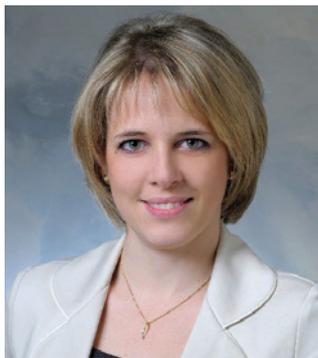


KRISZTINA NÉMETHNÉ FUTOSI



Semmelweis University
Faculty of Medicine
Department of Physiology

Address: Tűzoltó u. 37-47., H-1094 Budapest, Hungary

RESEARCH AREA

Autoimmune and autoinflammatory diseases are characterized by the pathological overactivation of the immune system. In addition to acute flares, these inflammations in most cases show a chronic, progressive course and are associated with significant tissue damage, resulting in a significant deterioration in the quality of life of the affected patients. Our research group investigates the cellular and molecular mechanisms underlying the above inflammatory processes, which may contribute to a better understanding of the pathomechanism of these diseases and to identify new therapeutic targets. In our recent studies, we investigate the role of tyrosine kinase signaling pathways in the development of autoimmune arthritis, and in the urate crystal-mediated non-autoimmune gout by using genetic and pharmacological approaches. In recent years, we have identified a number of signaling molecules involved in the development of these inflammatory processes.

TECHNIQUES AVAILABLE IN THE LAB

Isolation of hematopoietic cells of human and mouse origin (mainly neutrophils and monocytes), maintenance of macrophage cell cultures, measurement of in vitro neutrophil and macrophage cell responses (reactive oxygen intermediates production, cytokine and chemokine release, migration, phagocytosis, degranulation). In vivo animal models, processing of samples obtained from joint lavage. General laboratory techniques, Western blot, immunoprecipitation, flow cytometry, spectrophotometry, ELISA method, fluorescence video microscopy, cell migration and adhesion studies.

SELECTED PUBLICATIONS

Futosi, K., Kása, O., Szilveszter, K., Mócsai, A. (2021) Neutrophil phospholipase C γ 2 drives autoantibody-induced arthritis through the generation of the inflammatory microenvironment. **Arthritis & Rheumatology** **73**: 1614-1625.

Németh, T., **Futosi, K.**, Szilveszter, K., Viliinovszki, O., Kiss-Pápai, L., Mócsai, A. (2018) Lineage-specific analysis of Syk function in autoantibody-induced arthritis. **Frontiers in Immunology** **9**: 555.

Németh T., **Futosi, K.**, Sitaru, C., Ruland, J., Mócsai, A. (2016) Neutrophil-specific deletion of the CARD9 gene expression regulator suppresses autoantibody-induced inflammation in vivo. **Nature Communications** **7**: 11004.

Futosi, K., Németh, T., Pick, R., Vántus, T., Walzog, B., Mócsai, A. (2012) Dasatinib inhibits pro-inflammatory functions of mature human neutrophils. **Blood** **119**: 4981-4991.