

Post-doctoral position

Haematopoietic specification in the human embryo: toward de novo generation of Haematopoietic Stem Cells

A two-year post-doctoral position funded by a grant of the ANR (The French National Research Agency) coordinated by Dr. Manuela Tavian, is available from January 2015 in the INSERM UMR-S949, at the University of Strasbourg.

The aim of the project is to elucidate the cellular and molecular events leading to the specification and activation of a haematopoietic program during embryonic development. We notably focus on understanding the origin of haematopoietic stem cells (HSC) during embryonic development, the mechanisms implicated in HSC generation and expansion, the composition and function of the different HSC niches during ontogeny, and the cellular and molecular signatures of HSC and precursors.

The project is focused on the angiotensin-converting enzyme (ACE) that we have shown to identify pre-haematopoietic cells inside the early human embryo (*Sinka et al, Blood 2012*). The post-doctoral fellow will be in charge of the analysis of the differentiation potential and the fate of ACE⁺ cells by *in vitro* approaches and by transplant into the zebrafish embryo (*Danio rerio*).

The transcriptome profile of pre-haematopoietic ACE⁺ cells sorted from the human embryo will also be characterised, in collaboration with the Microarray and Sequencing Platform at the IGBMC (Illkirch) and carried out on single cells using the Fluidigm platform (C1™ Single-Cell Auto Prep System and BioMark™ HD System).

We are looking for a highly motivated candidate possessing a strong background in mouse/human HSC, molecular and cellular biology and microscopy.

Expertise in haematopoietic development/physiology and skills in bioinformatics analyses are highly desirable.

Organisation and communication skills as well as aptitude in working with research teams are appreciated.

The candidate should have a PhD degree in molecular biology, developmental biology, stem cell biology, or related fields.

Please send an application by e-mail, including a CV, a cover letter outlining relevant experience and reasons for interest in this position, and contact information for 2-3 references, to Dr Manuela Tavian (manuela.tavian@inserm.fr).