

FROM LIFE SCIENCES TO HEALTH

NARILIS promotes life sciences research, with the aim to further improve health and wellbeing in human and animals. NARILIS therefore supports research expanding our **understanding of fundamental biological processes underlying normal and pathological conditions**, as well as **advancing diagnosis, treatment and prevention of diseases**.

NARILIS conducts research activities within a broad variety of areas and at different levels, **from gene to public health**.

BRIDGING BASIC SCIENCE AND MEDICINE

NARILIS is based on a **partnership between the UNamur and the hospital complex CHU UCL Namur**. Thanks to this partnership, NARILIS fosters bidirectional interactions between basic- and clinical-oriented researchers, and enables to build bridges from bench to bedside. NARILIS hereby provides scientists the opportunity to conduct research that has an impact on health, and ultimately to participate to the transfer of fundamental scientific discoveries to clinical applications.

MULTIDISCIPLINARY AND COLLABORATIVE RESEARCH

NARILIS gathers scientists from diverse disciplines, including biologists, physicists, chemists, pharmacists and veterinarians from the UNamur, as well as human healthcare professionals from the CHU UCL Namur. Researchers carrying out projects in more transversal disciplines, such as informatics, mathematics, management and ethics, are also integrated.

RESEARCH AREAS

Health & disease-related research

Ageing	Blood, Thrombosis & Hemostasis	Cancer
Cardiovascular & Respiratory diseases	Developmental biology & regeneration	Diabetes, obesity, & kidney
Healthcare management	Infectiology	Neuroscience & regenerative medicine
Organelle biology	Skin disease	Veterinary & comparative medicine

Science, technology & innovation

Analytical proteomics
Medicinal chemistry & pharmacology
Nanosciences & nanotoxicology
Radiobiology & protontherapy

NARILIS encourages researchers from different disciplines to move from silos to synergy and to work together to develop innovative projects. **Examples of successful multidisciplinary research structures built up within NARILIS are:**

THE NAMUR THROMBOSIS & HEMOSTASIS CENTER



The NTHC is composed of a multidisciplinary team, including clinicians from the Hematology Department and clinical biologists from the Hematology Laboratory of the CHU UCL Namur (Godinne), as well as researchers from the Pharmacy Department of the UNamur. This structure centralizes all the expertise in thrombosis and hemostasis in the fields of patient care, research and education. Basic research activities aim at (i) understanding the physio-pathological mechanisms underlying thrombosis, (ii) developing new anti-thrombotic drugs, (iii) evaluating laboratory assays for the monitoring of oral anticoagulants, and (iv) elaborating tools for hemocompatibility testing of biomaterials and nanomaterials. Moreover, translational research activities are intended to optimize the management of thrombotic pathologies and to better assess the thrombotic and/or bleeding risk associated with anticoagulotherapy. [More info](#)

THE NAMUR MEDICINE & DRUG INNOVATION CENTER



The research of effective and innovative drugs remains a major challenge in health. The NAMEDIC was established with this ambitious objective in mind, associating the Chemistry and Pharmacy Departments of the UNamur. This research center is dedicated to medicinal chemistry from the hit identification to the lead optimization. The activities are highly multidisciplinary, including the research of new hits, the design of computer-aided drug, the organic synthesis of new molecules, the pharmaceutical analysis and physicochemical characterization of new compounds and the experimental evaluation using bioassays. Today, NAMEDIC activities are mainly focused on two research areas: cancer and thrombosis. [More info](#)

THE NAMUR NANOSAFETY CENTER



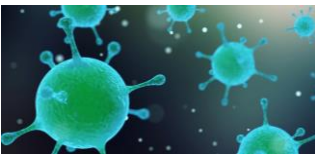
The Namur Nanosafety Center of the UNamur is a multidisciplinary platform for safety assessment of nanomaterials and evaluation of their putative risks for health and environment. Three partners are working together within this platform: the Laboratory of Analysis by Nuclear Reaction (LARN)/Physics of Matter and Radiation (PMR) for the physicochemical characterization of the nanomaterials, the Laboratory of Cellular Biology (URBC) for the *in vitro* toxicology testing and the Pharmacy Department for the *in vivo* animal testing. [More info](#)

OMNIBUS ANIMALIBUS STUDIA SANITATIS



The Omnibus Animalibus Studia Sanitatis (OASIS) research group was born out of a joint initiative from the Veterinary Medicine Department of the UNamur and the Diagnostic Imaging Department of the CHU UCL Namur (Godinne). The group uses the sheep as an animal model to study human diseases. Their main research focus are osteoarthritis and intervertebral disc degeneration, but other disorders are studied as well, such as cardiovascular diseases. OASIS benefits from the facilities and pedigree flock of the UNamur Ovine Research Center located at Faulx-les-Tombes and the advanced imaging equipment (computed tomography and magnetic resonance imaging) based on the site of Godinne. [More info](#)

THE RESEARCH POLE IN INFECTIOLOGY



At the UNamur, several teams are active in a research fully concentrated on infectiology topics, such as the Research Unit in Biology of Micro-organisms (URBM), the Integrated Veterinary Research Unit (URVI) and the Bio-Organic Chemistry Laboratory (CBO). Other teams, i.e. within the Geography Department, the Chemistry Department, the Molecular Physiology Research Unit (URPhyM) and the Laboratory of Cellular Biology (URBC), are partially connected to this area. The networking of all these researchers within the new Pole in Infectiology generates an important potential for multidisciplinary collaborations. Together these groups cover diversified aspects of infectiology, including host-pathogen interactions, veterinary surveillance, virology, bacteriology, organic synthesis of bacterial sugars and enzyme inhibitors, protein crystallography, epidemiology, stimulation of plant immune responses, and animal-, tissue- and cell-based infection models. Moreover, an asset of this new pole is its connection with the clinical Microbiology Laboratory and the Department of Infectious diseases of the CHU UCL Namur (Godinne). [More info](#)

THE CANCER RESEARCH POLE



The new Cancer Research Pole joins scientific and clinical researchers engaged in different aspects of cancer research, from fundamental research to clinical studies. Cell and organelle biology, radiobiology, molecular cancer biology, genome expression and medicinal chemistry are among the key competences found at the UNamur in the field of cancer research. Innovative and ambitious projects are developed thanks to the participation of clinicians involved in oncology treatment at the CHU UCL Namur. The major goal is to better understand and overcome cancer resistance to conventional treatments such as chemotherapy and/or radiation therapy. Research activities therefore include the study of the mechanisms underlying cancer cell resistance, the identification of new targets, and the development of new drugs or alternative strategies to treat resistant cancers. [More info](#)

SHARED RESEARCH FACILITIES

Besides the research facilities existing within the [UNamur technological platforms](#), the partnership with the CHU UCL Namur offers access to other resources:

- The **biobank** of the CHU UCL Namur (Godinne): collection and storage of human biological samples
- **In vivo imaging systems** at the Departments of Diagnostic imaging and Nuclear medicine of the CHU UCL Namur (Godinne)

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