

ADVANCED TRAINING COURSE

"Gut-brain and beyond: Interorgan Communication in Health and Disease.

Translational Insights from Preclinical Models to Clinical Applications"

Academic Year 2025/26

Art. 1

The Scuola Normale Superiore is organising for the academic year 2025/2026 - within the **MERITA Project, the network for talent**, with funding of the Piano Nazionale di Ripresa e Resilienza (PNRR) (NRRP, the National Recovery and Resilience Plan), Mission 4 – Education and Research, Component 1, Investment 3.4 "Advanced university training and skills" – "Reinforcement of the Scuole universitarie superiori (the university institutes of higher education)", Public notice pursuant to Director's Decree No. 594/2024 - an advanced training course denominated **"Gut-brain and beyond: Interorgan Communication in Health and Disease. Translational Insights from Preclinical Models to Clinical Applications"** in collaboration with the Health Science Interdisciplinary Center of Scuola Superiore Sant'Anna.

The course will be held in person from 27 May to 28 May 2026 at the site of the Scuola Palazzo della Carovana in Piazza dei Cavalieri, for a total of 15 hours.

The official language of the course is English.

The course will have a maximum of 85 participants.

Art. 2

Educational objectives

The course "Gut-brain and beyond: Interorgan Communication in Health and Disease. Translational Insights from Preclinical Models to Clinical Applications" has the aim to strengthen knowledge related to integrated physiology and inter-organ communication, by analyzing the cellular and molecular mechanisms that regulate the dialogue between different systems, as well as their pathophysiological implications. In particular, it will explore:

- the cellular and molecular mechanisms underlying the gut–brain crosstalk, with a focus on the processes connecting digestive, neuroendocrine, and behavioral functions
- the implications of the intestinal microbiota in cardiometabolic risks and metabolic disorders, examining how alterations in the microbial community influence systemic homeostasis
- the heart–brain crosstalk in the regulation of cardiovascular function and behavior, including neuroautonomic circuits and peripheral signals
- inter-organ communication as a clinical frontier in systems medicine, with emerging applications in the diagnosis, prevention, and treatment of chronic diseases
- innovative approaches for studying inter-organ communication, ranging from advanced omics methodologies and engineering-based devices to preclinical experimental models and human studies.

The course therefore aims to provide a multidimensional perspective that spans from basic mechanisms to pathophysiology, up to advanced clinical implications, offering useful tools to understand the complex interactions that regulate human health in both physiological and pathological conditions.

Art. 3

Those qualifying and admission requirements

The above-described activities are suitable for students of Italian and non-Italian universities enrolled in Undergraduate Degree, Master's or PhD programs, or for young researchers.

Admission requirements: Attendance in Undergraduate/Graduate/PhD programs or being a post-doc or a young researcher in the biological, medical, pharmaceutical, biotechnological, neuroscience, veterinary or related fields.

The selection of participants will be based on the Curriculum Vitae.

Art. 4

Organisation of the Course

The first day consists of 9 hours of lessons (schedule 9:15–13:00; 14:00–18:40, with a 1-hour lunch break). The second day consists of 4 hours. No final test is envisaged.

Art. 5

Admission applications

Those intending to compete for admission to the course must submit an application with the following [link](#) no later than 16 March 2026.

The list of admitted and waitlisted candidates is going to be published by 10 April 2026, identified by their respective application numbers.

The following documentation must be attached to the application, on pain of non-admittance to the course:

- an up-to-date CV;
- a valid identity document.

In addition to the mandatory attachments, an abstract may be enclosed, in case the candidate intends to present a poster (the abstract form is available for download at this [link](#)).

The three/four best abstracts will be selected to be inserted in the course program as short talks.

All applications arriving late or in a form different from that stated in the article herein, for whatever reason, will not be taken into consideration.

False or mendacious declarations are punishable pursuant to the Penal Code and to the specific Laws, Arts. 75 and 76 of D.PR. 445/2000.

At any moment of the procedure, including after the start of the Course, the Scuola may carry out checks as to the veracity of the declarations submitted and the documents produced and may request to see the documents in the original. In the case of false declarations, the Scuola may invoke a special Rector's Decree for the exclusion of the applicant, except for any ensuing penal responsibilities.

Art. 6

Enrolment fees and benefits

Participation in the course does not entail enrolment fees.

Admission to the course includes participation in the lectures, the educational material, lunches and coffee breaks for the first and second day.

Art. 7

Acceptance procedure

Applicants admitted to the course who intend to take part must confirm their participation, on pain of exclusion, by the deadline and with the procedure indicated in the notice of admission.

Art. 8

Certification issued

On termination of the course, those having attended at least 80% of the lectures, will be awarded by the Scuola Normale Superiore a certificate of participation valid within the limits permitted by law.

Art. 9

Processing of personal data and manager of the procedure

EU Regulation 2016/679, the General Data Protection Regulation, is applicable to the candidates' personal data processing.

The Data Controller of the personal data provided by the interested parties is the Scuola Normale Superiore, a public university institute, located in Piazza dei Cavalieri, 7 Pisa - 56126, in the person of its Director and pro tempore legal representative.

Applicants' personal data will be collected by the Scuola for the purposes of the selection/admission procedure and will be processed for the fulfilment of the same, and, for successful applicants, for the subsequent career management of the PhD students and all connected activities.

Personal data are thus provided to the SNS for the performance of tasks of public interest or at any rate connected to the exercising of its public powers, including the purposes of archiving, historical research and analysis for statistical purposes. Personal data will be processed, also with automated tools (software and databases administered by the SNS and hosted by any contracting entities), in compliance with the principles of accountability, lawfulness, correctness, minimization, transparency, integrity, accuracy, confidentiality and proportionality.

The personal data collected will be communicated or transferred to third parties (public and / or private parties) in the context of institutional relations, for the fulfilment of legal obligations or regulations or of contracts, within the services required by the SNS (access to facilities, etc.).

The personal data collected may be communicated or transferred to parties established in third countries, but only if suitable data protection guarantees and conditions have been ascertained.

The personal data collected will be published on the official online register and on the SNS's institutional website if specified by the law and other regulations of the SNS.

The personal data collected will be processed and stored for the time strictly necessary to achieve the purposes for which they have been collected, with the application of the regulations concerning documentation storage by public institutions.

The data subject may at all times exercise the following rights:

- a) access to personal data, under the terms and conditions of Art. 15 of the Regulations;
- b) the rectification, erasure or restriction of the processing of personal data, under the terms and conditions of Articles 16-18 of the Regulations; erasure is not permitted for data included in any documents that the SNS is required to keep;
- c) the portability of data, under the terms and conditions of Art. 20 of the Regulations;
- d) objection to the processing of his or her data, under Article 21 of the Regulations;
- e) the right to submit a complaint to the Data Protection Authority, by sending a request to the e-mail address privacy@sns.it or via PEC (certified e-mail) to the e-mail address protocollo@pec.sns.it.

For any further information, please contact the Data Protection Officer (DPO), at the e-mail address dpo@sns.it

Art. 10.

Final provisions and referrals, information

The head of the Teaching Activities Service, Dr. Silvia Marcacci, is the administrative manager of the procedure.