BENZOPHENONE-BASED FARNESYLTRANSFERASE INHIBITORS DISPLAY HIGH ACTIVITY AGAINST TRYPANOSOMATID PARASITES

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New drugs are desperately needed against diseases caused by *Trypanosoma cruzi* and *Trypanosoma brucei* the causative agents of the African Sleeping Sickness and Chagas disease.
The WHO estimates that approximately 300.000 cases of African Sleeping Sickness occur annually in 36 countries. Nearly 16-18 million people in Latin America suffer chronically from Chagas disease. Most of the currently used drugs (nitrofuran- and nitroimidazole-derivatives) against these diseases are generally highly toxic and often ineffective because of the fast development of drug resistances in some cases.
Farnesyltransferase has been identified in several pathogenic parasites e.g. *T. brucei* and *cruzi* [1]. From the few farnesyltransferase inhibitors tested against trypanosomatids so far, only 4 have been assayed against *T. cruzi*.
We developed a new class of farnesyltransferase inhibitors based on a benzophenone scaffold [Fig.1] [2].

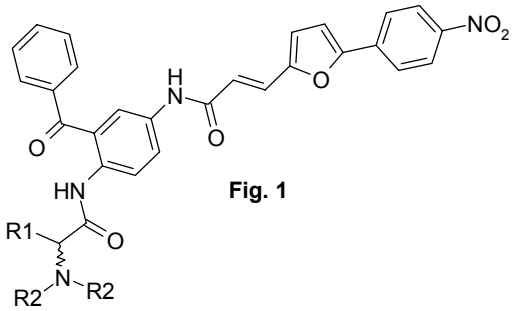

Fig. 1

Subject of this study was the efficacy of this type of compounds against *T. cruzi.* Some of our compounds displayed excellent activity against *T.cruzi in vitro* and *in vivo* while being not cytotoxic thus displaying high selectivity against *T.cruzi* in comparison to human cells.

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[1] Buckner, F. S. *et al.*, *J. Biol. Chem.* **2000**, *275*, 21870-21876.
[2] Schlitzer, M., *Curr. Pharm. Design* **2002**, *8*, 1713-1722.