

## **Abstract**

This bachelor thesis deals with the role of gut microbiome in the etiopathogenesis of mental disorders. It describes the communication axis between the brain, intestine and its microbiome, the so-called microbiome-gut-brain axis. The thesis also mentions important signaling agents that mediate this communication, the role of the hypothalamic-pituitary-adrenal axis, its connection with the immune system and stress. The other part of the thesis describes the role of intestinal microbiome in the etiopathogenesis of selected mental disorders. The impact of dysbalanced microbiome on mental health is presented. Part of the thesis is also dedicated to new approaches to the treatment of these disorders using knowledge of intestinal microbiome, especially the potential benefit of probiotics. The proposed research would address the effectiveness of probiotics in the treatment of depression.

## **Keywords**

Gut microbiome; Microbiome-gut-brain axis; Mental Disorders; Depression; Probiotic

