Recruitment of a PhD student

Multi-dimensional approaches for the quality control of the next generation of medicines

PhD project:

The last century marked the discovery of many new chemical entities that turned out to be remarkable drugs. Monoclonal antibodies (mAbs) and related therapeutic modalities, therapeutic oligonucleotides and vaccines are the most well-known. But this new generation of drugs is complex, very expensive and has pushed the limits of health care systems finances as well as the boundaries of science. To handle those news medicines and their associated new formulations properly, the development of up-to-date analytical workflows will play a very important role in the coming decade, not only on the quality control perspectives but also to accelerate and make the drug development process more efficient.

In this project, the doctoral candidate will have to develop innovative analytical approaches to characterize these complex pharmaceutical products at the molecular (microheterogeneity) and supramolecular (macroheterogeneity) levels. The research will be conducted with respects to the current quality-by-design paradigm and will aim at providing data-rich and high-throughput methods that answer the need for state-of-the-art methods. He/she will have to select the right combination of tools (among which different modes of HPLC and CE coupled with DAD, MALS, LIF or MS/MS detectors) that will provide a better understanding and monitoring of therapeutic proteins and oligonucleotides.

The candidate will also take part of educational training courses dedicated to pharmacy students and participate to the laboratory Quality Assurance.

Candidate profile:

The candidate must have a master degree in pharmacy, chemistry, engineering or related studies. Experience in pharmaceutical industry, biotech, GMP or QA system, analytical techniques (HPLC, CE, MS) is an asset.

The candidate must be enthusiastic about research related to developing analytical/biophysical platform for biopharmaceutical/oligonucleotides analysis, have critical thinking skills, good final marks and ranks, ability to work well both independently and as part of a team, and proficiency in written and oral English communication.

Professor Marianne FILLET – Laboratory for the Analysis of Medicines – University of Liege
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The successful candidate will have the opportunity to be involved in cutting-edge research projects in a GMP environment while obtaining valuable experience with the relevant technologies that prepares well for future positions in academia or industry. We will also provide individual career development/support and access to an interdisciplinary and collaborative research community.

Keywords: Biopharmaceuticals – therapeutic oligonucleotides – Quality Control – HPLC – CE – MS

Host Laboratory: Laboratory for the Analysis of Medicines (LAM; lam-uliege.com)

Adress Host Laboratory: Laboratory for the Analysis of Medicines, University of Liege, Faculty of Medicine – 15, av. Hippocrate – 4000 Liège, Belgium

Supervisors: FILLET Marianne (marianne.fillet@uliege.ac.be)

Contract duration: 2 years renewable twice (max 6 years)

Jobs Hours: Full time

Deadline application: 20 July 2021

Starting job: 1st October 2021

Application: Please send the following documents to Marianne Fillet:

1) For EU candidates: Copy of your national ID card or of your passport page where your photo is printed. For non-EU candidates: Copy of your passport page where your photo is printed.

2) Curriculum Vitae (max 2 pages).

3) Letter of motivation relatively to the position (1 page).

4) Copy of your Master degree and/or Engineer degree if already available.

5) Copy of your final marks and ranks.

6) Coordinates of reference persons (at least your master thesis supervisor): Title, Name, organization, e-mail.

Please note that only complete applications are eligible.

Selection process: First step: selection on files, second step: interview.

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