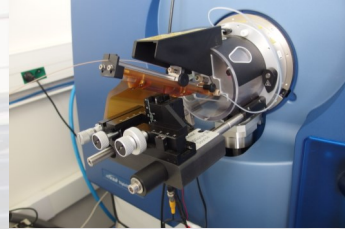


LABORATORY OF PROTEOMICS



ABOUT US

The research team focuses on analysis of complex protein mixtures, including human and animal tissues and body fluids, as well as their derivatives, using a proteomic technology. This center major advantage lies in its experience with processing and identification of real clinical samples, particularly uremic blood plasma, dialysate/ultrafiltrate of uremic blood plasma and dialysis membrane biofilm.

MEMBERS

- Jan Mareš, M.D., Ph.D. – Research Group Leader
- Jiří Moravec, Ph.D., M.Sc.
- Zdeněk Tůma, M.Sc.

WE OFFER

- Preparation of biological samples prior to proteomic analysis, i.e. homogenisation, isolation, purification and fractionation.
- One-dimensional polyacrylamide gel electrophoresis.
- Two-dimensional polyacrylamide gel electrophoresis.
- Differential polyacrylamide gel electrophoresis (DIGE).
- Gel imaging in visible and UV spectrum.
- Gel image analysis including statistical evaluation.
- Protein identification by tandem mass spektrometry.
- Biofilm analysis of implantable devices and extracorporeal circuits.

SELECTED PUBLICATIONS

- Mares J, Thongboonkerd V, Tuma Z, Moravec J, Matejovic M: Specific adsorption of some complement activation proteins to polysulfone dialysis membranes during hemodialysis. *Kidney Int* 2009.
- Mares J, Richtrova P, Hricinova A, Tuma Z, Moravec J, Lysak D, Matejovic M: Proteomic profiling of blood-dialyzer interactome reveals involvement of lectin complement pathway in hemodialysis-induced inflammatory response. *Proteomics - Clinical Applications* 2010, 4:829-838.
- Mares J, Thongboonkerd V, Tuma Z, Moravec J, Karvunidis T, Matejovic M: Proteomic Analysis of Proteins Bound to Adsorption Units of Extracorporeal Liver Support System under Clinical Conditions. *J Proteome Res* 2009, 8:1756-1764.
- Thongboonkerd V, Chiangjong W, Mares J, Moravec J, Tuma Z, Karvunidis T, Sinchaikul S, Chen ST, Opatry K, Matejovic M: Altered plasma proteome during an early phase of peritonitis-induced sepsis. *Clin Sci (Lond)* 2009, 116:721-730.
- Molacek J, Mares J, Treska V, Houdek K, Baxa J: Proteomic analysis of the abdominal aortic aneurysm wall. *Surg Today* 2014, 44:142-151.

