Post-doctoral position in development of vibrational microscopy for cancer cell characterization: spectral data processing and clinical data management

A post-doctoral position is available in the frame of a European project (Competitiveness and Innovation framework Program) entitled M3S for Molecular Signature Detection with Multi-modal Microscopy Scanner. The project is led by a multidisciplinary consortium comprising academia, clinical, and industrial partners.

The innovation consists in combining biological sample morphological exploration to label free biophotonics Raman data collection so as to retrieve innovative diagnostic/pronostic markers and propose personalized treatment and patient follow-up strategies. In addition to morphological and spectral data, the M3S solution aims at considering exhaustively information on patient history and biological characterization currently performed in routine. The concerned pathology is Chronic Lymphocytic Leukaemia and M3S involves with 2 European clinical centres (CHU Caen, France and CHU Dinant Godinne, Belgium) involved in the project.

The post-doctorate will be recruited by the University of Reims Champagne-Ardenne, France, in one of its research teams: Biophotonics and Technologies for Health (UMR CNRS 7369 MEDyC), specialized in vibrational (Raman and infrared) microspectroscopy of cells and tissues and the processing of spectral data (chemometric correction of spectral interferences, statistical multivariate classification). The position requires working in very close interaction with clinical partners but also with industrial partners, in particular TRIBVN (SME specialized in developing medical image workstation fully integrated in laboratories and research environment) and QUINTEN (SME specialized in data analysis/data mining)

Missions: Developing new approaches of spectral data classification by taking into consideration complementary information such as morphological data, clinical and biological data or patient history.

Required skills: data processing on Matlab

Recommended expertise: vibrational spectroscopy, optical microscopy; the candidate must be motivated by the biological cell microscopy as application field and must present real communication skills to ensure discussions and coordination between the multiple partners involved in the project.

Duration of post-doc: the position is open from now to December 2016

Application deadline: 30th April 2015

Contact for information and application: Pr Olivier Piot/Dr Cyril Gobinet

« Biophotonics and Technologies for Health », UMR CNRS 7369 MEDyC, University of Reims Champagne Ardenne.France. olivier.piot@univ-reims.fr, cyril.gobinet@univ-reims.fr