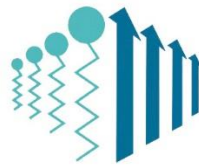




**Università
di Catania**



LipAgg
DOCTORAL NETWORK
ON AMYLOID PROTEIN

Organisation/University

University of Catania

Research Field

Biophysics, Structural Biology

Researcher Profile

First stage researcher (R1)

Application Deadline

01/05/2026 23:00 Europe/Brussels

Location

Catania - Italy (25 months)

Jülich - Germany (11 months)

Type of contract

Temporary

Job Status

Full-time

Hours per week

40

Offer Starting Date

01/09/2026

EU Research Framework Programme

HORIZON-MCSA-2024-DN

Marie Curie Grant Agreement Number

101227450

LipAgg Doctoral Network project

The LipAgg project seeks to unravel the structural complexities of amyloid protein-lipid aggregates and investigate their role in pathological aggregation, cellular toxicity, and intercellular spread. Focusing on key human amyloid

proteins —amylin (IAPP), amyloid beta (A β), and α -synuclein (α S)—linked to type 2 diabetes (T2D), Alzheimer's disease (AD), and Parkinson's disease (PD), respectively, the project builds on recent discoveries made by the consortium. These findings highlight the critical role of free lipids in membrane damage through the formation of stable lipid-amyloidogenic protein complexes, leading to the lipid-chaperone hypothesis.

LipAgg Doctoral Network program

The selected PhD candidate will participate in the EU-funded HORIZON-MSCA-DN-2024-01 project LipAgg. The LipAgg network brings together partners from 6 European countries and comprises 11 academic or research institutions and 12 industrial partners. The consortium is committed to delivering an outstanding training programme for 15 Doctoral Candidates (DCs) aimed at elucidating the role of lipids in the toxicity and propagation of protein aggregation.

Supervisors

Prof. Carmelo La Rosa – clarosa@unict.it

Prof. Birgit Strodel – b.strodel@fz-juelich.de

Involved Company

Biofordrug - <https://www.biofordrug.com/>

Title

Characterization of A β -lipid complexes.

Objectives

This project aims at establishing a reproducible protocol to generate A β -lipid complexes made from recombinant A β and near physiological vesicle preparations. The kinetics of the complex formation will be determined using Surface Plasmon Resonance (SPR) and Resonance Rayleigh Scattering (RRS) spectroscopy. Molecular simulations will be applied to determine the affinity (ΔG) between A β and the different lipids, and to determine the effects on the structure and dynamics of A β (at Forschungszentrum Jülich), which will involve collaborations with DC 4 who will perform the same kind of simulations for IAPP and α S.

The Position

The selected PhD candidate will participate in the EU-funded HORIZON-MSCA-DN-2024-01 project LipAgg. The LipAgg network brings together partners from

five European countries and comprises nine academic institutions and twelve industrial partners. The consortium is committed to delivering an outstanding training programme for fifteen Doctoral Candidates (DCs) aimed at elucidating the role of lipids in the toxicity and propagation of protein aggregation.

The Doctoral candidate key tasks will be to manage and carry out the assigned research project, participate in the LipAgg training and network activities, take PhD courses, write scientific articles and your PhD thesis, participate in national and international congresses and scientific meetings, undertake a research stay at an external research laboratory within the LipAgg network, and disseminate the obtained scientific results.

The Doctoral Candidate will be enrolled at University of Catania under the supervision of Prof. Carmelo La Rosa. The project includes a 11-month secondment at Forschungszentrum Jülich (Jülich, Germany) to perform molecular simulations under the supervision of Prof. Birgit Strodel, as well as a 1-month secondment in screening and profiling of drug candidates for biotech companies (Bari, Italy).

The expected start date is 1 September 2026.

The Candidate

The ideal candidate for this position is a highly motivated and talented researcher holding a Master's degree (MSc or equivalent) in Chemistry or Biophysics.

The candidate should enjoy the challenge of novel scientific concepts and have a highly motivated, persistent and result-driven attitude. The candidate should be able to work well both independently and in an interdisciplinary team.

Excellent oral and written communication skills in English are required. Strong organisational and planning skills are also necessary.

Eligibility rules

This position is subject to the mobility and eligibility rules of the Marie Skłodowska-Curie Actions. In particular, the candidate must not have resided or carried out their main activity (work, studies, etc.) in Italy for more than twelve months during the three years immediately prior to the recruitment date, unless as part of a procedure for obtaining refugee status under the Geneva Convention. At the date of recruitment, the candidate must be a Doctoral Candidate, *i.e.* in the first five years (full-time equivalent research experience) of their research career and must not have been awarded a doctoral degree.

Funding

The successful candidates will receive a gross salary of 3821.53 € as well as a mobility allowance of €710.00 per month in accordance with the MSCA regulations for Doctoral Researchers. The net salary depends on local tax regulations and on the country correction factor (to allow for the difference in cost of living in different EU Member States). The salary includes a living allowance, a mobility allowance, and a family allowance (if applicable). The PhD funding is for 36 months.

Required documents

CV - including methodological skills

Motivation letter

Copy of Master's degree (or proof of expected completion)

Master thesis (if available)

All academic transcripts

Contact information for at least two references

Contact information

To get more details please visit the website at URL: <https://lipagg.eu/> or write to clarosa@unict.it and b.strodel@fz-juelich.de.