

# LGB

## Laboratoire de génét et biologie cellu

### PARTNERS

The LGBC develops projects in collaboration with different partners :

- » With Maxime Breban's team (IRIS, U1173 INSERM/UVSQ), we use the *Drosophila* model system to study the activities of the HLA-B27 antigen, the main genetic predisposing factor for ankylosing spondylitis, an inflammatory rheumatic disease (see 'Human pathological mechanisms in *Drosophila*' axis).
- » With Jean-Louis Herrmann's team (EPIM, U1173 INSERM/UVSQ), we are using *Drosophila* as a model organism for infection by *Mycobacterium abscessus*, in particular, to identify factors enabling *Mycobacterium abscessus* to resist the innate immune response and the humoral (antimicrobial peptides) or cellular (plasmatocytes) immune response during infection (see 'Human pathological mechanisms in *Drosophila*' axis).
- » In the framework of the the "Human pathological mechanisms in *Drosophila*" axis, with Eugénie Huillet (UMR Micalis, INRAE de Jouy-en-Josas), we use the *Drosophila* model to study the protective effect of bacterial supernatants and lysates on intestinal

physiology and immune response in the context of inflammation and dysbiosis following infection.

» In the framework of the "Sideroflexins, mitochondria, and cell fate" axis, we collaborate through a project funded by the French National Research Agency with Nathalie Bonnefoy and Geneviève Dujardin (I2BC, Gif-sur-Yvette), Géraldine Liot (CEA, Fontenay-aux-Roses), Marie-Pierre Golinelli (ICSN, Gif-sur-Yvette) and Ioana Ferecatu (Faculty of Pharmacy Paris 5, Paris).

» In the framework of the "Mitochondria and ER stress resolution" axis, we collaborate with Jérôme Estaquier (Laval University, Quebec) to study the role of the ATF5 protein in HIV infection and with Loïc Paulevé to model in silico the signaling network centered around ATF5 (LaBRI, Bordeaux). This approach allows integrating results from the literature into a simulated network to predict expected results in vivo and test these predictions in immortalized or primary cultured cells.

» With Pauline Spéder's team (Structure and signals in the neurogenic niche, Institut Pasteur, UMR 3738, CNRS/UPC) we are studying the impact of alterations in the *Drosophila* larval brain architecture, on the behavior of the adult fly. These studies are based on tools developed within the LGBC behavioral study platform (DISSECT)