



**Universidade Nova de Lisboa (NOVA University of Lisbon)
Institute of Hygiene and Tropical Medicine (IHMT NOVA)
Advert seeking a PhD graduate to perform researcher activities:**

Scientific Employment Competition Ref. DM04-DRH/201

According to the provisions of article 23 of Decree-Law no. 57/2016 of 29 August, and taking into account the legal regime to which it refers, contained in the same legal document, a competition procedure of international selection is open, to fill a doctoral post for the exercise of scientific research activities, financed by national funds through the Foundation for Science and Technology, with the following guidelines and specifications:

Background

- a) The decision to open the competition procedure is due to the fact that the scientific research activities related to the project, under reference SFRH/BPD/100688/2014, are carried out by the postdoctoral fellow, holder of the FCT grant, and fulfilling Article 23 of Decree-Law no. 57/2016 of 29 August.
- b) Considering that the legal cause of the decision to open the competition is the pursuit of scientific research activities by the postdoctoral fellow, the decision to open the contest will be without effect if the fellow, holder of the aforementioned scholarship, does not submit an application.
- c) The contract with the winner of the competition is subject to the condition its being adequately funded by a budget allocation through a development contract to be signed by FC&T with the Institution, in order to fund the competition.
- d) Candidates who do not earn 10 points on a scale of between 0 and 20 of the respective ranking criteria will not be allowed to fill the position due to lack of sufficient absolute merit.

General application requirements:

- a. National, foreign and stateless persons with a PhD in Biomedical Sciences, specialising in Microbiology;
- b. Holders of a scientific and professional curriculum vitae that displays an appropriate profile for the activity to be performed;

If the PhD has been awarded by a foreign higher education institution, it must comply with the provisions of Decree-Law no. 341/2007, of 12 October, and the fulfilment of any formalities established therein must occur by the application expiration date.

Specific admission requirements:

- PhD in Biomedical Sciences, specialising in Microbiology;
- Knowledge, experience and scientific production in the field of P3 biosafety laboratories for the manipulation of pathogenic microorganisms of biosafety level 3, in particular susceptible, multi-resistant and extensively resistant *M. tuberculosis*;
- Knowledge, experience and scientific production in the field of ex vivo infection testing with susceptible, multi-resistant and extensively resistant *M. tuberculosis* and in obtaining cultures for *M. tuberculosis* in dormancy/latency in vitro and ex vivo;
- Knowledge, experience and scientific production in the field of *M. tuberculosis* laboratory diagnosis and molecular biology.

Duties to be performed:

- Antibiotic synergy studies: inhibitory compounds of efflux by microdilution in a 96-well plate and by macrodilution by the BACTEC MGIT 960 system. Toxicity tests of compounds in primary macrophages;
- Cloning in *M. tuberculosis* of pH sensitive GFPs for the evaluation of intracellular pH in vitro and in infected macrophages;
- Preparation of mutants of *M. tuberculosis* resistant to efflux inhibitors by the agar plate method and by the BACTEC MGIT 960 method;
- Real-time fluorometry for evaluation of efflux activity in *M. tuberculosis* with RT-qPCR for the evaluation of the expression of electron transport chain and efflux protein genes responsible for acid resistance;
- Obtaining cultures for *M. tuberculosis* in dormancy/latency using three dormancy models: Wayne model; rapid depletion of oxygen and production of nitric oxide;
- Evaluation of the effect of efflux inhibitor compounds on the regulation of intraphagolysosomal pH in macrophages infected with *M. tuberculosis* in the dormancy/latency phase. Determination of the production of reactive oxygen species, production of nitric oxide and membrane potential, intracellular ATP levels, intracellular calcium and potassium and of nitric oxide.
- Performing scientific research activities in the areas indicated above with funding from external sources through the submission and coordination of national and international projects;
- Making activities promoting science and national and international collaborations in the specific scientific area more dynamic, as well as support in the training of students at Masters, PhD and postdoctoral level.

Contract and Status:

The employment is carried out by means of an unfixed-term contract under the terms of the Labour Code, as a PhD, Level 33 of the single remuneration table (TRU), in accordance with Decree-Law no. 11-A/2017, of 29 December.

Workplace:

IHMT-NOVA Facilities, Lisbon.

Documents that should be included in the application:

- i) Cover Letter (max. 2500 characters, including spaces)
- ii) Future research plan (max. 5000 characters, including spaces);
- iii) Copy of certificate or diploma;
- iv) Detailed curriculum vitae according to the application requirements;
- v) Other documents relevant to the evaluation of the suitability of the requested profile;

Selection methods and their weighting:

- Curricular evaluation (evaluation of curriculum vitae and cover letter and the future research plan, as specified in the general and special requirements) - 90%
- Interview - 10%

If there is no interview, because there is only one candidate, the curricular evaluation has a weighting of 100%.

The selection methods, their weightings and classification system are listed in Minutes no. 1 of the Jury meetings.

Application deadline:

The deadline for submission of applications is 10 working days from the date of publication in the Official Gazette.

Full notice of this procedure will be available on the FCT website at <http://www.eracareers.pt> and on the IHMT website at <http://www.ihmt.unl.pt/category/bolsas-e-concursos/>.

The application must be sent by email indicating the reference in the subject field, to the email address recursos@ihmt.unl.pt by 5pm on 03 of september 2018.

Notification of Results: All applicants will be informed of the results via email.