
**The Czech Centre of Phenogenomics,
Institute of Molecular Genetics ASCR
invites applications for the following open position**

**1 PhD position in genome editing technologies (ESR)
for the Marie Skłodowska Curie ETN-training network
“Improving Genome Editing Efficiency” (IMGENE)**

STARTING DATE: March 2018

DURATION: 36 Months

EU RESEARCH RESEARCH AND INNOVATION PROGRAMME: H2020 / Marie Skłodowska-Curie
Actions (GRANT AGREEMENT NUMBER: 765269)

Project Title:

**New transgenic models of rare diseases generated using programmable nucleases:
CRISPR-Cas9 based genome editing of germline cells**

The group and our research:

The position is available in the department of Transgenic Models of diseases, which closely cooperates with the Czech Centre for Phenogenomics (CCP; <http://www.phenogenomics.cz>). The successful applicant will especially cooperate with the Transgenic and Archiving Module of CCP where the new targeting technologies will be developed. The analysis of the new models will be performed in cooperation with the team of Phenotyping Module of CCP.

Main Objective and expected results:

The main objective is the improve CRISPR genome editing efficiency in mice by development and optimization of targeting technologies employing in vivo electroporation, manipulation of spermatogonial stem cells, and other methods. Besides the technology development, mouse/rat models for several selected human rare disease models will be generated and their phenotype analysed. The expected results include new or optimized technologies and protocols for in vivo/ex vivo targeting using CRISPR/Cas system and new models for rare diseases.

Work location and supervisor name

Institute of Molecular Genetics, the Czech Centre of Phenogenomics

Prumyslova 595,

252 50 Vestec, Czech Republic

Supervisor: Assoc. Prof. Radislav Sedlacek, PhD

Required Skills/qualification:

We are looking for a highly motivated and enthusiastic candidate with the following qualifications:

- A Master of Science in biology or biotechnology or similar field
- Experience in biochemistry, molecular biology, genetics and cell culture is expected
- General knowledge about biology, physiology and reproduction will of advantage
- Excellent communication skills in English are requested

Project background and goal

CRISPR genome editing technology is considered to become the greatest technological improvement in biomedical research since the invention of the polymerase chain reaction 25 years ago and pharmaceutical companies as well as academic research are eager to apply it. However, the efficiency of introducing defined changes into the genome by CRISPR is still low, currently limiting its application in basic research, industry and gene therapy. The IMGENE consortium unites expert European research groups of academia and industry to address by innovative and complementary approaches the low efficiency of precise genome editing using CRISPR technology. Combining complementary knowledge on protein chemistry, molecular biology, cellular biology, viral vectors, transgenic mice, gene therapy, and bioinformatics present in the network, IMGENE will establish novel tools and protocols for improved CRISPR genome editing efficiency that will be of immediate benefit for health and life science research, the pharmaceutical industry, and the application of gene therapy. In addition, IMGENE addresses crucial ethical questions related to the application of genome editing technology in animals, plants, and humans, which have to be solved to gain acceptance by the society.

www.imgene.ku.dk

Eligibility criteria

Applicants need to fully comply with three eligibility criteria

1. Early-stage researchers (ESR) are those who, at the time of recruitment by the host, are in the first four years (full-time equivalent) of their research careers. This is measured from the date when they obtained the degree which formally entitles them to embark on a doctorate, either in the country in which the degree was obtained or in the country in which the research training is provided, irrespective of whether or not a doctorate was envisaged. Please note that applicants cannot already hold a PhD at the time of recruitment.
2. Conditions of international mobility of researchers: Researchers are required to undertake transnational mobility (i.e. move from one country to another) when taking up the appointment. Researchers must not have resided or carried out their main activity (work,

studies, etc.) in the country of their host organisation for more than 12 months in the 3 years immediately prior to their recruitment. Short stays, such as holidays, are not taken into account.

3. English language: Network ESRs must demonstrate that their ability to understand and express themselves in both written and spoken English is sufficiently high for them to derive the full benefit from the network training

How to apply:

The job application in English consisting of a covering letter and structured CV should be sent to Mr. Libor Danek (libor.danek@img.cas.cz) **by 30 November 2017**. If you have any questions related to the positions, please send them to this email as well.

We thank all who apply for their interest; however, only those candidates who are considered for an interview will be contacted.

Additional information

The Marie Skłodowska-Curie Actions offer attractive salary and working conditions. The successful candidates will receive a salary in accordance with the national legislation of the recruiting institution and the Marie Skłodowska-Curie Actions regulations for early stage researchers. Exact salary will be confirmed upon appointment.

In addition to their individual scientific projects, all ESR will benefit from further continuing education, which includes scientific skills courses, transferable skills courses, as well as active participation in workshops and conferences and secondments to partner labs.

Each ESR will be hired for 3 years, full time.

The European IMGENE training network wish to reflect the diversity of society and welcome applications from all qualified candidates regardless of age, disability, gender, nationality, race, religion or sexual orientation.



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