CONSTRUCTOR UNIVERSITY

School of Science

European Research Council
Established by the European Commission

Two PhD Positions in the Nau Research Group at Constructor University

Join a cutting-edge research team!

We are offering two fully funded, 3-4 year PhD fellowships in the Nau research group at Constructor University. Highly motivated candidates are invited to contribute to the innovative project CARAMEL – Covalent Chaotropic Membrane Transport for Biotherapeutic Delivery, as part of a dynamic international team embedded within a Synergy Grant funded by the European Research Council.

Project overview

The CARAMEL project aims to pioneer new synthetic strategies for modified boron clusters that interact with biological membranes, enabling efficient transport of therapeutics across these barriers. This interdisciplinary research combines organic synthesis, supramolecular chemistry, and membrane biophysics.

Your role

The selected candidates will contribute to the following tasks within the project framework:

1. Multi-step synthesis of novel boron cluster derivatives, including purification and full structural characterization.
2. Physico-chemical analysis of interactions with cellular membrane models, utilizing liposomes with varied compositions.
3. Mechanistic studies of membrane transport, employing advanced fluorescence-based assays.

Starting date: 1st April 2026

Candidate profile

We are looking for candidates who possess:

- BSc and MSc in Chemistry, Biochemistry, or related fields**,** with background in synthetic organic or elemento-inorganic chemistry, and research experience.
- Hands-on experience with characterization techniques such as NMR, LC-MS, HPLC, and spectroscopy (UV-vis, fluorescence).
- Familiarity with supramolecular interactions or membrane models is highly desirable.
- Excellent communication skills in English (both written and spoken).
- Strong teamworking, organizational, and problem-solving abilities.

Selection process

Applicants should fill out the online form available HERE.
Please upload *a single PDF* file (NameSurname.pdf) including:

- A motivation letter outlining your interest and suitability for the position.
- Your Curriculum Vitae.
- Academic transcripts (BSc and MSc).
- Contact details of two academic referees.
- A brief summary of previous research experience (max 1 page).

For any questions, please contact to abarbabon@constructor.university

Incomplete applications will not be considered. Shortlisted candidates will be invited to online or in-person interviews. Applications will be reviewed on a rolling basis until both positions are filled.

Take the next step in your scientific career and help shape the future of biotherapeutic delivery!