

Programme

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

Monday 16 September

11:00	Registration
12:00	Lunch
12.45	Welcome and Introductions Session chair: Ian Hamley
13.00 Paper 1	Introductory Lecture: Samuel Stupp <i>Northwestern University, USA</i>
Session 1	Self-Assembly of DNA and RNA materials Session chair: Ian Hamley
14:00 Paper 2	Ion specific effects in bundling and depolymerisation of taxol-stabilized microtubules 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>
Paper 3	Phototriggered cargo release from virus-like assemblies 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
Session 2	Self-assembly of peptides and polymer/protein conjugates Session chair: Jan van Hest
15:30 Paper 4	Atomistic organization and characterization of tube-like assemblies comprising peptide-polymer conjugates: computer simulation studies Oscar Bertran, David Curcó, David Zanuy and Carlos Alemán* <i>Universitat Politècnica de Catalunya, Spain</i>
Paper 5	Self-assembled core-shell micelles from peptide-<i>b</i>-polymer molecular chimeras towards structure-activity relationships Charlotte Drappier, Hugo Oliveira, Olivier Sandre, Emmanuel Ibarboure, Sophie Combet, Elisabeth Garanger* and Sébastien Lecommandoux <i>Institut Polytechnique de Bordeaux, France</i>
Paper 6	The influence of the kinetics of self-assembly on the properties of dipeptide hydrogels 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

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

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

Session 3	Self-Assembly of Lipids, Lipopeptides and Polymersomes Session Chair: Adam Squires
09:00 Paper 19	Coiled-coil driven membrane fusion: zipper like vs. non-zipper-like peptide orientation Frank Versluis, Juan Dominguez, Jens Voskhul and Alexander Kros* <i>Leiden University, The Netherlands</i>
Paper 20	A structural study of the self-assembly of a palmitoyl peptide amphiphile 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>
Paper 21	New RGD-peptide amphiphile mixtures containing a negatively charged diluent Valeria Castelletto, Ricardo Gouveia*, Che Connors and Ian Hamley <i>University of Reading, UK</i>
Paper 22	α_s-Casein – PE6400 mixtures: a fluorescence study 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
Session 4	Self-assembly of carbohydrate/glyco polymer hybrid materials Session chair:

11:30 Paper 23	Liposome and protein based stealth nanoparticles 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	Concluding remarks Cameron Alexander <i>University of Nottingham, UK</i>
12:45	Acknowledgements
13:00	Close of Meeting
13:10	Lunch (<i>tickets only</i>)