

The press service of Sechenov University reported that university scientists discovered mechanisms for the effective blocking of the programmable death of the cells of the immune system-ferroptosis of macrophages. The study was conducted with the support of a grant from the Ministry of Science and Higher Education of Russia.

According to one of the authors of the work of Maria Yurkanova, the study of ferroptosis is especially relevant for immunological therapy. This phenomenon is actively studied in various fields of medicine - from Alzheimer's disease to cancer of the nasopharynx.

Scientists have found that the key role in the lock of ferroptosis plays the donors of nitrogen oxide - compounds that gradually release this biologically active molecule. The study showed that only a prolonged effect of nitrogen oxide effectively prevents the accumulation of lipid peroxide, which are the main sign of ferroptosis.

Another important discovery was the ability of autologous serum - the patient's own blood serum - completely block the death of cells. This creates conditions as close as possible to the natural environment of the body.

The results are revealed to the development of new therapeutic strategies in immunology and the treatment of inflammatory diseases.