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RESEARCH AREA

Neurobiology of stress. Regulation of the hypothalamo-pituitary-adrenocortical axis. The role of gut microbiome in the neuroendocrine regulation.

TECHNIQUES AVAILABLE IN THE LAB

Surgical techniques on laboratory rodents (mice, rats). Hormone measurements (RIA, ELISA); Histological techniques, immunocytochemistry, *in situ* hybridization, RNAscope; Molecular biology: RNA and protein isolation, real time PCR and Western blot.

SELECTED PUBLICATIONS

Xu, L., Füredi, N., Lutter, C., Geenen, B., Pétervári, E., Balaskó, M., Dénes, Á., **Kovács, K.J.**, Gaszner, B., Kozicz, T. (2022) Leptin coordinates efferent sympathetic outflow to the white adipose tissue through the midbrain centrally-projecting Edinger-Westphal nucleus in male rats. *Neuropharmacology* **205**: 108898.

Kuti, D., Winkler, Zs., Horváth, K., Juhász, B., Paholcsek, M., Stágel, A., Gulyás, G., Czeglédi, L., Ferenczi, Sz., **Kovács, K.J.** (2020) Gastrointestinal (Non-systemic) Antibiotic Rifaximin Differentially Affects Chronic Stress-induced Changes in Colon Microbiome and Gut Permeability without Effect on Behavior. *Brain Behav Immun* **804**: 218.228.

Winkler, Zs., Kuti, D., Polyák, Á., Juhász, B., Gulyás, K., Lénárt, N., Dénes, Á., Ferenczi, Sz., Kovács, K.J. (2019) Hypoglycemia-activated Hypothalamic Microglia Impairs Glucose Counterregulatory Responses. *Sci Rep* **9**: 6224.

Winkler, Z., Kuti, D., Ferenczi, S., Gulyas, K., Polyak, A., **Kovacs, K.J.** (2017) Impaired microglia fractalkine signaling affects stress reaction and coping style in mice. *Behav Brain Res* **334**: 119-128.

Ferenczi, S., Szegi, K., Winkler, Z., Barna, T., **Kovacs, K.J.** (2016) Oligomannan Prebiotic Attenuates Immunological, Clinical and Behavioral Symptoms in Mouse Model of Inflammatory Bowel Disease. *Sci Rep* **6**: 34132.