

Care & Platform

Robotein®

Centre for Protein Engineering

FACULTY OF SCIENCES

The Faculty of Sciences works on three different missions : teaching, research and citizenship.

The teaching and the research of the Faculty of Sciences are multidisciplinary and interdisciplinary. It is also based on specialist and passionate teachers and researchers.

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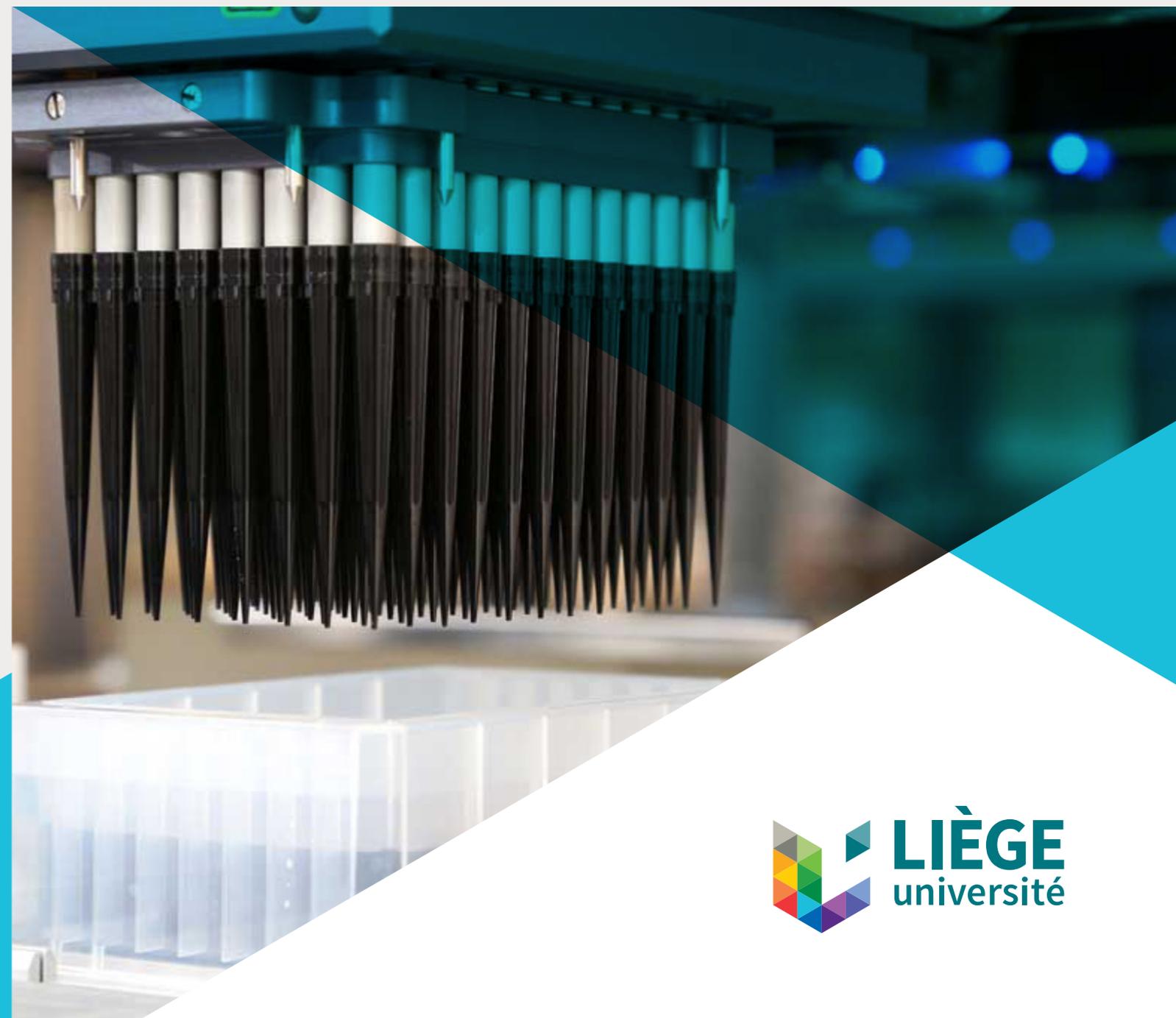
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Care and Plateform **ROBOTEIN®**

The Research and Teaching Support Units (CARE) play a key role in the partnerships the Université de Liège has been developing with companies. They support a growing number of private organizations, which can thus benefit from their expertise and specialized facilities. The platform/CARE presented below can closely and efficiently collaborate with industry in the framework of R&D projects.

- ▶ Service offer to more than 15 companies
- ▶ Open to Academic collaborations

PRESENTATION

Robotein® is a versatile technological platform for high-throughput (HT) protein production and analysis. It is built on competences and infrastructures available in the academic setting of two labs that offer a complete structural biology portfolio : the Centre for Protein Engineering at the Université de Liège and the Structural Biology and Bioinformatics Centre at the Université Libre de Bruxelles.

We develop methods for automated (HT) cloning, mutagenesis and colony picking, screening for production of recombinant proteins (selection of the best producers and optimal culture medium, enhanced reproducibility and yield at each purification step), purification, formulation, biophysical characterization (e.g. automated screening of refolding conditions and confor-

mational stability measurements, quantitative analysis of hundreds of proteins using infrared spectroscopy), label-free interaction analysis and enzymatic assays.

Some of these applications are quite complementary to the main activities developed at **Protein Factory**, our sister platform.

Robotein® is equipped with two robotic workstations, two microplate readers allowing UV/Vis absorbance and fluorescence measurements, together with chemiluminescence detection, a system for automated electrophoretic separation of nucleic acids and proteins, an Octet HTX platform allowing HT analysis of biomolecular interactions and quantitation of biomolecules even in crude extracts, in 96- and 384-well microplates.

Furthermore, the combination of a protein spotter with an infrared imager allows fast and reliable quantification of many protein samples, together with determination of protein secondary structure content and measurement of phosphorylations and glycosylations.

PARTNERS

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