

## POST-DOC POSITION A.R.T. PROGRAMME

The Laboratory of Experimental Molecular Imaging at the Institute of Biomedical Imaging of the CEA (CEA/I2BM, Orsay), conducts research in medical imaging and notably in quantitative imaging of new tracers for Positron Emission Tomography (PET). It conducts the A.R.T. programme in collaboration with the Research Institute on Universe Fundamental Laws (Irfu/CEA). This programme funded by the French Research and Higher Education Ministry aims at developing a pre-industrial device for measuring tracers' arterial and plasmatic concentrations in animals. The project involves several parts:

- (1) Instrumental development of a real-time measurement system of radioactivity in arterial samples (electronics, informatics);
- (2) Design and implementation of a device allowing to insure the transfer of blood samples without mixing (micro fluid);
- (3) Development of a system allowing the effective separation of plasma blood cells on micro samples.
- (4) Validation of biological pertinence of results by comparing them to hand realized measures (pharmacokinetic modelling).

This position stands at the interface of instrumentation and biology. The successful candidate will be assigned to optimise and validate the existing A.R.T. biomedical device pilot.

Preferentially a general engineer, the candidate should have sufficient knowledge in physics and electronics to take control of the A.R.T. system. He/she should also have good knowledge of mechanics and of *Labview* type programming language. The candidate should ideally have experience in setting up one or more projects involving computer programming of electrical compounds in addition to the essential computer skills necessary for optimisation of the device's acquisition software.

Additional skills, i.e. English, enthusiasm, scientific rigor, sense of organization, adaptation capacity and good communication skills shall be appreciated. The successful candidate will work with teams of physicists, electronics engineers and biologists and should be motivated by integration of his/her technical skills into a goal driven project.

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