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COST MC Chair: Prof Erich Gnaiger, erich.gnaiger@i-med.ac.at

COST STSM Reference Number: COST-STSM-CA15203-35666

Period: 2016-12-12 to 2016-12-16

COST Action: CA15203

STSM type: Regular (from Poland to Austria)

STSM Applicant: Dr Dorota Dymkowska, Nencki Institute of Experimental Biology of Polish Academy of Sciences, Warsaw (PL), d.dymkowska@nencki.gov.pl

STSM Topic: 5-days training in the MitoFit laboratory

Host: Erich Gnaiger, OROBOROS INSTRUMENTS high-resolution respirometry, Innsbruck (AT), erich.gnaiger@i-med.ac.at

Budget Request: Year-2016

Travel	370 Euro
Subsistence (hotel/meals)	380 Euro
Total	750 Euro

Short CV:

I am working at the Laboratory of Cellular Metabolism of the Nencki Institute of Experimental Biology as an assistant professor. My scientific interests are linked with the role of mitochondrial respiratory chain in the response of human endothelial cells to different stimuli, especially related to type 2 diabetes. So, I investigate respiration rate and respiratory capacity in cells exposed to glucose or palmitate at elevated concentrations as well as after treatment with compounds activating mitochondrial biogenesis. Moreover I am interested in elucidating the mechanism of reactive oxygen species generation under diabetic conditions and the participation of mitochondria and/or NADPH oxidases (especially NOX4, which could be located to mitochondria) in this process. I hope that participation in the 5-days training in MitoFit Laboratory in Innsbruck will allow expanding my knowledge of various theoretical and practical aspects concerning an investigation of the mitochondrial energy metabolism.

Work Plan Summary:

The OROBOROS MitoFit laboratory is probably the world-wide best equipped lab for high-resolution respirometry. During the 5-day training in a very small group (4-6 participants) real experts provide training for quality control in high-resolution respirometry, aimed at standardization of SUIT protocols and fostering proficiency to generate experimental data of assured high quality as required for a data base on mitochondrial physiology. Specific coaching blocks particularly on instrumental setup and maintenance, instrumental quality control, DatLab analysis, protocols and experiments design, normalization of flux and data reporting are included.

I request the approval of a COST Short Term Scientific Mission as described above

Applicant:

Dr Dorota Dymkowska 28 Oct 2016