

INSTITUTE OF FUNCTIONAL GENOMICS OF LYON - IGFL

BASIC RESEARCH LABORATORY IN ANIMAL BIOLOGY

<http://igfl.ens-lyon.fr/>



RESEARCH TOPICS

12 RESEARCH TEAMS

- ANIMAL BIOLOGY AND ITS GENOMIC BASES
- ADAPTATION AND EVOLUTIONARY GENOMICS
- MECHANISMS OF DEVELOPMENT AND REGENERATION
- INTEGRATIVE PHYSIOLOGY

CROSS-CUTTING THEMES

- GENETICS AND EPIGENETICS
- NUTRITION, ENDOCRINOLOGY AND METABOLISM
- MODELING AND BIOINFORMATICS
- EVOLUTION, ECOLOGY AND ENVIRONMENT

RESEARCH EQUIPMENT AND TOOLS

Equipment and platforms

- Confocal and digital microscopy, stereomicroscopy
- Histology
- High-throughput sequencing
- Transgenesis and genome engineering in animals
- Specialized animal houses: diversity of classic animal models (zebrafish, fruit flies and mice) and emerging animal models (semi-aquatic insects and crustaceans)

KEY FIGURES

96 staff including **30** researchers, **13** PhD students, **14** post-doctoral fellows and **39** research support staff

Over the last 5 years:

30 prizes and distinctions including **2** CNRS crystal medals, **1** IUF and **1** Sanofi Pasteur prize

187 publications

80 public funding including **4** ERC, **2** Horizon 2020, **30** ANR

15 private financing

Intellectual property:

1 portfolio of **6** patents, **4** third-party operating licenses, **1** know-how

1 start-up in incubation: Lipics

TRL scale between **1** and **4**

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FROM THE LABORATORY TO THE SOCIO-ECONOMIC WORLD

- When working with others, many studies rely on the equipment and know-how of teams and platforms.
- The IGFL provides expertise in genetics (genome engineering), endocrinology (endocrine disruptors), extracellular matrix (tissue regeneration), circadian rhythms or the microbiota.
- These themes have applications in the fields of cosmetics, animal and human health.

FOCUS ON

Institutional partnership research

- **Collaborations with many institutions abroad:** Uppsala University (Sweden), University of Toronto (Canada), University of Tokyo (Japan), University of Massachusetts Medical School (USA), Humboldt University and Heidelberg University (Germany), Indian Institute of Science Education and Research (India).
- **The IGFL also participates** in the Marie Curie Training Network EvoCELL.

Private partnership research

- **Collaboration between the company SILAB** and the team «Matrix Biology and Pathology» for the analysis of the matrisome of subpopulations of human dermal fibroblasts.
- **Collaboration between Boehringer Ingelheim** and the «Integrative physiology of host-microbes interactions» team to develop animal health.
- **Collaboration between Enyo-Pharma** and the «Ontogenesis and molecular interactions» team based on the analysis of protein-protein interactions *in vivo*.

Services provided

- **Scientific and technical expertise in biology** (molecular, cellular, animal, comparative, environmental), biochemistry, physiology, bacteriology, bioinformatics and modeling.
- **Services provided by IGFL platforms** associated with the development of Next Generation Sequencing (NGS), Imaging and Data Analysis technologies.
- **Provision of services for CLARINS** by the «Matrix Biology and Pathology» team for the development of a vascularized skin substitute with compartmentalized dermis: impact of papillary and reticular microenvironments (CIFRE thesis).

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