University *of Ljubljana*

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Expression of supervisor's interest to host
Marie Skłodowska-Curie Individual Fellows at the University of Ljubljana (UL)

Prof. dr. Damjana Rozman from University of Ljubljana is searching for a top-class experienced researcher of any nationality interested in developing collaborative MSCA IF application for the following EU Framework Programme for Research and Innovation **Horizon 2020** actions:

- Marie Skłodowska-Curie Individual Fellowships – European (MSCA-IF-2016-EF)
- Marie Skłodowska-Curie Individual Fellowships – Global (MSCA-IF-2016-GF)

Call H2020-MSCA-IF-2016
Planned opening date: 12 April 2016
Deadline: 14 September 2016
More info H2020-MSCA-IF-2016

ELIGIBILITY CRITERIA FOR MSC FELLOWS

- The researcher must, at the deadline for the submission of proposals, be in possession of a doctoral degree or have at least four years of full-time equivalent research experience. The researcher may be of any nationality.
- Mobility rule: the researcher must not have resided or carried out his/her main activity (work, studies) in the country of the host organisation for more than 12 months in the 3 years immediately prior to the deadline for submission of proposals.

OPPORTUNITIES FOR POTENTIAL CANDIDATES – RESEARCHER'S CAREER DEVELOPMENT

The goal of MSCA Individual Fellowships is to enhance the creative and innovative potential of experienced researchers (post-doctoral or with 4 years of equivalent research experience) wishing to diversify their individual competence in terms of skill acquisition through advanced training, international and intersectoral mobility. The researcher and supervisor will develop the application jointly. The project proposals will be submitted by the host organization. If the application will be successful, the IF researcher will be recruited under an employment contract with a monthly salary of 4.650 €* coefficient of the country where the researcher is hosted (living allowance) + 600 € (mobility allowance) + 500 € (family allowance) per month. More information may be found here.

University of Ljubljana offers stimulating environment for postdoctoral research providing modern core facilities in a supported environment with on-the-job training and supervision. In addition, postdoctoral researchers will have access to the generic and transferable skills trainings, they will have the possibility to be involved in educational process and if suitable, they will be seconded to industry all with the purpose for further development of their careers in the academic and non-academic sector.

Researchers who wish to cooperate with UL for the submission of a project proposal under the aforementioned Actions should check that they fulfil the respective eligibility criteria and then send an expression of interest, consisting of a CV and a two-page summary presentation of their research proposal by **18 March 2016**. Proposals will be pre-selected based on internal evaluation and the availability of suitable supervision. Candidates will be informed of the results of the pre-selection by 25 March 2016.

Selected candidates will be invited to meet the supervisor and visit the research environment of the university within the 2-day MSCA-IF proposal writing workshop in Ljubljana organised by the UL at the end of May 2016.

UNIVERSITY OF LJUBLJANA

University of Ljubljana (Univerza v Ljubljani, UL) was founded in 1919 and is the oldest and largest higher education and scientific research institution in Slovenia. It encompasses 23 faculties and 3 art academies and has more than 40.000 undergraduate and postgraduate students and approximately 5.600 employees. UL is listed amongst the **top 500 universities** in the world according to the ARWU Shanghai, Times THES-QS and WEBOMETRICS rankings. UL is very active in national and international R&D and educational programmes, and creates almost half of the research results of Slovenia. In the period 2007-2013 UL cooperated in **745 EU projects**, including **163 FP7 projects**, which places UL on the first place among the organisations in the EU 13 member states. The University of Ljubljana has close ties with many excellent Slovenian and foreign companies. In May 2015, UL founded the Slovenian Innovation Hub, which will operate mainly as a facilitator and promoter of development and research teams in the academic and business sphere. UL is also founder of the University incubator, the Institute for Research and Innovation, and very recently the SMUL network - a global alumni and associates network. From 2008 UL is committed to respect the principles of the European Charter for Researchers and the Code of Conduct for Recruitment of Researchers, which led to the EC given UL the right to use the logo *'HR Excellence in Research'* in 2013.

PROFILE OF THE SUPERVISOR

NAME OF THE SUPERVISOR: Prof. dr. Damjana Rozman
MAIN RESEARCH FIELD: Systems biology/medicine of cholesterol homeostasis and non-alcoholic liver pathologies
E-MAIL address: damjana.rozman@mf.uni-lj.si
LINK to SUPERVISOR's CV: http://cfgbc.mf.uni-lj.si/

DESCRIPTION OF THE SUPERVISOR (max. 200 words)
(Describe important research experience, education, current and previous positions, institutional responsibilities, awards, experiences in supervision, teaching and organisation (esp. international), major collaboration, important international research projects. Add your personal picture if possible.)

Damjana Rozman is a full professor at Faculty of Medicine UL. Since 2006 she is a full Professor and Head of Centre for Functional Genomics and Bio-Chips. She received Ph.D in Biochemistry at UL, followed by a 3-year post-doctoral training at Vanderbilt University, School of Medicine, USA, where she worked on characterization of novel human cytochromes P450. As a Visiting Scholar at IGBMC in Strasbourg she got insights into circadian clock in metabolism. She collaborated also on industrial projects dealing with development of novel hypolipidemics. She led Slovenian and international research projects, published over 100 SCI papers, her h-index is 25. She served as Expert of The Directorate for Health EU in development of personalised/systems medicine, and was/is a member of the Advisory Board for Systems Biology at BMBF, Germany, of the FEBS Advanced Courses Committee, and the Excecutive Board of European Association for Systesm Medicine. She supervised over 20 university students, 14 Ph.Ds, and 9 post-docs, from Slovenia and abroad. Her trainees benefit from reputation of the group and were successful in obtaining international funds and competitive jobs in different sectors. The current research of D. Rozman focuses on systems aspects of cholesterol homeostasis in non-alcoholic liver pathologies.

RESEARCH FIELD OF THE SUPERVISOR
Main research field: Biochemistry and molecular biology
Sub-fields: Systems biology/medicine, endocrinology

RECENT TRACK-RECORD and other SIGNIFICANT ACHIEVEMENTS
(List 3-5 publications in major international/leading peer reviewed journals relevant for the scientific field in which you would like to develop the project application with the post-doc researcher. Consider also patents or other significant achievements)

Lessons from hepatocyte-specific Cyp51 knockout mice: impaired cholesterol synthesis leads to oval cell-driven liver injury.
Lorbek G, Perše M, Jeruc J, Juvan P, Gutierrez-Mariscal FM, Lewinska M, Gebhardt R, Keber R, Horvat S, Björkhem I, **Rozman D**.
Sci Rep. 2015 Mar 5;5:8777. doi: 10.1038/srep08777. (IF 2014 = 5,578)

Identification of natural RORγ ligands that regulate the development of lymphoid cells.
Santori FR, Huang P, van de Pavert SA, Douglass EF Jr, Leaver DJ, Haubrich BA, Keber R, Lorbek G, Konijn T, Rosales BN, **Rozman D**, Horvat S, Rahier A, Mebius RE, Rastinejad F, Nes WD, Littman DR.
Cell Metab. 2015 Feb 3;21(2):286-97. doi: 10.1016/j.cmet.2015.01.004. (IF 2014 = 17,565)

SteatoNet: the first integrated human metabolic model with multi-layered regulation to investigate liver-associated pathologies.
Naik A, **Rozman D**, Belič A.
PLoS Comput Biol. 2014 Dec 11;10(12):e1003993. doi: 10.1371/journal.pcbi.1003993. eCollection 2014 Dec. (IF 2014 = 4,62)

Genomic aspects of NAFLD pathogenesis.
Naik A, Košir R, **Rozman D**.
Genomics. 2013 Aug;102(2):84-95. doi: 10.1016/j.ygeno.2013.03.007. Epub 2013 Mar 29. Review. (IF 2014= 2,793)

Inducible cAMP early repressor regulates the Period 1 gene of the hepatic and adrenal clocks.
Zmrzljak UP, Korenčič A, Košir R, Goličnik M, Sassone-Corsi P, **Rozman D**.
J Biol Chem. 2013 Apr 12;288(15):10318-27. doi: 10.1074/jbc.M112.445692. Epub 2013 Feb 25. (IF 2014 = 4,6)

RESEARCH ENVIRONMENT

FACULTY/DEPARTMENT/LABORATORY

(Describe briefly the faculty/department/laboratory, where the researcher will be employed, including the research team expertise)

Faculty of Medicine (MF) at University of Ljubljana recently celebrated 90th anniversary during which it educated close to 9000 doctors of medicine and dental medicine and hundreds of Biomedicine PhDs. The hallmark of MF is a close connection between education, research and clinical work which qualifies MF among top 10% medical schools worldwide. **Institute of Biochemistry** is a key preclinical institute of Faculty of Medicine. It was founded at 1919, together with Faculty of Medicine, initially as Institute of Chemistry and since 1972 Institute of Biochemistry (IBK). It developed into research and education institute with over 50 full and part time employees. IBK is a research and education basis for Biochemistry and Molecular biology at undergraduate, graduate and life long levels. It provides biochemistry courses at 1st and 2nd years of the undergraduate studies of medicine and dentistry, coordinates Biochemistry and molecular biology programme within the interdisciplinary University Doctoral Programme of Biomedicine, where it offers several obligatory and elective courses of. The research work at the Institute is focused on regulation of diverse aging-related cellular processes and application of molecular genetics methods in medicine and all the equipment necessary for DNA and molecular biology analyses is available, including Real-Time PCR systems and a platform for custom-made and Agilent microarray analysis. IBK staff holds several Slovenian and international projects (EU and beyond) and programmes. Due to research potential IBK represents a high-rating base for training doctoral students. IBK members have also extensive collaborations with clinics of University Medical Centre Ljubljana and other clinics in Slovenia and abroad – particularly with Karolinska Institute.

Centre for Functional Genomics and Bio-Chips (CFGBC) is a part of the Network of infrastructure centres of University of Ljubljana (MRIC-UL). It was established at Faculty of Medicine in June 2005 by the Slovenian Consortium for Biochips, the network of Slovenian academic institutions, research institutes, clinical centres and pharmaceutical industry. CFGBC represent the Slovenian national microarray and sequencing facility and training site that is used by partners of the Slovenian Consortium of Bio-Chips. Training of functional genomic and systems medicine is provided at undergraduate level (students of medicine, dental medicine, biotechnology, genetics, bioinformatics, pharmacogenomics), doctoral level (Genetic Concepts – Biomedicine, Systems Medicine, etc.) and by international schemes (ERASMUS. Marie Curie, etc.). The unit operates as a core facility, allowing members of the Consortium to perform microarray experiments and seek advice. Since 2011 the laboratory holds next generation sequencing equipment and since 2013 represents the national node of the European ESFRI infrastructure ELIXIR. CFGBC is partially funded by Slovenian Research Agency infrastructure programme (MRIC-UL). The personnel is supported also by the SRA programme Functional genomics and biotechnology for health . CFGBC hosts several Slovenian and international projects of the Slovenian Consortium for Bio-Chips members. The current staff includes three post-docs (including research staff), three doctoral students, two technicians, and master students.

RESEARCH INFRASTRUCTURE

(Describe significant internal or external research infrastructure, including e-infrastructure if relevant, accessible to the MSC fellows)

The CFGBC laboratory is equipped for: **General molecular biology equipment for isolation purification and quality control of nucleic acids and proteins and bacterial cloning procedures:** The FujiFilm QickGene-810 apparatus for automatic isolation of nucleic acids and proteins, microtiter plate reader Tecan GENios, spectrophotometer NanoDrop ND1000, speedvac vacuum centrifuge Heto Maxi Dry Plus, centrifugs for tubes Eppendorf 5415 D and microtiter plates Eppendorf 5810 R, DNA and RNA analyser Agilent 2100 Bioanalyser, several refrigerators and -20C freezers (Gorenje, Candy) and -70C freezers Sanyo, water baths Memmert, incubators Biosan, gel immaging system Uvitec Uvi Pro Platinium. **Amplification of nucleic acids** is performed by PCR apparatus Applied Biosystems 2720 Thermal Cycler, Q-PCR Roche 480 Light Cycler. **Equipment for hybridization and analysis of high density micorarrays and sequencing** includes the Affymetrix platform (Gene Chip Fluidic station 450 and Gene Chip Scanner 7G), and the platform to process long oligo (Agilent) and cDNA micorarrays (Tecan scanner LS 200, GenePix 4100 Personal scanner; different hybridization devices: Tecan HS 400 Pro hybridisation station, hybridization oven (Agilent) and water hybridization devices. The laboratory holds also the Roche GS Junior next generation DNA sequencer.

Laboratories are equipped by personal computers and appropriate hardware and software for data capture and analysis. CFGBC owns as well a computational and **storage server HP DL150**, where data can be stored, further analyzed and backuped. More IT equipment is provided by the Institute of informatics and Medical Statistics at faculty of Medicine that closely collaborates with CFGBC.

In addition, CFGBC includes a standard cold room, darkroom, the laboratory for the radioactive isotope work, cell culture laboratory, the sterilization unit and dish washing area. The laboratory is equipped with computers and software that support capturing the data and its interpretation. The animal facility is at the Medical Experimental Centre in the same building as CFGBC.

ACADEMIC AND NON-ACADEMIC COLLABORATION

(Describe briefly your involvement in important international networks and projects, highlighting the interdisciplinary collaborations and transfer of knowledge. Describe significant collaborations with other stakeholders highlighting the secondment opportunities for MSC fellows to industry/SMEs/NGOs/institutes if relevant.)

PROJECTS

RUNNING- Slovenia

P1- 0390 – **Functional genomics and biotechnology for health** (1. 1. 2015 – 31. 12. 2020). P.I. R. Komel; D. Rozman coordinates the metabolic part of the research within the programme group.

Network of infrastructure Centres of University of Ljubljana (MRIC-UL; (1. 1. 2009 – 31. 12. 2014). **–** D. Rozman leads CFGBC as the functional genomics center within the nework.

J3-5504 – **The role of polymorphisms in segregation genes of cancer**. (1. 8. 2013 – 31. 7. 2016); P.I.: R. Komel, D. Rozman responsible for expression analyses. P. Juvan responsible for bioinformatics analyses.

J3-6799 - **Biomarkers of endometriosis: proteomics and metabolomics approach** (1. 7. 2014 – 30. 6. 2017). P.I. Tea Lanisnik-Rizner, D. Rozman responsible for proteomics and P. Juvan for bioinformatics analyses.

J1-6736 – **Chemical carcinogenesis – computational approaches** (1. 7. 2014 – 30. 6. 2017). P.I. Urban Bren, Chemical Institute, D. Rozman leads the experimental part of protein production.

RUNNING - International

FP7-HEALTH-2012-INNOVATION-1: CASyM - Coordinating Action Systems Medicine #305033, 2012 - 2016 – https://www.casym.eu/. Implementation of Systems Medicine across Europe. D. Rozman is the deputy speaker of the CASyM consortium and the leader of WP2 – Education and training of systems medicine. CASyM is a multidisciplinary European consortium that joined forces to develop a road map (implementation strategy) for Systems medicine in Europe. It is driven by clinical needs and aims to identify areas where systems approaches will aid importantly in solving the clinical problems. In addition to promoting interdisciplinary systems research in biomedical sciences, interdisciplinary training of medical and other students, and continuous professional education, represent other key parts of the roadmap.

ELIXIR (sustainable funding) - D. Rozman is the coordinator of the Slovenian node of ESFRI infrastructure ELIXIR headed by EBI in Hinxton. Brane Leskošek is the Head of the node, Peter Juvan Technical coordinator of the node. The Slovenian node is a network of 11 onstitutions from research, academia and clinics. http://www.elixir-europe.org/

Bilateral collaboration with USA (K. Ryckman, University of Iowa), longterm collaboration with Vanderbilt Unviersity, School of Medicine.

In review:

Marie Curie ETN (D. Rozman coordinator). Acronym: LiverSex. Collaboration with University of Leipzig, Inst. National de Recher-che en Informati-que et en Automatique INRIA, Rocquencourt Paris, KTH Royal Institute of Technology, Research Centre for Na-tural Sciences, Hungari-an Academy of Sciences SMEs; Acies Bio, Microdiscovery. Partners: Georgetown University, Semmelweis University, University of Iowa, Saarland University , Clinical Centre.

SPECIFIC REQUIREMENTS/PREFERENCES

(Describe the specific requirements/preferences for the MSC fellow if necessary for the development/implementation of the project eg. required language, degree field, research experience, etc.)

Prof. dr. D. Rozman seeks for a candidate for the European Marie Curie Fellowship (24 months) who wants to complement her/his existing skills. The established researcher (ER) should be fluent in English and is expected to actively participate in grant writing. The project deals with an interdisciplinary area of systems medicine of multifactorial liver disorders. Eligible candidates:

a) Ph.Ds in biomedical sciences or MDs with 4 years of documented research track, with basic level of mathematical understanding. The candidate will be trained in applications of modeling to aid understanding and predicting the progression of non-alcoholic liver pathologies, from mouse models and in humans.

b) Ph.Ds in mathematical or technical (engineering) sciences. The candidate will be trained in basics of the liver-related biochemistry and biomedicine and will apply modeling to aid understanding and predicting the progression of non-alcoholic liver pathologies.

Interested candidates should send an email with CV and motivation letter to: damjana.rozman@mf.uni-lj.si

OTHER

(Describe any other relevant information)