Shabnam Shaneh Sazzadeh

Identification of new natural products with anti-microbial activity against apicomplexa and multiresistant gram-negative rods

The launch of anti-microbial therapies has led to a decisive break-through in the treatment and chemo-prophylaxis of infectious diseases. Furthermore, under protection of anti-infectives invasive and cytostatic therapies (i.e. bonemarrow transplantation, tumor therapies) were enabled which, without efficient control of infections, would lead to death of immunocompromised patients.

Recent occurrence of (multi-) resistant pathogens leads to an increase in lethality and morbidity of infection patients. Apicomplexa such as plasmodia or toxoplasma also develop resistance against common treatments even to artemisinine or cannot be eradicated after infection, respectively. Therefore the need for new anti-microbial drugs is urgent.

Within a first round of screening, promising candidates could be detected. Aims of this project will be the identification of novel natural products with anti-microbial activities against multidrug resistant gram-negative organisms and apicomplexa and the elucidation of their targets in pathogens in order to develop new leads for anti-microbial therapies.

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