Report on the Van Leeuwenhoek Distinctive Travel Award

After receiving the award I considered highly important to visit European Microcirculatory laboratories in order to learn new methodologies and widened my knowledge in the field of microcirculation. In order to achieve these goals I visited three different laboratories in Europe between 2004 and 2006.

- **Visiting Prof. Axel Pries** at the Department of Physiology, Free University of Berlin, Germany

In 2005, I have spent a week in Berlin, visiting the microcirculatory laboratory led by Prof Axel Pries. During my staying I was introduced to the technique of intravital microscopy to study in vivo microcirculation. I became familiar with the visualization of the microcirculation of the mesentery as well as the skeletal muscle. During this course I was introduced to the automated measurement of the diameter and red blood velocity in the mesentery capillary system. In the laboratory led by Prof. Wolfgang Kuebler I became familiar with the isolated perfused lung preparation and visualization its microcirculation using fluorescence imaging technique. In addition, during my staying I had scientific discussions with Axel Pries and Wolfgang Kuebler.

- **Visiting Dr. Cor de Wit** at the Institute of Physiology, University of Luebeck, Germany

After visiting Prof. Axel Pries I went to Luebeck to visit the laboratory led by Dr. Cor de Wit for another week. In this laboratory I was introduced to the technique of intravital microscopy of the cremaster muscle microcirculation. Specifically, I became familiar detecting the so called conducted vasodilation in this preparation. We had a discussion about the key roles of connexins in the conductive vasodilation. Upon this conversation we have initiated a common project in order to reveal the roles of different connexins in the human coronary microvessels. For this collaboration a grant application is already proposed in Hungary.

- **Visiting Prof. Daniel Henrion** at the Department of Physiology, University of Angers, France

In 2006, I have spent a month in Angers visiting the laboratory led by Prof. Daniel Henrion. Here I became familiar with the field of microvascular remodeling and its physiological role under high- or low-flow vascular adaptation. Also, extending my previous experience, we have performed experiments using confocal microsopy in order to detect reactive oxygen species formation in the living vessels. As a result of these works we have initiated common projects and future collaboration. To this end, we agreed to visit each others and we have initiated an exchange program between the French and my Hungarian laboratories.

Taken together, the Van Leeuwenhoek Distinctive Travel Award of the European Microcirculatory Society was an excellent opportunity for learning new methodologies and building collaborations in the field of microcirculation and I believe that the award contributed significantly to my future research career, as well.

I would like to thank again for the European Microcirculatory Society for this valuable opportunity.

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