PhD equivalent scholarship financed from OTKA in the field of micro RNA involvement in the transition of acute kidney injury to renal fibrosis

Background: Post-transcriptional gene expression regulation offers new therapeutic approaches enabling fine-tuning of complex biologic processes. Renal ischemia is a common complication at the Intensive Care Units following surgery or circulatory shock, is an important pathogenic factor in renal transplantation and often involved in X-ray-contrast induced acute kidney injury. Thus, ischemia induced chronic renal damage is in the focus of interest in nephrology, presently.

The **topic** of the PhD studies is to investigate the protein-microRNA network activated during the transition of acute kidney injury into chronic renal fibrosis.

Support available: an OTKA-ARSS (2015-2018) and an OTKA-FWF (2014-2017) grants provide support for reagents and financial background to establish a Semmelweis Scholarship – equivalent to Hungarian Government supported PhD scholarships.

Prerequisites:
University degree, Msc in biology or medical degree
English (intermediate level)
Preferences:
Experience in research and/or molecular biology methods

International collaborators of the above grants are
Dontscho Kerjaschki (Pathology, AKH, Wien, Austria),
Boris Turk (Biochemistry and Molecular Biology, University of Ljubljana, Slovenia)
Further active collaborations:
Judy Lieberman (Immune Disease Institute, Boston Children's Hospital and Harvard University, USA).
Thomas Thum (IMTTS, Hannover Medical School, Germany)

Contact: Peter Hamar, MD, PhD, Dsc. Tel: 20-825-9751, e-mail: hampet@net.sote.hu. Semmelweis University, Institute of Pathophysiology, Budapest, Nagyvárad tér 4. http://semmelweis.hu/immun-patofiziologia/en/

Recent publications:

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2. **Kaucsár T**, Bodor C, Godó M, Szalay C, Révész C, Németh Z, Mózes M, Szénási G, Rosivall L, Sőti C, **Hamar P**.: LPS-induced delayed preconditioning is mediated by Hsp90 and involves the heat shock response in mouse kidney. PLoS One. 2014 Mar 19;9(3):e92004.

3. Lorenzen JM, **Kaucsar** T, Schauerte C, Schmitt R, Rong S, Hübner A, Scherf K, Fiedler J, Martino F, Kumarswamy R, Kölling M, Sörensen I, Hinz H, Heineke J, van Rooij E, Haller H, Thum T. : MicroRNA-24 antagonism prevents renal ischemia reperfusion injury. J Am Soc Nephrol. 2014 Dec;25(12):2717-29.
4. **Kaucsár T**, Révész C, Godó M, Krenács T, Albert M, Szalay CI, Rosivall L, Benyó Z, Bátkai S, Thum T, Szénási G, **Hamar P**.: Activation of the miR-17 family and miR-21 during murine kidney ischemia-reperfusion injury. Nucleic Acid Ther. 2013 Oct;23(5):344-54.
5. **Hamar P**.: Role of regulatory micro RNAs in type 2 diabetes mellitus-related inflammation. Nucleic Acid Ther. 2012 Oct;22(5):289-94.
6. Rácz Z, **Kaucsár T**, **Hamar P**.: The huge world of small RNAs: regulating networks of microRNAs (review). Acta Physiol Hung. 2011 Sep;98(3):243-51.
7. Rácz Z, Godó M, Révész C, **Hamar P**.: Immune activation and target organ damage are consequences of hydrodynamic treatment but not delivery of naked siRNAs in mice. Nucleic Acid Ther. 2011 Jun;21(3):215-24.
8. **Kaucsár T**, Rácz Z, **Hamar P**.: Post-transcriptional gene-expression regulation by micro RNA (miRNA) network in renal disease. Adv Drug Deliv Rev. 2010 Nov 30;62(14):1390-401.