

Impact of DNA enhancers in type 2 diabetes etiology

Context :

By joining the UMR1283 unit (<http://www.good.cnrs.fr>), you will be part of a world-class multidisciplinary team dedicated to the identification and characterization of genetic variations and to the molecular mechanisms associated with metabolic diseases such as diabetes, obesity and kidney disease, using latest cutting-edge approaches in genetics, genomics, bioinformatics, biostatistics, molecular and cell biology, and animal models. The research unit counts 60 people headed by Professor Philippe Froguel, MD, PhD. The UMR1283 is the founder of the LabEx EGID focusing on basic and translational research in diabetes, and comprising 220 researchers and supporting staff from 3 UMRs: UMR1283, UMR1011 directed by Prof Bart Staels, UMR1190 directed by Prof François Pattou). EGID is directed by Prof Philippe Froguel and has been renewed to 2024. EGID research groups share several platforms in genomics, immune phenotyping, human islet preparation and transplantation, and in metabolic phenotyping of animal models (including rodents and minipigs). The UMR1283 is also affiliated to IPL an independent non-profit private foundation created by Louis Pasteur in 1894. IPL is a leading center of excellence in medical research working in active partnership with the University and Hospitals of Lille and research Institutions (Inserm, CNRS). IPL has 6 research units mainly focusing on infectious and inflammatory diseases, neurodegenerative diseases, cardiovascular diseases, metabolic diseases, diabetes, obesity, cancer and drug discovery, and 10 state-of-the-art technological platforms (“omics”, cell imaging, animal facilities, BSL-2-3, mass spectrometry...) and 6 start-up (see website Annual report: <https://www.pasteur-lille.fr/>).

The PhD student joining the UMR1283 through this call will be part of the Lille health PhD program within the Doctoral School “Biology and Health” of Lille. The Doctoral School provides students a stimulating academic environment for advanced multi-disciplinary training in basic biological and biomedical research, applied clinical research, medically-related technological innovations and Public Health research (<http://edbsl.univ-lille2.fr/en/welcome.html>).

Project :

The successful candidate will join the team 1 of the Unit headed by Dr Amélie Bonnefond entitled « Metabolic functional (epi)genomics and their abnormalities in type 2 diabetes and related disorders » and work under the supervision of Dr Amélie Bonnefond and Dr Morgane Baron. In the laboratory, we have identified genomic regions where some mutations are associated with type 2 diabetes. The project is aimed to specify the role of these variants in the pathophysiology of type 2 diabetes and related disorders using cell models. The effect of each mutation will be studied using luciferase assays and cells modified by CRISPR/Cas9 technology. The project involves multidisciplinary fields and should lead to the identification of new genetic markers involved in type 2 diabetes development.

Candidate :

The PhD candidate should hold or be preparing a Master degree in genetics, molecular or cellular biology or in a related field. We aim to find a highly-motivated student with creative skills and appeal for experimental work. Ability to work in an interdisciplinary environment is required. Applicants should have a sufficient level in English to read the scientific literature about the fields linked to the project.

Application :

Candidates should send their CV and motivation letter to morgane.baron@cnrs.fr and amelie.bonnefond@cnrs.fr.