

ABSTRACT

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Title of diploma thesis: Usage of antibodies and immunoconjugates in the pharmacotherapy of cancer.

This diploma thesis displays possibility of tumor treatment by antibodies, their conjugates and antibody fragments. Antibody therapy uses natural antibody binding of tumor cell or other abnormal cell. Antibodies bind only cells with cellular biomarkers which are present on target cells. Binding initiates disposal process of damaged cell. Genetic engineering helps to create different antibodies and their conjugates with different qualities, especially various affinity to specific structures they recognise. Unconjugated antibodies are chimerical, humanized, pure human or pure murine. Conjugated antibodies are represented by immunoconjugates, conjugates with cytostatics, with enzymes, with phytoxic or animal toxins. Development of antibodies has totally new phenomenon – creating of antibody fragments. These elements are products of genetic engineering and their utilization has a great future. This work summarizes the latest knowledge about using monoclonal antibodies and immunoconjugates in anticancer therapy.