**Kratek opis usposabljanja mladega raziskovalca** (*Short description of the Young Researcher's training)*

1. Raziskovalna organizacija (*Research organisation)*:

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| Univerza v Ljubljani, Biotehniška fakulteta |

2. Ime, priimek in elektronski naslov mentorja (*Mentor's name, surname and email*):

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| Jernej Ogorevc (jernej.ogorevc@bf.uni-lj.si) |

3. Šifra in naziv raziskovalnega področja (*Research field*):

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| 4.06 Biotehnologija |

4. Kratek opis usposabljanja mladega raziskovalca (*Short description of the Young Researcher's training)*:

Navedite tudi morebitne druge zahteve, vezane na usposabljanje mladega raziskovalca (npr. znanje tujih jezikov, izkušnje z laboratorijskim delom, potrebne licence za usposabljanje…).

*slo:*
Mladi raziskovalec se bo priključil programski skupini »Primerjalna genomika in genomska biodiverziteta (P4-0220). Delo raziskovalne skupine je interdisciplinirano in vključuje pet tematskih sklopov: povezava med genotipom in kompleksnimi fenotipi, funkcijska genomika in živalski modeli, interakcije med gostiteljem in patogeni, bioinformatika in populacijske študije genomske biodiverzitete. Pomembna cilja raziskovalnega programa, v okviru katerega bo mladi raziskovalec opravljal svoje usposabljanje, sta funkcionalna anotacija genomov na genetski in epigenetski ravni ter razvoj celičnih in živalskih modelov. Poleg uporabe sodobnih metod za analizo genomov raziskovalni program vključuje tudi razvoj ekspertize za pripravo transgenih živalskih modelov, ob uporabi najsodobnejših metod za preurejanje genomov (npr. tehnologija CRISPR/Cas9).

V okviru usposabljanja se bo kandidat seznanil z molekularno-genetskimi tehnikami, metodologijo vzpostavitve, vzdrževanja, rokovanja in karakterizacije različnih celičnih kultur primarnih, trajnih in matičnih celic ter tehnologijo generiranja transgenih organizmov. Raziskave bodo usmerjene predvsem v odkrivanje kandidatnih genov, ki vplivajo na gospodarsko pomembne lastnosti pri domačih živalih (npr. delovanje imunskega sistema pri okužbah mlečne žleze) in pripravo celičnih ter potencialno transgenih mišjih modelov za preučevanje izbranih kandidatnih genov.

Delo bo potekalo na Oddelku za zootehniko (Biotehniška Fakulteta, UL) v laboratorijih programske skupine P4-0220 in v centru za laboratorijske živali, ki deluje v okviru programske skupine. Mladi raziskovalec bo imel možnost sodelovanja pri projektih znotraj skupine in možnost raziskovalnih obiskov na inštitucijah v tujini, s katerimi programska skupina sodeluje. Zaželene kompetence kandidata/kandidatke so:

- dobro znanje angleškega jezika,
- poznavanje področij molekularne genetike, celične biologije in fiziologije živali
- pripravljenost na delo z živalmi.

*eng:*
The candidate will join the research group "Comparative Genomics and Genomic Biodiversity" financed by Slovenian Research Agency (ARRS) through research programme (P4-0220). The work of the research group is interdisciplinary and integrates five thematic pillars: identification of associations between genotype and complex phenotypes, functional genomics and animal models, host - pathogen interactions, bioinformatics and population studies, and genomic biodiversity. Important goals of the research programme, which will also represent the focus of the young researcher's training, include functional annotation of animal genomes at the genetic and epigenetic level and the development of cell and animal models for different traits. In addition to use of high-throughput methods for genome analysis, the research programme aims to develop expertise for preparation of transgenic animal models, using state-of-the-art genome editing methods (*e.g.* CRISPR/Cas9 technology).

During the training, the candidate will get acquainted with molecular-genetic techniques, methodology for establishment, maintenance, handling and characterization of various cultures of primary cells, continuous cell lines, and stem cells, and technology for preparation of transgenic organisms. Research will mainly focus on identification of candidate genes associated with economically important complex traits in domestic animals (*e.g.* innate immune function in mammary gland infections) and development of cellular models and potentially transgenic mouse models to study selected candidate genes.

The candidate will work in the facilities of the research programme group P4-0220, which include molecular-genetic and cell culture laboratories and the center for laboratory animals (all located at the Department of Animal Science, Biotechnical Faculty, University of Ljubljana). The young researcher will have the opportunity to participate in research projects within the research group and the possibility of research visits abroad. Desirable competencies of the candidate are:

- good knowledge of English language
- general knowledge of molecular genetics, cell biology and animal physiology
- willingness to work with animals.