Stress-induced translocation of the intestinal microbiota in the regulation of the inflammatory response - sex differences in rodents

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Abstract: Chronic stress alters communication between neuroendocrine and immune system, what significantly participates in the development of diseases related to chronic inflammation. In this respect, the intestinal microbiota, which affects both of these systems, plays an important role. Stress-related diseases show significant gender differences as a result of nerve, endocrine, immune differences, but also changes in the microbiota. Stress increases the translocation of the intestinal microbiota into the bloodstream, tissues and organs, thereby affecting the activity of immune cells and their inflammatory activity. The aim of the project is to describe the differences between male and female mice in stress-induced translocation of intestinal bacteria and its role in the communication of the neuroendocrine and immune systems, especially in the regulation of the inflammatory response.

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