



DIPARTIMENTO DI FARMACIA E BIOTECNOLOGIE

AVVISO DI SEMINARIO

Il giorno venerdì **12 maggio 2023**
alle ore **12:00**

in presenza:

Aula 1 – FaBiT, via Belmeloro 6, Bologna BO

oppure *in streaming:*

<https://teams.microsoft.com/l/meetup-join/19%3aN09c0NlyEssBnF7ObCyDOQwkgDWm1qdd9f7F2nJV9fw1%40thread.tacv2/1631519544944?context=%7b%22Tid%22%3a%22e99647dc-1b08-454a-bf8c-699181b389ab%22%2c%22Oid%22%3a%225a941351-ef41-4aa4-8771-fa50a6d62ca1%22%7d>

Dott.ssa Emanuela Colla

Laboratory of Biology, Scuola Normale Superiore, Pisa, Italy
(ospite Prof.ssa Manuela Bartolini)

terrà un seminario dal titolo:

THE GUT-BRAIN AXIS IN THE PATHOGENESIS OF PARKINSON'S DISEASE

Collegli e studenti sono cordialmente invitati

Commissione Ricerca e Attività Correlate - FaBiT

ABSTRACT

Parkinson's' Disease (PD) is a progressive neurodegenerative disease that involves dysfunctions in both the CNS and PNS circuitries with loss of specific cellular population including dopaminergic neurons. Involvement of the gut-brain axis, a bidirectional communication between the brain and the enteric nervous system (ENS) in the pathogenesis of PD became apparent when proteinaceous inclusions (Lewy Bodies) typical of PD patients' brain were found in the intestinal wall of diseased subjects but also asymptomatic controls. Because of this initial evidence, a gut-first hypothesis of PD onset, where the pathology would initiate in the GI tract of susceptible individuals and then later spread to the midbrain, is now accepted. My lab has been involved in recent years in understanding the contribution of the enteric nervous system in PD pathogenesis, in the characterization of in vivo and in vitro models of prodromal PD and in evaluating the impact of disease modifying therapies on ENS functionality and PD progression.

BIOGRAPHICAL SKETCHES



Dr. Colla earned her PhD degree in Molecular Biology and Pathology from the University of Parma, Italy. During her postdoctoral years she joined the Division of Neuropathology at Johns Hopkins School of Medicine where her research focused on elucidating molecular and cellular aspects of Parkinson's Disease (PD) and alpha-synucleinopathies. In 2010 she was awarded financial support (Rientro dei Cervelli - Montalcini 2009) and she returned to Italy as Assistant Professor at Scuola Normale in Pisa. Her major contributions to the study of alpha-synucleinopathies and PD relied on the study of the role of endoplasmic reticulum (ER) stress in mediating neurodegeneration; on the link between ER and alpha-synuclein toxic species and on the development of live cell imaging-based biosensors to study alpha-synuclein aggregation in live cells and primary neurons. More recently her focus has moved to the study of PD connection to the enteric nervous system as she characterized a new murine model that allows to study the influence of PD prodromal phase in the progression of the alpha-synuclein pathology. These projects have been supported by a MJF Foundation grant in collaboration with Axial Therapeutics and by AlfaSigma. Since 2020 Dr. Colla has also a teaching appointment as Instructor for the program of Applied Biomedical Engineering for professionals at Johns Hopkins University for the teaching of the course of Methods in Neurobiology.