

## History, localisation of the unit

The Laboratory of Biometry and Evolutionary Biology (LBBE) is issued from a team within the “Laboratory of General and Applied Biology” created in 1966 by Professor Jean-Marie Legay (1925-2012) under the name “Biometry laboratory”. The Biometry laboratory started with the aim of promoting the use of Biometry to answer questions in the field of population biology. Biometry is to be understood here in its most general meaning of all quantitative approaches in Biology, including modelling, statistics and bioinformatics. The laboratory progressively hosted teams active in population genetics, evolutionary ecology, molecular evolution, ecotoxicology, medicine, bioinformatics. The LBBE has always been home to scientists with very different backgrounds: evolutionary ecology, molecular genetics, mathematics, computer science, medicine. The current name of the laboratory reflects the two major unifying axes of LBBE: **Biometry** with methodological innovations in statistics, modelling and bioinformatics targeting biological and medical questions, and **Evolutionary Biology** studied at all scales from the molecular to the population and community levels.

LBBE is located in 4 areas of the “greater Lyon” city, either in University campus or in hospitals sites:

- › the major part of the lab is hosted in the Mendel building of La Doua campus of University Lyon 1 Claude Bernard;
- › the medical teams are located in 2 areas with both a medical school and hospital facilities (Rockefeller/Lacassagne/Laennec, Lyon-sud hospital);
- › our members from Lyon Vet school are hosted in both Marcy-l’Etoile and in La Doua.

The part of LBBE hosted in the Mendel building on the La Doua campus has been deeply affected by a large, on-going renovation operation of this campus. All the Mendel building is to be completely internally re-built in order to meet new efficiency and energy standards. A 2-year period of construction work began in January 2019. By the beginning of 2021, the LBBE will enjoy a quite significant increase of the surface and quality of its laboratory and office rooms (see project).

## Structure of the unit (see Annex 2)

LBBE has 3 parent **institutions** (“tutelles”): Université Claude Bernard Lyon 1 (UCBL, 50% of permanent staff), CNRS (INEE is our primary institute, INSB and INSMI our secondary institutes, 36%) and VetAgroSup (5%) since 2014. INRIA (4%), and Hospices Civils de Lyon (5%), as partner institutions, also employ LBBE members.

LBBE is organized in **4 scientific departments** whose scientific results and projects are presented in this document:

- > - The Department "Phylogeny, Evolution, Genomes Algorithms and Statistics" (

**PEGASE**

) is devoted to the study of evolution and functioning of genomes, and the interactions between both, with much bioinformatics, statistics and algorithmics involved. The ERABLE INRIA team is part of PEGASE.

- > - The Department "Genetics, Interactions and Evolution of Genomes" (

**GINSENG**

) is devoted to the study of symbiotic interactions of all kinds (parasitism, commensalism, mutualism, mobile genomic elements) and their functional and evolutionary consequences.

- > - The Department "Evolutionary Ecology" (**EE**) is devoted to the study of ecological phenomena in an evolutionary perspective at various scales (molecular, individual, population, community) using various tools such as demography, statistical modelling and population genetics.
- > - The Department "Biostatistics and Modelling for Health and the Environment" (**BMHE**) is devoted to several quantitative approaches in medicine and ecotoxicology. Modelling, statistics, data science are mobilized in the fields of pharmacology, paediatrics, public health, and ecotoxicology.

Each scientific department is composed of 3 to 5 research teams. Teams are defined by shared scientific interests and intense cooperation between their members who share the funding allocated by LBBE (see "Resource allocation" below) and meet frequently to discuss their results and projects. Reorganization of the teams within a department is not a rare event: the internal team organization of the "Evolutionary Ecology" department was completely changed in 2016; team "Le Cocon" spun-off from the team "Bioinformatics, phylogeny and evolutionary genomics" in 2019. Such changes allow each researcher to find the best place for her/him, allow young colleagues to begin taking on collective responsibilities, and facilitate the emergence of new research themes and new interactions between colleagues.

**Administrative, technical and scientific support staff** are organized in 4 centers in La DOUA campus: "Pôle Biotechnologique" (10 permanent staff), "Pôle Informatique" (8), "Pôle administratif" (4), housekeeping (2). Each contributes to the whole LBBE in its own area. Thus, each of their members interacts with and contributes to the scientific projects of several teams and departments. Some members of "Pôle Biotechnologique" and "Pôle Informatique" are involved in other research projects, often in collaboration with other laboratories. In addition, VetAgroSup has affected two support staff persons to LBBE activities for a total of 1.2 full-time equivalent. INRIA also provided support staff for the ERABLE INRIA team.