

Projektszám: 98öu15		HUF 961400 EUR 1350
Pályázó neve: Dr Oufa Hamza		Intézménye: Bécsi Orvostudományi Egyetem, Orvosbiológia Centrum
Projektpartner neve: Prof Dr Papp Zoltán		Intézménye: DEBRECENI EGYETEM Általános Orvostudományi Kar, Klinikai Fiziologia Tanszék
Pályázat címe: Closed large animal model of heart failure by volume overload secondary to ischemic mitral regurgitation		

A projekt jellege: (kérjük bejelölni)

- Workshop, konferencia
- Publikáció, tananyag
- **Kutatási együttműködés**
- Oktatási program

Beszámoló/Eredmények

Tudományos tevékenység: The following iv vivo and in vitro measurement were done at the Dept. of Biomedical Research, Medical University of Vienna, Austria (supervised by Prof Dr Bruno K Podesser and Dr Ouafa Hamza): To achieve a localized posteromedial papillary muscle (PMPM) myocardial infarction (MI), its irrigating branches were occluded. Left ventricle function and dimensions, left atrium volume and systolic pulmonary artery pressure were measured during the follow up. Blood samples were withdrawn at baseline, immediately and 1 day after the MR induction procedure and then once a week. The models was characterized by measuring plasma levels of Tenascin C and MMPs. The following in vitro measurement were done at the Division of Clinical Physiology, Department of Cardiology, Medical University of Debrecen, Hungary: After the in vivo measurement the hearts were harvested and left ventricle tissue samples were taken and transported for force measurement and calcium sensitivity in permeabilized cardiomyocyte preparations.

Time schedule: The project was planned for a duration of 14 months with the following schedule: 1) month 1-8: induction of infarction; in vivo and in vitro analysis at the Dept. of Biomedical Research, Vienna; 2) month 9-12 in vitro force measurement calcium sensitivity analysis at the Division of Clinical Physiology, Department of Cardiology, Debrecen; 3) month 13-14: finalize the results, further studies to be planned and writing report to AÖU.

Significance: the proposed project includes an intense program of experimental work involving various laboratory techniques, experimental models in collaboration between Medical University of Vienna from Austria and the Medical University of Debrecen from Hungary. This study contributed to the mechanistic understanding of heart failure and allows to make available a new reliable and robust model of heart failure by volume overload to better understand the pathways involved in the development of heart failure in the setting of volume overload. Importantly, the project gives unique opportunity for senior and young scientists to exchange and gain new knowledge while establishing a strong scientific collaboration between Austria and Hungary.

Üdvözlettel és tisztelettel,



Papp Zoltán, a 98öu15 jelű pályázat magyarországi szakmai vezetője
Debrecen, 2019. december 6.