

## Formulaire de proposition de stage de Master 1 en Bioinformatique

Période de stage : 3 Avril au 26 Mai 2022

<b>Titre du stage</b>	Method evaluation and analysis of lifetime-series -omics data to identify regulators of muscle ageing in the fruit fly, <i>Drosophila melanogaster</i>
<b>Nom/acronyme du laboratoire d'accueil</b>	IBDM UMR 7288
<b>Adresse ou site web du laboratoire d'accueil</b>	<a href="https://www.ibdm.univ-amu.fr/">https://www.ibdm.univ-amu.fr/</a>
<b>Nom, Email et Tel du Maître de stage</b>	Bianca Habermann, <a href="mailto:bianca.habermann@univ-amu.fr">bianca.habermann@univ-amu.fr</a> ; 0649443263 Co-supervisor : Frank Schnorrer, <a href="mailto:frank.schnorrer@univ-amu.fr">frank.schnorrer@univ-amu.fr</a>
<b>Descriptif du stage</b>	Loss of muscle mass and function is one of the major hallmarks of ageing. However, the mechanisms of muscle deterioration with advanced age are not understood. We have performed controlled ageing experiments covering the entire lifespan of the fruit fly, <i>D. melanogaster</i> , under different exercise regimes (no-flight or <i>ad libitum</i> flight in a large flydome), followed by RNA-sequencing and proteomics studies from muscle to identify genes that regulate or are affected during muscle ageing. During this internship, you will be involved in the analysis of these time-series data and develop new techniques for analyzing such complex datasets that will be insightful for the experimental biologists testing these genes in the fly.
<b>Confidentiel (O/N)</b>	No
<b>Compétences attendues</b> (e.g. analyses RNAseq ou réseaux, génomique comparative, phylogénie, interface web/database)	RNA-seq analysis, R-, python-programming, data visualization
<b>Bibliographie</b> (liens/Pubmed ID)	Lucas, et al., 2022 (accepted for publication) <a href="https://doi.org/10.1101/2021.03.26.437187v1">doi: 10.1101/2021.03.26.437187v1</a> Marchiano F, et al. 2022 <a href="https://doi.org/10.1093/nar/gkac306">doi: 10.1093/nar/gkac306</a> . Haering, et al., 2021 <a href="https://doi.org/10.12688/f1000research.54533.2">doi : 10.12688/f1000research.54533.2</a> . Pierrelee, et al., 2021 <a href="https://doi.org/10.1038/s41598-021-93128-5">doi : 10.1038/s41598-021-93128-5</a> . Luis & Schnorrer 2021 <a href="https://doi.org/10.1016/j.cdev.2021.203760">doi : 10.1016/j.cdev.2021.203760</a> .
<b>Equipement informatique disponible (O/N)</b>	Oui