

The project contains a proposal of complex interdisciplinary studies aimed at the possibility of exploitation of three selected enzymes participating in biosynthesis of amino acid, L-methionine, as a target for novel antifungals. Results of studies on consequences of disruption of genes encoding these enzymes on properties of fungal cells, including growth ability and virulence, should constitute basis for target validation. The enzymes will be isolated and their biochemical and structural properties will be determined. Based on the results of structural studies of the enzymes, structures of several potential inhibitors will be designed as possible antifungal agents. Completion of all planned studies should help to answer the question, whether compounds inhibiting methionine biosynthesis, could be applied in the future for the treatment of disseminated mycoses.