



**UNIVERSITÀ DEGLI STUDI
DELL'INSUBRIA**

**DIPARTIMENTO DI BIOTECNOLOGIE
E SCIENZE DELLA VITA – DBSV**

SEMINAR ANNOUNCEMENT

PROF. LUCA NARDO
DISAT, University of Insubria

Tuesday September 13th 2022, 2:30pm
Aula A – Molini Marzoli
Via A. da Giussano 10, Busto Arsizio (VA)

**“AMYLOID AGGREGATION: NEW
PERSPECTIVES FROM THE FLUORESCENCE
POINT OF VIEW”**

Biophysical investigation has been extensively applied to study the aggregation patterns of amyloid proteins. While dynamic light scattering and atomic force microscopy have played a major role, fluorescence studies have historically been used more sparingly and confined to semi-quantitative assays, though. Nonetheless, quantitative fluorescence analysis promises to be an exceptionally powerful tool to reconstruct the details of amyloids aggregation dynamics in pseudo-physiological conditions. In this seminar, taking advantage from my past experience on the aggregation of Amyloid β , the amyloid peptide responsible for neurodegeneration in Alzheimer disease, I will initially survey a panel of biophysical techniques which were more or less extensively used in the past to characterize amyloid aggregation and fibrillation: light scattering, atomic force microscopy, fluorescence imaging and in vitro fluorimetry. After spotting the main endowments and limitations of these classical approaches, I will introduce some advanced fluorescence techniques which could offer additional insight. Several of them were already validated and applied in my previous research, others are in principle feasible with the equipment available at my laboratory at DiSAT, but still wait for a biological system to be probed.