



COST Office Science Officer: Dr Federica Ortelli, federica.ortelli@cost.eu
COST MC Chair: Prof Erich Gnaiger, erich.gnaiger@i-med.ac.at

COST STSM Reference Number: COST-STSM-CA15203-35760

Period: 2016-11-21 to 2016-11-28

COST Action: CA15203

STSM type: Regular (from Hungary to Austria)

STSM Applicant: Dr Andras Meszaros, University of Szeged, Szeged (HU), meszaros.andras@med.u-szeged.hu

STSM Topic: Harmonizing protocols of high resolution respirometry with fluorometry

Host: Erich Gnaiger, Oroboros Instruments, Innsbruck (AT), erich.gnaiger@i-med.ac.at

Budget Request: Year-2016

Travel	160 Euro
Subsistence (hotel/meals)	590 Euro
Total	750 Euro

Short CV:

22.11.1987
Medical doctor (MD)
Assistant professor,
University of Szeged, Institute of Surgical Research
Hungary

Work Plan Summary:

The main objective of the planned STSM training is to get acquainted with and to standardize fluorometric measurements of isolated mitochondria and cultured cells. During the 8 days of short-term visit at the MitoFit Laboratory three new techniques could be learned: (1) measurement of reactive oxygen species production of permeabilized cells using H₂O₂-sensitive fluorescent probes; (2) determination of mitochondrial membrane potential and (3) assessment of mitochondrial phosphate/oxygen ratio by measuring ATP levels fluorometrically. Preparation and execution of each method will be learned with emphasis on internal quality control and possible adaptation of measurement protocols to samples from various tissues. Furthermore, we are going to use tools of complex data analysis and calibration. Fulfillment of the proposed research plan during the STSM training would contribute significantly to the objectives of the MITOEAGLE Working Group 1 (standardization of protocols in respirometry). I wish to actively participate in the MITOEAGLE project, in, among others, establishing and testing reference protocols to provide basis for comparison of results obtained in various laboratories.

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

Applicant:

Dr Andras Meszaros 31 Oct 2016