



JOB OFFER

Position in the project:	PhD student
Scientific discipline:	Biology, biotechnology, biochemistry, medicine
Job type:	Stipend
Number of job offers:	2
Stipend amount:	Stipend 4,000 PLN per month (~ 900 EUR)
Position starts on:	01.11.2018
Maximum period of stipend agreement:	3 years
Institution:	Institute of Molecular Biology and Biotechnology, Faculty of Biology, Adam Mickiewicz University
Project leader:	Krzysztof Sobczak, PhD
Project title:	<i>Pathogenesis driven by RNAs with expansion of trinucleotide repeats: mechanisms and therapeutic strategies</i> Project is carried out within the TEAM programme of the Foundation for Polish Science
Project description:	<p>The PhD student position is available in Department of Gene Expression of Adam Mickiewicz University which is the largest institution of higher education in Poznan and one of the largest and best institutions of higher education in Poland.</p> <p>A highly motivated researcher is sought to join the human molecular genetic research team under the supervision of Krzysztof Sobczak, PhD. We focus on studying the molecular pathomechanism and experimental therapy of hereditary neuro-muscular disease (myotonic dystrophy; DM) and neurodegenerative disorders (fragile X-associated tremor/ataxia syndrome; FXTAS).</p> <p>DM1 is an RNA dominant disorder caused by expansion of a CTG repeat in the 3'-UTR of the DMPK gene. The DMPK transcripts containing highly expanded CUG repeats (CUG^{exp}) are retained in the nucleus in discrete foci. Their nuclear retention is partly a function of the interaction of CUG^{exp} RNA with poly(CUG) binding proteins, such as, splicing factors in the Muscleblind-like (MBNL) family. The pathogenic effects of CUG^{exp} RNA are due in part to sequestration of MBNL proteins, which results in is regulated alternative splicing that these proteins normally regulate.</p> <p>In our research we focus on deeper understanding of some aspects of molecular pathomechanism of DM and FXTAS, especially associated with miRNA metabolism, function of specific splicing factors, abnormalities in translation (RAN translation) as well as application of antisense oligomers or small compounds to disrupt pathogenic interaction of CUG^{exp} (DM) or CGG^{exp} (FXTAS) with proteins in vitro and in vivo.</p>

Key responsibilities include:	<ol style="list-style-type: none"> 1. Experiments explaining the mechanism of RNA recognition by MBNL proteins and regulation of alternative splicing by MBNLs. 2. Experiments explaining the mechanism of RAN translation of expanded CGG repeats. 3. Genetic screening of genes regulating both processes (1 and 2). 4. Screening of small compounds and antisense oligonucleotides targeting expanded CGG repeats in RNA. 5. Participation in preparation of manuscripts and grant proposals.
Profile of candidates/requirements:	<ol style="list-style-type: none"> 1. The successful candidate must have a master degree in biology, biochemistry, genetics, computational biology or related life science field, love and enthusiasm for science, ability to work independently as well as collaboratively, strong organizational and communication skills, and a record of productive research; 2. Excellent university records (grades, honors and prizes, subject and quality of their MSc thesis); 3. Experience in human molecular genetics, molecular and cellular biology, and statistics; 4. Experience in: DNA cloning, in vitro assays, RT-PCR, real-time PCR, northern blot and all types of electrophoresis, western blot, immuno-affinity pull downs, deep sequencing.
Required documents:	<ol style="list-style-type: none"> 1. Professional CV including scientific achievements and university records (grades, honors and prizes). 2. Copy of MSc diploma. 3. List of academic grades (diploma supplement). 4. Letter summarizing previous work experience and future interests. 5. Contact information for two professional references.
We offer:	<ul style="list-style-type: none"> • A broad range of experimental methods are employed in our laboratory, including microarray hybridization, next generation RNA/DNA sequencing, fluorescence in situ hybridization; DNA/RNA purification, cloning, genotyping, sequencing and hybridization; protein immunoblots, immunoprecipitation, and immunohistochemistry; tissue culture, transfection and transduction of cells, confocal microscopy, single molecule microscopy, drug screening, and experiments with mouse models.
Please submit the following documents to:	ksobczak@amu.edu.pl
Application deadline:	15.10.2018, 23:59:59

Please include in your offer:

"I hereby give consent for my personal data included in my application to be processed for the purposes of the recruitment process under the Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation)."