

## Open Call for a Master's Research Fellowship

The Instituto Gulbenkian de Ciência (IGC) is welcoming applications to a Master's degree (BI) with a Research Fellowship, financed by Fundação Calouste Gulbenkian under the following conditions:

**1. Duration** The fellowship duration according to the [IGC Research Fellowship Regulation](#) approved by FCT is 12 months, with the possibility of renewal up to a maximum limit of 2 years. The fellowship contract is expected to start by January 2024, under the exclusiveness regime as required by Research Fellowship Regulation of Fundação para a Ciência e Tecnologia, IP (FCT).

**2. Subject of Activities:** The selected candidate will be involved in the research of comparative genomics. Advances in comparative genomics are revealing remarkable biodiversity in how different organisms execute essential cellular functions. Notably, the discovery of organisms lacking genes conventionally considered essential for viability challenges our established understanding of ubiquitous biological processes. For instance, certain protist species lack genes that encode proteins involved in DNA replication, chromosome segregation, and cell cycle progression, all of which are typically deemed essential. This raises the question of how these genes were lost while still maintaining organismal viability.

The goal of this project is to challenge the concept of gene essentiality, by perturbing conserved cellular processes in *S. cerevisiae*. The obtained mutants will be experimentally evolved and sequenced. Ultimately, this project will lead to a deeper understanding of the biodiversity involved in genome maintenance that is present in nature and understanding how it can be evolutionarily achieved.

**Scientific Areas:** Biological Sciences.

**3. Scientific Guidance:** The selected candidate will join the Genome Maintenance and Evolution Laboratory (<https://gulbenkian.pt/ciencia/research-groups/mfumasoni/>), headed by Dr. Marco Fumasoni.

**4. Academic Profile and Admission Requirements:** We are currently seeking an MSc to develop the offered project. The candidate should hold a master's degree in biomedical engineering and have a background in molecular biology. Practical experience in microbiology, particularly *S. cerevisiae* manipulation is a prerequisite as well yeast genetic manipulation and evolution assays. Expertise or prior experience in flow cytometry and microscopy, especially live imaging is considered advantageous.

We are specifically looking for a candidate who is proactive, curious, and capable of independent contributions to the project. Skills related to lab organization are important and a strong emphasis is placed on critical thinking. It is essential that applicants demonstrate English language skills both oral and written. Attention to detail, well organized, and ability to keep clear written records;

According to article 3, point 2 of [IGC Research Fellowship Regulation](#), the selected candidate must be enrolled in a non-academic degree course integrated in the educational project of a higher education institution.

If the qualification has been conferred by a foreign higher education institution it must be recognized by a Portuguese higher education institution, under the terms of the provisions of article 25.º of Decree-Law n.º 66/2018, of August 16<sup>th</sup> (<https://www.dges.gov.pt/en/pagina/degree-and-diploma-recognition>), which approves the legal regime of recognition of academic degrees

and diplomas of Higher Education, attributed by foreign higher education institutions, and of paragraph e) of n.º 2 of article 4.º of Decree-Law n.º 60/2018, of August 3rd, and any formalities established therein must be fulfilled by the date of the hiring act. The jury reserves the right to invite the candidate ranked immediately after to the position in question when the first ranked candidate is not recognized with the academic degree after the aforementioned formalities have been fulfilled.

**5. For Portuguese taxpayers:** All candidates that where/are currently taxpayers in Portugal are required to present evidence of the fulfillment of their individual obligations towards the Portuguese Tax Authority and Social Security. Failure to comply with this requirement will be considered as a criteria for exclusion from the recruitment process.

**6. Applicable legislation and Regulation:** All candidates must comply with the [IGC Research Fellowship Regulation](#); [Research Fellowship Statutes](#) amended by [Decree n.º 123/2019](#) of August 28<sup>th</sup>; [FCT Legislation and Regulations for Fellowships](#) and the [Decree-Law n.º 66/2018](#), of August 16th (Legal regime for recognition of academic degrees and diplomas of higher education awarded by foreign higher education institutions)

**7. Subsidy Month Stipend:** 1.300,00 €/month according to the table of monthly maintenance allowance amounts set out in Annex I of [IGC Research Fellowship Regulation](#). The payment will be made by bank transfer. The selected candidate will be reimbursed for the amount corresponding to the Voluntary Social Security contribution.

**8. Deadline for applications and how to submit applications:** Interested candidates should send their applications to [igcpositions@igc.gulbenkian.pt](mailto:igcpositions@igc.gulbenkian.pt) in a single PDF file, named “**Applicant name\_MSc Research Fellowship\_S.cerevisiae Gene Essentiality**”, containing: Motivation Letter (2 page max); Curriculum Vitae (2 pages max), two contacts for reference letters and proof of degree.

**9. Methods of Selection and Evaluation:** The selection procedure shall be as follows: Curriculum (40%), motivation letter (20%) and contact information for 2 references (20%). If considered necessary by the jury, the interview of the selected applicants will represent (20%) of the final evaluation.

**10. Jury Selection:** Chairman: Dr. Marco Fumasoni. Other members: Dr. Ana Garona and Dr. Mario del Rosário.

**11. Form of Advertising / Notification of results:** The assessment results will be sent to all candidates by email. After being notified of the panel's decision, applicants shall have 10 working days to issue an opinion.

**12. Application Period:** From 27/12/2023 until 11/01/2024.

**13. Non-discrimination and equal access policy:** The Instituto Gulbenkian de Ciência of the Calouste Gulbenkian Foundation actively promotes a non-discrimination and equal access policy, wherefore no candidate can be privileged, benefitted, impaired or deprived of any rights whatsoever, or be exempt of any duties based on ancestry, age, sex, sexual preference, marital status, family and economic conditions, education, origin or social conditions, genetic heritage, reduced work capacity, disability, chronic illness, nationality, ethnic origin or race, origin territory, language, religion, political or ideological convictions and union membership.