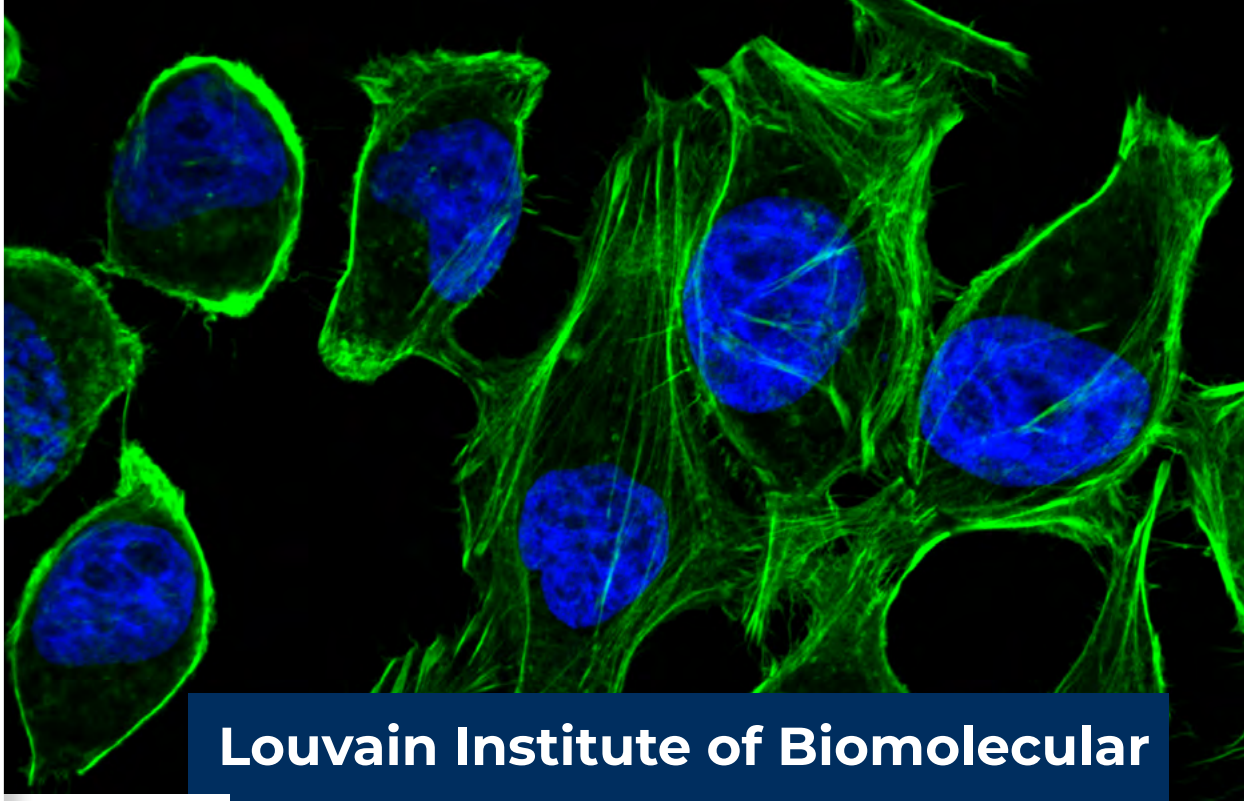
UCLouvain

LIBST
LOUVAIN INSTITUTE OF BIOMOLECULAR SCIENCE AND TECHNOLOGY

SCIENCE AND TECHNOLOGY SECTOR



Louvain Institute of Biomolecular Science and Technology - LIBST

1 Research Scope

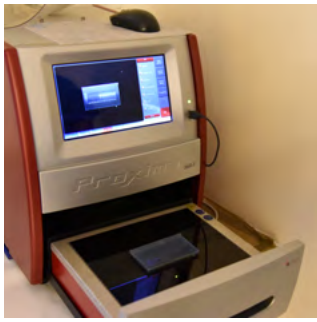
Our societies face major challenges such as cancer, neurodegenerative disease, obesity, an aging human population, viral and bacterial infections, pollution, frequent and severe droughts, declining microbial, plant and animal biodiversity.

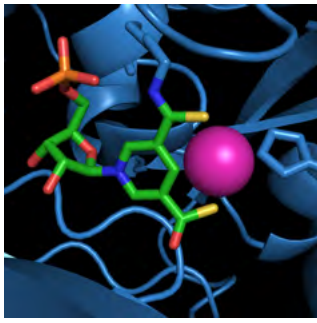
The Louvain Institute of Biomolecular Science and Technology (LIBST) addresses these challenges by investigating molecular and cellular mechanisms underlying physiological processes in a wide range of species, from bacteria and yeasts, to plants and animals, and, from this knowledge, brings societal benefits and industrial applications. To promote high quality basic and applied research, LIBST aspires to attract talented young researchers, to help them develop their project, and to foster interdisciplinary collaborations.

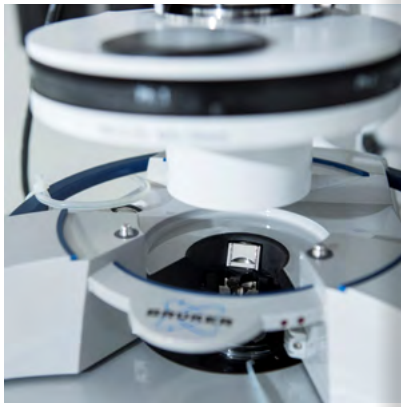
2 Research topics

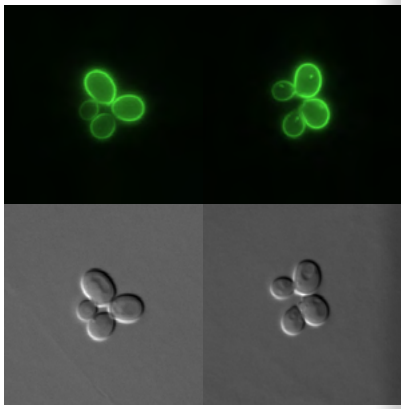
LIBST aims at discovering, understanding and applying biological mechanisms at the molecular and cellular levels using state-of-the-art technologies. The fields of investigation of LIBST include:

- Single molecule biophysics
- Enzymes and co-factors
- Protein and genome evolution
- Transposition in bacteria and recombination in yeast
- Mechanisms of bacterial and viral infections, and resistance to antibiotics
- Microbial adhesion and biofilm formation
- Impact of novel nutrients and bioactive dietary compounds on health
- Flavours from plants and yeasts, and applications in brewing sciences
- Membrane transporters, trafficking and degradation in yeasts and plants
- Plant development and cellular farming
- Developmental and pathological processes in human and animals
- Response to oxidative stress in animal cells
- Mechanisms of resistance to environmental pollutants
- Microbial, plant and animal biodiversity









3 Technical facilities

LIBST manages **three technological platforms** whose mission is to provide support to researchers of the whole scientific community:

- **MASSPROT**: a platform dedicated to **proteomics & protein analysis by mass spectrometry** (https://uclouvain.be/en/research-institutes/libst/massprot)
- **IMABIOL**: an inter-institute platform for **biological imaging using confocal, atomic force and epifluorescence microscopes** (https://uclouvain.be/en/research-institutes/libst/imabiol)
- **ANCA**: a platform for **husbandry, breeding and experimental procedures of vertebrate models**. It is divided into two zones: a conventional rodent facility and a fish/amphibian housing facility (https://uclouvain.be/en/research-institutes/libst/anca)

4 Key numbers

LIBST comprises about 185 members, among whom more than half are PhD students or postdocs, 25 permanent academic staff members, and ca. 35 administrative and technical staff members. Each year, about 8 PhD theses are defended and 50 peer-reviewed articles are published in international journals.

Since 2020, members of LIBST have been managing or participating in the following projects:

- 2 European ERC Advanced Grants
- 3 European ERC Starting Grants
- 4 Marie Skłodowska-Curie Grants
- 1 Belgian Excellence of Science Grant
- 3 WELBIO Grants
- 55 projects of the National Fund for Scientific Research
- 28 regional research projects
- 29 projects sponsored by Belgian and foreign private funds

5 Contact

Website	https://uclouvain.be/en/research-institutes/libst/
Head of the institute	president-libst@uclouvain.be
Administrative coordinator	Michèle Rochat - michele.rochat@uclouvain.be
Secretary	Lucie Chanel - lucie.chanel@uclouvain.be
	Véronique Lebrun - veronique.lebrun@uclouvain.be

"Physics studies the infinitely small, astronomy studies the infinitely large and biology studies the infinitely complex" (A. Goffeau).

Address Louvain Institute of
Biomolecular Science and technology
Croix du Sud 4, Bte L7.07.01
B-1348 Louvain-la-Neuve, Belgium

UCLouvain
University