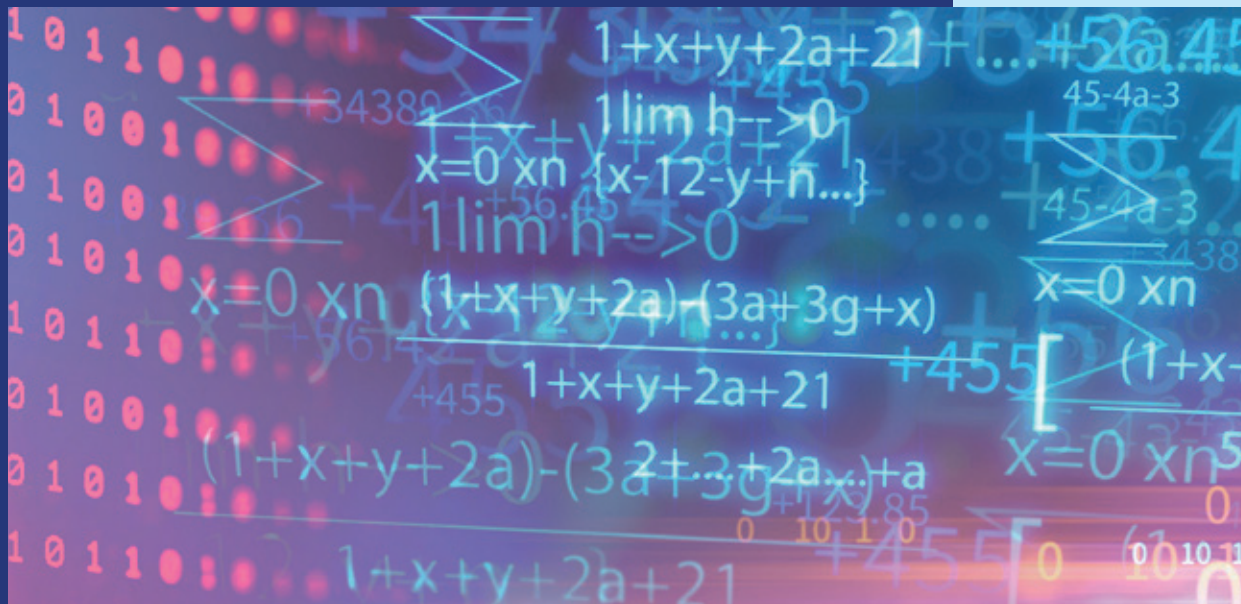




Laënnec



The power of digital technology and AI at the patient's bedside

At the crossroads of research and education, the Laënnec institute is the setting for a fertile multi-, inter- and transdisciplinary dialogue between doctors, computer scientists, physicists, mathematicians, lawyers and ethicists on medical issues. Medical questions arising in the field will be answered in a concerted fashion, in the form of operational and profitable technical solutions that respect legal and ethical constraints and are developed in the interests of patients. To achieve this, the institute brings together, on the Aix Marseille Université site, a large disciplinary and interdisciplinary force in digital sciences and artificial intelligence for health.

Forming a community

21 research units

4 doctoral schools

6 faculties

**more than
520 staff**

**more than
380 students
(master's
and PhD)**



Artificial intelligence

Health

Oncology

Neuroscience

**Thoracic
pathologies**

Digital prototypes



Bringing disciplines closer together

Science and technology

Health

Humanities and social sciences

Multidisciplinary
scientific leadership

Incentive calls for projects



Training through and for research

Internships for master's
students in research units

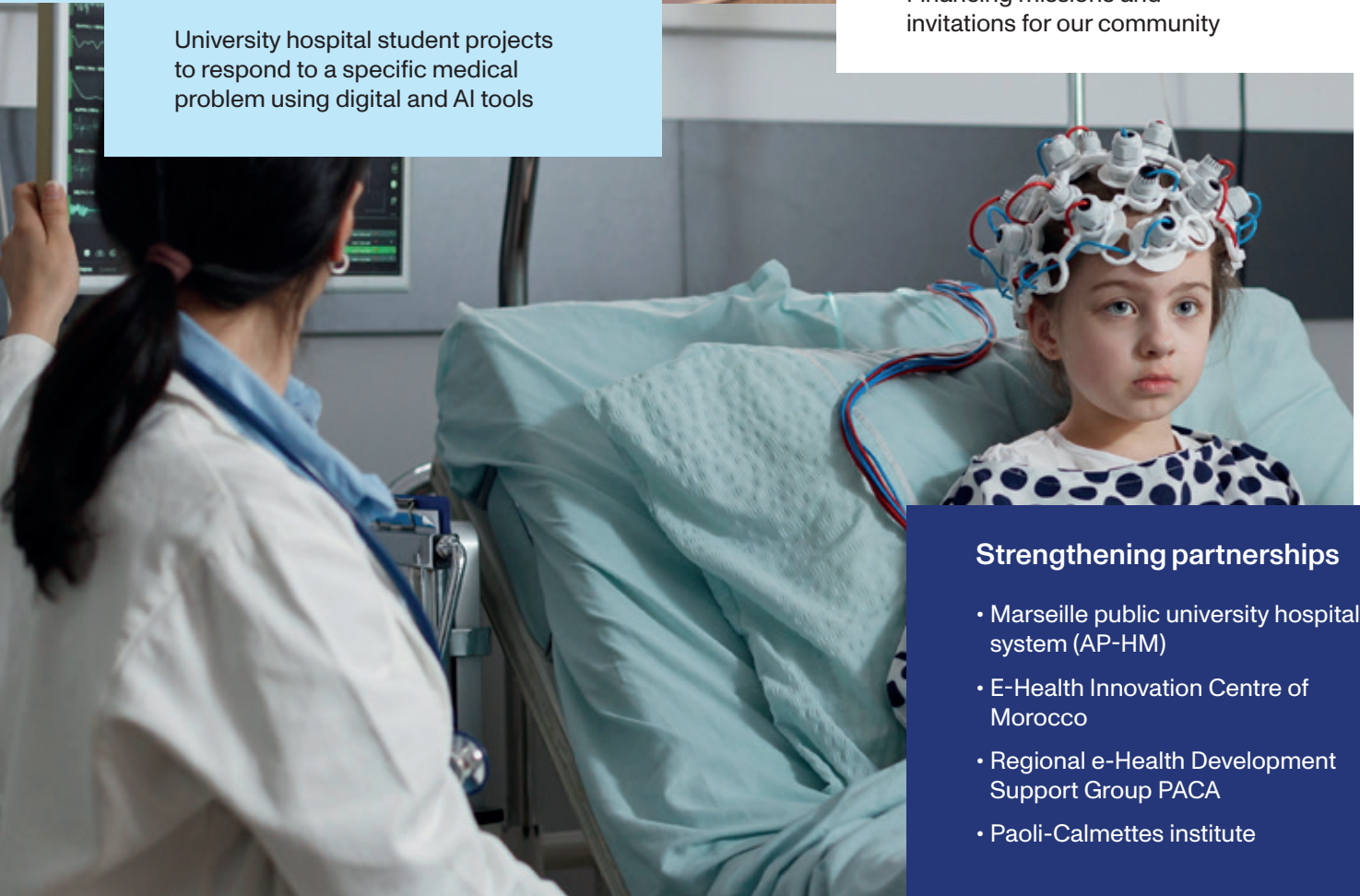
University hospital student projects
to respond to a specific medical
problem using digital and AI tools

Acting internationally

European Master's degree
in AI and Health

Partnership with Morocco's
e-Health Innovation Centre

Financing missions and
invitations for our community



Strengthening partnerships

- Marseille public university hospital system (AP-HM)
- E-Health Innovation Centre of Morocco
- Regional e-Health Development Support Group PACA
- Paoli-Calmettes institute

The institute in motion



Watch the institute's animated film



Our executive office

The entire governance team: <https://url.univ-amu.fr/institut-Laennec-gouvernance>

Director:
**Mustapha
Ouladsine**

Operations
manager:
Xavier Sau

Deputy research
director:
Stéphane Delliaux

Deputy training
director:
Kathia Chaumoitre

Focus on our university hospital student projects

The hospital-university projects are designed to bring students in digital sciences face to face with concrete medical problems arising from the services of the institute's partner care establishments. Supervised by a mixed multidisciplinary team (teacher-researchers and doctors) and carried out as part of their training courses, these projects introduce students to the problems of the medical world while providing digital solutions for healthcare professionals.

Contact

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"Working with the institute as part of a university hospital project integrating oncology, digital sciences and artificial intelligence has been a very inspiring partnership. The students worked to understand the specific needs of the health sector and we worked with them step by step to develop a prototype that met our requirements. This experience was enriching for the students and for us as healthcare professionals, as it enabled us to benefit from knowledge and skills in digital sciences and AI."

Dr J. Pluvy
initiator of the "CANCERTIMELINE"
hospital-university project, AP-HM

Training at Laënnec



*Training for, through and in research, with
continuity from master's to doctorate level*



Our training ecosystem

**more than 380
master's students***

6 partner faculties

Faculty of medical and
paramedical sciences (SMPM)

Faculty of sciences (FS)

Faculty of pharmacy

Marseille polytech

Faculty of arts, letters, languages
and humanities (ALLSH)

Faculty of sports science (FSS)

**department of
Polytech Marseille**

**more than 160
PhD students***

4 partner doctoral schools

Life sciences (ED 658)

Biomedical research (ED 659)

Marseille mathematics and
computer sciences (ED 184)

Engineering sciences (ED 353)

**1 interdisciplinary
PhD programme**

**European
master's degree**

11 master's specialisations

Medicines and Health Products
- DIGIPHARM specialisation

Biology-Health - Biomarker
& AI specialisation

Computer science - SID specialisation

Computer science - IAAA
specialisation

Automatic electrical energy
electronics - Automatic specialisation

Automatic electrical energy
electronics - S3AD specialisation

Neuroscience - NICC specialisation

Cognitive sciences

Public Health - AI4PH specialisation

Public Health - MQERS specialisation

Marseille polytech - Department
of computer science

* These figures include students enrolled in master's specialisations affiliated with the institute and PhD students enrolled in our partner doctoral schools.

Explore our
full range of
training offers:





Our key actions since 2021

Internships for master's students in research units

Spring school: "Mastering AI and data analysis techniques for healthcare"

Training to raise awareness of the regulations governing medical devices

University hospital student projects: Creation of student - teacher-researcher - doctor consortiums to respond to a specific medical problem using digital and AI tools

60 stages en unité de recherche

60 doctorants et médecins formés à l'École de Printemps

96 personnes sensibilisées à la réglementation des dispositifs médicaux

Contact

Deputy training director:
Kathia Chaumoitre

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"The Laënnec institute gave me the opportunity to do my final year placement on the detection of patient-machine asynchronies in artificial ventilation and apply my skills in automation and computer engineering to a real medical problem. This project, led by the head of the intensive care unit at the Timone hospital, gave me the opportunity to put my skills into practice in a rewarding, multidisciplinary medical context."

Louis R.

Master 2 student in electronics, electrical energy, automation and computer engineering

Our international training initiatives

CIVIS alliance

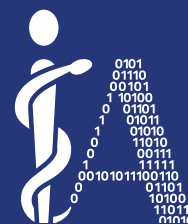
European civic university

European Master's degree in AI and Health with Stockholm University, Università Di Pisa, Institut National de Recherche en Informatique et Automatique, Universidad Autonoma De Barcelona, Universitatea de Medicina si Farmacie Carol Davila Din Bucurest

Strong cooperation with Morocco's e-Health Innovation Centre

– Participation of Institute members in the e-Health DU at Mohammed 6 University

Research at Laënnec



*Bringing together the digital sciences and AI
for health strengths of the Aix-Marseille site to
consolidate our international scientific position*



Our research ecosystem

21 research units

Health and life sciences

Bio-cultural anthropology, law, ethics and health (ADES)

Centre for cardiovascular and nutrition research (C2VN)

Research on health services and quality of life (CEReSS)

Marseille centre for cancer research (CRCM)

Centre for biological and medical magnetic resonance (CRMBM)

Mediterranean institute for neurobiology (INMED)

Institute for neurophysiopathology (INP)

Institute for systems neuroscience (INS)

Timone neuroscience institute (INT)

Laboratory for applied biomechanics (LBA)

Marseille centre for medical genetics (MMG)

Economic and social sciences of health and medical information processing (SESSTIM)

Advanced science and technology

Marseille institute for mathematics (I2M)

Provence institute for microelectronics and nanosciences (IM2NP)

Fresnel institute

Institute for movement science - Étienne Jules Marey (ISM)

Computer science and systems laboratory (LIS)

Humanities

Aix-Marseille centre for management studies and research (CERGAM)

Comparative and European international law (DICE)

Research centre for psychology and neuroscience (CRPN)

Aix-Marseille school of economics (AMSE)

more than 350 staff

Aix Marseille Université

CNRS

Inserm

AP-HM

INRAE

IRD

Gustave Eiffel University

IPC



Our key actions since 2021

“Mini-RHU” call for projects
- funding for research
projects addressing
specific medical issues

Postdoctoral call
for projects

Development of prototype
digital tools in response
to a medical problem

**7 mini-RHUs
funded**

**11 funded
theses**

**8 funded
postdocorates**

**more than
25 projects**

Our main areas of research

- Digital sciences and artificial intelligence applied to oncology
- Digital sciences and artificial intelligence applied to neuroscience
- Digital sciences and artificial intelligence applied to thoracic pathologies

Contact

Deputy research director:
Stéphane Delliaux

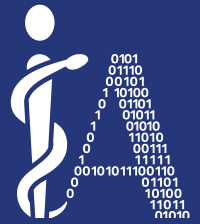
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Laënnec partnerships



*Strengthening and developing special links with
academic and institutional players and the
socio-economic and cultural world*



Our key actions since 2021

Biannual theme days
Health data
Digital health and medical instrumentation

**Annual GMED training courses on
raising awareness of the regulations
governing medical devices**

**Creation of a European Master's degree in AI
and Health**

> More than 100 students enrolled each year
Objective: to meet the growing demand
for highly qualified professionals
in this rapidly expanding field

Annual Spring School:
Mastering AI and data analysis
tools for healthcare



Our key partners include

Internationally

E-Health Innovation Centre (CleS) - Morocco
 Stockholm University
 Universita Di Pisa
 Universidad Autonoma de Barcelona
 Universitatea de Medicina si Farmacie
 Carol Davila Din Bucuresti

In France

Inserm
 INRIA tech
 Digital Health Delegation (DNS)

In the Aix-Marseille area

Marseille public university
 hospital system (AP-HM)
 Paoli-Calmettes institute (IPC)
 EUROBIOMED competitiveness cluster
 SCS competitiveness cluster
 Regional e-Health Development
 Support Group - PACA

The institute is developing its partnerships with public and private players both nationally and internationally, and is heavily involved in two relevant competitiveness clusters (the Secured Communicating Solutions cluster and the Eurobiomed cluster), which have made AI in healthcare their priority for the coming years. Every two years, Laënnec also organises theme days with manufacturers to address common issues and create opportunities for exchange between healthcare professionals, teacher-researchers, researchers and manufacturers.

Internationally, the institute relies on the CIVIS alliance, European civic university, but is also developing its network, particularly in Morocco with the E-Health Innovation Centre (CleS). Laënnec supports the mobility of researchers within its perimeter, who act as ambassadors for the institute and help to develop new links. Nationally, we are increasing our contacts with a range of public and private players with a view to setting up cooperation projects.



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The Laënnec institute brings together teams on 9 university and scientific sites



MEGA site



Nord site



Saint-Charles site



Timone site



Paoli-Calmettes site



Schuman site



Main site: Saint-Jérôme



Château-Gombert site



Luminy site

The Aix Marseille Université institutes are coordinated by the Amidex foundation

amidex

Aix
Marseille
Université



Aix Marseille Université institutes: facilitators to strengthen the research-training link, interaction with the economic and cultural world, interdisciplinarity and internationalisation around twenty or so strategic fields of research. Their core unifying role: training a new generation of academics to meet the scientific and societal challenges of our time!

The Aix-Marseille Excellence Initiative, a consortium between Aix Marseille Université and 8 partners

amU Aix
Marseille
Université



Inserm



Centrale
Méditerranée

sciencespo.aix

Hôpitaux
Universitaires
de Marseille

ap
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INSTITUT PAOLI-CALMETTES
unCancer Marseille