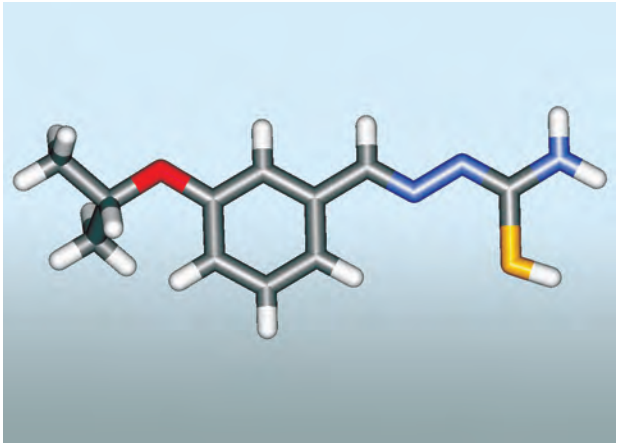
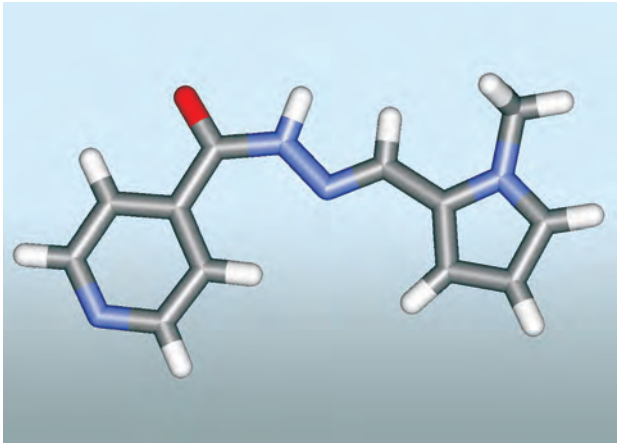
LOW-MOLECULAR COMPOUNDS WITH ANTITUBERCULOSIS ACTION



a



b

Chemical structure of 3-isopropoxy benzaldehyde thiosemicarbazone (*a*) and N′-[1E)-1-methyl-1H-pyrrol-2-yl)methylene]isonicotinic hydrazide (*b*)

Areas of Application

Low-molecular compounds with antituberculosis action

Advantages

The developed compounds act on the strains of Mycobacterium tuberculosis that are stable to known commercial antituberculosis drugs, in particular, isoniazid, rifampin, and ofloxacin

Specification

Chemical names:3-isopropoxybenzaldehyde thiosemicarbazone (1) and N′-[1E)-1-methyl-1H-pyrrol-2-yl)methylene]isonicotinic hydrazide (2). The compounds inhibit the growth of *Mycobacterium tuberculosis* in aerobic conditions with MIC = 0.79 μM (compound 1) and 0.39 μM (compound 2); the compounds are not cytotoxic with respect to cellular line of human liver HepG2; penetrate through the monolayer of Caco-2 cells, which is *in vitro* model of the mucous membrane of human small intestine for predicting drug absorption; the binding with proteins of blood plasma makes up 86.8 and 42.1 for compounds 1 and 2, respectively

Stage of Development. Suggestion for Commercialization

IRL2, TRL2
Seeking partners for preclinical/clinical trials. The ready offering can be proposed to pharmaceutical corporations

IPR Protection

IPR2

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