



INSTITUTE
FOR RESEARCH
IN BIOMEDICINE

Barcelona BioMed Conference

Intrinsically disordered proteins in biomedicine

October 4-6, 2010

Programme

Monday, October 4, 2010

8.30 Registration

9.00 Welcome by Miquel Pons, IRB Barcelona (SPAIN)

Session I:

Chair: Ernest Giralt, IRB Barcelona (SPAIN)

9.15 - 9.55 **Keith Dunker** Center for Computational Biology and Bioinformatics.
Indiana University (USA)

Protein intrinsic disorder in cell signaling, scaffolds, and molecular machines

9.55 - 10.35 **Jane Dyson** The Scripps Research Institute. La Jolla (USA)

Detection and characterization of folded-globule states by NMR

10.35 - 11.05 **Coffee break and poster session**

11.05 - 11.30 **Ugo Bastolla** Centro de Biología Molecular Severo Ochoa. Madrid
(SPAIN)

Protein disorder in the centrosome correlates with complexity in cell types number

11.30 - 12.10 **Sonia Longhi** Université d'Aix-Marseille. Marseille (FRANCE)

*Structural disorder and induced folding within the measles virus nucleoprotein:
experimental assessment and functional implications*

12.10 - 12.35 **Norman Davey** European Molecular Biology Laboratory. Heidelberg
(GERMANY)

How viruses hijack cell regulation

12.35 - 15.00 Lunch (FresCo, C/ Carme, 16)

Session II:

Chair: Monika Fuxreiter, Hungarian Academy of Sciences (HUNGARY)

15.00 - 15.40 **Ron Kopito** Stanford University. Stanford (USA)
Membrane penetration and prion-like propagation of amyloids

15.40 - 16.20 **Miquel Pons** IRB Barcelona. Barcelona (SPAIN)
Functional and structural annotation of the intrinsically disordered unique domain of c-Src Kinase

16.20 - 16.50 Coffee break and poster session

16.50 - 17.15 **Robert Konrat** University of Vienna. Vienna (AUSTRIA)
Theoretical and experimental investigations of the meandering of intrinsically disordered proteins in conformational space

17.15 - 17.55 **Toshio Ando** Kanazawa University. Kanazawa (JAPAN)
High-speed AFM imaging of intrinsically disordered proteins

17.55 - 18.35 **Martin Blackledge** Institut de Biologie Structurale Jean-Pierre Ebel. Grenoble (FRANCE)
NMR studies of intrinsically disordered proteins at atomic resolution

18.35 -20.00 Poster session and networking

Tuesday, October 5, 2010

Session III:

Chair: Miquel Pons, IRB Barcelona (SPAIN)

9.00 - 9.40 **Peter Tompa** Institute of Enzymology, Hungarian Academy of Sciences. Budapest (HUNGARY)
Structural disorder and chaperone activity of plant dehydrins in vitro and in vivo

9.40 - 10.20 **Markus Zweckstetter** Max-Planck Institute for Biophysical Chemistry. Göttingen (GERMANY)
Folding and misfolding of tau

10.20 - 10.45 **Monika Fuxreiter** Institute of Enzymology, Hungarian Academy of Sciences. Budapest (HUNGARY)

Patterns of order-disorder comprise a conserved evolutionary protein trait

10.45 - 11.15 Coffee break and poster session

11.15 - 11.55 **Ben Lehner** Centre for Genomic Regulation. Barcelona (SPAIN)

Dosage and disorder

11.55 - 12.35 **Julie Forman-Kay** University of Toronto. Toronto (CANADA)

Describing dynamic complexes of intrinsically disordered proteins

12.35 - 13.00 **Carlos Bertoncini** Institute for Research in Biomedicine. Barcelona (SPAIN)

Towards a quantitative assessment of amyloid formation in vivo by multiparametric fluorescence microscopy

13.00- 15.00 Lunch (Restaurant Fresco, C/ Carme, 16)

Session IV:

Chair: Frans Mulder, University of Groningen (THE NETHERLANDS)

15.00 - 15.40 **Dmitri Svergun** EMBL-Hamburg Outstation (GERMANY)

Small angle X-ray scattering to study protein flexibility in solution

15.40 - 16.20 **Ashok Deniz** The Scripps Research Institute. La Jolla (USA)

Single-molecule dynamics and coupled binding-folding of intrinsically disordered proteins

16.20 - 16.50 Coffee break and poster session

16.50 - 17.30 **Doug Barrick** Johns Hopkins University. Baltimore (USA)

Ordered, and disordered regions in the structure, thermodynamics, and function of the Notch signaling pathway

17.30 - 18.10 **Pau Bernadó** IRB Barcelona. Barcelona (SPAIN)

Exploiting the synergy between NMR and SAXS in intrinsically disordered proteins

18.10 - 18.50 **Richard Kriwacki** St. Jude Children's Research Hospital. Memphis (USA)

Role of intrinsic flexibility in protein regulatory mechanisms

20.30 - open end: Speakers dinner

Wednesday, October 6, 2010

Session V:

Chair: Mikael Akke, Lund University (SWEDEN)

9.00 - 9.40 **M. Madan Babu** MRC-Laboratory of Molecular Biology. Cambridge (UK)
Intrinsically unstructured proteins: Regulation and disease

9.40 - 10.20 **Vince Hilser** Johns Hopkins University. Baltimore (USA)
Intrinsic disorder, local unfolding and allostery in an ensemble

10.20 - 10.45 **Lluís Ribas de Pouplana** IRB Barcelona. Barcelona (SPAIN)
microRNAs regulate the cellular response to unfolded protein stress

10.45 - 11.15 Coffee break and poster session

11.15 - 11.40 **Remy Loris** Vrije Universiteit Brussel. Brussels (BELGIUM)
Rejuvenation of CcdB-poisoned gyrase by an intrinsically disordered protein domain

11.40 - 12.20 **Patrick Aloy** IRB Barcelona. Barcelona (SPAIN)
Peptide-mediated interactions in high-resolution 3D structures

12.20 - 13.00 **Peter Wright** Scripps Research Institute. La Jolla (USA)
Promiscuous liaisons: functional interactions of intrinsically disordered proteins in signaling networks

13.00 Closing