

ZSÓFIA BÚR



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RESEARCH AREA

In modern society, the unlimited food availability can extend the daily feeding period, which is a risk factor for numerous diseases, including metabolic disorders, cardiovascular, mental, and cancer-related conditions. By contrast, well-timed food intake has been shown to effectively improve metabolic health. Time-restricted eating (TRE) strengthens circadian rhythms in peripheral tissues and protects against metabolic dysfunction. Given the tight circadian regulation of metabolic processes and immune responses, and the association between metabolic disturbances and disrupted immune responses, we aim to address how the timing (time-restricted feeding, TRF) and composition of diet (standard or high-fat chow) influence the onset, severity, and progression of various types of dermatitis in mouse models.

TECHNIQUES AVAILABLE IN THE LAB

Flow cytometry and cell sorting (cytoflex, Kaluza Analysis Software 2.1), gene expression analysis RT-PCR (LC480) Enzyme-Linked Immunosorbent Assays (ELISAs), bone marrow transplantation, histology, immunostaining, Contact hypersensitivity mouse model, K/BxN serum transfer arthritis murine model, work with cell cultures, agarose gel electrophoresis.

SELECTED PUBLICATIONS

Búr, Z., Vendl, B., Sűdy, Á. R., Lumniczky, Z., Szántó, C. G., Mócsai, A., Káldi, K., & Ella, K. (2025). Time-restricted feeding alleviates arthritis symptoms augmented by high-fat diet. **Front Immunol 16**: 1512328.

Ella, K., Sűdy, Á. R., **Búr, Z.**, Koós, B., Kisiczki, Á. S., Mócsai, A., & Káldi, K. (2022). Time restricted feeding modifies leukocyte responsiveness and improves inflammation outcome. **Front Immunol 13**: 924541.