Abstract:
Monoclonal antibodies, modern vaccines and gene therapy have become a major field in modern biotechnology, especially in the area of human health and fascinating developments achieved in the past decades are impressive examples of an interdisciplinary interplay between medicine, biology and engineering. Among the classical products from cells one can find viral vaccines, monoclonal antibodies, and interferons, as well as recombinant therapeutic proteins. Gene therapy opens up challenging new areas. In this review, a definitions of these processes are given and fields of application and products, as well as the future prospects, are discussed.

Key words:
biotechnology, vaccines, traditional vaccines, modern vaccines, monoclonal antibodies, zidovudine, thalidomide, alemtuzumab