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Call for Application National Doctoral Course in
Science and Technology for Advanced Therapies (STAT) - 41st cycle
2025/2026 academic year

DEADLINE FOR SUBMISSION 13:00 (Italian Time 27 August 2025)

Changes or additions to the call will be published on the "Calls for applications and announcements/Calls for PhD programmes" page of the School's official website

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Art. 1 - ESTABLISHMENT OF THE DOCTORAL COURSE IN SCIENCE AND TECHNOLOGY FOR ADVANCED THERAPIES

The Scuola Universitaria Superiore IUSS, Piazza della Vittoria n. 15 – 27100 Pavia (hereafter "the School"), hereby announces a Call for Applications to enroll in the **41**st cycle of the National Doctoral Course in Science and Technology for Advanced Therapies (hereafter PhD-STAT) for the **2025/2026** academic year.

PhD Programme Coordinator: Professor Annalisa Bonfiglio – annalisa.bonfiglio@iusspavia.it

1.1 Course Description and Objectives

Technological innovation has transformed medicine, enhancing diagnostic and therapeutic capabilities, but also increasing the complexity of available solutions and healthcare costs. To ensure the safe and effective use of new technologies, it is crucial to train professionals who possess interdisciplinary skills and can integrate basic research, technological development, and clinical application.

The **Doctoral Course in Science and Technology for Advanced Therapies** was created to meet this need, aiming to provide a multidisciplinary training path that combines scientific, technological, methodological, and regulatory aspects. The Scuola Universitaria Superiore IUSS di Pavia, Fondazione Telethon, University of Pavia, and Fondazione CNAO collaborate to create a stimulating environment to address the challenges of advanced therapies, with particular attention to gene and cell therapies, advanced physical therapies including Hadron therapy and biotechnologies applied in the biomedical field.

The Course is structured into three distinct curricula designed to train highly qualified researchers in biomedical fields, with emphasis on: emerging technologies for biomedicine, gene therapies, and biomolecular sciences and biotechnology. The programme provides an interdisciplinary and transdisciplinary background, encouraging an innovative approach to the research and application of advanced therapies; it fits into the context of national priorities outlined by the National Research Programme (NRP) and the National Recovery and Resilience Plan (NRRP), contributing to scientific progress by developing next-generation biotechnology and biomedical solutions. The initiative aims to strengthen the Italian research system in strategic areas for human health, responding to the innovation needs of the public and private sectors.

The Course, which has a **three-year duration**, is divided into the following three curricula, the description of which (with the relevant SSDs - Scientific Disciplinary Sectors) can be found in the attached "Educational Program" which is an integral part of this announcement:

<u>CU1 - HADRON THERAPY AND ADVANCED BIOPHYSICAL THERAPIES</u>: This programme focuses on the study of non-pharmacological therapeutic technologies based on a biophysical and bioengineering approach to medicine. Particular focus is given to hadron therapy and other innovative therapies based on the use of advanced biophysical technologies applied to biomedicine. Students will develop skills in designing and developing cutting-edge therapeutic devices, engineering biomedical instrumentation as well as the analysis of the risks and clinical implications associated with the use of these technologies in human health care.

CU2 - GENE AND CELL THERAPIES: This path aims to train highly specialised researchers in the design,

development and clinical application of innovative genetic technology-based therapies. The curriculum provides a solid theoretical background in genetics, molecular biology and precision medicine, alongside an extensive experimental and laboratory work. This approach enables the development of cutting-edge therapeutic solutions for the treatment of genetic and other complex diseases, preparing researchers to address the scientific and clinical challenges of the future.

<u>CU3 - BIOMOLECULAR AND BIOTECHNOLOGICAL SCIENCES:</u> This programme integrates core disciplines such as structural biology, bioinorganic chemistry, pharmaceutical chemistry, biocatalysis, molecular microbiology, neuropharmacology and molecular hematology. Emphasis is placed on experimental laboratory research, with the aim of developing innovative methodologies to understand and improve crucial aspects of human health, from the molecular basis of disease to the most advanced therapeutic applications.

1.2 Affiliated bodies

For the activation of the National Doctoral Course, the School has formalized agreements with following universities, which will be host university of the program:

- 1. Università degli Studi di PAVIA
- 2. Università degli Studi di TORINO
- 3. Università degli Studi di TRENTO
- 4. Università del PIEMONTE ORIENTALE

The School has also formalised agreements with the following entities for the management and operation of the course:

- 5. Consiglio Nazionale delle Ricerche
- 6. Fondazione Telethon
- 7. Centro Nazionale per le Terapie Oncologiche (CNAO)
- 8. Philogen
- 9. Boston Children's Hospital

1.3 Scholarships

The attached document (Research programme) describes the **36** scholarships available, 6 of which are reserved for company employees. The number of scholarships may be increased if further funding should be available before the beginning of the PhD course. Each scholarship requires the performance of the activities on a specific research topic, as detailed in the aforementioned annex, and binds to conduct the research activity at the indicated "host university/institute". Each individual scholarship can only be assigned to those candidates who are evaluated as eligible by the Selection Board.

Interviews held during the selection process will allow the Selection Board to establish whether the candidates have the necessary knowledge and skills to be admitted to the doctoral course and to study the selected scholarship research topics. For further information on the doctoral course and its "Educational Programme", please visit <a href="https://www.iusspavia.it/en/education/doctoral-programmes/science-and-doctoral-programmes/science-a

technology-advanced-therapies or email phd-stat@iusspavia.it.

Art. 2 – ADMISSION REQUIREMENTS

Applications are welcome from all qualified candidates, regardless of age or nationality. Eligible candidates must hold the following academic qualifications:

- a) Master's degree (Laurea Magistrale or Laurea Specialistica or Laurea Vecchio Ordinamento);
- b) Analogous academic qualification awarded abroad that is comparable to an Italian master's degree, in terms of duration and study content, and recognized by the Selection Board as suitable for application to the course.

Applications from candidates who are still to graduate will be considered pending. **The academic qualification** required for admission to the PhD programs must be obtained within the start date of the course.

Art. 3 - APPLICATIONS

3.1 Application Procedure

Applications must be submitted exclusively online by **27 August, 2025 at 13:00 Italian time**. The application fees are **30 euro** to be paid before the deadline to avoid exclusion. The application fees cannot be reimbursed under any circumstances.

Please refer to the application procedure described below.

- Go to the following link: https://pica.cineca.it/iuss/dottorato-stat-41/
- Log in if you have already registered;
- If you are logging in for the first time, click on "New Registration" and enter the following data:
 - Name
 - Surname
 - Gender
 - Date of birth
 - Fiscal Code (for Italian citizen only)
 - State of birth
 - Place of birth
 - Phone number

Once you have completed registration your login credentials will be sent to the email address provided. You will be able to log in once you receive an email confirming registration.

In order to apply, you have to upload the following documents:

- Curriculum Vitae
- Valid ID (clearly visible)
- Research Proposal
- Letter of Purpose

- Academic qualification (for those candidates who have not yet obtained the required qualification the procedure will required the estimated date of graduation)
- References
- Other qualifications (for example: publications and certificates)

Once all the required documents have been uploaded, click "save" and return to the dashboard.

You will be asked to verify – through the "verify" button – the data you entered; only after verifying that the information present is correct, you can continue and finalize the registration payment.

You have to click on "payment" and follow the instructions provided by the platform in order to use the "PagoPA" system. You have to sign the application and submit it.

Successful submission of the application will be confirmed to the email address provided in the registration details. If you have not yet received a confirmation email after 24 hours please contact the help desk of PICA platform.

3.2 Required Accompanying Documents

a)	A scan of a valid form of photographic ID	Please scan both sides of the document.
		If the ID document is not written in Latin characters, you must provide a certified Italian translation. Please note that if you do not provide a certified translation your ID document will not accepted.
b)	Curriculum Vitae	Language: English
		Suggested template
		In any case, it must include:
		- academic qualifications and training path;
		 research and/or work experience, including experience outside their country of origin (if any);
		- list of publications (if any);
		 other relevant qualifications/documents that provide information on the applicant's academic and professional experience.
с)	Proof of university degree awards needed for the admission, for which the	Language: Italian, English, French, Spanish.
	following information must be entered:	For academic documents in all other languages applicants must provide an official translation provided by the university
	1. University;	issuing the degree or by an authorized body or translator Without a certified translation the documents will not be
	2. Degree type;	

3. Full name of the degree;	accepted.	
4. Major;	Type of certificate for degrees awarded in:	
Date of graduation (or expected date);	 Italian public universities: self-declaration* of master's degree award, signed and dated; 	
6. Final mark/grade;	2. EU and non-EU member state universities: where available, certificates, transcripts of	
7. List of exams undertaken and the associated grade awarded.	records master's degree or diploma supplement, if available.	
Proof of other academic qualifications, including the following information:	Language: Italian, English, French or Spanish.	
1. University;	For all other languages, applicants must provide an official translation provided by the university issuing the degree or by an authorized body or translator. Without a certified translation the documents will not be accepted.	
2. Degree type;3. Full name of the degree;		
4. Major;	Type of certificate for degrees awarded in:	
Date of graduation (or expected date);	 Italian public universities: self-declaration* of bachelor's or master's degree award, 	
6. Final mark/grade;	signed and dated; 2. EU and non-EU member state universities:	
List of exams undertaken, the associated grade awarded.	where available, certificates, transcripts of records of bachelor's or master's degree or diploma supplement, if available.	
For applicants due to be awarded their master's degree:	Language: Italian, English, French or Spanish.	
Proof of exams taken and grades awarded.	For all other languages, applicants must provide an official translation provided by the university issuing the degree or by an authorized body or translator. Without a certified translation the documents will not be accepted.	
Research Proposal	Language: English	
	The Research Proposal (min 1000- max 1500 words, excluding bibliography) should be written on one of the selected research topics or consistent with the objectives of the curriculum to which the selected project-s belong(s). This proposal will be taken into account when evaluating the candidate's aptitude for research. It should preferably be articulated as	
	 Major; Date of graduation (or expected date); Final mark/grade; List of exams undertaken and the associated grade awarded. Proof of other academic qualifications, including the following information: University; Degree type; Full name of the degree; Major; Date of graduation (or expected date); Final mark/grade; List of exams undertaken, the associated grade awarded. For applicants due to be awarded their master's degree: Proof of exams taken and grades awarded. 	

		Abstract (max 250 words);Scope of research and question-s;Methodology;
		- Expected impacts
		A maximum of 2 figures may be included.
g)	Letter of Purpose	Language: English
		The Letter of Purpose (max 500 words) must include your motivations ad interest for conducting the selected research topic-s based on relevant skills and experience.
f)	Reference	Once the application has been submitted, the candidate can enter the names of up to two referees via the 'Reference letters' button. The system will then send a link to each referee's email address, allowing them to proceed with filling in the reference form.

^{*} Current regulations do not recognize certificates issued by other Public Administrations. Qualifications included in the application must be self-certified if issued by Italian public universities.

With the exception of a), which can be in the original language, and c) and d), and e) which can be in Italian, English, French or Spanish, all documents must be in English. For documents issued in a different language, an official translation (into Italian or English, by the issuing university or by an authorized body) must be provided.

All documents referred to in a) and c) - or, for applicants due to be awarded their master's degree, in e) - are strictly required. Failing to submit any of the said documents during application will result in the candidate's exclusion from admission.

Art. 4 - ADMISSION PROCEDURE

Evaluation

Selection will be based on an assessment of the qualifications listed in the "Qualification Assessment" section followed by an interview. The Selection Board will award a score from 1 to 100.

1. Qualification Assessment: The Selection Board will assess the applicants' scientific qualifications and allocate an overall score up to a maximum of **60** points. Applicants who receive a score of at least **40** will be invited to attend an interview.

The Selection Board will award scores based on:

- CV, academic qualifications and references (Required documents b, c, d, h): up to a maximum of 25 points;
- Research Proposal and Letter of Purpose (Required documents *f* and *g*): up to a maximum of 35 points.

At this stage candidates may already be determined non-eligible for one or more of the selected scholarships.

Interview: interviews will be conducted in English through platform and will focus on the applicant's scientific background, Research Proposal, as well as the candidate's motivations. It will also include a discussion of a scientific paper on a topic relevant to the chosen CU, which will be provided by the Selection Board before the interview. At their discretion, candidates may also present the above using the screen sharing option within Teams (maximum of 6 slides).

The Selection Board can invite a proven expert for each research topic to participate in the interview. This expert could be a member of the Academic Board. The Selection Board will determine a score for the interview up to a maximum of **40** points. A minimum of **25** points is required to continue the process.

During the interview, the Selection Board will verify that the candidate has the necessary knowledge and skills for attending the doctoral course and will proceed to evaluate the eligibility of the candidate for the research topics selected.

Qualifications Assessment	- Curriculum Vitae;	
	 Diploma supplement or transcripts of master's degree grades or levels; 	
	- List of publications (if any) as stated on CV;	
	- Research Proposal;	
	- Letter of Purpose;	
	- References	
	 Any other relevant qualifications listed on the CV that provide evidence of academic and professional experience. 	
Assessment Results	The results of the qualification assessment will be published on the IUSS website – on the "Call for Applications" page, by 24 September 2025 .	
Interview Schedule	The interviews will be conducted starting from 29 September 2025.	
	Candidates will be given reasonable notice of the date and timing of the interview.	
Special needs	People with disabilities can apply for special equipment and/or other aids during the application process.	

Candidates must be connected on the indicated platform via both audio and video. Failing to connect at the time and date of the interview or lacking ID proof will be regarded as withdrawal from the application process.

Art. 5 - SELECTION BOARD

The Selection Board for admission to PhD programmes is appointed by the Rector of the university. The list of the Board Members is published on the School website – "Call for Applications" page. The Selection Board is divided into subcommittees, corresponding to the different curricula. The subcommittees will be responsible for arranging and conducting the relevant interviews and can be joined by experts, for each of the research topics. The experts may also be part of the Academic Board.

Art. 6 – RANKING AND ASSIGNMENT OF SCHOLARSHIPS

Following the interviews, the final ranking for each curriculum will be published on the School's website – "Call for Applications" page by **8 October 2025.**

The final ranking:

- Will be in decreasing order of scores (in the event of a tie, the youngest candidate will be given precedence);
- Will confirm the candidate's eligibility to study the research topics of their choice or additional research topics based on the assessment of the Selection Board.

The scholarships will be assigned according to the following procedure:

- 1. Each candidate will be notified by email and offered a scholarship in observance of the final ranking and of their order of preference as formally declared at the application stage;
- 2. Candidates must confirm acceptance by replying to the email within 48 hours;
- 3. Once scholarships are assigned, they are no longer obtainable by other candidates;
- 4. Candidates who reject the scholarship or fail to confirm before the deadline will forfeit the right to the scholarship offered and to any further scholarship. The place will be offered to the next eligible candidate.

This procedure will continue until all scholarships are assigned, up until the beginning of the PhD course.

If any scholarships remain unallocated at the end of the above-mentioned procedure of scrolling down the ranking list, a new allocation procedure will be carried out exclusively for these scholarships. This will take the form of an expression of interest, to which only candidates who are already on the final ranking list and have not yet accepted or declined a scholarship may respond. The new expression of interest will take place according to terms and conditions communicated by the School to candidates.

Art.7 – ENROLMENT

7.1 Enrolment Procedure

Publication of the rankings on the School's online Official Register (Albo Ufficiale) shall be considered as official notification. The Doctoral Course Programme will start on **15 November 2025.**

Successful candidates will be notified of the final date for enrolment – failure to enrol by that date will result in their exclusion from the doctoral course.

The following is a summary of the documents to be submitted to the enrolment office:

a) for candidates who obtained their master's degree abroad a Declaration of Local Value (or a copy

of the application to the competent authority) or a Diploma Supplement is required;

b) for candidates awarded their master's degree ("laurea magistrale") after the deadline for applications to the course but no later than 14 November 2025, a degree certificate or self-declaration of the qualification including grades, date and place of degree awarded must be sent by email to phd-stat@iusspavia.it.

In order to enroll candidates need to complete procedure on <u>Service Esse3 – Reserved Area</u>; more information will be provided you by the secretariat.

Any different form of payment and enrollment from those specified in this document are not accepted.

For any student the actual entrance in Italy and the arrival to the host University must occurred before the **31**st of January 2026 to avoid exclusion from the PhD course.

7.2 Additional Requirements for Visa Applicants

Non-EU students entering Italy should apply for a specific study visa using the online procedure on the <u>Universitaly portal</u> within 5 days since the acceptance of the scholarship. Students must apply to the local Police Department ("Questura") within eight (8) days of arriving in Italy for a residence permit for study purposes.

For further information, please visit IUSS website.

7.3 Registration Fee

PhD students must pay the registration fee for each academic year. The registration fee includes the regional study tax and the stamp duty.

In case of withdrawal from the doctoral course candidates cannot be reimbursed the registration fee.

Art.8 – SCHOLARSHIPS

The scholarships have the duration of the PhD Course and are awarded for the 1st Year and confirmed on a yearly basis for admission to the subsequent year subject to the decision by the Teaching Board of the individual programmes.

The scholarships are paid monthly in arrears, by the last day of each month.

The annual amount of the scholarship is € 19.021,02, including National Social Security Contributions (INPS). This amount is exempt from the IRPEF tax and it is subject to the payment of National Social Security contribution (INPS "gestione separata"), of which two thirds are paid by the administration and one third by the PhD student.

The scholarships may not be cumulated with other scholarships granted for any reason, with the exception of those granted by national or foreign institutions to enhance the student's research activity with periods of stay abroad.

The scholarship cannot be awarded to those who have already benefited, even partially, from a doctoral scholarship in the past.

The scholarship may be increased by 50% for an average period of 6 months stay abroad and, in any case, until a maximum period of 12 months.

The School will also make an annual budget, amounting to not less than 20% of the scholarship, available to all PhD students pursuant to article 9 of Italian Ministerial Decree 226/2021 to cover research activity-related expenses in Italy and abroad, as provided for by internal rules.

The School shall insure the students against accidents and civil liability for the entire duration of the Programme.

Art. 9 – LIMITATIONS ON OTHER EMPLOYMENT

Admission to the PhD course implies a full-time commitment and no other type of employment is allowed. However, art. 17 of the "Regolamento in materia di corsi di dottorato" allows the student to occasionally work within strict guidelines for other entities while enrolled in the course. Please refer to the Regulations for more details.

Art. 10 - MANAGEMENT OF PERSONAL DATA

The School, as Controller (piazza Vittoria, 15, 27100 Pavia PV – PEC direzione@pec-iusspavia.it), in full conformance with Legislative Decree n. 196/2003 and with any subsequent updates, and with article 13 of the EU General Data Protection Regulation n. 679/2016, collects and processes personal data in order to manage the application for participation in the doctoral competition.

Data will be kept and may be used after the completion of the selection procedure for operational, administrative, accounting and/or other purposes related to the management of institutional activities and legal obligations, as well as for informing the successful applicants of any opportunities. Any data subjects wishing to exercise their statutory rights as per articles 15-22 of Reg. UE/2016/679 may do so by writing an email to the Controller.

Further information on the management of personal data by the School can be found at: https://www.iusspavia.it/en/privacy.

Transparent Administration

The School operates in compliance with Law no. 190/2012 (Provisions for the prevention and repression of corruption and illegality in public administration), applying the measures identified in the "Piano Integrato" that can be found in the "Trasparenza" section (in Italian) on the School's web site at: https://trasparenza.iusspavia.it.

Art 11 - REFERENCE RULES

For any items or information not included in this announcement, please refer to the "Regulations for Doctoral Courses" issued by the D.R. n. 74/2024 and the "Regulation for the PhD in Science and Technology for Advanced Therapies".

Submission of an application using the procedure described in art. 3 implies acceptance of the regulations contained in this announcement and of those that apply to PhD courses.

Procedure Supervisor

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