

Opened positions: Post-doc in Bioinformatics

Date posted: October 8th, 2014

Application deadline: December 31st, 2014

Institut Curie is looking for a highly motivated post-doctoral fellow in bioinformatics and computational biology to lead a project in Vassili Soumelis' research group, in the Immunity and Cancer Unit (U932). The successful candidate will work in close collaboration with the "Bioinformatics and Computational Systems Biology of Cancer" Unit (U900) led by Emmanuel Barillot.

Context

Institut Curie is one of the largest European institutions for cancer research with strong interdisciplinary traditions. It also comprises a hospital specialized in cancer treatment, and therefore disposes of a continuum of expertise from basic research to patient care. It is located in the center of Paris in France, in a both cultural and scientific rich environment.

The candidate will have the opportunity to work in a unique immunology and bioinformatics oriented environment under the supervision of Vassili Soumelis, in the Immunology Department headed by S. Amigorena. Importantly, the Immunology Department and the "Bioinformatics and Computational Systems Biology of Cancer" Unit have established a tight and productive collaboration, which has been successful over the past few years to improve our understanding of complex inflammatory and immune reactions, as well as basic mechanisms of signal integration and cell behavior [Touzot et al (Nat. Commun. 2014), Segura et al (Immunity 2013), Volpe et al (Blood 2009), Volpe et al (Nat. Immunol 2008)].

The open position is in line with recent developments at the interface between Immunology, Bioinformatics and Systems Biology.

More information: www.curie.fr and <http://u932.curie.fr/>.

Mission

Working exclusively on human cells and tissues in both normal and pathological conditions, our aim is to understand the reciprocal interactions between immune cell state/behavior and their environment in a global and integrated manner and to translate this knowledge into new biomarkers and therapeutic strategies. Our research is organized in several interconnected projects and the successful candidate will work on one or several specific projects depending on interest and expertise.

One main research area of our laboratory consists in the global analysis of human tissue inflammation and tumor microenvironment. Each type of inflammation (infection, cancer, allergy etc...) is characterized by molecular and intercellular communication networks that globally explain and drive the pathogenic process. Our global aim is to reconstruct such networks by combining a wide diversity of data generated in our lab and coming from high-throughput experiments (microarray, RNA-seq), Luminex, FACS, etc, as well as follow-up clinical data.

The successful candidate will be involved in the development of bioinformatics and modeling methods to mine these heterogeneous data in order to :

- i) identify and validate prognostic or predictive biomarkers, as well as new potential targets for therapeutic interventions,
- ii) reconstruct molecular and cellular interaction networks,
- iii) unravel correlations and co-segregation of biological parameters.

Profile

Ideal candidate will have a PhD in Computational Biology, Bioinformatics or Biology, and good publication records. Extensive experience in bioinformatics and statistical analysis of high-throughput data (differential analysis, pathway enrichment, identification of biomarkers...), R/bioconductor and unix environment is required. Some knowledge of cancer biology, cell biology and/or immunology is not mandatory but would be appreciated.

The candidate should be able to work independently, be proactive and have excellent communication skills. A working knowledge of English is essential.

Starting date : as soon as possible

Salary : Precise salary will depend on the past experience of the candidate.

Duration : position is open for 2 and up to 3 years.