BIOLOGY
HEALTH

BIOSCIENCES AND BIOENGINEERING FOR HEALTH LABORATORY

UA13 UGA Université Grenoble Alpes cea Inserm

Cell and tissue engineering | *Data science* | *Proteomics* | *Drug discovery* | *Cancer* | *Diabetes*

KEY FIGURES:

30 permanent researchers and lecturers

26 technical and administrative staff

20 PhD students and postdoctoral researchers

45 publications per year (on average)

3 patents over the last 5 years

OVERVIEW

The *Biosciences and Bioengineering for Health Laboratory* (BGE) aims to contribute to the improvement of human health in areas such as cancer, diabetes, and rare diseases. This is achieved through the identification of therapeutic targets and the understanding of their mechanisms of action, the discovery of clinically relevant biomarkers, the selection of bioactive compounds, the development of innovative therapeutic strategies derived from cell and tissue engineering, and the computational analysis of large omics or clinical data sets for precision medicine.

RESEARCH TOPICS

- **Personalized Medicine:**
  Cell and tissue engineering, including organoids-on-chip, and their applications in studying and treating pancreatic diseases such as cancer, diabetes, and skin disorders.
- **Fundamental Mechanisms in Biology:**
  Genetic, multi-omics, and pharmacological approaches to understand molecular and cellular mechanisms of signaling and cellular homeostasis in development, cancer, or rare diseases.
- **Proteome Dynamics:**
  Studies of proteome dynamics and their applications to understand epigenetic mechanisms of gene expression and the discovery of clinical biomarkers.
- **Data Science:**
  Bioinformatics, mathematics, and statistics, and their applications in interpreting large-scale data.
- **Instrumental Innovation Applied to Mass Spectrometry (Biophysics).**