



IDP2Biomed
Bringing Intrinsically Disordered
Proteins to Biomedical Applications

Grant Agreement Number: 101160233

Expert Seminars and 1st Training School

Agenda

**Funded by the European Union. HORIZON WIDERA 2023 IDP2Biomed -
grant agreement No 101160233**



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the European Union



**Venue: Todd-Hamied room, Department of Chemistry, University of Cambridge;
Lensfield Road Cambridge, CB2 1EW**

EXPERT SEMINARS

Tuesday, 10 June 2025 | 9.00 - 12.30

9:00-9:30	Zsuzsanna Dosztányi (ELTE): From Short Linear Motifs to Higher-Order Assemblies: LC8 Interactions in Centrosomal IDPs
9:30-10:00	Zenon Toprakcioglu (Cambridge):
10:00-10:30	Mihály Kovács (ELTE): Emerging roles of nucleic acid-dependent and redox-dependent dynamic condensation by single-stranded DNA binding (SSB) proteins in bacterial and eukaryotic stress response
10:30-11:00	<i>Coffee break</i>
11:00-11:30	Alicia Gonzalez Diaz (Cambridge): iPSC-derived cellular models of Alzheimer's disease
11:30-12:00	Andrea Bodor (ELTE): IDPs: structural features by the DR and SPIT statistics, disorder-to-order transitions for p53
12:00-12:30	Michele Vendruscolo: AI-driven drug discovery for disordered proteins (Cambridge)
12:30-14:00	<i>Lunch break</i>



1st IDP2Biomed Training School

Computational and Experimental Methods for characterizing the conformational properties of IDPs

Venue: Todd-Hamied room, Department of Chemistry, University of Cambridge;
Lensfield Road Cambridge, CB2 1EW

☰ Questions for IDP2Biomed TS1 Cambridge

Module 1 Biomolecular simulations of IDPs, advanced molecular dynamics simulations, coarse-grained methods	
Tuesday, 10 June 2025 14.00 - 17.30	
14:00-15:00	Rosana Collepardo-Guevara (Cambridge): Multiscale modelling of biomolecular phase transitions
15:00-16:00	Zsuzsanna Dosztányi (ELTE): Intrinsically disordered proteins: sequence based predictions and involvement in disease
16:00-17:00	Gabi Heller (Bind Research): Drugging disordered proteins
17:00-18:00	Discussion

Module 2 Experimental methods to characterize structural properties of IDPs in monomeric and oligomeric forms, NMR spectroscopy and cryo-EM	
☰ Questions for IDP2Biomed TS1 Cambridge	
Wednesday, 11 June 2025 9.00 - 17.00	
09:00-10:00	Sandro Bottaro (Peptone): Targeting IDPs with small molecules.
10:00-10:30	<i>Coffee Break</i>



10:30-11:30	Claudio M. Gomes (Lisbon): Chaperone regulation of protein aggregation beyond the cell boundary
11:30-12:30	Mateo Sanchez Lopez (Cambridge): Bioengineering of molecular tools for cell biology, optogenetics and neuroscience
12:30-13:30	<i>Lunch Break</i>
13:30-14:30	Pietro Sormanni (Cambridge): Antibody Discovery and Engineering by Computational Design
14:30-15:30	Markus Zweckstetter (Goettingen): NMR Spectroscopy of IDPs
15:30-15:40	<i>Short break</i>
15:40-16:40	José Miguel Hernández Lobato (Cambridge): FEAT: free energy estimation with adaptive learning
16:40-17:40	Discussion
19:00-22:00	<i>Social dinner</i> <i>Browns, in Trumpington Street (round the corner)</i>

Module 3

Integrating computational and experimental approaches, PED database, methods to analyze, compare and assess conformational ensembles of IDPs

Thursday, 12 June 2025 | 9.00 - 16.00

☰ Questions for IDP2Biomed TS1 Cambridge

09:00-10:00	Mariapina D'Onofrio (Verona): Modulation of Toxic Tau Species by Ubiquitination
10:00-10:30	<i>Coffee Break</i>
10:30-11:30	Giulio Tesei (Lund): Data-driven modeling of IDRs
11:30-12:30	Georg Meisl (Cambridge): Bridging the gap in neurodegeneration - Connecting molecular level mechanisms and patient data



12:30-14:00	<i>Lunch Break</i>
14:00-15:00	Alex Monzon (Padova): Computational Generation and Deposition of Conformational Ensembles
15:00-16:00	Shengyu Zhang (Cambridge): Sequence based drug discovery
16:00-16:10	<i>Short break</i>
16:10-17:10	Vaidehi Roy Chowdhury (Cambridge): Medin - a novel amyloid target in Alzheimer disease
17:10-18:10	Discussion

Module 4

Friday, 13 June 2025 | 9.00 - 12.30

9:00-12.30	Site visits to facilities at UCAM, including the Centre for Misfolding Diseases, the Chemistry of Health Incubator and the Molecular Production and Characterisation Centre
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