ABSTRACT

Charles University

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Title of the Diploma Thesis: Synthetic studies leading to CAR receptor agonists

CAR, which belongs to the family of xenobiotic nuclear receptors, affects xenobiotic and endogenic metabolic processes via metabolic enzyme genes expression. Since up to this day there is no available agonist which would activate CAR strictly without having an effect on similar nuclear receptors, thus, the effort to find such a compound is still ongoing.

The aim of this diploma thesis was the synthesis of quinazoline derivatives, which, after previous preparation of 2-(3-methoxyphenyl)quinazoline-4-ol, a CAR agonist model compound, proved to be a promising group of chemical species with potential CAR activation effect – target compounds included amides of carboxylic acids via reaction with 2-aminobenzonitrile, derivatives of quinazoline-4-ol, quinazoline-4-thiol, 4-methoxyquinazoline and 3-methyl-3,4-dihydroquinazoline-4-one.