



avec le Fonds européen de développement régional (FEDER)

RÉGION
BOURGOGNE
FRANCHE
COMTE



RESEARCH ENGINEER

Besançon France

Development of a lab on chip integrating an acoustic biosensor network to characterize specific molecules in blood

BioMicrodevice / Microfluidic / Acoustofluidic interaction / microsensor / instrumentation

Location: FEMTO-ST Institute, MN2S Dept, Besançon, France

Starting date: 01/02/2018.

Duration: 12 Months + 24 Months possible extension

Salary: 2250€ net/month (FEDER project)

Positioning of the project

The objective of the project is to develop a platform for innovative, personalized cell immunotherapies for the treatment of severe inflammatory and autoimmune diseases with high-unmet medical need. The project concerns the development of a complex modular bio-reactor which integrates several microdevices. Each device will be used to address a function in the production of personalized drugs based on blood.

The objective of this work is to develop a very innovative microsystem to explore, in real time and with a low limit of detection, some specific biological molecules in such drugs for innovative therapy. In this "lab on chip", microfluidic cells and channels, acoustic actuators and a multiparameter acoustic biosensor network will be integrated to perform real time measurements.

Required profile:

The candidate will be employed at FEMTO-ST, benefit from the skills and experience of our laboratory in the field of microtechnology, acoustic devices, microfluidic, instrumentation and biochemistry and operate in the MIMENTO clean-room facilities. She/he will be involved in the design, microfabrication of prototypes including the fluidic cell with acoustic sensors and in the experimental setup to control and characterize the set of microsensors and microfluidic devices.

The candidate should be qualified in applied physics and with strong interest in microtechnology and experiments (eg: PhD in the field of microsystem and/or acoustic device, with a strong background in instrumentation). He/she should possess skills in acoustic microtransducers, instrumentation for microsensors integration and multiphysics simulation, MEMS technology to fabricate and characterize the fluidic cells. Some knowledge on biomedical aspects will be appreciated.

She/he is expected to be highly autonomous and innovative, to demonstrate ability to write, communicate in English and work in an interdisciplinary approach. French language is not required.

Application procedure:

To apply, send an email with detailed CV, 2 names of referees, list of publications, and motivation letter to : therese.leblois@femto-st.fr (+33 3 63 08 24 56) and jfmanceau@femto-st.fr (+33 3 63 08 26 17),

<http://www.femto-st.fr/en/Research-departments/MN2S/Research-axes/BioMicroDevices-Team>