

GIMM IS OPENING A CALL FOR A PHD RESEARCH FELLOWSHIP UNDER ERC ADVANCED GRANT KILLBILL

Fellowship Reference GIMM/BI/30-2026

Gulbenkian Institute for Molecular Medicine (GIMM) opens a call for one PhD research fellowship under the project ***“KILLBILL – A metabolic-based defense strategy against malaria”***, with funding support from the European Union, ERC Advanced Grant, Grant Agreement No. 101267836. The selected candidate is expected to enroll in the CAML PhD Programme at the Faculty of Medicine of the University of Lisbon, subject to the applicable academic admission and enrolment requirements.

GIMM, the Gulbenkian Institute for Molecular Medicine, is a pioneering Portuguese private research foundation, with an ambitious vision of fundamental scientific exploration and its profound impact on global health and well-being. Founded in 2023, GIMM is the result of the merger of two leading research institutes: *Instituto de Medicina Molecular João Lobo Antunes (iMM)* and *Instituto Gulbenkian de Ciência (IGC)*, which is dedicated to uncovering the fundamental mysteries of life and aims to be at the forefront of transdisciplinary research.

The Soares Lab ([Inflammation Laboratory](#)) at GIMM leads the ERC Advanced Grant KILLBILL, which investigates how bilirubin, a byproduct of red blood cell breakdown, protects the host against malaria by acting on macrophages. Plasmodium parasites infect red blood cells and feed on hemoglobin, releasing highly toxic heme into circulation. Our recent study, published in Science (Figueiredo et al.), showed that bilirubin, long considered a metabolic waste product responsible for the jaundice observed in severe malaria, is in fact an adaptive host response that confers protection against the disease. Mice unable to produce bilirubin succumb to infection, while bilirubin administration restores resistance. Mechanistically, bilirubin blocks parasite proliferation and virulence within red blood cells and, central to the KILLBILL project, enables macrophages to kill the parasite, although the underlying mechanism remains unknown. This discovery reveals an unanticipated role for macrophage biology in host defense and opens new therapeutic avenues against malaria, a disease that still causes over 500,000 deaths per year worldwide. The PhD project will build on these findings, within the KILLBILL programme, to dissect the mechanistic basis of bilirubin-mediated protection against Plasmodium infection, with a particular focus on how bilirubin enables macrophages to kill the parasite.

Scientific Area(s): Biomedical Sciences, with a focus on Infectious Diseases, Immunology, Parasitology, Molecular and Cellular Biology, and Metabolism.

Fellowship recipients / Admission requirements: Any National, foreign and stateless candidate(s) that fulfill the necessary conditions to be enrolled in a PhD degree course (in area related to the work plan) can apply.

Applicants must hold the following requirements:

- Hold a degree **or degrees** (Bachelor's, Master's, or recognized equivalent, corresponding **cumulatively** to at least four years of full-time study or 240 ECTS credits) in Life Sciences, Biomedicine, or a related field, that formally entitles the holder to embark on a doctoral programme;
- Not have previously received funding for doctoral studies from the Portuguese Foundation for Science and Technology (Fundação para a Ciência e a Tecnologia - FCT), regardless of duration;
- Not hold a PhD degree by the deadline of this call;

- Demonstrate proficiency in English at CEFR level B2 or above. This may be evidenced by a recognized test (e.g., IELTS, TOEFL), prior education conducted in English, or relevant professional or academic experience in an English-speaking environment;

Work Plan and Objectives:

PhD Project: *Bilirubin-mediated protection of macrophages against cell death: mechanisms and therapeutic potential*

. The thesis will characterize, mechanistically, how bilirubin protects macrophages from cell death engaged during malaria and sterile hemolysis. Using macrophages as a tractable model, the student will first establish a macrophage-based screening system for cell death and generate an integrated molecular map of the changes through which bilirubin protects macrophages. Building on this map, the student will apply target-identification methods to determine which proteins bilirubin binds and will prioritize and confirm the most promising candidate(s). These candidates will then be functionally validated in macrophages, combining gene editing, imaging and rescue experiments to establish their specificity and importance. Finally, the student will test the validated pathway in vivo using established disease models to explore its therapeutic potential, culminating in the manuscript and doctoral thesis. The programme is designed to yield at least one first-author publication and a coherent thesis, alongside the standard institutional milestones (annual thesis committee review, mid-thesis assessment, and final defense).

Legislation and Applicable Regulation: *Estatuto do Bolseiro de Investigação (Lei n.º 40/2004, de 18 de Agosto, republished in attachment to Decreto-Lei n.º 202/2012, de 27 de Agosto, changed by **Decretos-Leis n.º 123/2019, 28 de Agosto e nº 65/2024, 1 de outubro**)* and current Regulation of Fellowships of GIMM.

Predicted start date, duration and renewal conditions: The fellowship contract is expected to start in January or early February 2027, for an initial period of 12 (twelve) months on an exclusive basis. It may be renewed for additional periods, up to a maximum total duration of four years (48 months), in accordance with the applicable regulations. The fellowship cannot be awarded for a period of less than three consecutive months. The fellowship is intended to support research activities leading to the award of a PhD degree by the Faculty of Medicine of the University of Lisbon. The selected candidate will be integrated into [GIMM's institutional PhD programme](#) and invited to enroll in the [CAML PhD Programme](#) at the Faculty of Medicine of the University of Lisbon. The research activities will be carried out primarily at GIMM and integrated into the Inflammation Laboratory's work plan and scientific strategy, within the scope of the CAML PhD Programme, without prejudice to research conducted in collaboration with other institutions.

Work place and Scientific orientation: The research activities will be carried out primarily at the Inflammation Laboratory of GIMM, under the scientific supervision of Miguel Soares, without prejudice to research activities conducted in collaboration with other institutions.

Non-discrimination and equal access policy: GIMM undertakes to ensure compliance with the principles of non-discrimination and equality and to that extent, provides that no candidate can be privileged, benefited, harmed or deprived of any right or exempted from any duty due in particular ancestry, age, gender, sexual orientation, marital status, family status, economic status, education, social origin or condition, genetic heritage, reduced working capacity, disability, chronic disease, nationality, ethnic origin or race, place of origin, language, religion, political or ideological convictions and trade union membership.

International environment and experience: Diversity is a fundamental aspect of the essence of GIMM, where researchers and non-researchers of different nationalities, backgrounds and areas of study work together, promoting the exchange of experiences and interactions, contributing to the personal and professional development of each person and to the existence of an international, inclusive and stimulating environment.

Research Fellows Support Centre: The Research Fellows Support Centre works everyday from 09:00AM to 11:00AM at People & Culture Unit Office.

Fellowship financial conditions: The fellow will benefit from a monthly stipend in the amount of **1.359,64€**. The amount will be paid by wire transfer at the end of each month. The fellow will also benefit from a personal accident insurance to execute the proposed research activities as well as the right to Social Security through Voluntary Social Insurance regimen, if wanted, under the terms of Código dos Regimes Contributivos do Sistema Previdencial de Segurança Social, and the contributions costs will be supported by the research project.

Application documents:

By the deadline defined for this call, applicants must submit:

1. in PDF format, exclusively in English, as **one single merged file**:

- Curriculum Vitae (maximum 2 pages);
- Motivation Letter (maximum 5000 characters).

The letter must be original, written in clear, plain language, and specifically tailored to this call. It should state the candidate's motivation for pursuing a PhD, the experiences that shaped this ambition, and how her/his career objectives connect specifically to this laboratory's research programme rather than to doctoral study in general; demonstrate command of the scientific literature underlying the proposed project, situating it within the current state of the field and identifying the specific knowledge gap it addresses; and critically compare the project's proposed experimental approach with at least one plausible alternative or complementary line of investigation, justifying why that alternative would be a valid way to address the same underlying scientific question;

- BSc / MSc /certificate.

Documents proving the holder's academic qualifications and diplomas, or their recognition where these have been awarded by foreign higher education institutions, may be waived at the application stage and replaced by a declaration of honour from the applicant; verification of this will only take place at the stage of formalizing the fellowship contract. This declaration must attest to facts that occurred prior to the application. In the event of any discrepancy between the information contained in the declaration and the documentation submitted for the purpose of finalizing the fellowship contract, only the information contained in the latter shall be taken into account. Should it be found that the documents proving possession of the academic degree and diploma, or their recognition in accordance with Decree-Law No. 66/2018 of 16 August, do not correspond to the grades awarded in the assessment of the candidate's academic record and may, consequently, alter the candidate's ranking, the scholarship contract will not be finalized.

2. In addition to the application PDF, candidates must ensure that GIMM receives a minimum of 2 recommendation letters by the application deadline, written in English, ranking the candidate on the following dimensions (1-poor to 5- excellent) with a short paragraph to support each score:
 - i) Technical skills and experimental rigor, relative to the candidate's stage of training.
 - ii) Scientific curiosity, critical thinking, and problem-solving ability.
 - iii) Capacity to learn new techniques and adapt to unfamiliar research areas.
 - iv) Reliability, work ethic, and ability to work as part of a team.
 - v) Overall potential to succeed in and complete a PhD programme.
 - vi) Rank the candidate among all the undergraduate/master's students the referee has trained or supervised (e.g., top 5%, top 10%, top 25%, average).

Reference letters must be submitted directly and confidentially by the referee, in English, either on official institutional letterhead or from a verifiable institutional email address, dated and signed (handwritten or a valid electronic signature). Each letter must include the referee's full name, institutional affiliation, current professional title, and contact details (institutional email and telephone), and will be treated as confidential and not disclosed to the candidate. Personal data contained in reference letters will be processed in accordance with GIMM's data protection policy and applicable data protection law.

Important Note: *Candidates who submit their applications incorrectly or who fail to provide evidence of the requirements set out in this call within the deadlines specified herein will be excluded from the competition. The provision of false statements or acts of plagiarism by candidates is grounds for cancellation of the application, without prejudice against other sanctioning measures. Motivation letters that are generic, templated, or evidently AI-generated, and that fail to demonstrate original, specific engagement with the candidate's own objectives and with the scientific basis of the proposed project, will be considered non-compliant with this requirement and constitute grounds for elimination from the competition.*

Jury evaluation and selection: Applications will be assessed by a selection panel comprising three effective members: Dr. Miguel P. Soares (PhD), Dr. Marc Veldhoen (PhD), and Dr. Isabel Gordo (PhD), and one alternate member, Dr. Pavel Hanč (PhD), all affiliated with GIMM. Panel members with a direct personal or financial conflict of interest with an applicant must declare it and recuse themselves from the evaluation of that application.

Selection methods: The selection process for this PhD Research Fellowship will occur in two stages:

a) First stage — Application assessment

The first stage is eliminatory, and each application will be reviewed in detail by the members of the selection panel. The evaluation considers the candidate's merit and motivation, assessed based on the documents submitted in the application. Applications considered admissible will be scored on a scale of 1 to 20 in each of the following evaluation criteria:

- Criterion A (50%): CV that reflects academic, scientific and professional background;

- Criterion B (35%): Motivation letters. The evaluation considers the candidate's motivation to pursue a PhD and to work on this specific scientific project, and how the programme connects to her/his personal and professional objectives; the candidate's demonstrated command of the scientific literature underlying the project and understanding of the specific knowledge gap it addresses; and the scientific soundness of the alternative or complementary line of investigation proposed, and its justification;
- Criterion C (15%): Recommendation letters. The evaluation focuses on the candidate's intellectual curiosity and scientific commitment, academic curriculum and experience, and research competence.

Applications will be ranked according to the weighted average obtained in each of the 3 criteria above:

Documentary Score = $(0.50 \times A) + (0.35 \times B) + (0.15 \times C)$.

b) Second stage — Interview

Candidates approved in the first stage (scoring 15 or above) will be invited to an individual interview conducted by the members of the selection panel. The interview will assess the candidate's academic, scientific, and professional merit and its alignment with the proposed project, as well as their motivation, initiative, and originality. Particular attention will be given to the candidate's ability to discuss and critically analyze scientific work, their specific knowledge in the area of study, and their broader scientific knowledge, with a particular focus on GIMM's core research areas. Proficiency in English, including fluency and clarity of communication, will also be evaluated. The interview would then account for 50% of the Final Score.

Final Score: = $(0.50 \times \text{Documentary Score}) + (0.50 \times \text{Interview Score})$.

Deadlines and application process: The call will be open from 12th of August to 20th of September 2026.

Applications and all supporting documents, excluding reference letter, should be submitted to People & Culture Unit, through the email positions@gimm.pt, with the email subject First and Last Name of the Candidate_GIMM/BI/30-2026.

Reference letters must be sent separately to the same email address (positions@gimm.pt), with the subject First and Last Name of the Candidate _GIMM/BI/30-2026 – Reference Letter.

The non-compliance with these requirements determines the immediate rejection of the application.

Notification of results: Within 90 days after the termination of the applications submission deadline, both admitted and excluded candidates list and final classification list shall be communicated to all admitted candidates through email.

Preliminary Hearing and Final Decision Deadline: The evaluation results are communicated by email to all candidates. After notification, candidates have a period of 10 working days to, if they wish, make a statement in a preliminary hearing of interested parties, under the terms of articles 121 et seq. of the Administrative Procedure Code. The final decision will be issued after analysis of the statements presented in the preliminary hearing. Offers must be accepted within 15 working days.

The present call is exclusively aimed at filling the indicated vacancy and may be terminated until the homologation of the final candidate's ranking list and expires with the respective occupation of the position on offer

Fellowship contracting: The Fellowship is granted through the signature of a contract between GIMM and the selected fellow and after the fellow sends the following mandatory documents: copy of identification document (in case of non-European citizens is mandatory the work visa / valid resident permit), document proving the required academic degree and evidence of admission and/or active enrolment in the applicable doctoral programme. Renewal of the fellowship will depend on the approval of the student's progress, as demonstrated by:

- The student's report on annual activities and progress;
- The statement issued by the supervisor confirming the development of the work plan and the assessment of the corresponding activities;
- The report issued by the thesis committee attesting to the progress and evaluation of the work plan.

Oeiras, 11th of August 2026

The Executive Committee of GIMM
Professor Maria Manuel Dias da Mota



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