

HEALTH & MEDICAL INDUSTRY IN NORMANDY

CUTTING EDGE OF TECHNOLOGICAL PROGRESS

Health and medical technology is a dynamic and innovative sector in Normandy, encompassing a wide range of healthcare products, technologies and services used to **diagnose, monitor or treat diseases and medical conditions**. Normandy has a long R&D and industrial tradition in **biomedical, pharmaceutical and nuclear physics applied to health**. The particularity of the territory's areas of excellence in health is the presence of the entire value chain, from research to subcontracting and finally distribution to the end customer.

INNOVATION, RESEARCH & DEVELOPMENT

► NUCLEAR PHYSICS APPLIED TO HEALTH

GANIL (www.ganil-spiral2.eu)

One of the world's leading laboratories in the field of ion beam research.

LARIA (<https://urlz.fr/fq2U>)

Research Laboratory and open facility for radiation biology with Accelerated Ions.

CYCERON (www.cyceron.fr)

A 6,000m² biological imaging platform.

ARCHADE CAEN (www.archade.fr)

Advanced resource center for Hadrontherapy (protons and carbon) in Europe.

LABEX IRON (www.labex-iron.com/en/)

Innovative Radiopharmaceuticals in Oncology and Neurology laboratory of excellence. Develops innovative radiopharmaceuticals and transfers them to the clinic for molecular imaging diagnosis.

► ONCOLOGY

Like all Cancer Care Centers (CLCC), these centers have a threefold mission of research, training and patient care.

FRANÇOIS BACLESSE CENTER (www.baclesse.fr)

167 beds / +26 000 patients per year.

HENRI-BECQUEREL CENTER

(www.becquerel.fr)

125 beds / + 24 000 patients per year.

► UNIVERSITY HOSPITAL CAEN UNIVERSITY HOSPITAL

(www.chu-caen.fr)

Referral hospital for medical & surgical specialties with a national reputation for medical and pharmaceutical healthcare, research & training. 43 research units.

ROUEN UNIVERSITY HOSPITAL

(www.chu-rouen.fr)

Clinical Research and Innovation Department (DRCI) with more than 364 registered biomedical research studies. The areas of excellence are: Cardiology (aortic stenosis), Genetics, Gynecology (endometriosis center), Dermatology (bullous diseases), Mini-invasive thoracic surgery assisted by robot...

► LABORATORIES LABEX SYNORG

(www.labex-synorg.fr/en)

The largest consortium of French organic synthesis laboratories. Their research is geared towards synthesis methodology aimed at finding applications in life sciences. LABEX fosters the discovery and synthesis of new pharmacologically active compounds.

INNOVATION CHIMIE CARNOT (I2C)

(www.instituts-carnot.eu)

Carnot I2C brings together 8 research entities from Normandy:
CERMN: drug design & testing
COBRA: Organic and analytical chemistry laboratory
GLYCOMEY: Glycobiology and plant extracellular matrix
LCMT: molecular and thioorganic chemistry
ISTCT: Imaging and therapeutical strategies in cerebral and tumoral pathologies
PBS: Multidisciplinary research at the interface between the physical sciences and the life sciences
SMS (Sciences and separation methods): Crystallogenes and chromatography
URCOM: pharmaceutical-rich organs and complex systems based on polysaccharides

2 Teaching University Hospitals

INSERM/CNRS/INRA/CEA accredited laboratories

11 national centers of excellence

922 healthcare structures

30 000 jobs

3200 researchers

2nd most important region in France for pharmaceutical chemistry

1st French region on interventional cancer research

2 billion € turnover

Over 180 industrial establishments

MAIN COMPANIES

Aspen • Delpharm
 Johnson&Johnson • Servier
 MSD Santé animale
 Farmaclair
 Glaxo Smith Kline
 Lisi Orthodeadics • IBA
 Sanofi • Batteur • Aptar
 Nipro Pharmapackaging...

TRAINING



▶ **NORMANDY UNIVERSITY** (www.normandie-univ.fr)

2050 research professors, 750 curricula, 70 000 students including 18 000 master students and 5 200 engineering students.

FACULTY OF MEDICINE AND PHARMACY: Specialized courses in biochemistry, molecular biology, health engineering, microbiology, bio informatics, cellular imaging, behavioral neurosciences, immunology, genetics chemistry, physical chemistry of drugs, E-health...



▶ **MEDICAL TRAINING CENTER** (www.mtc.chu-rouen.fr)

MTC Rouen Normandy provides a wide range of cutting edge medical techniques in optimal learning conditions.



▶ **ENSICAEN ENGINEERING SCHOOL** (www.ensicaen.fr)

International Master of Science SNEAM with a specialization in Nuclear Technologies for Medical Applications (NUTMA).



▶ **ESITECH** (www.esitech.univ-rouen.fr/en)

Engineering School for Innovative Technologies, trains general engineers with two possible majors: Physical engineering and biological engineering.



▶ **INSA** (www.insa-rouen.fr)

Engineering school - fine chemistry, chemical process engineering and polymer materials.

SERVICES & SUPPORTS



▶ **NORMANDIE ENERGIES** (www.normandie-energies.com/nucleopolis/)

The Nucleopolis division of Normandie Energies focuses on the development of collaborative projects in different fields such as diagnosis, biological imaging, instrumentation, radiopharmaceutical production and radiotherapy.



▶ **POLEPHARMA** (www.polepharma.com)

Polepharma is the federation of Europe's leading pharmaceutical production basin, with 53 % of drug production in France and nearly 60,000 jobs. Its role is to enhance the economic and industrial development of the players in the leading French pharmaceutical sector through actions promoting competitiveness, innovation and attractiveness.



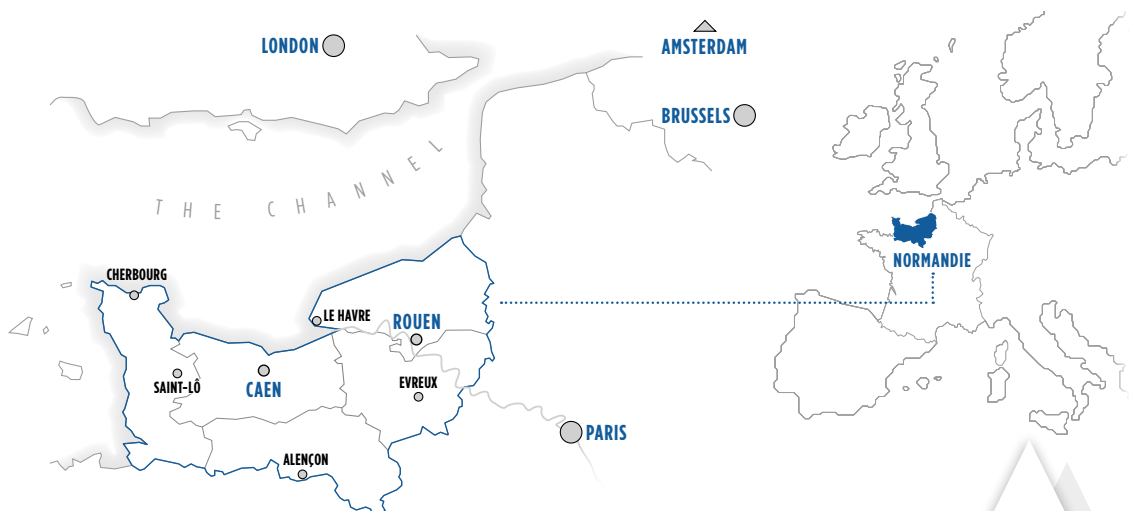
▶ **POLE TES** (www.pole-tes.com)

The digital cluster aims to be the benchmark for innovation in high digital technology particularly in the field of health: integration of adapted digital solutions throughout the patient journey; IoT and medical devices; AI for diagnostic support, health data monitoring; digital transformation of healthcare institutions.



▶ **AD NORMANDIE** (www.adnormandie.fr/en)

The regional agency for economic development is the representative of Business France Invest in Normandy. AD Normandie extends a whole range of services to foreign investors setting up their businesses in Normandy.



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