

# Avviso di Seminario

**Mercoledì 5 Aprile 2023 ore 14.30 – Aula 2**  
**Edificio A - Dipartimento di Scienze del Farmaco**

**Prof. Frank Sobott**

School of Molecular and Cellular Biology and Astbury  
Centre University of Leeds UK

terrà il seminario dal titolo:

**Molecular footprints of protein aggregation**

E' possibile partecipare al seminario da remoto collegandosi al link:

<https://unipd.zoom.us/j/82834864238>

Prof.ssa Barbara Spolaore – info: [barbara.spolaore@unipd.it](mailto:barbara.spolaore@unipd.it)

## Abstract

In this contribution we will discuss a structural MS toolbox which comprises a comprehensive set of methods to characterize stoichiometry, global size and shape of amyloid-related proteins such as  $\alpha$ -synuclein and IAPP, implicated in Parkinson's disease and Type 2 diabetes, respectively, as well as their oligomerization/aggregation and interactions. We are developing methods which address aspects of dynamic and heterogeneous protein conformations and assemblies, both in vitro and in vivo, using an integrated structural approach based on "native" mass spectrometry and top-down structure-sensitive fragmentation, limited digestion, ion mobility, H/D exchange, crosslinking and surface mapping techniques (e.g. covalent labelling by Fast Photochemical Oxidation of Proteins) in combination with electron microscopy and other biophysical approaches. Together with computational modelling, this will allow us to significantly improve our fundamental understanding of key species which are implicated in debilitating neurodegenerative diseases.