MuSkLE PhD programme
Building, maintaining and repairing the functional locomotor system

Co-funded by the European Union

# PhD Position 01 job vacancy

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| Reference: | **PP01** |
| Title: | **The role of the extracelllular matrix in the regenerating niche in Duchenne Muscular Dystrophy** |
| Hiring institution: | **Lyon1** |
| Location: | University Claude Bernard Lyon 1, Villeurbanne, France. |
| Start date: | As from 1st September 2027 |
| Duration: | 36 months |
| Application deadline: | 15th January 2027 |

## Job description

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| Objective: | **The recruited doctoral fellow (DF01)** will develop the following program:<br><br>***Context***. Duchenne Muscular Dystrophy (DMD) is a skeletal muscle disease, characterized by chronic inflammation, permanent attemps of muscle regeneration and the activation of stromal cells called fibro-adipogenic precursors (FAPs) that lead to fibrosis. Chronic inflammation and fibrosis are considered as secondary events of the disease and are considered as potential therapeutic targets to improve muscle homeostasis. Unpublished work of the lab has shown that the extracellular matrix (ECM) play biological roles in the microenvironment of muscle stem cells (MuSCs, that allow myofiber repair) and FAPs, altering their behavior (proliferation, differentiation, etc). Our proteomic analysis identified a series of molecules either overexpressed, or on the contrary, lacking in the DMD ECM when compared with the normal regenerating ECM.<br>***Project hypothesis***. We hypothesize that the ECM in DMD takes an important part of the pathogenic process by impacting the behavior of MuSCs, FAPs and immune cells.<br>***Objectives.*** The PhD program will focus on the role of the ECM on MuSC, FAPs and macrophages, cultured alone or together, to identify the role(s) of the ECM in the regenerative niche. The program aims to identify molecular components of the ECM involved in the regenerationg versus detrimental niche in skeletal muscle. The work will be run both with mouse and human cells.<br>The main techniques will be co and tri-culture, cell biology techniques, omics and molecular histology. The results will depict the status and behavior of the main ECM components of the MuSC niche in DMD. At the molecular level, it will identify the ECM determinants driving the organization of the regenerative niche in normal and DMD muscles, with a cellular and molecular mapping of the regenerative niche *in vivo* as well as *in vitro* molecular functional validation and *in situ* validation. |
| Collaborations and co-supervisions: | The PhD project will be co-supervised by Bénédicte Chazaud and Laure Gallay. |
| Supervisors: | Bénédicte Chazaud – benedicte.chazaud@inserm.fr<br>Co-supervisor: Laure Gallay – laure.gallay@univ-lyon1.fr |
| Place of work: | Laboratory Physiopathologie et Génétique du Neurone et du Muscle, Lyon, France |

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| Required degree | Master's degree or equivalent in Cellular and molecular biology |
| Skills/Experience: | Experience in cell culture and cell biology techniques is required. |
| Keywords | Skeletal muscle, myopathies, extracellular matrix, muscle stem cells,macrophages, fibroblasts |

## Mandatory requirements

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| Eligibility: | The doctoral fellow:<br>- should not have resided or carried out his/her main activity (work, study) in the country where he/she is being recruited, i.e., France, **for more than 12 months in the 3 years before the application call deadline,** unless this time was part of a compulsory national service or a procedure for obtaining refugee status under the Geneva Convention.<br>- **must be in possession of a master's degree** at the date of the call deadline. Applicants who have completed their cursus but not yet been awarded the formal master's degree by that date will not be considered eligible.<br>- must be **a doctoral candidate** (not already in possession of a doctoral degree at the date of the application call deadline). |
| Languages: | Oral and written skills must meet the standards of academic English used in international research. |

## Job details

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| Type of contract: | Full time position |
| Gross salary: | The monthly **living allowance, including employer and employees' social charges, is €3,500.** This amount corresponds to a gross monthly salary estimated to €2,440 and to an estimated net monthly salary before income tax of approximately €1,976.<br>On top of the monthly salary, the doctoral fellow will receive a **mobility allowance,** including employer and employees' social charges of €4,752 over the 36 months of the working contract. This amount corresponds to a gross monthly allowance estimated to €92 and to an estimated net monthly allowance before income tax of approximately €74. |
| Other benefits: | **Social Protection**: The fellow will benefit from **full social security coverage**, including health insurance, unemployment insurance, and pension contributions. He/she will also have access to occupational health services (*médecine du travail*), as required by French labour law.<br>**Additional Insurance**: The fellow may choose to subscribe to complementary health insurance plans, at affordable rates (approximately €70 *per* month), of which 50% is paid by the employer.<br>**Paid Leave**: The fellow is entitled to up to **33.5 days of paid leave annually** (for 35 hours worked per week), in accordance with national labour law, and will enjoy the same employment rights as other public-sector employees.<br>**Transport**: The fellow benefits from significantly **reduced fares on public transport**, available in all partner cities. Additionally, the host institution will cover 50% of the monthly transportation costs.<br>**Sports and culture:** The fellow will enjoy the cultural environment provided by the Lyon 1 campuses, where numerous exhibitions and activities open to the general public are organised throughout the year. The fellow may play his/her favourite sport in the largest University Sports Association in France, where over 30 activities are on offer year-round through the Sports & Physical Activity University Department. The fellow may also join one of the 70 student associations that unite the University. |