

Comparison of molecular and behavioral consequences of altered brain development in two models of autism.

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Abstract: In this project, we will compare molecular and behavioral consequences of altered brain development in two models of autism, thanks to the cooperation between Hungarian and Slovak research partners. Valproate (VPA) induced rodent model of autism used by Hungarian research partner and transgenic autism-like mouse model available at the Slovak research partner bring unique possibility for mutual research of these models, which can bring new data and at the same time exchange experience and strengthen cooperation. We plan to specifically evaluate and immunohistochemically stain subtypes of excitatory and inhibitory neurons in several areas of the brain and at the same time compare and associate obtained results with behavioral phenotyping in both autism-like models. We will focus mainly on the areas of the brain to which oxytocin and vasopressin from the hypothalamus are distributed. Given the previous expertise of both teams in the field of neurodevelopmental disorders and the research of neuropeptide systems in the brain, we assume that this project can help to clarify some aspects of the pathogenesis of autism.