

Currently, cancer is one of the major diseases of civilization. The disadvantage of conventional chemotherapy, which began in the 1940s, is its non-specific effect, so the cytostatics are toxic to healthy cells. However, if the cytostatic is inserted into a nanotransporter, it increases its specific efficacy and reduces the negative side effects. One of the possible nanotransporters is protein called apoferritin (a protein component of ferritin, an iron-carrying protein) that contains light and heavy subunits differing in their function in iron uptake. In this bachelor thesis, the ability of apoferritin to encapsulate two cytostatics (ellipticine and doxorubicin), depending on its origin and the proportion of light and heavy apoferritin subunits, was studied.