

**Harvard Medical School – Portugal Program
in Translational Research and Information**

**Terms of Reference for the
2010 Calls for Proposals**

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1: Themes for the Call for Proposals

This document provides information relevant to the 2010 Calls for Proposals for the Harvard Medical School – Portugal Program in Translational Research and Information by the Fundação para a Ciência e a Tecnologia (FCT).

Regulations governing access to funding are available at:

<http://alfa.fct.mctes.pt/apoios/projectos/regulamento>

The announcement of the opening of each call is available at:

<http://alfa.fct.mctes.pt/apoios/projectos/concursos/harvard>

A guide to writing and submitting proposals is available at:

<http://alfa.fct.mctes.pt/apoios/cooptrans/parcerias/harvard>

In the **Health Information** area, a call for the following activities will be launched:

- 1: Production and Distribution of Health Information

In the area of **Clinical and Translational Research and Education**, calls for the following activities will be launched:

- 2: Collaborative Research Grants that partner Portuguese investigators (with special attention to participation of junior MDs) with experienced mentors in Portugal and at Harvard Medical School (HMS), HMS-affiliated institutions, and other Harvard faculties and schools.
- 3: Junior Research and Career Development Awards that support Portuguese Medical Doctors (MDs) seeking to develop careers in clinical research. A substantial portion of the clinical research funds will be used to support clinical research undertaken by MDs during their residency training in Portugal.
- 4: Senior Research and Career Development Awards to provide qualified applicants with an opportunity to study toward the Master of Medical Sciences degree from Harvard Medical School and to launch and support a novel clinical research program upon their return to Portugal.

- 1: Production and Distribution of Health Information

The Harvard Health Publications Division (HHP) of Harvard Medical School will work with Portuguese teams on several initiatives designed to produce (1) educational material for the general public and (2) educational material for students and professionals in the health sciences. These initiatives to produce material about health, medicine and biomedical science will be conducted through applications for competitive proposals from collaborative teams across Portuguese institutions. Funding will be available for up to 6 projects per year, in either of these two categories.

1. Educational material for the general public

The Harvard Medical School-Portugal Program in Translational Research and Information is soliciting applications for grants to create health information for the general public, *written in Portuguese*, published electronically and delivered over the Internet.

Topics of interest that will be top priority include all health topics identified in the Portuguese national health plan. However, excellent proposals in any other topic will also be considered.

Guidelines for the content to be produced:

- The total content per topic would be approximately 30-60,000 words, written at the 10th grade reading level, and would address prevention, diagnosis, treatment and prognosis.
- In addition, a simplified version of the content—approximately 10,000 words, written at the 5th grade level—would be created. This simplified version would ultimately be delivered in *spoken* form over the Internet, with visual material (usually single images, sometimes animations) on the screen that relates to what is being spoken. The audience for this information is people of limited literacy.
- The content can address health problems that affect people of all ages. Priority is given to content that emphasizes health problems of teenage children, young adults and older adults.
- The content will include newly-created illustrations (or illustrations that are in the public domain and can be used without constraints).

Additional features that will make an application attractive, because they take advantage of the capabilities of the Internet, include:

- Simple animated illustrations (as simple as two-step or three-step animations);
- Quizzes the user can take to test whether they have understood the material they have read;

- Simple, interactive tools that allow individual users to obtain information that is specific to someone like themselves (particular age, gender, past medical history, medication history, etc.).
- Online communities in which topic experts engage in conversations with secondary school and college students and with the general public, organized through the Harvard Medical School-Portugal Program
- In creating or organizing animations, quizzes, videos, tools or online communities, project directors must from the beginning work with UMIC/FCCN directly to obtain necessary software for delivering the content on the existing HMS-P website.

2. Educational material for students and professionals in the health sciences

Topics of interest that will be top priority include all health topics identified in the Portuguese national health plan. However, excellent proposals in any other topic will also be considered.

Guidelines for the content to be produced

- The total content per topic would be approximately 30-60,000 words, written in *English*, and would address basic biology of disease, prevention, diagnosis, treatment and prognosis.
- Each project should include self-tests, so that users can assess their learning.
- Projects are encouraged to create animations and videos as part of the content.
- Projects are encouraged to organize online communities in which topic experts engage in conversations with health professional students and health professionals, organized through the Harvard Medical School-Portugal Program
- If self-tests, animations, videos, and online communities that are included in a funded proposal, the project directors must work with UMIC/FCCN directly to obtain necessary software for delivering the content on the existing HMS-P website.

SPECIFIC INFORMATION ABOUT THE GRANTS

Duration of activity. Grants will be awarded for up to two years. For the 2010 call, funding is available for 6 projects, in total, across the two categories.

Funding. Up to 50,000 Euro per year will be available to support each project that is chosen. Funds awarded to Harvard Medical School for the HMS-Portugal Program will cover the participation of HMS teams in each project.

Eligible applicants. Applications must come from groups associated with Portuguese Universities, Associate Laboratories, Research Centres, State Laboratories or any other public or private research institutions, including hospitals. Applications must involve participants from at least two different Portuguese institutions, working directly with faculty and staff of the Harvard Health Publications Division of Harvard Medical School. Applications from multiple institutions will be viewed particularly favorably. Successful applicants will be expected to reflect an active collaboration between teams from Portugal and advisors from Harvard, and should be consistent with the overall editorial agenda and plan approved by the Health Information Executive Committee of the Harvard Medical School-Portugal Program.

Principal Applicant or team members with an overall allocation of over 100% in FCT financed or co-financed projects cannot be eligible for funding. The minimal time allocation for the PI is 35% and for each Portuguese team member 15%. Time allocations will be verified before contract signature. As allowed by FCT, the PI may reallocate time in other FCT financed or co-financed projects in order to become eligible for funding at the time of the grant award.

Where to apply. Applications must be submitted online through

<https://concursos.fct.mctes.pt/projectos>

following the Announcement of the Call for Proposals.

Structure of the application. The application must comply with the online FCT application form (see Guide to writing and submitting proposals available through the FCT website following the Announcement of the Call for Proposals).

In addition, applicants must create a complete application **in .pdf form, written in English**, that includes:

1. **Project title** in English; **Principal contractor** and **participating institutions**; Name of **Project Leader** (no more than 1/3 of page);

2. **Scientific Component**:

a. A brief summary of what the *topic(s)* of the content will be, and what the chosen *audience* (general public, students or professionals in the health sciences) will be **(1/3 page)**;

b. A description of the need for this information: a survey of what information on the chosen topic for the chosen audience already exists in Portugal, and what this proposal will add to the existing information **(1-2 pages)**;

c. A detailed description of the subtopics to be covered, within the broad overall topic: the Table of Contents for the entire content to be developed **(3-4 pages)**;

d. A clear statement of the *type* of content to be created—text, art, animations, quizzes, interactive tools, videos, information in spoken form (with static art or videos on the screen), etc. **(1-2 pages)**;

e. A description of the role of each member of the project team, including a description of each member's past experience with producing health information for the intended audience and of the intended type (text, animations, videos, etc.) **(1-2 pages)**;

f. A budget that includes the names of all personnel already identified to work on the project, and that includes a justification for any new equipment worth more than 500 Euros, and any travel costing more than 1,000 Euros;

g. For projects that will produce health information for the *general public*, a sample of the type of content that will be produced, written in Portuguese (4 pages).

Applications must be written in English, except for 2. g., just above, must be single spaced, have left and right margins of 2.5 cm, and use 11 point font.

Deadline for receipt of applications: 1 October 2010 (5 pm GMT)

Review of applications. Applications will be reviewed by a **Review Committee** of independent experts in the field of health information for the general public, from the United States and nations other than Portugal, organized by FCT in close collaboration with Harvard Medical School. The Committee will be chaired by Professor Anthony Komaroff and will be responsible for evaluating the merit of each proposal, and for identifying ways in which successful applicants might work together to avoid the creation of redundant content.

Applications will be ranked according to the following criteria:

A = Scientific merit and novelty of the project

B = Scientific merit of the research team

C = Feasibility of work plan and reasonable budget

D = Contribution to the acquisition of knowledge and skills by the Portuguese National Scientific and Technologic Network (effects and expected results)

Notification. FCT will notify successful applicants by e-mail after 1 December 2010.

Start of activity. Funded applications will commence after 1 January 2011.

First Progress Report. A final editorial plan and initial content produced will be delivered within 6 months after the signature of the Contract, for interim review by the Review Committee. If the Committee is concerned about the progress made by the applicants, the Committee may require another interim review in several months, and has the right to recommend that further funding be discontinued when progress has been poor.

Second Progress Report. A summary of new content produced since the first Progress Report will be delivered within 12 months after the signature of the Contract, for interim review by the Review Committee. If the Committee is concerned about the progress made by the applicants, the Committee may require another interim review in several months, and has the right to recommend that further funding be discontinued when progress has been poor.

Delivery of content produced. Content produced should be delivered to the Program on a on-going basis. The content will published on the web-based portal being developed by the Program. It is expected that the final content will be delivered no later than 24 months after the signature of the Contract.

Information about the FCT on-line application form and process can be addressed to

projectosharvard@fct.mctes.pt

Questions on the project's content, eligibility and general information on the program can be addressed to HMS-Portugal (contact@hmsportugal.pt)

2: Clinical and Translational Research Grants

Research in biomedical sciences that targets disease mechanisms and outcomes may be divided into several overlapping areas. **Translational** research focuses on the areas of biology that impinge on human health and the understanding of disease mechanisms, and on the application of this research toward a particular medical challenge. **Clinical** research aims to understand disease and health by directly observing and experimenting on patients. Both areas of research are required to promote the effective application of basic knowledge into patient needs. The Clinical and Translational Collaborative Research Grants are designed to enhance and enlarge the clinical and translational research infrastructure in Portugal and to promote collaboration not only within Portugal but also internationally. The research topics to be considered in these calls should be patient and/or disease oriented and the translational and/or clinical outcomes should be clearly stated. It is expected that, through a range of scientific approaches, the Collaborative Research Grants will focus on questions relevant to medicine at the frontier of translational and clinical sciences.

Successful competitive proposals will involve a collaborative effort between (at least) two Portuguese research teams from different institutions and (at least) one research team from Harvard Medical School. There will be one call for grant applications in each of the first four years of this Program, each call offering three collaborative research grants. Each grant will provide funding for two years, with the possibility (upon evaluation) of extension for a third year. Grant applications will be assessed on a strictly competitive basis by an international panel of experts in clinical and translational investigation and will be subjected to annual evaluation.

Grant applications will be assessed on a strictly competitive basis by a panel of independent experts. A typical award will provide resources for each individual laboratory adequate to cover salaries (at the levels of PhD or MD-PhD student, postdoctoral fellow, or technician), supplies, and limited resources for equipment. If requested, salary support for principal investigators at Harvard will be limited to no more than 10% of the principal investigator's then current salary.

Travel support will be provided to allow all the researchers from the Harvard teams to meet annually with their counterparts in Portugal and to participate in the Annual Symposium and the Annual Retreat to be held in Portugal; these meetings and the Annual Symposium and Retreat will be essential to ensure active networking among all the participants of the program.

As a condition of accepting their research grant awards, the Portuguese laboratories involved in the Collaborative Research Grants will make available laboratory slots to accommodate either MD or MD/PhD students or MDs in residency or fellowship training. Medical students and MD residents or fellows enrolled in a research project in the Portuguese laboratories can participate in a significant period of practical training at the Harvard laboratories involved in the Collaborative Research Grants. While in residence at Harvard, Portuguese students and fellows will become full members of the host laboratory, participating in laboratory research, group meetings, journal clubs, retreats, workshops, seminars, and nanocourses. The Portuguese fellows will also participate in the Harvard Catalyst Colloquium Series and a bimonthly faculty dinner series together with “peer mentors” from one of the Harvard laboratories involved in the Collaborative Research Grants. These paracurricular activities will allow the Portuguese MDs studying at Harvard to interact with Harvard students and fellows and will encourage community-building among the Portuguese MDs in each cohort.

Investigators applying for a clinical and translational collaborative research grant must organize themselves as an international research team. The team must consist of at least three investigators: one investigator is designated the “Principal Applicant” and the other investigators are designated the “Co-Applicants.” The Principal Applicant and at least one Co-Applicant will be located in Portugal, and at least one Co-Applicant will be located at Harvard. The Principal Applicant will be responsible for coordinating the research on behalf of the team. He/she will also act as the team’s liaison with the HMS-Portugal Program and will be required to submit annual budgets and progress reports.

A key requisite for acceptance of a Collaborative Research Grant is that all funded researchers directly supported by the Research Grant (including the Principal Investigators, students, post-doctoral fellows, and technicians) must attend and participate in the Annual HMS-Portugal Program Retreats and Symposia to be held in Portugal. Failure to attend could result in loss of funding.

Duration of activity. A typical proposal should cover research efforts for a period of three years. Funding for years 2 and 3 will be conditional on the progress achieved by the team as determined upon review by the Review Committee.

Funding. The maximal annual funding level for a project is 100,000€/year for each Portuguese team (up to a total of 200,000€/year for all the Portuguese laboratories participating in a given project) and up to a total of U.S. \$160,000/year in direct costs for the Harvard laboratory(ies)

participating in a given project. Indirect costs will follow the non-federal rates applicable to HMS and the indirect cost agreements between HMS and the Harvard-affiliated institutions. For the 2010 call, funding is available for 3 projects. Funds awarded to Harvard Medical School for the HMS-Portugal Program will cover the participation of HMS teams in each project.

Eligible applicants. Applications must come from groups associated with Portuguese Universities, Associate Laboratories, Research Centers, State Laboratories or any other public or private research institutions, including hospitals. Applications must involve participants from at least two different legally defined Portuguese institutions and (at least) one research team from Harvard Medical School, institutions affiliated with Harvard Medical School and/or other Harvard faculties and schools.

Principal Applicant or team members with an overall allocation of over 100% in FCT financed or co-financed projects cannot be eligible for funding. The minimal time allocation for the Principal Applicant is 35% and for each Portuguese team member 15%. Time allocations will be verified before contract signature. As allowed by FCT, the Principal Applicant may reallocate time in other FCT financed or co-financed projects in order to become eligible for funding at the time of the grant award.

Where to apply. Applications must be submitted online through

<https://concursos.fct.mctes.pt/projectos>

following the Announcement of the Call for Proposals.

Structure of the application. The application must comply with the online FCT application form (see Guide to writing and submitting proposals available through the FCT website following the Announcement of the Call for Proposals).

In addition, applicants must create a complete application **in .pdf form, written in English**, that includes:

- An overview of proposed research emphasizing how the proposal meets the aims of the HMS-Portugal Program. Emphasize also the nature and expected outcomes of the collaborative work. State clearly the aims of the team as a whole and indicate the specific role played by each member in achieving the goals of the team. Explain the advantages of conducting the proposed studies as a collaborative effort. Do not exceed three pages, Arial regular font, 11 point.

- A detailed outline of the proposed research, including specific aims, background and rationale, preliminary results, and experimental plan. Do not exceed seven pages, Arial regular font, 11 point. The detailed presentation must delineate the specific contributions of each member of the team.
- The CV of the principal applicant and each co-applicant, including a list of up to 10 of the most relevant papers for each applicant. For each applicant, the maximum is 2 pages, Arial regular font, 11 point.

Applications must be written in English, must be single spaced, and have left and right margins of 2.5 cm, Arial regular font, 11 point. The overview and the detailed outline should not exceed ten pages. Figures and drawings can be used as needed. There is no page limit for the reference-citations section of the application.

Deadline for receipt of applications: 1 October 2010 (5 pm GMT)

Review of applications. Applications will be reviewed by a Review Committee of independent experts from the United States and, if applicable, from nations other than Portugal, organized by FCT in close collaboration with Harvard Medical School. The Review Committee will be chaired by Professor Lee Nadler at Harvard Medical School and will be responsible for evaluating the merit of each proposal, and for identifying ways in which successful applicants might work together to avoid the creation of redundant content.

Applications will be ranked according to the following criteria:

A = Scientific merit and novelty of the project,

B = Scientific merit of the research team and clear indication of the collaborative nature of the work and complementarities of the studies.

C = Feasibility of work plan and reasonable budget.

D = Contribution to the acquisition of knowledge and skills by the Portuguese National Scientific and Technologic Network (effects and expected results)

Notification. Successful applicants will be notified by e-mail after 1 December 2010.

Start of activity. Funded applications will commence after 1 January 2011.

Progress Report. A yearly report will be delivered, for interim review by a Review Committee. The Committee has the right to recommend that further funding be discontinued or extended for one more year.

Final Report. A final Report will be delivered, for review by the Review Committee.

Information about the application form and process can be addressed to projectosharvard@fct.mctes.pt

Questions on the project's content, eligibility and general information on the program can be addressed to HMS-Portugal (contact@hmsportugal.pt)

3: Junior Research and Career Development Awards

The Junior Research and Career Development Awards will provide MDs in Portuguese residency training with an opportunity to apply on a competitive basis for funding to support their clinical research in Portugal. Awards will be made to MD residents who propose a worthwhile project, demonstrate the support of their institution to pursue the work full-time over a two- to three-year period, and bring to the project a Portuguese mentor. Where appropriate, a Harvard co-mentor may also be recruited.

Each award will also provide an annual stipend for the MD applicant as well as research costs over the two- to three-year period. Tuition and registration will be provided for each qualified MD resident to attend the Harvard Medical School “Program in Clinical Effectiveness (PCE)” summer course (see <http://www.hsph.harvard.edu/clineff/>) during the first and second years of their award. The awardees must apply and be accepted to the PCE summer course through the normal PCE admissions process. Participation in the Program in Clinical Effectiveness for two successive summers will provide each awardee with a solid underpinning for clinical research.

An important condition of the award will be an institutional guarantee of the support and infrastructure required to carry out the work. This support and infrastructure must be guaranteed in writing by the Portuguese hospital, clinical institution, and/or research laboratory in which the clinical research will be conducted.

Duration of activity. Funding will be awarded for up to 3 years. Funding will be conditional on the progress achieved by the awardees as determined upon review by the Review Committee.

Funding. Up to 80,000 Euro per year will be available to support each applicant who is chosen (including salary, travel and support for research in Portugal). For the 2010 call, funding is available for 2 awards.

Where to apply. Applications must be submitted online through

<https://concursos.fct.mctes.pt/projectos>

following the Announcement of the Call for Proposals.

Structure of the application. The application must comply with the online FCT application form (see Guide to writing and submitting proposals available through the FCT website following the Announcement of the Call for Proposals).

In addition, applicants must create a complete application **in .pdf form, written in English**, that includes:

- Three detailed letters of recommendation sent by individuals who are familiar with the applicant's clinical ability and/or research potential. One of these letters must be from the applicant's Department or Division Head who must take responsibility for protected time of the applicant from clinical effort.
- A one-page statement of the applicant's reasons for wishing to attend this program, indicating his/her professional goals and describing why he/she feels that this program will be beneficial to him/her.
- The CV of the applicant.

Deadline for receipt of applications: 1 October 2010 (5 pm GMT)

Review of applications. Applications will be assessed by a Review Committee of independent experts, to be organized by FCT in close collaboration with Harvard Medical School. The top four applications will be sent to the Clinical Effectiveness Program Admissions Committee.

Notification. The 2 successful applicants will be notified by e-mail in March 2011.

Start of activity. Program starts July 1, 2011.

Progress Report. The selected candidates will participate in Harvard's Program in Clinical Effectiveness during the summer of 2011. The Review Committee will identify Harvard-based clinical research mentors to work with each of the Portuguese MDs during their time in Boston. The Portuguese MDs will work with these mentors to develop their ideas into a research project. Upon returning to Portugal, the candidates will be asked to submit their fully developed research proposal for review (deadline October 15, 2011), to assess whether it has both merit as well as likelihood of success. If this research proposal is approved by the Review Committee, then the candidates would be granted the remainder of their funding for the year. A yearly report will be delivered, for interim review by the Review Committee. The Committee has the right to recommend that further funding be discontinued or extended for a maximum of 3 years.

Final Report. A final Report will be delivered, for review by the Review Committee.

Information about the application form and process can be addressed to projectosharvard@fct.mctes.pt

Questions on the project's content, eligibility and general information on the program can be addressed to HMS-Portugal (contact@hmsportugal.pt)

4: Senior Research and Career Development Awards

The Senior Research and Career Development Awards will support physician investigators who qualify for admission to an established Master's training program at Harvard Medical School. Upon completion of their training, the trainees will return to Portugal with a full and thorough understanding of clinical research and an active and ongoing clinical research project that will be continued and expanded in Portugal with the help of a two-year research and career development grant including an annual stipend (including benefits) and an annual supplement toward research costs in Portugal. An important condition of the award will be an institutional guarantee of the support and infrastructure required to carry out the work. This support and infrastructure must be guaranteed in writing by the Portuguese hospital, clinical institution, and/or research laboratory in which the clinical research will be conducted.

Each Senior Research and Career Development Award will include funding for the two-year Harvard Scholars in Clinical Science Program (SCSP; see <http://www.hms.harvard.edu/gradprograms/scsp/>). This two-year post-graduate training program in clinical investigation includes formal course work, a longitudinal seminar series, and a mentored clinical research project. Students who successfully complete the program are awarded a Master of Medical Sciences degree from Harvard Medical School.

The application process for the Senior Research and Career Development Award will be designed to recruit the most competitive Portuguese post-graduate student for intensive training in clinical research at Harvard Medical School. The Admissions Committee will include representatives from the Faculties of Medicine and teaching hospitals throughout Portugal as well as one advisor from the Harvard Scholars in Clinical Science Program. Applicants will be ranked on the basis of their grades, test scores, research experience, letters of recommendation, and interest and aptitude for international-caliber careers in clinical investigation. The best student will be chosen for this program, without regard for gender, country of origin, city of origin, specific field(s) of interest within clinical investigation, or initial preference for returning institution (see above). The program will forward the application of two students per year to the Harvard Medical School Scholars in Clinical Science Program Admissions Committee; if the top Portuguese applicant is accepted through the SCSP's normal application and admissions process, the program will award the student two years of funding to attend the SCSP and an additional two years of funding as a new clinical investigator in Portugal. Each year of continued funding will be contingent on satisfactory progress.

Duration of activity. Funding will be awarded for up to 4 years. Funding will be conditional on the progress achieved by the awardees as determined upon review by the Review Committee.

Funding. Up to 100,000 Euro per year will be available to support each applicant who is chosen (including salary, travel and support for research in Portugal). For the 2010 call, funding is available for 1 award.

Where to apply. Applications must be submitted online through

<https://concursos.fct.mctes.pt/projectos>

following the Announcement of the Call for Proposals.

Structure of the application. The application must comply with the online FCT application form (see Guide to writing and submitting proposals available through the FCT website following the Announcement of the Call for Proposals).

In addition, applicants must create a complete application **in .pdf form, written in English**, that includes:

- Three detailed letters of recommendation sent by individuals who are familiar with the applicant's clinical ability and/or research potential. One of these letters must be from the applicant's Department or Division Head who must take responsibility for protected time of the applicant from clinical effort.
- A statement of intent that A) Describes the general area of research in which the applicant is interested and his/her reasons for choosing this area (maximum of 300 words). B) Provides a general outline of the project(s) that the applicant wishes to complete during the tenure of his/her involvement in the Scholars in Clinical Science Program. Please provide as much detail as possible including hypothesis, methods and potential pitfalls. If the applicant does not have a specific project, describe in general what the project(s) might be (maximum of 700 words). C) If the applicant has already chosen a mentor, what were the reasons for doing so? (maximum of 200 words). D) Describes the applicant's reasons for wishing to attend this program, indicating his/her professional goals and describing why he/she feels that this program will be beneficial to him/her (maximum of 600 words).
- The CV of the applicant.

Deadline for receipt of applications: 1 October 2010 (5 pm GMT)

Review of applications. Applications will be assessed by a Review Committee of independent experts, to be organized by FCT in close collaboration with Harvard Medical School. The top two applications will be sent to the Scholars in Clinical Science Program Admissions Committee.

Notification. The successful applicant will be notified by e-mail in March 2011.

Start of activity. Program starts July 1, 2011.

Progress Report. A yearly report will be delivered, for interim review by the Review Committee. The Committee has the right to recommend that further funding be discontinued or extended for one more year.

Final Report. A final Report will be delivered, for review by the Review Committee.

Information about the application form and process can be addressed to projectosharvard@fct.mctes.pt

Questions on the project's content, eligibility and general information on the program can be addressed to HMS-Portugal (contact@hmsportugal.pt)