

Innovation for **CA**rdiovascular, metabolic
and **RE**spiratory diseases



InnoCARE

Graduate Programme



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Why choose InnoCARE?

The InnoCARE programme is an **interdisciplinary training opportunity offering you the choice to specialise in experimental research, data analysis, or clinical research.**

Choosing InnoCARE means gaining expertise in all aspects of integrated physiology and pathophysiology — from clinical characterisation to disease modelling — with the goal of developing new therapeutic strategies.

InnoCARE brings together students with **diverse backgrounds** (scientists, healthcare professionals, engineers, etc.). The structure of the programme benefits from **the expertise of *l'institut du thorax* teams**, both from the research unit and the clinical investigation centre. It is built on an integrative and translational approach to cardiovascular, metabolic, and respiratory diseases, in both clinical and lab settings.

- **Translational approach to diseases:** arrhythmias, valvular diseases, diabetes, obesity, asthma, hypertension, aneurysms, etc.
- **Innovative methods and technologies:** genomics, stem cells, organoids, genome editing (CRISPR/Cas9), cell biology, animal models, imaging, electrophysiology, biomarkers, molecular medicine, biotherapies, etc.
- **Laboratory-based coursework**
- **Opportunities for international mobility**
- **Career prospects at Master and PhD levels** (academic, private, and clinical sectors)
- **Individualised career guidance**

Specific Courses

- **Pathophysiology of cardiovascular, metabolic, and respiratory diseases**
- **Design a research project** (poster session)
- **Success stories in translational research**
- **An integrative approach to pathologies** (from gene to treatment)
- **Themed days and practical workshops**
- **Scientific writing workshop**
- **Journal Club**

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Internships in France or abroad

- Minimum 8-week internship during the first year (possibility of internship grants)
- 6-month internship during the second year

Scientific Days

- Winter and Summer Schools
- Hackathon-Based Learning in Project Management
- Other events organised by Nantes Université

The expertise of *l'institut du thorax* research teams



Founded in 2004, *l'institut du thorax* was established by clinicians and researchers with the goal of creating a major centre for training, research, and care focused on cardiovascular, vascular, metabolic, and pulmonary diseases. From improving fundamental knowledge to developing new treatments and implementing preventive measures, **the medical and scientific teams at *l'institut du thorax* (with 1,000 collaborators) share a single aim: to accelerate research for the benefit of patients.**

InnoCARE was created in 2023 as an extension of the aims originally instated by *l'institut du thorax* in order to train new minds in research.

Basic and translational research

- Human genetics
- Ion channels and cardiopathies
- Vascular and pulmonary diseases
- Cardiometabolic diseases



**Experimental Research
or
Research and omics data analysis**

Clinical Investigation Centre (CIC)

- Cardiovascular diseases
- Pneumology
- Endocrinology, Diabetes, Nutrition
- Neurovascular, Anaesthesia/Intensive Care



Clinical Research



Learn more about *l'institut du thorax*: institutduthorax.org
and its laboratory: umr1087.univ-nantes.fr



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The InnoCARE Team

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Learn more about InnoCARE



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