

JOB OFFER: Postdoctoral fellow

PRINCIPAL INVESTIGATOR: Daniel Bachiller

GROUP: Advanced Therapies (<https://www.cib.csic.es/research/cellular-and-molecular-biology/advanced-therapies>)

PROJECT TITLE: Engineering induced pluripotent stem cells for a novel immunotherapy of fungal infections.

PROJECT DESCRIPTION: Although fungi infect billions of people every year, their contribution to the global burden of diseases is largely underestimated. Invasive fungal infections kill every year about the same number of people than tuberculosis and about three-times more than malaria. Due to the lack of suitable highly sensitive and specific diagnostic tests, fungal infections are diagnosed late and often inaccurately. As a result, fungal infections are commonly treated empirically, leading to the unselective and unspecific use of expensive, not very effective, and often toxic antifungal drugs.

Our group is challenging this situation by developing a radically new iPSC-based interdisciplinary platform that integrates into a single functional protocol several disruptive technologies:

- Highly Immunocompatible iPSC cell lines for allogenic treatments,
- New, high-end genomic editing Docking Platform with unlimited loading capacity, for secure and fast incorporation of CARs and other effector genes at predetermined safe locations in the genome,
- Optimized upscaled protocols for iPSC differentiation into Macrophages (M ϕ) and NK cells,
- New generation of Chimeric Antigen Receptors (CARs) optimized for targeting fungal infections.

DURATION: 3 years

ACADEMIC QUALIFICATIONS: Candidates should have a PhD. in biomedical sciences or related disciplines.

EXPERIENCE REQUIRED: Basic molecular biology techniques (PCR, cloning, DNA, RNA and protein analysis). Bioinformatic tools (sequences analysis, molecular cloning, and gene design software). Cell culture experience is desirable.

ADDITIONAL REQUIREMENTS: We are looking for a person who, in addition to the technical and scientific skills mentioned above, has the ambition, curiosity and energy to take responsibility for the project and its future evolution. The next phases of the clinical and commercial development of the technology will be carried out in a spin-off company that is being set with the participation of the CSIC.

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DEADLINE: 28/02/2024

OTHER INFORMATION: Candidates should email an application form to Dr. Bachiller containing a CV, a short cover letter describing your expertise and research interest and the contact details of three potential referees.