

ÉVA MIKICS



Institute of Experimental Medicine
Laboratory of Translational Behavioural Neuroscience

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RESEARCH AREA

Our lab conducts behavioral neuroscience research with a translational approach. We aim to better understand the neurobiological background of mental disorders using animal models in order to identify potential targets for novel treatment strategies. Our work is mainly focused on the long-term effects of early-life stress, i.e. how early adverse factors contribute to vulnerability for the development of specific mental disorders.

TECHNIQUES AVAILABLE IN THE LAB

Detailed behavioral studies in rodents: design, implementation and analysis of behavioral tests (analysis of emotional, cognitive, social and motor functions)

Optogenetic, chemogenetic and pharmacological manipulations

Fiber photometry

Immunohistochemistry

Confocal and super resolution microscopy

qPCR

SELECTED PUBLICATIONS

Bruzsik, B., Biro, L., Zelena, D., Sipos, E., Török, B., Sarosdi, K.R., Szebik, H., **Mikics**[#], E., Toth[#]. M. [#]equal contribution (2022) Neurochemically distinct populations of the bed nucleus of stria terminalis modulate innate fear response to weak threat evoked by predator odor stimuli. **Neurobiol Stress** **15**: 100415.

Bruzsik, B., Biro, L., Zelena, D., Sipos, E., Szebik, H., Sarosdi, K.R., Horvath, O., Farkas, I., Csillag, V., Finszter, C.K., **Mikics**[#], E., and Toth[#], M. [#]equal contribution, (2021) Somatostatin neurons of the bed nucleus of stria terminalis enhance associative fear memory consolidation in mice. **J Neurosci** **41**: 1982–1995.

Miskolczi, C., Halász, J., and **Mikics**, É. (2019) Changes in neuroplasticity following early-life social adversities. **Pediatr Res** **85**: 225–233.

Mikics^{*-†}, E., Guirado^{*}, R., Umemori, J., Toth, M., Biro, L., Miskolczi, C., Balazsfi, D., Zelena, D., Castren, E., Haller, J., and Karpova, N. ^{*}equal contribution (2018) Social Learning Requires Plasticity Enhanced by Fluoxetine Through Prefrontal Bdnf-TrkB Signaling to Limit Aggression Induced by Post-Weaning Social Isolation. **Neuropsychopharmacology** **43**: 235–245.

Mikics, É., Kruk, M., and Haller, J. (2004) Genomic and non-genomic effects of glucocorticoids on aggressive behavior in male rats. **Psychoneuroendocrinology** **29**: 618–635.