

Ph.D. fellow in Synthetic Biology

IIT invites excellent candidates to apply to its PhD program organized in collaboration with the Open University; this international PhD program confers Doctorates in *Health, Sustainable and Human Technologies*.

In order to be admitted into the ARC program, the minimum requirements are

- i. a Masters-level degree, which broadly corresponds to a 4/5-year undergraduate MSc/MChem/Meng-style degree or to a postgraduate Masters in the British system, or to a second level University degree in Italy;
- ii. a grade corresponding to an upper second class (2.1) or a merit in the UK system or 100/110 in the Italian system. Candidates with lower grades but redeeming features (publications, specific expertise) are requested to contact the potential supervisors before applying;
- iii. where English is not the applicant's first language, a valid IELTS (International English Language Testing System) certificate. The minimum acceptable score is an overall 6.5, with no less than 6.0 in any of the four categories

Two PhD fellow positions **will be available from October 1st 2024** in the group of Synthetic and Systems Biology for Biomedicine led by Dr. **Velia Siciliano**.

Title of the project: Engineering immune cells for better tumor treatment.

Background: The treatment of solid tumours remains challenging, with poor outcomes. The tumor microenvironment (TME) is strongly immune-suppressive, leading to the skewing of the cytotoxicity capacity of immune cells. Therefore, there is a pressing need for therapeutic interventions to transform cold tumours in hot tumours.

Description: Synthetic biology offers the potential to engineer immune cells that can reverse the cold tumours and establish novel methods of killing cancer cells. In this project the object is to establish novel genetic circuits that will help regulate the interaction between immune and cancer cells and modify the TME.

Main Supervisor: [Velia Siciliano](#). ([Synthetic and Systems Biology for Biomedicine](#))

Essential expertise:

- i. Bioengineering
- ii. Synthetic Biology
- iii. Immunology
- iv. Molecular Biology

Desirable expertise:

- i. Cancer Biology
- ii. Cell Biology

How to apply. Prospective students must submit using the [online form](#) the following documents

- 1) 2-page CV, which includes studies, expertise and achievements.
- 2) 1-page research statement, which includes the choice of a project from the list above and a justification of the choice. Only if robustly justified, the student may signal their interest also for a second project, but there is no guarantee that this will be taken into account by the selection panel.
- 3) A transcript of undergraduate and postgraduate studies.
- 4) A valid IELTS certificate, obtained no more than two years before the proposed registration date.
- 5) Contact details of two referees.

For both positions, ARC accepts candidatures on an ongoing basis (first-come, first-served) .

Istituto Italiano di Tecnologia, with its headquarters in Genoa, Italy, is a non-profit institution with the primary goal of creating and disseminating scientific knowledge and strengthening Italy's technological competitiveness. IIT's research endeavour focuses on high-tech and innovation, representing the forefront of technology with possible application from medicine to industry, computer science, robotics, life sciences and nanobiotechnologies.

Istituto Italiano di Tecnologia is an Equal Opportunity Employer that actively seeks diversity in the workforce.

Please note that the data that you provide will be used exclusively for the purpose of professional profiles' evaluation and selection, and in order to meet the requirements of Istituto Italiano di Tecnologia. Your data will be processed by Istituto Italiano di Tecnologia, based in Genoa, Via Morego 30, acting as Data Controller, in compliance with the rules on protection of personal data, including those related to data security.