# Post-doctoral Researcher Position in Bioinformatics for Translational Research at CNRS-EISBM, Lyon, in relation to the IMI-eTRIKS Consortium.

**Disease and target-specific knowledge enrichment using disease network models**

**Employer:** CNRS
**Website:** http://www.eisbm.org
**Location:** CNRS-EISBM, Lyon, France
**Expires:** 15 February 2016
**Qualifications:** PhD
**Salary:** Depending on qualifications and experience, based on CNRS salary grid.
**Duration:** 18 months
**Starting date:** March/April 2016

**Keywords:** Computational Systems Biology, Pathways and Networks, Data Integration and Modelling

A post-doctoral researcher position in Systems Biology is available as part of the European Translational Research Information and Knowledge Management Services project (eTRIKS, https://www.etriks.org/; http://www.imi.europa.eu/content/etriks), funded by the Innovative Medicines Initiative (IMI, http://www.imi.europa.eu/) of the European Commission 7th Framework Programme and the European Federation of Pharmaceutical Industries and Associations (EFPIA).

**EU project:** The eTRIKS Consortium is dedicated to delivering knowledge management services initially for all IMI projects and then for other translational research projects. These projects encompass translational bioinformatics, clinical research informatics, health/clinical informatics and the development of new analytical tools. They use tranSMART as part of the software knowledge management platform: http://www.transmartproject.org. eTRIKS is a collaboration between multiple partners from academia and industry, merging their resources and expertise in data hosting, curation, analysis and compliance with the international standards. Within the eTRIKS project, the CNRS-EISBM team works on developing tools for advanced data analysis and interpretation.

**Job context:** High-throughput experimental methods are generating large amounts of heterogeneous data associated with patient populations. These data have the potential to further a mechanistic understanding of disease and to impact on strategies for personalised medicine. However, a bottleneck is data interpretation. This can be facilitated by exploration of the experimental data in the context of background knowledge about the disease condition, represented by biological networks. The mining of these networks can suggest new unexpected relationships and can facilitate hypothesis generation on disease mechanisms.

**Job description:** The successful applicant will work on approaches for disease and target-specific knowledge enrichment using disease network models. The disease networks generated would aid in the interpretation of new experimental data and would enhance and complement traditional pathway-based resources. The project would develop and evaluate a general approach that involves information extraction through text mining methods, data representation as networks (using, for example, the openBEL framework (www.openbel.org)), and mining of the disease networks. The approach will then be applied to data interpretation in several IMI projects supported by eTRIKS.

The selected candidate will be based in Lyon-Gerland within the CNRS-EISBM team led by Dr. Charles Auffray, hosted by Claude Bernard University on the Charles Mérieux campus: (http://www.eisbm.org).

**Required Experience/Skills**: Candidates should have a PhD degree in computational biology, computer science, mathematics, physics, bioinformatics or engineering. Good programming skills in Python, Matlab, C/C++, Java, R or similar are essential. Experience of analysis of biological networks is desirable. The position requires good communication skills in English and involves working in collaboration with eTRIKS partners on translational medicine projects across Europe.

**Application**: Please send your CV, motivation letter and names of two references to Dr. Charles Auffray: jobs@eisbm.org. Please also mention the reference 'EISBM-12-15-MS' in your application.