

Postdoctoral Position in Organic Synthesis for Membrane Carriers

The group of [Dr. Javier Montenegro](#) is seeking for a **Postdoctoral associate** with strong background in **organic synthesis** for the preparation of new molecules with applications as **conceptually new membrane carriers**. This is an excellent opportunity to join the [Montenegro lab](#) and work in a multidisciplinary team in a great challenge for the development of a completely new field of research.

The aim of the project is to prepare new organic functionalized boron clusters for their application as chaotropic membrane transporters.

DESCRIPTION

Chaotropic membrane transport is a completely new research field (see references) with an outstanding potential to revolutionize the fields of membrane transport and drug delivery. We are now exploring new intriguing properties and mechanisms of chaotropic membrane transport and we advance towards the modification of boron clusters with organic functional groups for their future implementation in therapeutic delivery.

The applicant will be involved in the synthesis of boron clusters with **organic functional groups** (e.g. alkynes, amides, esters) for their connections to other molecules (e.g. fluorescent probes, antimicrobials) and their intracellular delivery by chaotropic transport.

REQUIREMENTS

We seek motivated candidates with initiative, creativity and team-working ability and with a PhD in **Organic Chemistry** and multistep synthesis.

Experience in inorganic synthesis and/or supramolecular chemistry will be highly considered.

Good communication skills and proficiency in written and spoken English are essential.

REFERENCES

- Boron clusters as broadband membrane carriers. [Nature 2022, 603, 637–642.](#)
- Synthetic materials at the forefront of gene delivery, [Nat. Rev. Chem. 2018, 2, 258-277.](#)
- Peptide/Cas9 Nano-structures for Ribonucleoprotein Cell Membrane Transport and Gene Edition. [Chem. Sci., 2017, 8, 7923-7931.](#)

STARTING DATE AND TERM

Starting from January 2024 (flexible), 1 year of contract with possible 1 + 1 (3 years total) extension.

APPLICATIONS

Applications should be sent to patricia.lago.rama@rai.usc.es and javier.montenegro@usc.es, as soon as possible and including a CV (maximum 2 pages), a complete list of publications and the name and the e-mail of two contact persons, indicating in the subject **Postdoctoral Organic Clusters**.