

JOB DESCRIPTION

Job Title : Postdoc position in Molecular Biology: Translation platforms at the mitochondria surface

Job Summary :

A post-doctoral position is open at “Institut de biologie moléculaire des plantes” (IBMP, UPR du CNRS 2357), University of Strasbourg, France

Starting date: between 1st of May and 1st of July, 2016

Duration: 18 months. A 6 months extension, financed by MitoCross LabEx, could be eventually considered.

Salary: 2600 euros (monthly gross wage)

Workplace: Institut de biologie moléculaire des plantes, 12 rue du Général Zimmer, Strasbourg, France

Candidate profile: A highly motivated candidate with PhD in molecular biology is sought, with a strong background in gene cloning, protein purification, microscopic analysis. Expertise in NGS will be welcome.

Restrictions: The PhD thesis should have been defended within the 4 preceding years, in any university except Strasbourg.

Contact: Prof Anne-Marie Duchêne
anne-marie.duchene@ibmp-cnrs.unistra.fr

Applicants should submit the following information (PDF file preferred):

- Curriculum vitae
- List of publications and communications
- Brief statement of research interests
- Names and contact information of at least two referees

Job Description:

The position is available in the team “ Metabolism and traffic of RNAs in the plant cell” at IBMP. The team is worldwide recognized for its works on plant mitochondria, and has a strong expertise in analyzing translation processes. The PI is Dr Laurence Maréchal-Drouard, also Director of the Institute. The supervisor is Prof Anne-Marie Duchêne.

Scientific context:

Intracellular trafficking of mRNAs and localized protein synthesis are fundamental mechanisms to spatially regulate gene expression. Recent results show that translation platforms are localized in different subcellular compartments, in particular at the surface of mitochondria, and defects in mRNA targeting to mitochondrial surface have dramatic impacts in the cell. We investigate this question in plant and we have already:

- shown targeting of cytosolic mRNAs to the surface of plant mitochondria (*Plant Mol Biol* (2010))
- identified mitochondrial membranes components involved in mRNA binding (*Biochimie* (2014))
- demonstrated a role of mRNA targeting in mitochondria biogenesis (*Proc Natl Acad Sci U S A.* (2014))
- performed a genome-wide analysis of mitochondrial associated mRNAs (RNA-seq analysis; manuscript in preparation). Analysis of the targeted mRNAs pointed out a strong correlation between mRNA targeting and protein function.

The mission of the post-doc will be to explore the functions and regulations of mRNA targeting to mitochondria. He/she will first develop a new tool to identify targeted mRNAs, based on the specific tagging of ribosomes. Then he/she will use this tool to evaluate mRNA targeting in response to different stress, or in different organs, in accordance with our RNA-seq results. This work will thus allow re-evaluating our understanding of how mRNA translation is spatially organized and regulated in eukaryotic cells. This is an essential question because perturbations of mRNA targeting and localized translation have dramatic consequences in the cell.

Main research field:

Biological sciences (molecular biology)

JOB DETAIL

Type of contract: Temporary

Status: Full-time

Company / Institute : Université de Strasbourg

Country: France

City: Strasbourg

Postal Code: 67000

Street: 4 rue Blaise Pascal

APPLICATION DETAILS (mandatory)

Envisaged job starting date: 1/05/2016 to 01/07/2016

Application deadline: 01/06/2016

Application e-mail :

anne-marie.duchene@ibmp-cnrs.unistra.fr