



Job Vacancy

H2020-MSCA-ITN-2016

Early Stage Researcher (ESR/PhD)

TRANSMIT - TRANSlating the role of Mitochondria in Tumorigenesis

The consolidation of the knowledge that cancer is not only a genetic, but also a metabolic disease, has led scientists to investigate the intricate metabolic plasticity that transformed cells must undergo to survive the adverse tumor microenvironment conditions, and the contribution of oncogenes and tumor suppressors in shaping metabolism. In this scenario, genetic, biochemical and clinical evidences place mitochondria as key actors in cancer metabolic restructuring, not only because these organelles have a crucial role in the energy and biosynthetic intermediates production but also because occurrence of mutations in metabolic enzymes encoded by both nuclear and mitochondrial DNA has been associated to different types of cancer. TRANSMIT aims to dissect the metabolic remodeling in human cancers, placing the focus on the role of mitochondria and bridging basic research to the improvement/development of therapeutic strategies. Further, TRANSMIT fosters the communication of this emerging field to the patients and their families. To these aims, TRANSMIT will create a network of seven different countries, among which world-leading basic science and clinical centers of excellence, several industrial partners with up-to date omics technologies, as well as non-profit foundations and associations who care for cancer patients. By creating the critical mass of scientific excellence, TRANSMIT will allow to transfer the current knowledge into the wide field of cancer research, translating scientific and technical advances into the education and training of eleven Early Stage Researchers. TRANSMIT will implement training-through-research dedicated to unravel the metabolic features of cancer, as well as to provide a full portfolio of complementary skills through the creation of a network of basic, translational and industrial laboratories, devoted to a multidisciplinary/multisectorial education of young scientists.

Project Description

1) Job Summary

BIOCRATES Life Sciences AG – The “Deep Phenotyping” Company, Headquartered in Innsbruck/Austria, is a global leader in the dynamically-growing field of Targeted Metabolomics. Biocrates offers the possibility to identify potential biomarkers for diagnostic investigation as well as drug therapy monitoring. With its mass spectrometry based products the company is providing tools for a comprehensive insight into pathways and metabolic signatures of diseases (such as cancer or neurodegenerative diseases). In our Research & Development department in Innsbruck an early stage researcher (ESR) position is available.

2) Job description

Quantitative analysis of coenzymes in cancer cells

As central metabolic organelles, mitochondria execute critical biochemical functions for the synthesis of the fundamental cellular components. Coenzymes have a major role in mitochondrial functions including the respiratory chain and biosynthesis of structural components. Analysis of cofactors will improve the understanding of mitochondrial dysfunction and facilitate identification of new therapeutic targets. However, a precise and accurate quantitative analysis of these metabolites is a highly challenging bioanalytical task due to the low intracellular concentrations and instability. Aims of the study are the development of a novel LC-MS/MS based metabolomics method for the quantitative analysis of coenzymes in cancer cell samples and the application of the method to identify the role of coenzymes in different cancer cell types.

3) Subject area of PhD program in which the ESR will be enrolled and PhD program duration

The medical science doctorate study program "Ph.D. Scient. Med." is a post-graduate study program and, based on its form, an attendance study with mandatory attendance in accordance with the teaching events specified in the curriculum. The doctorate study "Ph.D. Scient. Med." comprises at least three years and a total workload of 180 ECTS points.

4) Host University that will provide the PhD degree

The PhD program is hosted by the Paracelsus Medical University Salzburg. As a private university, the Paracelsus Medical University Salzburg does not receive any support from the Ministry of Science and thus charges a study fee.

5) PhD program starting date

The PhD program is starting in October 2017.

Required Educational Level

Degree: Master, MSc

Degree Field: The successful candidates must hold a university degree in analytical chemistry, biochemistry, metabolomics or related fields.

Skills:

- We are looking for a highly motivated graduate student with proven skills in team working and communication
- The successful candidates must have first research experiences in one of the above mentioned fields.
- First experience with LC-MS/MS based analytical techniques is of advantage
- Mobility to undergo training within the network is mandatory

Languages: As the ESR will be working in an international and interdisciplinary environment, an excellent command of English (written and oral) is mandatory. Basic knowledge in German is an advantage.

Applications, in English, should include CV, detailed academic transcripts, a copy of the thesis, a motivation letter and a reference letter, which are all to be submitted by email to Dr. Guido Dallmann (guido.dallmann@biocrates.com)

Application deadline: 2017-06-16

Specific Requirements

At the date of recruitment – the ‘early stage researcher’ has to be in the first four years (full time equivalent research experience) of his/her research career and not have been awarded a doctoral degree. Trans-national mobility (i.e. move from one country to another) is an essential requirement of MSCA-ITN. The ESR can be of any nationality. At the time of recruitment by the host organisation, he/she must not have resided or carried out his/her main activity (work, studies, etc) in the country of the host organisation for more than 12 months in the three years immediately before the reference date. Compulsory national service and/or short stays such as holidays are not taken into account.

Benefits

- Enrollment in a PhD school in a specific area;
- 3-year employment contract (39111 EUR/year including social security and taxes; additionally mobility allowance 7200 EUR/year)
- A highly multidisciplinary, cross-cultural and competitive training program in the field of metabolism in cancer
- Secondments and a specific training program
- Vacation: 25 days/year

Selection criteria

First selection step: Curriculum evaluation. Numerical scores will be awarded for grading criteria such as study marks, duration of study, scientific publications in peer reviewed journals, reference letters. Only the admitted candidates will be contacted by e-mail for the second selection step.

Second selection step: Skype or face-to-face interview in which candidates will give a short presentation of their master thesis and of a scientific paper that they will receive three weeks before the interview.

Applications to

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