

## Postdoctoral Fellowship: Computational biology of RNA-protein interactions - data analysis of mass spectrometry and high-throughput sequencing



**Location:** Heidelberg, Germany  
**Staff Category:** Postdoctoral Fellow  
**Contract Duration:** 2 years  
**Grading:** N/A  
**Closing Date:** 15 December 2012  
**Reference number:** HD\_00294

### Job Description

The European Molecular Biology Laboratory (EMBL) is one of the highest ranked scientific research organisations in the world. The Headquarters Laboratory is located in Heidelberg (Germany) and the outstations are in Grenoble (France), Hamburg (Germany), Hinxton (UK) and Monterotondo (Italy).

RNA-protein interactions are a largely uncharted territory of biology, yet play a major part in gene regulation. Recent progress in quantitative mass spectrometry is opening the door to the systematic mapping of RNA-binding proteins (RBPs); it is complemented by immunoprecipitation and high-throughput sequencing (CLiP, iCLiP, PAR-CLiP). The [Hentze group](#) is at the forefront of applying these approaches to biological areas that range from medically-relevant RBPs (NMD, 3'end processing) to RBPs involved in the regulation of metabolism (Castello\*, Fischer\* et al., Cell, in press). For computational scientists, this new field of biology offers exciting opportunities, ranging from the development of statistical algorithms for primary analysis of new data to data integration and systems-level inference.

We are looking for a PhD-level computational scientist who is interested in being actively involved in the design and analysis of new experiments in quantitative mass spectrometry, CLiP and their derivatives. He/she will address novel questions in the intersections of applied statistics, machine learning, bioinformatics and systems biology. He/she will be practically responsible for the design and execution of cutting-edge data analysis workflows for the experimental projects in the group.

The position is situated in the group of Matthias Hentze at the EMBL in Heidelberg, Germany, with a joint appointment with the group of [Wolfgang Huber](#) in the Genome Biology Unit. Medically-relevant RBP projects emerge from collaborations within the [Molecular Medicine Partnership Unit](#) (MMPU) of EMBL and the University of Heidelberg.

### Qualifications and Experience

The successful candidate should hold a PhD in a quantitative or computational discipline (e.g. bioinformatics, physics, computer science, statistics). Ability for multidisciplinary work covering applied statistics, bioinformatics, the biology of gene expression, and experimental technologies as well as strong mathematical and computational skills are mandatory. Experience in data analysis and familiarity with data analysis languages (R, Matlab, Python) are expected. A good publication record (which can include academic papers and scientific software) is required.

An ability to independently take responsibility over his/her own project, as well as strong teamwork and communication skills, are required as well as reliability, attention to detail and effective time management. Motivation to work in a multidisciplinary and international environment is fundamental to this position. Good communication and presentation skills and fluency in English are expected.

The successful candidate will benefit from the joint activities within the Hentze and Huber groups, the valuable knowledge transfer among the participants and the stimulating international and interdisciplinary environment at EMBL.

**Application Instructions**

Please apply online through [www.embl.org/jobs](http://www.embl.org/jobs)

**Additional Information**

EMBL is an inclusive, equal opportunity employer offering attractive conditions and benefits appropriate to an international research organisation.

Please note that appointments on fixed term contracts can be renewed, depending on circumstances at the time of the review.