polit3cnica de Catalunya, Spain</i>
<b>Paper 5</b>	<b>Self-assembled core-shell micelles from peptide-<i>b</i>-polymer molecular chimeras towards structure-activity relationships</b> Charlotte Drappier, Hugo Oliveira, Olivier Sandre, Emmanuel Ibarboure, Sophie Combet, Elisabeth Garanger* and S3bastien Lecommandoux <i>Institut Polytechnique de Bordeaux, France</i>
<b>Paper 6</b>	<b>The influence of the kinetics of self-assembly on the properties of dipeptide hydrogels</b> Andre Zamith Cardoso, Ana Estefania Alvarez Alvarez, Beatrice N Cattoz, Peter C Griffiths, Stephen M King, William J Frith and Dave J Adams* <i>University of Liverpool, UK</i>
17:00 –	Poster Session and Wine Reception

18:30	
19:00	Dinner ( <i>tickets only</i> )

## Tuesday 17 September

<b>Session 2</b>	<b>Self-assembly of peptides and polymer/protein conjugates</b> Session chair: Jan van Hest
09:00 <b>Paper 7</b>	<b>Synthesis and self-assembly of branched glycopolypeptides: effect of topology and conformation</b> Colin Bonduelle, Silvia Mazzaferro, Jin Huang, Olivier Lambert, Andreas Heise and Sebastien Lecommandoux* <i>Institut Polytechnique de Bordeaux, France</i>
<b>Paper 8</b>	<b>Polymorphism in bovine serum albumin fibrils: morphology and statistical analysis</b> Ivan Usov, Josef Adamcik and Raffaele Mezzenga* <i>ETH Zurich, Switzerland</i>
<b>Paper 9</b>	<b>Lamination and spherulite-like compaction of hormone's native amyloid-like nanofibrils: spectroscopic insights into key interactions</b> Wilmar van Grondelle, Sophie Lecomte, Carmen Lopez-Inglesias, Jose-Maria Manero, Roland Cherif-Cheikh, Céline Valéry and Maite Paternostre* <i>Institut de Biologie et de Technologies de Saclay, France</i>
10:30	Morning Coffee
<b>Session 2</b>	<b>Self-assembly of peptides and polymer/protein conjugates</b> Session chair: Alberto Saiani
11:00 <b>Paper 10</b>	<b>Peptide nanofibres as molecular transporters: from self-assembly to <i>in vivo</i> degradation</b> Marianosa Mazza, Avnish Patel, Ramon Pons, Cyrill Bussy and Kostas Kostarelos* <i>University College London, UK</i>
<b>Paper 11</b>	<b>From fibres to networks using self-assembling peptides</b> Stephen Boothroyd*, Aline F Miller and Alberto Saiani <i>University of Manchester, UK</i>
<b>Paper 12</b>	<b>Electrospinning of peptide and protein fibres: Approaching the molecular scale</b> Wiwat Nuansing, Daniela Frauchiger, Florian Huth, Rainer Hillenbrand and Alexander Bittner* <i>CIC nanoGUNE, Spain</i>
12:30	Lunch
<b>Session 2</b>	<b>Self-assembly of peptides and polymer/protein conjugates</b> Session chair: Alberto Saiani
14:00 <b>Paper 13</b>	<b>Self-assembling amphipathic alpha-helical peptides induce formation of active protein aggregates <i>in vivo</i></b> Zhanglin Lin* Bihong Zhou, Wei Wu, Lei Xhing, Qing Zhao <i>Tsinghua University, China</i>
<b>Paper 14</b>	<b>Surface mediated L-phenylalanyl-L-phenylalanine assembly into large dendritic structures</b> Vladimir V Korolkov, Stephanie Allen, Clive J Roberts and Saul Tendler* <i>University of Nottingham, UK</i>

15:00	Close of Session & Afternoon Tea
<b>Session 3</b>	<b>Self-Assembly of Lipids, Lipopeptides and Polymersomes</b> Session Chair: Adam Squires
15:30 <b>Paper 15</b>	<b>Cell penetrating peptide amphiphile integrated liposomal systems for enhanced delivery of anticancer drugs to tumor cells</b> Melis Sardan, Murat Kilinc, Rukan Genc, Ayse B Tekinay and Mustafa O Guler* <i>Bilkent University, Turkey</i>
<b>Paper 16</b>	<b>Self-assembly of natural and synthetic drug amphiphiles into discrete supramolecular nanostructures</b> Lye Lin Lock, Michelle Lacombe, Kelly Schwarz, Andrew G Cheetham, Yi-an Lin, Pengcheng Zhang and Honggang Cui,* <i>John Hopkins University, USA</i>
<b>Paper 17</b>	<b>Block copolymers in giant unilamellar vesicles with proteins or with phospholipids</b> Regina Schöps Elkin Amando, Sohpie S Müller, Holger Frey and Joerg Kressler* <i>Martin Luther University, Germany</i>
<b>Paper 18</b>	<b>Electrostatic interaction of heterogeneously charged surfaces with semipermeable membranes</b> Salim R Maduar, Vladamir Lobaskin and Olga I Vinogradova* <i>University College Dublin, Ireland</i>
17:30	Close of sessions
19:00	Pre-Dinner Drinks ( <i>tickets only</i> )
19:30	Conference Dinner ( <i>tickets only</i> )

### Wednesday 18 September

<b>Session 3</b>	<b>Self-Assembly of Lipids, Lipopeptides and Polymersomes</b> Session Chair: Adam Squires
09:00 <b>Paper 19</b>	<b>Coiled-coil driven membrane fusion: zipper like vs. non-zipper-like peptide orientation</b> Frank Versluis, Juan Dominguez, Jens Voskhul and Alexander Kros* <i>Leiden University, The Netherlands</i>
<b>Paper 20</b>	<b>A structural study of the self-assembly of a palmitoyl peptide amphiphile</b> M van den Heuval, L Ruizendaal, A Brinkmann, L Kroon-Batenburg, J C M van Hest and Dennis Lowik* <i>Radboud University Nijmegen, The Netherlands</i>
<b>Paper 21</b>	<b>New RGD-peptide amphiphile mixtures containing a negatively charged diluent</b> Valeria Castelletto, Ricardo Gouveia*, Che Connon and Ian Hamley <i>University of Reading, UK</i>
<b>Paper 22</b>	<b><math>\alpha_s</math>-Casein – PE6400 mixtures: a fluorescence study</b> Anne Kessler*, Orquídea Menéndez-Aguirre, Jörg Hinrichs, Cosima Stubenrauch and Jochen Weiss <i>University of Hohenheim, Stuttgart, Germany</i>
11:00	Close of Session & Morning Coffee
<b>Session 4</b>	<b>Self-assembly of carbohydrate/glyco polymer hybrid materials</b> Session chair:

11:30 <b>Paper 23</b>	<b>Liposome and protein based stealth nanoparticles</b> Eugénia Nogueira, Ana Loureiro, Patrícia Nogueira, Jaime Freitas, Catarina R Almeida, Johan Härmak, Hans Hebert, Alexandra Moreira, Alexandre M Carmo, Ana Preto, Andreia C Gomes and Artur Cavaco-Paulo* <i>University of Minho, Portugal</i>
12:00	<b>Concluding remarks</b> Cameron Alexander <i>University of Nottingham, UK</i>
12:45	<b>Acknowledgements</b>
13:00	Close of Meeting
13:10	Lunch ( <i>tickets only</i> )