

POSTDOCTORAL RESEARCHER AT INEM/RARECELLS DIAGNOSTICS

Job title: Postdoctoral Researcher in Single Cell Analysis and Microfluidics.

The Institut Necker-Enfants Malades (INEM), created in January 2014, is an international biomedical research center located on the Necker Hospital campus, and supported by the French National Institute of Health and Medical Research (INSERM), the French National Center for Scientific Research (CNRS) and the University of Paris. The INEM is the hub for cellular and molecular biology at University of Paris, one of the World's leading universities. The Institute draws together over 100 talented scientists who are working together to translate research discoveries into applied more effective diagnostics and therapies.

The Circulating Rare Cells Research team is working in a public/private partnership with the Company **Rarecells Diagnostics**. Rarecells Diagnostics (www.rarecells.com, www.isetbyrarecells.com), is an innovative and dynamic company based in France and in the US, spin-off of Paris Descartes University, INSERM and APHP. Through its proprietary technology, the Isolation by Size or Tumor Cells (ISET®) for isolation and characterization of Circulating Tumor cells (CTC), internationally recognized by 85 independent scientific publications, Rarecells has provided a novel paradigm to the field of circulating tumor cells (CTC) as well as fetal cells and has implemented the ISET® technology in international Cancer Centers of excellence. Rarecells products have the IVD-CE mark.

Project

Trisomy 21 is the most common chromosomal aberration that causes a birth defect, widely known as Down Syndrome. Karyotyping of cells, obtained by chorionic villus sampling and amniocentesis, which are both costly and carry a risk of complications such as miscarriage (0.5 -1%), is still the only diagnostic test available.

The Post-Doc will work on the development of a new non-invasive and reliable prenatal test for trisomy 21 based on rare fetal circulating cells. The selected candidate will combine the recent advancements in cell enrichment from whole blood using filtration device and consumables, microfluidic technologies and molecular biology analysis.

The scientist will have an excellent opportunity to collaborate with experts in droplets microfluidics of the ESPCI.

The position is available immediately for an initial term of 1 year with a possible extension period and will be located in Paris.

Responsibilities

- Designing, developing, and implementing of a novel microfluidic system for samples concentration and cell encapsulation (design, microfabrication, testing and validation).
- Performing experiments in clinical settings (blood samples).
- Writing of protocols and support documentation, data analysis, interpretation and identification of technology limitations and troubleshooting.
- Results' presentation and publication.
- Supporting lab's organization.

Qualifications

- A PhD in Chemical/Mechanical Engineering, Physics, or Microfluidics (inertial microfluidics) with a strong background in fluid mechanics.
- Experience in microfabrication, numerical fluid flow modelling, computer-aided design (CAD) and clean room techniques.
- Experience in management of R&D projects.

- Experience in cell biology and blood samples processing would be highly appreciated.
- Proactivity, interest in technology development, ability to work in a multidisciplinary research and good interpersonal skills are essential.

Compulsory: Full English language proficiency.

Salary: According to experience

Application:

To apply, please send a CV and a cover letter to: researchparisdescartes@gmail.com