

ITC CONFERENCE GRANT SCIENTIFIC REPORT

This report is submitted for approval by the grantee to the MC Chair.

Action number: CA15203

Conference title: Joint meeting WISe³

Conference start and end date: 26/03/2018 to 27/03/2018

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Grantee name: Vladimir Zivkovic

ACTIVITIES DURING YOUR ATTENDANCE AT THIS CONFERENCE:

(max.500 words)

Conference started at 09:00 on 26. of March with very warm welcome from Prof. Ferenc Bari, prof. Mihaly Boros and assist. prof Andras Meszaros. After that started the first session entitled "Sepsis and systemic inflammation". At begging we have heard report from Wiggers-Bernard Conference regarding identification of limitations of pre-clinical investigations and quidlines for improving translation of the sepsis models. Furthermore, we have chance to learn novel findings from animal researches reffering to the role of mitochondria, endothelin receptors or immunology responses in sepsis. Second session entitled "Circulatory shock and ischemia-reperfusion" in general brought recent results from basic research dealing with different preconditioning maneuvers (ion channel, pharmacological and remote ischemic preconditioning). During this session I have lecture where I exposed the effects of ischemic and preconditioning with proton pump inhibitors on functional recovery in isolated rat heart. At lunch break participants have been enrolled in many unofficial conversations and changing of experiences. Afternoon sessions provided excellent and quite interesting facts about the impact of gaseous signal moleculs in different pathological conditions in animal models. During durations of all sessions there were a very live and constructive discussion in a friendly atmosphere.

After the dinner project workgroups were organized where participants summarized all session and draw conclusions. Second day of conference were dedicated to mitochondria. First session dealed with role of mitochondria in neurodegenerative and cardiovascular diseases, while after that demo esperiment regarding mitochondrial oxygen kinetics have been showed. In addition, there were another two Oroboros O2k workshops on hypoxia. At the end of conference COST ACTION MitoEAGLE were organized. At this place several significant investigations were shown regarding the role of glutamate-nitric oxide pathway in animal model of Alzheimer's disease or role of mitochondria in insulin resistance models.

IMPACT ON YOUR RESEARCH AND FUTURE COLLABORATIONS (if applicable)

(max.500 words)

Present conference enabled me excellent experience in many aspects. First of all I had opportunity to hear novel findings from many investigations which have different mutual points with my main field of research (cardiovascular pathophysiology). It meant me a lot for setting of design of my future experiments referring to usage of remote preconditioning in ischemic/reperfusion injury in rats. Moreover, based on studies performed by group of prof. dr Mihaly Boros, I realized that methane could be another important biological gaseous molecule in maintaining of heart function and perfusion. Therefore, I developed a new idea regarding estimation of the role of methane on isolated heart of normotensic and hypertensic rats.

In addition, discussion after my lecture helped me to answer on the question concerning my results and time of perfusion with proton pump inhibitors. This will be very useful for interpretation of results and next experiments.

Unofficial communications with other people were equally important to me. I have chance to met with brilliant scientists and at the same time kind persons who did not hesitate to share with me both problems and solutions concerning animal experiments and studies. The crown of all conversations was offer of prof. Andrey Kozlov from Vienna for cooperation. I was very happy because all of this and really looking forward for future collaboration.