

2020 Call – Applications for Doctoral Scholarships in the framework of the Proton Therapy PhD Grants Program

Terms of the Call

FCT and the ProtoTera Association agreed to promote a program of PhD grants in order to constitute a community of PhDs with multidisciplinary training in the areas of medicine, technology and physics that support the installation and operation in Portugal of cancer treatment centers using proton beam therapy.

The following domains will be considered:

- a) Fundamental or applied research in the studies of the effects of high energy radiation on biological systems and materials and, in particular, on studies of radiation on cells and animals;
- b) Development and optimization of relevant technologies for the therapeutic use of particle beams, including accelerators; beams modulated in space, time and intensity; real-time reconstruction systems for the location of the beam in the tumor area; real-time planning and medical imaging;
- c) Diagnosis and treatment of oncological diseases which imply the study of innovative approaches that involve the combination of therapeutic and diagnostic systems, commonly referred to as "theranostics", contributing to a precision and customized medicine;
- d) Research in medical and clinical physics related to proton radiotherapy namely, within the scope of the dependent and independent uncertainties of the dose calculation;
- e) Medical and clinical research related to proton radiation therapy, namely in the referral of patients and in the planning and follow up of treatments;
- f) Study of synergies between immunotherapy and proton therapy and therapies making use of radioisotopes and proton therapy.

The maximum number of grants to be awarded in the present call will be five. The granting of the scholarship will depend on the receipt of all required documents and is subject to the availability of FCT funding.

Candidates who have previously received an identical type of FCT-funded fellowship or have been selected for a PhD grant in an FCT PhD Program may not apply.

This program is associated to the IDPASC Doctoral Program in Particle Physics, Astrophysics and Cosmology.

1. Recipients Grant

PhD studentships will be granted to applicants that fulfil the requirements to join a study cycle that allows to obtain a PhD degree and wish to develop research work in the areas of medicine, technology and physics at a Portuguese University and hosted at the ProtoTera Association or at any national R&D centre **with a protocol previously established with the ProtoTera Association**. These grants will be supervised by a supervisor designed by the host institution and may be co-supervised by researchers from other institutions. In any case it is mandatory one of the supervisors has a link to a Portuguese University granting the academic degree, and in case of mixed grants one of the co-supervisors has to have a link to the foreign host institution.

The grants may be national or mixed grants, depending on whether the work program is carried out totally or partially at national institutions. In the case of national grants, it is mandatory to include in the work program a minimum period of a 6-month internship at an internationally renowned institution. In the case of mixed grants, the period of the work program that takes place in a foreign institution cannot exceed a period of two years. When applying for a mixed grant, applicants should specify the starting date and length(s) of the period(s) to be spent abroad and indicate the foreign institution where the research work will take place.

The duration of the grant is annual, renewable up to a maximum of four years and may not be awarded for periods of less than three consecutive months. Selected applicants will be awarded monthly stipends and supplementary support, which may include tuition fees, relocation costs, travel awards and health insurance, whenever applicable, as detailed in the FCT Regulations. For further information, please consult the following link: <https://www.fct.pt/apoios/bolsas/valores>.

Under the conditions set out in Article 9 and Paragraph 1 of Article 14 of Regulations for Studentships and Fellowships of the Fundação para a Ciência e a Tecnologia, applicants for the fellowships should comply with the following: a) Be Portuguese citizens, or citizens of other European Union member states; b) Be third-country citizens; c) Be stateless persons; d) Be beneficiaries of refugee status.

Application to the grants whose programme is partially carried out in a foreign institution (mixed grants) will only be accepted if candidates (Portuguese and foreign applicants) are able to prove habitual or permanent residence in Portugal at the starting date of the grant.

The documents which provide proof of residence in Portugal are the following, according to the nationality of the applicants:

- o Portuguese applicants: residence certificate, issued by the *junta de freguesia* of their residence area;
- o Citizens of a European Union member-state: EU citizen registration certificate, issued by the town council, or certificate of permanent residence for the EU, issued by the Serviço de Estrangeiros e Fronteiras (Borders and Foreigners Services);

- o Thirty-party citizens: certificate of permanent residence, issued by the Serviço de Estrangeiros e Fronteiras (Borders and Foreigners Services).

Candidates from third-party states that are not currently living in Portugal may also apply, if the required studentship proceeds fully in Portuguese institutions. In this circumstance, the contracting of the studentship that is conditionally granted depends on the presentation of a valid Portuguese residence permit at the starting date of the grant, under the terms established in Law no. 23/2007, of 4 July, last amended and republished by Law no. 102/2017, of 28 August.

These documents are not required during the application submission and may be presented upon provisional awarding of the grant, during the contracting process. However, these documents must be valid on the starting date of the grant.

The submission of degree certificates is no longer a mandatory admissibility requirement; its presentation may only occur upon granting the studentship. Nevertheless, only the degree certificates uploaded in the application form will be considered for evaluation purposes, namely to calculate the score of A1, a sub-criterion of the Merit of the Applicant.

2. Period of the Call

The call will be open from **21st September to 30th November 2020**.

- **1st Phase: Submission of thesis themes by the supervisors – 21st September to 23rd October 2020, 17:00 (Lisbon time)**
- **2nd Phase: Submissions of the applications by students – 26th October to 30th November 2020, 17:00 (Lisbon time)**

3. Applications

Applications can only be submitted electronically through: <https://prototerapia.lip.pt>

No other means of submission are available. Applications may only be submitted in English.

Notifications are sent by email but supervisors and applicants are strongly advised to consult regularly the status of their application in the website and keep direct communication by other means since the notifications can sometimes be filtered by anti-spam systems.

1st Phase: Submission of thesis themes by the supervisors – 21st September to 23rd October 2020, 17:00 (Lisbon time)

As stated in the call announcement, R&D centres should have a protocol previously established with the ProtoTera Association. It is also mandatory one of the supervisors has a link to a Portuguese University granting the academic degree, and in case of mixed grants one of the co-supervisors has to have a link to the foreign host institution. If your institution doesn't have

such a protocol yet, please ask your Direction to contact the ProtoTera Association via prototerapia@lip.pt to propose to establish one. A template of the protocol can be found at https://prototerapia.lip.pt/files/prototera_minute_agreement.docx.

Each thesis theme can only have a maximum of three supervisors, with one being the main supervisor and the other two co-supervisors (optional). Any fully active researcher holding a PhD may be a supervisor or co-supervisor.

To submit thesis themes, you need first to register using the following link: <https://prototerapia.lip.pt/register>. Supervisors and co-supervisors should guarantee that their CV is uploaded in the website.

For each thesis proposed the supervisor should setup the title, the PhD program, the scientific domain, the institution that will award the academic degree, the host institution, and, if applicable, the name of the co-supervisor(s).

After logging, supervisors should proceed as indicated below:

- Create a new proposal: go to "**Application->Supervisors->New Thesis**";
- Insert the title, the PhD Program, the scientific domain, the institution that will award the academic degree, the host institution, the name of the co-supervisors if applicable.

2nd Phase: Submissions of the applications by students – 26th October to 30th November 2020, 17:00 (Lisbon time)

Before to apply, you need to register as student using the following link: <https://prototerapia.lip.pt/register>.

All applicants have access to the proposed thesis themes in the website. The applicants should consult the proposed thesis themes and contact the supervisor/co-supervisors of the thesis theme. A communication between candidates and supervisors is mandatory. The process of locking in the application form depends on, among other factors, the association of the supervisor and the co-supervisors (when applicable), to the application.

Applicants must apply to the theme and formalize their application by filling the Candidate Application form (*provided on-line*), and by uploading the following documents:

- **One** CV file in pdf format;
- **One** Motivation Letter file in pdf format;
- **One** PDF file to include supporting documents attesting that the applicant fulfils all the required conditions, namely certificates of all the academic degrees obtained, with the final average grade and marks in all subjects; other documents that the candidate may consider relevant to the assessment of the merit mentioned in the CV;
- **Up to three** contacts for reference letters
(*The reference letters will be directly uploaded by the referees. Applicants will not have*

access to the letters content but they will be able to check if the reference letters have been uploaded and when. The referees will receive an e-mail with the name of the applicant and with a link in order to upload their letters. The Referees can upload the letters during the whole period of the Call).

Click **"Associate Supervisors"**. An e-mail will be sent to the applicant and to the supervisor, as well as to the co-supervisors (when applicable). Applicants must then be confirmed by the supervisor, who will need to fill the supervisor form (*provided on-line*), describing its personal judgment as regards to the student CV and his adequacy to the PhD subject and by the co-supervisors (when applicable).

After the supervisor and co-supervisors have locked their association to the application, applicants should click **"Submit and Lock"**. At this point, the entire application will be validated and, if there is no error, locked. No further modification will be allowed.

Important Notes:

Students may only register one single application. Deadline for submission - **30th November 2020, 17:00 (Lisbon time)**

Candidates should hold either a pre-Bologna degree, or a pre-/post-Bologna Master's degree at the time of application.

In order to comply with the foreseen applicable Portuguese legislation concerning the recognition of foreign qualifications, all the rights inherent to academic degrees granted by foreign higher education institutions is duly recognised to the holders of these degrees, subject to the presentation of the academic degrees recognition and conversion of the final grade to the Portuguese grading scale, requested to the Dean of a public Portuguese University, the Head of a Public Polytechnic Institute or the Director-General for Higher Education; or by the presentation of the equivalence/recognition, registered by a public higher education institution. The legal regime applicable to the recognition procedures is approved by the Decree-Law no. 66/2018, of 16 August, if requested after 1 January 2019. For requests submitted before 1 January 2019, the applicable legal procedure is ratified by Decree-Law 341/2007, of 12 October, and regulated by Decree no. 227/2017, of 25 July, or, alternatively, for equivalence processes, the request is governed by the Decree-Law no. 283/83, of 21 June.

For further information, applicants are advised to carefully read Decree-Law 66/2018, of 16 August, and to visit the website of the Directorate General for Higher Education (Direção-Geral do Ensino Superior, DGES):
<https://www.dges.gov.pt/en/pagina/degree-and-diploma-recognition?plid=1536>

Foreign certificates may be considered valid only when their acknowledgment record is submitted, or alternatively, when a document of acknowledgment/equivalence of foreign qualifications with the corresponding Portuguese qualifications is submitted. Applicants with foreign academic degrees should:

- ☐ Indicate that the academic degree was completed abroad;
- ☒ Upload the recognition/equivalence of the academic degree and the final grade conversion to the Portuguese grading scale, issued by a public Portuguese higher education institution or by the Directorate General for Higher Education (DGES). The submission of both the

recognition of academic degrees and the respective final grade conversion is mandatory for the calculation of the sub-criterion A1. The minimum grade of 0 will be scored when both graduate and master foreign degree certificates are not recognized nor the respective final grades converted to the Portuguese grading scale.

The members of the jury will only assess the degrees duly recognized at the date of the application submission.

4. Evaluation

Each application admitted to the Call, if considered to meet the admissibility requirements, will be assessed by the evaluation panel.

The composition of the evaluation panel will be announced before the deadline of the present call.

All the evaluators may never be a supervisor or co-supervisor of applicants with applications submitted under the evaluation panel where they participate.

Evaluation takes into account three criteria:

A) Merit of the Applicant

The criterion A, which has a 40% relative weight to the final score, is evaluated based on three sub-criteria:

A1. Academic career (reflecting the academic degree grades), with a relative weight of 50% in the Merit of the Applicant.

A2. Personal curriculum (reflecting the scientific, professional and academic career. In particular, in the domain of Particle and Astroparticle and associated domains, will be valued previous experience in theoretical, experimental or phenomenology in the domain, and in the domain of technologies associated to the Portuguese participation at CERN and their transfer to society will be valued skills on instrumentation, electronics, computing and engineering), with a relative weight of 40% in the Merit of the Applicant;

A3. Motivation letter, with a relative weight of 10% in the Merit of the Applicant.

B) Merit of the work programme

The merit of the work programme criterion has a relative weight of 40% and takes into account the following three parameters:

B1. Justified relevance of the study object;

B2. Scientific quality of the state of the art and the methodology of the work programme;

B3. Feasibility of the work programme.

C) Merit of hosting and supervision conditions

The merit of the hosting and supervision conditions criterion has a relative weight of 20% and takes into account two parameters:

- C1. The scientific merit and experience of the supervisor in the scientific field of the application [and, if applicable, the co-supervisor(s)] and suitability with regard to the applicant's supervision and the PhD academic degree achievement;
- C2. Quality and adequacy of the host institution(s) conditions.

For purposes of tiebreak, the final ranking list will be based on the scores assigned to each of the evaluation criteria in the following order: criterion A (Merit of the Applicant), criterion B (Merit of the Work Programme) and criterion C (Merit of the Hosting Conditions).

All applications will be graded from 0.000 (minimum) to 5.000 (maximum) in each of the three evaluation criteria.

The panel responsible for the evaluation of each application is identified taking into account the main domain stated by the candidate in the application form. In the merit of the candidate criterion, sub-criterion A1 - academic career, only the following will be scored: i) the academic degrees awarded by Portuguese universities whose certificates contain complete information regarding the final grade of each study cycle and the respective number of credits (ECTS), if applicable; ii) the academic degrees awarded by foreign higher education institutions whose recognition and conversion of the final grade to the Portuguese grading scale, according to the applicable legal regime, is demonstrated in the application.

Applicants whose application is scored with a final grade lower than 3.000 will not be eligible for studentship granting.

5. Disclosure of results

The results of the first step of the evaluation will be published through a list sorting the candidates according to their attributed mark, on the LIP website and by e-mail; in case of disagreement, the candidates have a period of 10 working days to contest the decision, as provided for in the Code of Administrative Procedure in a preliminary hearing. At the end of this period, the arguments presented will be analysed by the jury committee, which will simultaneously communicate the final decision to all the candidates who submitted allegations. The final results of the shortlisted applicants will be published on the LIP website and communicated by e-mail. In case of disagreement, the candidates have a period of 15 working days to contest the decision. A final appeal may also be lodged with the highest body of the funding entity (FCT) within a period of 30 working days after the announcement of the jury's final classification.

6. Equality and non-discrimination Policy

We are committed to promoting equality and preventing discrimination and welcome the applications of all qualified candidates irrespective of their age, disability, gender, marital status, pregnancy, maternity, gender identity, race, colour, nationality, ethnicity or national origin, sexual orientation, religion or belief, social background or culture or trade union membership.

7. Funding

The scholarship contracts will be signed directly with FCT. Grants final approval is conditioned to the admission of the candidate by the Institution granting the academic degree and is subject to the availability of FCT funding.

The scholarships awarded under this contract will be financed by funds from the State Budget of the Ministry of Science, Technology and Higher Education and, when applicable, by funds from the European Social Fund through the Operational Programs of Portugal 2020.

8. Applicable Legislation and Regulation

All missing aspects from this Call will follow the Regulations for Studentships and Fellowships of the Fundação para a Ciência e a Tecnologia available at:

<https://dre.pt/application/conteudo/127238533>

and the Research Fellowship Holder Statute available at:

<https://dre.pt/application/conteudo/124256707>

ProtoTera – PhD Program

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