Abstract

Infectious diseases are a looming threat to public health worldwide. Tuberculosis, with over 10 million casualties yearly, is one of the biggest. This is further stressed by the growing incidence of drug resistant strains. Mycobacteria resistant to multiple first line antituberculotics have been reported as well. Novel antitubercular drugs are necessary to combat this epidemic and stop the spread of drug-resistant strains.

Derivates of salicylic acid exhibit several interesting biological properties including antimicrobial effects. Based on previously described compounds, we prepared a series of salicylamide derivates containing *N*-monosubstituted carbamate scaffold. These were screened for antifungal and antibacterial activity and a few of them exhibited exceptional activity against G+ bacteria (MIC < 0.1 $\mu mol.l^{-1}$).

Concurrently we report the synthesis of a novel peptide carriers to further enhance the effectiveness of small antitubercular molecules. By combining two kinds of cell-penetrating peptides into one sequence we aim to create a selective and highly efficient delivery system for new small molecule (and other) drugs.

Key words

Amides, antibacterial activity, antifungal activity, antituberculotics, carbamates, *in vitro* activity, mycobacteria, peptide carriers, salicylic acid