

Call for applications for the assignment of 1 research fellowship grant for carrying out Category B research activities, as per Article 22 of Italian Law No. 240/2010, for the Scientific Disciplinary Sector of FIS/07 – Applied Physics, at the facilities of the Centro Integrato di Ricerca (CIR - Integrated Research Centre) and of the Departmental Faculty of Medicine and Surgery of Università Campus Bio-Medico di Roma (call code ASS-RIC/23_23).

THE RECTOR

- Considering** the Statute of Università Campus Bio-Medico di Roma;
- Considering** Italian Law No. 240 of 30/12/2010, containing regulations regarding the organization of universities, academic staff and recruitment, as well as the mandate to the Government to promote the quality and efficiency of the university system, and, in particular, Article 22;
- Considering** Italian Decree Law No. 192 of 31/12/2014, converted with modifications by Law dated 27 February 2015, n. 11, which extended for two years the total duration of the grants established pursuant Art. 22 Law n. 240/2010 prolonging it from four to six years;
- Considering** the Rector's Decree No. 460 of 9/12/2022, by which the Regulation for the Awarding of Research Grants of Università Campus Bio-Medico di Roma was issued, as per the aforementioned Italian Law No. 240/2010;
- Considering** Italian Law No. 241 of 07/08/1990, as amended, containing regulations on administrative procedures and the right of access to administrative documents;
- Considering** Italian Presidential Decree No. 445 of 28/12/2000 445, containing the "Consolidated law on regulations regarding administrative documents", as amended;
- Considering** Italian Legislative Decree No. 196 of 2003, as amended, and Italian Legislative Decree No. 51 of 18/05/2018, in implementation of Directive (EU) 2016/680 of the European Parliament and of the Council, of 27 April 2016 on the protection of natural persons with regard to the processing of personal data;
- Considering** Italian Ministerial Decree No. 102 of 9/03/2011, by which the minimum gross annual amount of research grants announced as per Italian Law No. 240/2010 is determined as a sum equal to Euro 19,367.00 net of charges to be borne by the administration;
- Considering** Italian Decree Law No. 198 of 29/12/2022, converted with modifications by Law dated 24 February 2023, n. 14, which extended to 31/12/2023 the deadline - originally set at 31/12/2022 by article 14 comma 6-quaterdecies Law 79/2022 - for establishing research fellowships in accordance with the previous regulations;
- Considering** the economic coverage guaranteed by the funds of project "QUAntum Sensing of living matter: magnetic fingerprint of cardiac ARrhythmias (QUASAR)", Scientific Supervisor for our University Ing. A. Loppini, funded by MUR under the call "PRIN: PROGETTI DI RICERCA DI RILEVANTE INTERESSE NAZIONALE - Bando 2022 Prot. 20225HYM8N", CUP C53D23001400008;
- Considering** the Resolution of the Academic Senate of Università Campus Bio-Medico di Roma of 11/12/2023;



Considering that it is necessary to issue a call for applications for the assignment of 1 research grant for carrying out Category B research activities, at the facilities of the Centro Integrato di Ricerca (CIR - Integrated Research Centre) and of the Departmental Faculty of Medicine and Surgery of Università Campus Bio-Medico di Roma;

HEREBY DECREES

Article 1 (Purpose of the call)

1. A public call for applications for the selection, based on qualifications and an interview, of the assignment of 1 research grant for carrying out Category B research activities as further described in Annex A, which forms an integral part of this call, to have a duration of 12 months, at the facilities of the CIR - Integrated Research Centre and the Departmental Faculty of Medicine and Surgery of Università Campus Bio-Medico di Roma.
2. The title of the research project to be carried out is the following: "Mathematical modeling of cardiac magnetic activity at the tissue scale", for the Scientific Disciplinary Sector of FIS/07 – Applied Physics, under the Scientific Supervisor Dott. Alessandro Loppini.

Article 2 (Admission requirements and causes for exclusion)

1. Applications may be submitted by those in possession of a:
 - **University degree** (as per the Old Italian System) earned with the previous Italian legislation in Physics, Biomedical Engineering, Mathematics or **Master's Degree** in Physics (20/S), Biomedical Engineering (26/S), Mathematics (45/S), Mathematical modelling for Engineering (50/S) or **Master's Degree** in Physics (LM-17), Biomedical Engineering (LM-21), Mathematics or Applied Mathematics (LM-40), Mathematical modelling for Engineering (LM-44) as per Ministerial Decrees No. 509/1999 and No. 270/2004;
 - **Scientific and professional curriculum** suitable for carrying out the research activities envisaged by this call;
 - **Research doctorate** in the field of Physics, Engineering, Applied Mathematics, Computer Science or equivalent qualification obtained abroad;
2. Applicants are admitted to the selection on a conditional basis. The university will issue justified notice for the exclusion of any applicants that lack the prescribed requirements. Such notice will be communicated to the parties concerned by registered letter with acknowledgement of receipt.
3. Excluded from applying are all those who have any degree of kinship or affinity, up to and including the fourth degree, with any professor belonging to the organization proposing the activation of the research activities, or with Università Campus Bio-Medico di Roma's Rector, Director General, or any member of the University Board of Directors;
4. The admission requirements and the reasons for exclusion also refer to the deadline for submitting applications.

Article 3 (Application methods and deadlines)

1. The application for participation in the call, as well as the qualifications possessed and the documents and publications deemed useful for the selection process, must be presented, **under penalty of**

exclusion, via telematic means, using the dedicated IT application, on the calls page of the website of the university: <https://www.unicampus.it/ateneo/concorsi/assegnisti/>. The IT application will require the possession of an e-mail address in order to register in the system. The applicant must enter all the data required by the application and attach, in electronic format, the documents referred to in this call. **No other forms of sending applications or documents useful for participation in the call are permitted.**

2. Within the deadline for the submission of the application, the online system allows the applicant to save data and upload documents in draft form. The date of the online submission of the application for selection is certified by the computer system by means of a receipt automatically sent to the email address provided by the applicant. After the deadline for application, the system will no longer allow access to or submission of the electronic form.
3. An identification number will be assigned to each submission that, together with the selection code indicated in the electronic application, shall be specified in all future communications.
4. The procedure for completing and submitting the application via electronic means must be completed **no later than 12.00 noon** on the fifteenth day elapsing from the calendar day following that of the publication of this call on the websites of Università Campus Bio-Medico di Roma, of the Italian Ministry of Education, University and Research, and of the European Union.
Should the aforementioned deadline fall on a public holiday, it shall automatically be extended to 12:00 pm on the first working day following such deadline.

The application must be **completed in full**, in all its parts, as per the online application procedure, and must indicate, in particular:

- a) **the title of the research project;**
- b) **the complete personal data of the applicant**, including name, surname, place and date of birth, personal fiscal identification number (Italian citizens only), place of residence, contact details used for the application (including zip/post code), a contact telephone number, and an email address to which formal communications can be sent;
- c) **the nationality of the applicant;**
- d) a declaration of the possession of the academic requirements referred to in Article 2 of this call;
- e) **the professional and/or scientific curriculum vitae suitable for carrying out the research activities, dated and signed at the bottom, initialled on all its pages**, and attached in **PDF** format;
- f) the list of **publications and research products** deemed useful for the purposes of the selection, which must be attached in **PDF** format;
- g) the **publications and research products** deemed useful for the purposes of the selection, which must be uploaded and sent in **PDF** format (the maximum data limit allowed for each publication is **30 MB**), exclusively via the appropriate section of the online procedure, and exclusively in **full text** format;
- h) self-certification of the equivalence of **titles attained abroad;**
- i) request for the recognition of the equivalence of titles by the Selection Board, for the sole purpose of the selection, **for those in possession of any qualifications attained abroad that have not yet been recognized as equivalent** (attached to which must be submitted a translation into Italian or English of the qualification attained abroad, a degree certificate indicating the marks attained in individual exams, and a certificate of the research doctorate/specialization);
- j) declaration of the level of knowledge of the **English** language;
- k) **self-certification of the veracity of the declarations made**, of the personal data provided, of the qualifications claimed in the curriculum, of the conformity with their originals of publications and titles submitted, and of all the data entered in the application.



In the application, applicants must also include a declaration stating:

- a) to not have been convicted or found guilty of any criminal offence;
- b) to be a citizen with full rights;
- c) to not have any degree of kinship or affinity, up to and including the fourth degree, with any professor belonging to the organization proposing the activation of the research activities, or with Università Campus Bio-Medico di Roma's Rector, Director General, or any member of the University Board of Directors;
- d) to have/have not been the assignee of research grant(s) awarded as per Article 22 of Italian Law No. 240/2010;
- e) to have/have not been the assignee of contracts as per Article 24 of Italian Law No. 240/2010;
- f) to be aware of provisions relating to the prohibition of the accumulation of paid activities as per Article 11 of this call.

Applicants with any disabilities as per Italian Law No. 104 of 5/02/1992 must make a formal request in order to be granted the relevant aid as per Article 20 of the aforementioned law.

5. The same procedures as envisaged for Italian citizens apply to citizens of the European Union. For the use of self-certifications by non-EU citizens, please refer to Article 4.
6. Submission of the application must be completed as per the following:

- **By means of the applicant's digital signature**, using a smart card, USB token or remote signature entitling the holder to sign generic documents using signature software on a computer or on a remote signing web portal as made available by the relevant certification authority. Those in possession of a smart card or a USB drive with their digital signature may verify its compatibility with the digital signature system of the online application server system. In case of compatibility, the holder may sign the application directly via the server;
- **Applicants who do not have a compatible digital signature device and applicants who have a remote digital signature** and access to a portal for the signing of generic documents must save the PDF file of the application generated by the system on their computer, and, **without in any way modifying it**, digitally sign it in CADES format in order to generate a file with the extension .p7m, which must then be uploaded to the system. Any changes made to the file before adding the digital signature will prevent automatic verification of conformity between the content of this document and the original, and will therefore lead to the exclusion of the submission;
- **In case the use of one of the aforementioned options is not possible**, the applicant must save the PDF file produced by the system on their computer, and, **without in any way modifying it**, print it, sign it with a complete handwritten signature on the last page of the form, and initial every other page. A copy of a valid identity document must also be attached to the signed document. The complete document must then be scanned, saved as a PDF and uploaded to the system.

Article 4 (Non-EU citizens - self-certifications)

1. Citizens of countries not belonging to the European Union yet legally residing in Italy may use self-certification as per Italian Presidential Decree No. 445 of 28/12/2000, limited to statuses, personal qualities and facts declarable or certifiable by Italian public parties, without prejudice to special provisions contained in laws and regulations concerning immigration and foreign subjects.
2. Apart from the cases provided for above, citizens of non-EU states authorized to reside in the territory of the Italian state may use the aforementioned self-certification in cases in which such use takes place in application of specific international conventions between Italy and the self-certifier's country of origin.

Article 5
(Appointment of the Selection Board)

1. The Selection Board is appointed by the Rector, on the proposal of the Scientific Supervisor.
2. The Selection Board is made up of three members: a university professor (full or associate) acting as Chairperson, and two other members chosen from among the university's professors and researchers (also with fixed-term contracts), one of which acting as the recording secretary.
3. The Selection Board may make use of telematic tools for collective work.

Article 6
(Evaluation of qualifications and the interview)

1. During its first meeting, the Selection Board establishes the criteria and methods for evaluating the qualifications and the interview, and formalizes them in the relative minutes of the meeting for the purposes of assigning relative scores.
2. The evaluation criteria are expressed out of a total of one hundred and comprise, with opportune weights applied, the following items:
 - research doctorate or equivalent qualification attained abroad;
 - degree mark;
 - publications and other research products;
 - specialization diplomas and certificates of attendance of post-graduate specialization courses;
 - other qualifications related to activities carried out, such as contracts, scholarships and positions in national or international research institutions. The effective date and duration of the activities must be duly certified;
 - the interview.
3. The interview will focus on the knowledge and skills of the applicant candidate, with particular reference to the research project as per Article 1 of this call, and shall take place according to the calendar indicated in Annex A of this call, which has the value of notification for all legal purposes without further formalities.
4. In order to take part in the interview, the candidates must present themselves with a valid identification document. Candidates must be available at time and date indicated. Failure to connect via Microsoft Teams at the scheduled time or exhibit an invalid ID will result in the exclusion of the candidate from the selection procedure.

Article 7
(Formation of the ranking list and approval of the formal documentation)

1. During its last meeting, the Selection Board draws up a merit ranking in descending order, adding up the scores achieved by each candidate.
2. Candidates who have achieved a minimum score of **60 out of 100** are considered eligible.
3. Having asserted the correctness of the formal documentation by Rector's Decree, the Rector shall approve the outcome of the selection, which shall then be published on the university website.
4. The successful candidate shall be given written communication of the awarding of the research grant.
5. The winning candidate must sign the grant acceptance declaration and submit the documentation as referred to in Article 8 of this call.

Article 8
(Conferment, forfeiture and termination of the relationship)

1. The fellowship is awarded via a private law contract. This contract does not in any way constitute a subordinate employment relationship and does not give rise to rights regarding access to university personnel roles.
2. Within fifteen days of the award of the grant, under penalty of its forfeiture, the winner must submit a self-certification statement, as per Article 46 of Presidential Decree No. 445 of 28/12/2000, stating:
 - a) date and place of birth;
 - b) citizenship;
 - c) possession of full citizenship rights;
 - d) the absence of any criminal convictions or ongoing criminal proceedings.
3. The winner must submit a self-certification regarding the authenticity of the academic titles presented.
4. The winner must also comply with the obligations established by the University Regulation for the awarding of research grants, which may be consulted on the university website.
5. **Forfeiture of the right to stipulate the contract** and termination of the relationship shall occur in the following cases:
 - a) should the winner of the grant not sign the relative contract within the deadline communicated by the organization, except for health reasons or force majeure, duly and promptly proven;
 - b) should any false statements be found to have been made.
6. The assignee of the research grant may withdraw from the contract by written communication to the organization giving notice of at least 30 days. The payment of the last monthly instalment will be commensurate with the period of the research activities effectively carried out.
7. Sufficient cause for termination of the contract shall be any serious or relevant breach by the grant assignee pursuant to the provisions of Articles 1453 and following of the Italian Civil Code.
8. Sufficient cause for termination of the contract shall furthermore be any unjustified suspension of the research activities for a period that might prejudice the research programme, as well as a formal negative opinion expressed by the Scientific Supervisor on the research activities carried out.
9. The criteria referred to in the previous paragraphs must be reported and justified by the Scientific Supervisor and notified to the Pro-Rector for Research, who shall report on such to the Academic Senate. The latter, having heard the interested parties, shall then express a binding formal opinion.
10. Finally, sufficient cause for termination of the relationship, as per Article 1456 of the Italian Civil Code, shall be performance of the activities covered by the contract in contrast with the institutional principles of the university, as expressed in its Charter of Purposes, or with the provisions contained in its Code of Ethics.

Article 9
(Duration, renewal and amount of the grant)

1. The grant, as per Article 1, shall have a duration of 12 months, and may be renewed according to the provisions of current legislation.
2. The overall duration of the relationship as per Article 22, Paragraph 3 of Italian Law No. 240/2010, as amended, including any renewals, may not in any case exceed six years, with the exception of the period in which the grant was used to coincide with a research doctorate, within the maximum limit of the legal duration of the such doctorate.
3. The overall duration of the relationship established with the research grant assignee as per this call

and of contracts as per Article 24 of Italian Law No. 240/2010, as amended, also with other public, private or telematic universities, as well as with the parties referred to in Article 22, Paragraph 1, of Italian Law No. 240/2010, as amended, with the same purpose, may not in any case exceed twelve years, even if not continuous. For the purposes of the duration of the aforementioned relationship, any periods spent on maternity leave or for health reasons shall not be counted as per applicable legislation in force.

4. The gross annual amount of the research grant is set at Euro 26.300,00 net of charges to be borne by the paying administration, and shall be attributed to the beneficiary in deferred monthly instalments.
5. The research grant shall be subject, in fiscal terms, to the provisions of Article 4 of Italian Law No. 476 of 13/08/1984, as amended, in social security terms, to those of Article 2, Paragraphs 26 and following, of Italian Law No. 335 of 8/08/1995, as amended, regarding compulsory maternity leave, to those of the Decree of the Minister of Labour and Social Security of 12/07/2007, and, regarding sick leave, to those of Article 1, Paragraph 788, of Italian Law No. 296 of 27/12/2006, as amended.
6. Università Campus Bio-Medico di Roma is committed to equality and equal opportunities between men and women for the assignment of the grant in question and the protection of the confidentiality of the processing of personal data, as per applicable legislation in force.

Article 10 **(Rights and duties of the research grant assignees)**

1. The assignee of the research grant must carry out the research activities in the context of the research programmes connected to the awarding of the research grant, at the Research Units or Departmental Faculties to which such programmes belong. The tasks performed by the fellowship assignee must regard research activities and not be merely of a technical support nature.
2. The research grant assignee may also carry out teaching activities, which, whether remunerated or not, must in no way compromise the research activities, must be pertinent to the scientific area of reference of the research activities, and may be carried out via:
 - a) the assumption of teaching assignments by resolution of the Academic Senate, subject to approval by the Departmental Faculty concerned;
 - b) participation in exam commissions, as an expert on the subject in question;
 - c) collaboration with students on research related to degree and master's degree theses;
 - d) participation in seminars and workshops for students.
3. For the purposes of carrying out the research activities, the research grant assignee has the right to make use of the equipment of the Research Unit or of the Departmental Faculty where the activities are carried out, and to use the equipment made available by the university for its employees, according to the applicable rules and provisions in force.
4. The research grant assignee is required to submit, annually and at the end of the research activities, before the set deadline, to the University Research Directorate or to the relevant Departmental Faculty Board, a detailed report on the research activities carried out, accompanied by the relevant evaluation of the Scientific Supervisor. In the event of a formal negative opinion expressed by the Scientific Supervisor on the research activities carried out, the contract, if multi-year, shall be terminated as per the provisions of Article 20, Paragraph 5 of the Regulation for the Awarding of Research Grants of Università Campus Bio-Medico di Roma. In the event of any renewal of the grant, the report on the research activities carried out must also be evaluated by the relevant Departmental Faculty Board.

5. The research grant assignee may carry out research activities at one or more qualified universities or research institutes abroad, provided that this is consistent with the programmes and objectives of the assigned research. The period of stay abroad must be previously expressly authorized by the University Research Directorate or by the relevant Departmental Faculty Board, on the motivated proposal of the Scientific Supervisor, and the periods spent at any such foreign institutions must be duly certified.
6. The period of stay abroad may not in any case exceed half of the duration of the research grant.
7. The research grant assignee undertakes to observe, in a spirit of loyal and effective collaboration, the principles which inspire the activities of the university, as enshrined in its Charter of Purposes and in the provisions of its Code of Ethics.

Article 11

(Prohibition of the accumulation of paid activities and incompatibilities)

1. The research grant may not be combined with other scholarships awarded for any reason, except with those granted by national or foreign institutions complementary to the research activities of the grant assignee on stays abroad, in accordance with the provisions of Article 22, Paragraph 3 of Italian Law No. 240/2010.
2. **The research grant may not be awarded to:**
 - a) permanent staff of the parties referred to by Article 22, Paragraph 1, of Italian Law No. 240, as amended;
 - b) permanent staff in service at any other public or private administration other than those referred to in letter a) of this paragraph, except for as provided for in the following paragraph 4;
 - c) fixed-term researchers at any university;
 - d) contract professors with teaching responsibilities in study programmes or specialization schools at other universities;
 - e) those enrolled in degree, specialist or master's degree courses, research doctorates with scholarships or medical specializations, whether in Italy or abroad;
 - f) assignees of other research grants at any institution.
3. Excluded from applying are all those who have any degree of kinship or affinity, up to and including the fourth degree, with any teaching staff belonging to the Departmental Faculty or Research Unit proposing the activation of the research activities, or with Università Campus Bio-Medico di Roma's Rector, Director General, or any member of the University Board of Directors.
4. Employees of public administrations other than those referred to in letter a) are to be placed on unpaid leave for the entire duration of the grant, in accordance with the provisions of Article 22, Paragraph 3, of Italian Law No. 240/2010.
5. For the purposes of the prohibitions and incompatibilities referred to in this article, upon stipulation of the contract, the assignee shall submit self-certification undertaking to communicate to the university any variation to what has been previously declared, on the occurrence of the variation itself.

Article 12

(Personal Data Processing)

1. All personal data provided by applicants will be used only for purposes strictly connected and functional to the management of the selection procedure, in accordance with regulations in force and the formal consent of the applicants themselves.



Article 13
(Competent Administration Unit and Person Responsible for the Procedure)

1. The person in charge of the administration of this call is Rosa Maria Lauretta, Head of the Call for Applications Service of the Human Resources Department, with email address: concorsi@unicampus.it.

Article 14
(Final Provisions)

1. For all matters not expressly provided for in this call, the legislative and regulatory provisions mentioned in the introduction and all applicable laws in force shall apply.

Article 15
(Dissemination of the Call)

1. This call is disseminated via the following websites:
 - Official website of the Università Campus Bio-Medico di Roma: <https://www.unicampus.it/ateneo/concorsi/assegnisti/> ;
 - Official website of the Italian Ministry of Education, University and Research: <https://bandi.miur.it>;
 - Official website of the European Union: <https://ec.europa.eu/euraxess>.

Rome, 20th December 2023

Chief Executive Officer and Director General
signed Dr. Andrea Rossi

The Rector
signed Prof. Eugenio Guglielmelli



Call for applications for the assignment of 1 research fellowship grant for carrying out Category B research activities, as per Article 22 of Italian Law No. 240/2010, for the Scientific Disciplinary Sector of FIS/07 – Applied Physics, at the facilities of the Centro Integrato di Ricerca (CIR - Integrated Research Centre) and of the Departmental Faculty of Medicine and Surgery of Università Campus Bio-Medico di Roma.

Call Code: ASS-RIC/23_23

Departmental Faculty	Medicine and Surgery
Research theme	Mathematical modeling of cardiac magnetic activity at the tissue scale.
Brief description of the research	Development of models able to reproduce the cardiac electric activity, based on phenomenological and biophysical descriptions. Optimization of model parameters to reproduce electrical activity as recorded in experimental cells cultures. Resolution of electromagnetic field generated by cardiac activity. Model optimization based on experimental measures of magnetic field. Simulation of the magnetic field generated by different patterns of electrical activity.
Scientific Supervisor	Dott. Alessandro Loppini
Scientific Disciplinary Sector	FIS/07 – Applied Physics
Language knowledge and skills	English - level B2
Date of the interview	2nd February 2024, at 10:00 am Remote candidates on Microsoft Teams platform