

An **ERC-funded** Postdoctoral position is available to join Eduardo Balsa's lab at CBMSO (Madrid) to study the Molecular and metabolic mechanisms underlying mitochondrial dysfunction.

**Background:** Mitochondria are unique and complex organelles that perform essential functions in many aspects of cell biology. Once considered to be mere sites of ATP generation, it is now evident that these organelles participate in a wide range of cellular processes including calcium homeostasis, apoptosis, redox balance or cell fate. Because of this multifaceted contribution of mitochondria to key biologic and metabolic pathways it is not surprising that mitochondrial dysfunction has been linked to many human disorders including neurodegeneration, diabetes, cancer or aging. The Balsa laboratory seeks to understand the basic molecular components that regulate mitochondrial function and integrate this knowledge in the context of human physiology and disease.

**Lab interest:** We are currently exploring two central areas. First, we aim to elucidate the molecular mechanisms whereby mitochondrial dysfunction compromise cellular fitness and leads to organ failure in the context of human diseases. Second, we focus on understanding how cancer cells adapt to unfavoured tumour microenvironments by rewiring their mitochondrial metabolism to enable tumour growth and survival.

**Candidate profile:** Are you interested in mitochondrial metabolism? You have a strong background (PhD) in molecular/cellular biology (background in mitochondrial biology, cancer and neuroscience metabolism is a plus). You have successfully applied state-of-the-art genetic engineering technologies (such as CRISPR/CAS9), and you are an expert in molecular biology techniques including but not limited to western blot, qPCR, bioenergetic assays, and cell culture techniques. Expertise in mouse models, cancer metabolism and/or neurometabolism is a plus. You are interested in molecular and metabolic mechanisms that connects mitochondrial dysfunction with human diseases. You like taking the scientific and experimental lead on a challenging project. You can work independently but also like to collaborate within the team and other research groups. You aim for high impact.

**We offer:**

- Cutting edge research projects funded by the European Research Council (ERC).
- The opportunity to lead exciting research project on Mitochondrial biology & metabolism.
- Multidisciplinary and international collaborations.
- State-of-the-art technologies including CRISPR/Cas9-based genetic screenings, mass spectrometry and preclinical mouse models.
- Team work and individual research career development.

**How to apply:**

Interested applicants should submit a motivation letter, a CV, and 2 letters of reference from current/previous supervisors in one single pdf file to Eduardo Balsa ([ebalsa@cbm.csic.es](mailto:ebalsa@cbm.csic.es)) indicating ERC-Postdoc position in the email subject.