# Determination of metabolites in urine of youths with depression

**L. Ilavská[1], M. Morvová Jr.[1], J. Trebatická[3], Z. Ďuračková[2] and L. Šikurová[1]**

[1] *Department of Nuclear Physics and Biophysics, Faculty of Mathematics, Physics and Informatics of the Comenius University, Mlynská Dolina F1, 84248 Bratislava, Slovakia.*
[2] *Institute of Medical Chemistry, Biochemistry and Clinical Biochemistry, Faculty of Medicine of the Comenius University, Sasinkova 2, 81372 Bratislava, Slovakia.*
[3] *Department of Child Psychiatry, Faculty of Medicine of the Comenius University and National Institute of Child Diseases, Limbova 1, 83340 Bratislava, Slovakia..*
*e-mail: lucia.ilavska@fmph.uniba.sk*

Depression is one of the neuropsychiatric disorders that is a serious global problem and is increasingly diagnosed in children and adolescents [1]. The disease is multifactorial and is affected by genetic, environmental, psychological, biological and biochemical factors, but its molecular basis in children and adolescents is not yet known. It has been hypothesized that disturbance of neurotransmitter metabolism (mainly serotonin) is responsible for the etiopathogenesis of depression [2]. The only known serotonin precursor is tryptophan. It is thought that increased tryptophan metabolism via the kynurenine pathway may be involved in the development of depression, which leads to decrease level of tryptophan for serotonin synthesis. Activation of the immune system also plays a key role, where neopterin in body fluids serves as a marker of cellular immune system activation [3]. In the study, we analyzed selected metabolites (tryptophan, kynurenine, neopterin) in urine by high performance liquid chromatography (HPLC) with absorption and fluorescence detection.

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**References**

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