



IDPfun- Driving functional characterization of intrinsically disordered proteins

Intrinsically disordered proteins (IDPs), characterized by high conformational variability and interaction promiscuity, defy the classic protein structure-function paradigm. IDPs cover almost half of the residues in Eukaryotic proteomes. Growing evidence suggests that IDPs, interacting with multiple partners, are major players in cellular regulation and involved in numerous human diseases. Computational methods have contributed to the identification of IDPs from sequence and recently published curated IDP databases provide a starting point. However, functional knowledge for IDPs remains very limited. IDPfun is an international consortium aiming to extend our knowledge on the functions of IDPs. Starting from available state of the art computational tools and databases, which have been mostly developed by IDPfun participants, it aims drive a new level of IDP characterization leverage the complementary expertise of 5 EU MS and 3 TC institutions in Argentina, the latter providing useful complementary expertises. IDPfun will create a collaborative environment for research on novel ways to detect and characterize different IDP phenomena in their evolutionary context. It will develop an ontology and classification facilitating the comprehension of IDP complexity and aims to understand IDP functional mechanisms. The gained knowledge will be translated into major international protein databases for the benefit of the wider scientific community. Periodic meetings and symposia will generate a continuous knowledge exchange to be disseminated by open training schools and conferences. IDPfun will foster particularly young researchers, through dedicated activities and by ensuring adherence to the highest quality, ethics and gender balance standards. It is expected that IDPfun will strengthen overseas collaborations, focusing and coordinating research, leading to the creation of a sustainable international IDP community, driving knowledge and infrastructure in bioinformatics.

UNIPD Team Leader: Silvio Tosatto

Department: Department of Biomedical Sciences

Coordinator: Università degli Studi di Padova

Other Participants:

Eötvös Loránd Tudományegyetem (Hungary)

Vrije Universiteit Brussel- VUB (Belgium)

University College Dublin, National University of Ireland, Dublin (Ireland)

European Molecular Biology Laboratory- EMBL (Germany)

Universidad Nacional de Quilmes (Argentina)

Fundación Instituto Leloir (Argentina)

Universidad Nacional de General San Martín (Argentina)



UNIVERSITÀ
DEGLI STUDI
DI PADOVA

H2020
PROJECTS FUNDED AT THE UNIVERSITY OF PADOVA

Total EU Contribution: Euro 1.291.500

Call ID: H2020-MSCA-RISE-2017

Project Duration in months: 48

Start Date: 01/03/2018

End Date: 28/02/2022

Find out more: https://cordis.europa.eu/project/rcn/212473_en.html