

**Call for applications for the award of 1 Research Contract pursuant to art. 22 of Law no. 240/2010, in the Scientific-Disciplinary Sector PHYS-06/A – Physics for the Life Sciences, the Environment and Cultural Heritage, at the facilities of the Research Unit of Nonlinear Physics and Mathematical Models and the Departmental Faculty of Medicine, Surgery and Dentistry of Università Campus Bio-Medico of Rome (competition code: CDR/01\_26).**

### THE RECTOR

|                    |                                                                                                                                                                                                                                                                                                                                                                                   |
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| <b>Considering</b> | the Statute of Università Campus Bio-Medico di Roma;                                                                                                                                                                                                                                                                                                                              |
| <b>Considering</b> | the Code of Ethics and the Charter of Aims of the University Campus Bio-Medico of Rome;                                                                                                                                                                                                                                                                                           |
| <b>Considering</b> | Italian Law No. 240 of 30/12/2010, containing regulations regarding the organisation 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;                                                                                                    |
| <b>Considering</b> | Rectoral Decree no. 61 of 24 February 2026, by which the Regulations for the award of research contracts, postdoctoral appointments, and research appointments, pursuant to Articles 22, 22-bis and 22-ter of the aforementioned Italian Law No. 240/2010. at the University Campus Bio-Medico of Rome are issued, pursuant to Article 22 of the aforementioned Law no. 240/2010; |
| <b>Considering</b> | Italian Law No. 241 of 07/08/1990, as amended, containing regulations on administrative procedures and the right of access to administrative documents;                                                                                                                                                                                                                           |
| <b>Considering</b> | Italian Presidential Decree No. 445 of 28/12/2000 445, containing the 'Consolidated law on regulations regarding administrative documents', as amended;                                                                                                                                                                                                                           |
| <b>Considering</b> | 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;                                                                    |
| <b>Considering</b> | the financial coverage of the research contract is ensured by internal funds allocated by the Departmental Faculty of Medicine, Surgery and Dentistry of Università Campus Bio-Medico of Rome;                                                                                                                                                                                    |
| <b>Considering</b> | Ministerial Decree no. 639 of 2 May 2024, concerning the determination of the Scientific-Disciplinary Groups, and of the relevant declarations, as well as the rationalisation and updating of the Scientific-Disciplinary Sectors and the reconciliation of the latter to the Scientific-Disciplinary Groups, pursuant to Article 15 of Law no. 240 of 30 December 2010;         |
| <b>Considering</b> | the research project entitled “Biophysical Modelling of Excitable Cells and Tissues”, under the scientific supervision of Dr Alessandro Loppini;                                                                                                                                                                                                                                  |
| <b>Considering</b> | the resolutions of the Academic Senate of Università Campus Bio-Medico di Roma adopted on 19 May 2026 and the resolution of the Board of Directors adopted on 26 May 2026;                                                                                                                                                                                                        |
| <b>Considering</b> | it necessary to issue the call for applications for the award of one research contract, with a duration of 24 months, for the performance of research activities at the Research Unit of Nonlinear Physics                                                                                                                                                                        |

and Mathematical Models and the Departmental Faculty of Medicine, Surgery and Dentistry of  
Università Campus Bio-Medico of Rome;

## DECREE

### Art. 1 (Competition type)

1. A public selection procedure, based on qualifications and an interview, is hereby announced for the award of one two-year research contract to carry out research activities in accordance with the research project covered by the contract, at the Research Unit of Nonlinear Physics and Mathematical Models and the Departmental Faculty of Medicine, Surgery and Dentistry of Università Campus Bio-Medico di Roma.
2. Annex A, which forms an integral part of this Call for Applications, specifies the Scientific Group, the Scientific Disciplinary Sector(s), the research project to which the contract relates, the Scientific Supervisor, the relevant Departmental Faculty/Research Unit, the place where the research activities will be carried out, the maximum number of publications that may be submitted, the date, time and arrangements for the public interview, and the foreign language proficiency required.

### Art. 2 (Admission requirements and grounds for exclusion)

1. Applicants are eligible to participate in the selection procedure provided that they meet one of the following requirements:
  - a **PhD degree in Physics or Engineering**, or an equivalent qualification obtained abroad; or
  - enrolment in the third year of a PhD programme or in the final year of a medical specialization programme, provided that the qualification is expected to be obtained within six months from the publication date of this Call for Applications.
2. In the case of qualifications to be obtained abroad, the Selection Committee shall assess the equivalence of the qualification in progress for the purposes of the procedure.
3. With regard to the requirements for the recruitment of research fellows under specific national and international programmes, reference shall be made to the provisions set out in the relevant programme regulations.
4. The following categories are not eligible to participate in the selection procedure:
  - a) tenured staff employed on a permanent basis by universities, public research institutions, and institutions whose advanced scientific diploma has been recognized as equivalent to a PhD pursuant to Article 74, paragraph 4, of Presidential Decree No. 382 of 11 July 1980;
  - b) individuals who have held fixed-term Researcher positions pursuant to Article 24 of Law No. 240/2010;
  - c) individuals who have a family relationship or affinity up to the fourth degree inclusive with a professor belonging to the Departmental Board and/or Research Unit that proposed the activation of the contract, or with the Rector, the Chief Executive Officer and Director General, or a member of the Academic Senate or the Board of Directors.
5. Exclusion from the selection procedure may be ordered at any time, by reasoned Rector's Decree, and shall be notified to the interested party.

**Art. 3**  
**(Application procedure and deadlines)**

1. Applications for participation in the public selection procedure, together with qualifications, documents, and publications deemed useful for the competition, **must be submitted exclusively online, under penalty of exclusion**, via the dedicated application available on the “Calls and Competitions” page of the University website: <https://www.unicampus.it/ateneo/concorsi/contratti-di-ricerca/> . The online application system requires a valid email address for self-registration. Applicants must enter all required data to complete the application form and upload, in electronic format, the documents specified in this Call for Applications. **No other forms of submission of applications or supporting documentation will be accepted.**
2. Until the application deadline, the system allows the application to be saved in draft mode. The date of electronic submission shall be certified by the system through a receipt automatically sent by email. After the deadline, the system will no longer allow access to or submission of the application form.
3. Each application will be assigned an identification number which, together with the selection code indicated in the online application system, must be quoted in any subsequent communication.
4. The online application procedure must be completed **no later than 12:00 noon on the fifteenth day** following the day after publication of this Call on the University website, the website of the Ministry of Education, Universities and Research, and the European Union portal.  
If the deadline falls on a public holiday, it shall be extended to the next working day.  
The application must be fully completed in all its parts, in accordance with the instructions provided in the online procedure, and must include in particular:
  - a) **the title of the research project;**
  - b) **the research proposal (max 1 page);**
  - c) **full personal data** (name and surname, place and date of birth, tax identification number, residential address and address for service of notices relating to this procedure, including postal code, telephone number, and email address for communications);
  - d) **citizenship;**
  - e) a declaration of possession of the qualification referred to in Article 2 of this Call;
  - f) a declaration of research experience abroad;
  - g) **a valid identity document;**
  - h) **a scientific and professional curriculum vitae suitable for the research activities covered by the contract, dated and signed, to be uploaded in PDF format;**
  - i) **a list of publications** deemed relevant for the selection, to be uploaded in PDF format;
  - j) the **publications** deemed relevant for the selection, to be uploaded in **PDF format** (each publication must not exceed 30 MB and must be uploaded exclusively in full-text format via the dedicated section of the online procedure);
  - k) a declaration of English language proficiency.
5. In the application, candidates shall also declare:
  - a) that they have no criminal convictions;
  - b) that they enjoy full political rights;
  - c) that they have no family relationship or affinity up to the fourth degree inclusive with a professor belonging to the Departmental Faculty and/or Research Unit that proposed the activation of the contract, or with the Rector, the Chief Executive Officer and Director General, or a member of the Academic Senate or the Board of Directors of the University;
  - d) that they are not tenured staff employed on a permanent basis by universities, public research institutions, or institutions whose advanced scientific diploma has been recognized as equivalent to a PhD pursuant to Article 74, paragraph 4, of Presidential Decree No. 382 of 11 July 1980;

- e) that they have not previously held fixed-term Researcher contracts pursuant to Article 24 of Law No. 240/2010.
6. The same provisions applicable to Italian citizens shall also apply to citizens of the European Union. With regard to the use of substitute declarations by non-EU citizens, reference shall be made to Article 4.
7. The application submission process must be completed according to one of the following methods:
- **by digital signature**, using a smart card, USB token, or remote signature, enabling the holder to sign documents via dedicated software or a web portal provided by the Certification Authority. Holders of a smart card or USB digital signature device may verify its compatibility with the system; if compatible, the application may be signed directly on the server;
  - **applicants without compatible digital signature devices, or holders of remote digital signatures** via external portals, must download the PDF file generated by the system and, without any modification, digitally sign it in CAdES format, producing a .p7m file which must then be re-uploaded to the system. Any alteration of the file prior to digital signature will prevent verification and result in exclusion from the procedure;
  - where none of the above options are available, applicants must download the generated PDF file, print it **without modification**, sign it by hand on the last page and initial all preceding pages, then scan the signed document and upload the resulting PDF file to the system.

**Art. 4**  
**(Non-EU citizens - self-declarations)**

1. Citizens of States not belonging to the European Union regularly residing in Italy may use substitute declarations pursuant to Presidential Decree no. 445 of 28 December 2000 limited to states, personal qualities and facts certifiable or attestable by Italian public entities, without prejudice to the special provisions contained in the laws and regulations concerning the discipline of immigration and the condition of foreigners.
2. Apart from the cases provided for above, citizens of non-EU States authorised to reside in the territory of the State may use the aforementioned substitute declarations in cases where they are produced pursuant to international conventions between Italy and the declarant's country of origin.

**Art. 5**  
**(Appointment of the Selection Committee)**

1. The Selection Committee shall be appointed by the Rector, upon proposal of the Scientific Supervisor.
2. The Selection Committee shall be composed of three members, ensuring, where possible, gender balance. Members shall be selected from among professors and researchers with proven research experience in the topics covered by the Call, at least one of whom shall belong to the relevant Scientific Group/Scientific Disciplinary Sector covered by the Call.
3. One member may also be selected from among experts, either Italian or foreign, including non-academic experts, in disciplines falling within the scope of the Scientific Group/Scientific Disciplinary Sector specified in the Call.

**Art. 6**  
**(Evaluation of qualifications, interview and final ranking)**

1. The selection procedure shall be carried out through a comparative evaluation of candidates and is aimed at assessing the consistency of the research proposals with the research programme covered by the selection, as well as the possession by candidates of **a scientific and professional curriculum suitable for carrying out the research activities under the contract**.
2. At its first meeting, the Selection Committee shall establish the criteria and procedures for the evaluation of qualifications, the research project, and the interview.
3. Candidates shall be comparatively evaluated on the basis of the following criteria:
  - a) quality, originality, and innovativeness of the research proposal, with reference to the research programme covered by the selection;
  - b) relevance and significance of previously conducted research activities, as well as any professional experience, in relation to the content of the research programme covered by the selection;
  - c) relevance of the submitted publications to the research programme covered by the selection;
  - d) interview aimed at assessing suitability for carrying out the research activities under the contract and for the implementation of the submitted research proposal, as well as the assessment of English language proficiency and/or other languages relevant to the research.
4. The Committee shall then communicate the criteria and scores adopted, expressed out of 100, to the person responsible for the procedure, who shall arrange for their publication on the University website.
5. The Committee may use telematic tools for collegial work and may hold its meetings remotely. The procedures adopted shall be recorded in the minutes. The public interview may also be conducted online, in accordance with the methods specified in the Call, and shall take place according to the schedule indicated in Annex A to this Call, which shall serve as formal notification for all legal purposes without further notice.
6. Candidates must be present on the date and at the time scheduled for the interview. For identification purposes, and under penalty of exclusion from the selection procedure, each candidate must identify themselves before the interview begins by presenting a valid identity document. In the case of interviews conducted remotely via Microsoft Teams, failure to connect, unavailability of the candidate, or failure to present a valid identification document shall result in exclusion from the selection procedure.
7. After appropriate evaluation and on the basis of the established criteria, the Committee shall jointly assign a reasoned score for each evaluation criterion and award the corresponding points.
8. The Committee shall draw up a ranking list based on the scores obtained by the candidates and shall identify the successful candidate. The selection shall be considered passed with a minimum score of **70/100**.
9. In the event of a tie, preference shall be given to the younger candidate in terms of age.
10. The outcome of the selection shall be published on the University website at the following link: <https://www.unicampus.it/ateneo/concorsi/contratti-di-ricerca/> and shall serve as formal notification for all legal purposes.

**Art. 7**  
**(Approval of acts)**

1. The Rector, by means of a Rector's Decree, within 30 days from the submission of the minutes to the Competitive Procedures Office – Human Resources Directorate, and having verified the formal regularity of the acts, shall approve the outcome of the ranking list.

2. The Decree approving the acts shall be published on the University website, within the time limits and under the procedures established by the Call, in compliance with the principles of transparency and personal data protection.
3. The merit ranking list shall remain valid for six months from the date of publication of the Decree approving the acts.
4. Within 180 days of the approval of the acts, and for the needs of the same research project, additional research contracts may be awarded to candidates included in the ranking list, provided that the availability of the corresponding financial coverage has been ascertained.
5. The awarding of such additional research contracts shall take place upon request of the Scientific Supervisor, handled by the Office for Doctoral Programmes, Research Fellowships, Technologists and Postgraduate Grants, and in compliance with the procedure set out in Article 3, paragraph 3, last subparagraph of the aforementioned Regulations.

#### **Art. 8**

#### **(Award of the Contract, Forfeiture and Termination of Employment)**

1. The activation of contracts is approved by the Board of Directors, following the resolution of the Academic Senate, after authorisation by the Executive Board, which verifies the financial coverage.
2. Conclusion of the contract is subject to verification by the Human Resources Department of possession of a PhD or medical specialisation qualification and, in the case of qualifications obtained abroad, of the equivalence or equivalence of the qualification.
3. When concluding the individual fixed-term employment contract, the Human Resources Department invites the person concerned to submit the documentation required under current legislation.
4. The contract must state:
  - a) the start and end date of the employment relationship;
  - b) the place of work;
  - c) activities related to the research project;
  - d) an indication of the total remuneration;
  - e) an indication of the manner in which the holder of the research contract is required, on an annual basis and at the end of the contract, to submit a detailed report on the research activity carried out to the DRU or to the Board of the Departmental Faculty or Faculty of affiliation;
  - f) an indication of the grounds for termination of the contract and the necessary notice periods;
  - g) an indication of the grounds for termination, in accordance with current legislation;
  - h) intellectual property and data processing legislation and related confidentiality obligations.
  - i) a commitment to respect the obligations contained in the Code of Ethics and the Charter of Aims.
5. The employment contract is signed by the research contract holder and the Managing Director and General Manager.
6. In the event that the successful candidate withdraws or is disqualified, the ranking list may be revised.
7. Failure on the part of the person concerned to conclude the contract by the deadline shall be deemed to be a waiver of employment.
8. It is permissible to request a reasoned postponement by the interested party of the start of the activity, provided it is compatible with the project activity.
9. The probationary period lasts for three actual months of service; any negative assessment is the responsibility of the Scientific Supervisor.
10. During this period, either party may terminate the contract at any time without notice or compensation in lieu of notice. At the end of the probationary period without the relationship being terminated by either party, the holder of the research contract shall be deemed to be confirmed in service and shall be accorded seniority from the day of recruitment for all purposes.

11. In the event of termination, remuneration is paid up to the last day of actual service.

**Art. 9**  
**(Duration, Renewal and Extension of the Research Contract)**

1. The research contract shall have a duration of two years and may be renewed only once for an additional two-year period.
2. In the case of national, European, or international research projects, research contracts may be extended for one additional year, where required by the specific objectives and nature of the research project.
3. The overall duration of research contracts, including those entered into with different institutions, shall in no case exceed five years. For the purpose of calculating the maximum overall duration, periods of leave taken for maternity, paternity, or health reasons in accordance with the applicable legislation shall not be taken into account.
4. Requests for a two-year renewal (permitted only once) or for a one-year extension (only in the case of national, European, or international research projects) shall be submitted in accordance with Article 3, paragraph 3, of the Regulations referred to in the preamble.
5. The Human Resources Directorate shall submit the renewal request to the Academic Senate for approval. Following approval by the Academic Senate, the renewal shall be subject to the approval of the Board of Directors.
6. Any renewal or extension of the research contract shall, in all cases, comply with the maximum overall duration of five years established by Article 22, paragraph 2, of Italian Law No. 240/2010.
7. Any renewal or extension shall be proposed by the Human Resources Directorate and/or the Board of the relevant Departmental Faculty, upon request of the Scientific Supervisor, and shall subsequently be approved by the Academic Senate, subject to the availability of financial resources and compliance with the applicable legal provisions. The resolution of the Academic Senate shall then be approved by the Board of Directors.
8. The renewal or extension of the employment contract shall be signed by the holder of the research contract and by the Chief Executive Officer and Director General.

**Art. 10**  
**(Rights and Duties of Research Contract Holders)**

1. The holder of the research contract shall carry out research activities in accordance with the research project covered by the contract, performing the duties and responsibilities specified therein.
2. For the purpose of carrying out their research activities, research contract holders shall be entitled to use the facilities and equipment of the structure in which they conduct their research and to access the services made available therein, in accordance with the rules and regulations governing that structure.
3. Research activities carried out outside the structure that proposed the award of the contract shall be subject to the prior authorization of the proposing structure.
4. Holding a research contract shall not confer any entitlement to appointment to permanent academic positions within the University.
5. Research contract holders shall be subject to the health surveillance measures provided for by Legislative Decree No. 81/2008, at the University's expense, as well as to the legislation governing health and safety in the workplace.
6. Research contract holders shall be subject to the disciplinary provisions set out in the General Employment Regulations for Technical and Administrative Staff (Chapter 4, Articles 33, 34, 35 and 36).

**Art. 11**  
**(Incompatibilities)**

1. The research contract is incompatible with:
  - any other employment relationship, whether full-time or part-time, permanent or fixed-term, with public or private entities;
  - holding a research fellowship, including those awarded by other universities or public research institutions;
  - scholarships or research grants awarded for any purpose by Italian or foreign institutions, except those exclusively intended to support international research mobility, including PhD scholarships and the financial benefits associated with medical specialization contracts.
2. The research contract is incompatible with enrolment in bachelor's, master's, doctoral, or medical specialization programmes, whether in Italy or abroad. Public employees who are awarded a research contract shall be placed on unpaid leave for the duration of the contract, in accordance with the applicable legislation.
3. Without prejudice to the foregoing, holders of a research contract may not, under any circumstances, engage in activities that could give rise to a conflict of interest with the University's activities.

**Art. 12**  
**(Economic, fiscal, social security and insurance treatment)**

1. Holders of a Research Contract shall receive an annual gross salary not lower than the initial salary of a tenured researcher employed on a part-time basis, currently amounting to EUR 28,456.47 gross per annum, corresponding to a total employer cost of EUR 38,731.97.
2. The annual gross remuneration shall not be subject to indexation or adjustment.
3. The employment relationship shall be governed by the applicable legislation, including the provisions relating to tax, social security, welfare, and insurance applicable to income derived from employment.
4. The University shall also provide insurance coverage against occupational accidents, occupational diseases, and third-party civil liability.

**Article 13**  
**(Processing of personal data)**

1. Personal data provided by applicants shall be processed, subject to the applicants' formal consent, exclusively in accordance with the applicable data protection legislation and solely for purposes directly related and instrumental to the management of the selection procedure.

**Article 14**  
**(Competent organisational unit and person in charge of the procedure)**

1. The person in charge of the competition procedure for this notice is Rosa Maria Lauretta, Head of the Competitions Service and Teaching staff – Human Resources Department, e-mail: [concorsi@unicampus.it](mailto:concorsi@unicampus.it)

**Art. 15**  
**(Final provisions)**



1. For all matters not expressly provided for in this notice, the laws and regulations cited in the introduction and the relevant laws in force apply.

**Art. 16**  
**(Publication of the notice)**

1. This decree is made available on the websites:
  - of the University: <https://www.unicampus.it/en/ateneo/concorsi/contratti-di-ricerca/>;
  - of the Ministry of University and Research: <https://bandi.mur.g or v.it/>;
  - of the European Union: <https://euraxess.ec.europa.eu/>.

The Chief Executive Officer and General Manager  
Signed Dr Andrea Rossi

The Rector  
Signed Prof. Rocco Papalia

**Call for applications for the award of 1 Research Contract pursuant to art. 22 of Law no. 240/2010, in the Scientific-Disciplinary Sector PHYS-06/A – Physics for the Life Sciences, the Environment and Cultural Heritage, at the facilities of the Research Unit of Nonlinear Physics and Mathematical Models and the Departmental Faculty of Medicine, Surgery and Dentistry of Università Campus Bio-Medico of Rome.**

Competition code: CDR/01\_26

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|----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Number of Research Contracts</b>                      | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Departmental Faculty/Research Unit of affiliation</b> | Departmental Faculty of Medicine, Surgery and Dentistry<br>Research Unit of Nonlinear Physics and Mathematical Models                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Place of activity</b>                                 | Research Unit of Nonlinear Physics and Mathematical Models                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Scientific Disciplinary Group</b>                     | 02/PHYS-06 – Physics for the Life Sciences, the Environment and Cultural Heritage, Physics Education and History of Physics                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Scientific-Disciplinary Sector</b>                    | PHYS-06/A – Physics for the Life Sciences, the Environment and Cultural Heritage                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Project title</b>                                     | Biophysical Modelling of Excitable Cells and Tissues                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Description of the research project</b>               | Development of multiphysics and multiscale models for the study of the activity of excitable cells and tissues, with particular emphasis on cardiac tissue and neurons. Parameter optimization of the developed models for the reproduction of experimental data. Investigation of pathophysiological conditions in cardiac electrodynamics through modelling at the cellular and tissue levels. Study of neuronal networks and the electrophysiological mechanisms of neurons using detailed biophysical models. |
| <b>Scientific Supervisor</b>                             | Alessandro Loppini                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Maximum number of publications</b>                    | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Language knowledge and skills</b>                     | English – CEFR Level B2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Date, time and place of interview</b>                 | 31 July 2026, 9:30 a.m.<br><b>Remote candidates on Microsoft platform</b>                                                                                                                                                                                                                                                                                                                                                                                                                                         |