



ALMA MATER STUDIORUM  
UNIVERSITÀ DI BOLOGNA

DIPARTIMENTO  
DI FARMACIA  
E BIOTECNOLOGIE

## AVVISO DI SEMINARIO

Il giorno **20 Maggio 2024**  
alle ore **12:00**

**Prof. Dr. João Paulo dos Santos Fernandes**

Adjunct Professor in Pharmaceutical Medicinal Chemistry

(ospite della Prof.ssa Manuela Bartolini)

terrà un seminario in lingua inglese dal titolo:

**Multitargeting strategies to design  
procognitive agents from histamine H3  
receptor antagonists**

Area tematica:

Drug discovery and development; Neuroscience

*in presenza:*

**Aula 2, via Belmeloro 6, Bologna BO**

Colleghi e studenti sono cordialmente invitati

## **ABSTRACT**

Historically, histamine is widely recognized as a pivotal mediator of inflammatory responses. However, histamine has also been recognized as one of the most important neurotransmitters involved in cognitive processes. The augmentation of histamine activity produced by H3 receptor (H3R) antagonism within the cortical and limbic areas leads to a positive effect on cognition that may be useful in treating cognitive decline related to Alzheimer's disease, Lewy body dementia, schizophrenia, and other conditions. In addition, the simplicity and structurally diverse scaffolds of H3R antagonists open opportunities for modulating additional targets synergistically, thereby potentiating this procognitive effect through a multitargeting approach. In the last years, our group has made efforts towards the search for novel agents against neurodegenerative and neuroinflammatory diseases by designing multitarget ligands using the H3R antagonists' pharmacophores as inspiration. The progress we have obtained in this endeavor will be discussed during this presentation.

## **BIOGRAPHICAL SKETCHES**

João Paulo S. Fernandes is a pharmacist, and obtained his MSc (2006) and PhD (2012) degrees in Pharmaceutical Sciences (Medicinal Chemistry) at the University of São Paulo. In 2013, he joined as Adjunct Professor in Medicinal Chemistry at the Federal University of São Paulo (Unifesp), and in 2022, he joined the University of Bologna for a short period as a Visiting Professor in the Department of Pharmacy and Biotechnology, hosted by Prof. Manuela Bartolini. His research interests regard synthetic medicinal chemistry, with special emphasis on multitarget-designed ligands for CNS, inflammation, and infectious diseases. He is an effective member of the Brazilian Association of Pharmaceutical Sciences (ABCF), Brazilian Chemical Society (SBQ), and European Histamine Research Society (EHRS), and has already published over 60 papers in peer-reviewed journals. He also holds a fellowship from the Brazilian National Council for Scientific and Technological Development for research productivity (level 2).