

Pharmahungary Group – Remembrane Srl Press Release

Budapest, Hungary and Imola, Italy; February 24, 2020.

Title: Pharmahungary Group and Remembrane developed and validated a medium throughput in vitro screening platform for testing potential cardiocytoprotective drug candidates against ischemia/reperfusion injury in the presence of hypercholesterolemia/metabolic disease comorbidities.

The use of comorbidity models is crucial in cardioprotective drug development and/or to reveal the ‘hidden cardiotoxic’ effect of drug candidates. Hypercholesterolemia causes myocardial dysfunction and aggravates ischemia/reperfusion (I/R)-induced myocardial injury. Endogenous cardioprotective mechanisms against I/R are impaired in hyperlipidemic and hyperglycemic in vivo animal models. ‘Therefore, our aim was to develop a cell-based medium throughput comorbidity test system of myocardial I/R injury combined with hypercholesterolemia and hyperglycemia that mimics relevant clinical comorbidity conditions.’ – explained Péter Ferdinandy, MD, PhD, MBA, Founder & CEO of Pharmahungary Group. ‘Moreover, such comorbidity models are essential to reveal the unwanted, ‘hidden cardiotoxic’ effects of drug candidates during early drug development’ he added.

‘Pharmaceutical and cosmetic research strives for revolutionary in-vitro models able to mimic in-vivo physiology and to decrease experimental biases of scientific data. Refeed® lipid supplements advance the quality of in-vitro models by focusing on their lipid composition and related properties, thus originating new and more reliable physiological and pathological in-vitro models. A clear example is represented by this innovative pathological in-vitro model developed through our collaboration with Pharmahungary Group.’ - said Alexandros Chatgililoglu, PhD, MBA, Founder and CEO of Remembrane Srl.

‘This is the first comorbidity cell-based in vitro test system of ischemia/reperfusion injury and hypercholesterolemia/metabolic disease that mimics the comorbidity condition of myocardial ischemia/reperfusion injury in patients. The present test system should be considered as part of the screening platform for testing potential cardiocytoprotective drug candidates, and/or to reveal the unwanted cardiotoxic effect of drug candidates in the early stage of drug development.’ – said Péter Ferdinandy.

The screening platform has been recently described in *Frontiers in Physiology* (Makkos et al., *Front. Physiol.* 2020; 10:1564).

Pharmahungary Group: Pharmahungary Group is a group of innovative R&D companies developing novel in-house R&D projects for valorization as well as providing innovative preclinical and clinical R&D services from cells to large animals focusing on but not limited to cardiovascular, metabolic, renal, and inflammation diseases. Visit www.pharmahungary.com for more information. The current project has been partially funded by the National Heart program (National Research, Development and Innovation Office of Hungary - NVKP-16-1-2016-0017)

Remembrane: Remembrane leads the cell culture technology a step forward, by envisaging the cell membrane network as a fundamental and indispensable actor of most cellular processes. Remembrane designs, develops and manufactures lipid supplements able to boost key performance parameters of cultured cells or to create physiological/pathological in-vitro models for drug and cosmetic testing. Visit www.remembrane.com for further information.

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