Synthesis of phenotypic Trypanosoma cruzi inhibitors
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Abstract

Chagas disease is a neglected parasitic disease caused by the Trypanosoma cruzi parasite which has currently infected 8-9 million people. The two current drugs for treating this disease are insufficient, especially in the chronic stage of Chagas disease, so the development for new inhibitors for T. cruzi is needed. In this project, new potential phenotypic inhibitors are synthesized to inhibit T. cruzi selectively and gather information regarding the structure-activity relationship between the inhibitors and the biological effect. Out of 16 synthesized compounds, 10 derivatives were purified and the synthesis routes resulted in generally low yields due to unoptimized reaction and purification conditions. All synthesized molecules obey the Lipinski rule of five so their properties are likely to have drug-like pharmacokinetic characteristics, which are important for further medicinal research using these compounds in the treatment of Chagas disease.