

DESCRIPTION FOR THE GENERAL PUBLIC

The project contains a proposal of complex interdisciplinary studies aimed at design, synthesis and characterization of semisynthetic derivatives of three antifungal polyene macrolide antibiotics, belonging to the group of aromatic heptaenes. It is expected that the proposed structural modifications of antibiotic molecules will result in substantial reduction of mammalian toxicity of the novel derivatives, in comparison to that of the parent antibiotics. Interpretation of results of experimental studies will be supported by the effects of theoretical calculations and molecular modelling, focused toward understanding of molecular basis of the expected improvement of selective toxicity of antifungals studied. The novel antifungals resulting from the proposed study may become the lead compounds for further development of potential drugs for antifungal chemotherapy.