Abstract

This bachelor thesis deals with the preparation of derivatives of acyclic nucleoside phosphonates with nitrogenous base favipiravir. There are many examples of acyclic nucleoside phosphonates that are used as antiviral drugs due to their structure. Favipiravir shows antiviral activity against the influenza virus. The target compounds thus might have the potential to be biologically active, which will be tested in virological laboratories at KU Leuven in Belgium.

First, the methods for preparation of 2-(phosphonomethoxy)ethyl derivative of favipiravir was designed, then for its diphosphate and a prodrug with pivaloyloxymethyl groups to increase the bioavailability of the compound. Thus, 2-(phosphonomethoxy)ethyl derivatives of favipiravir and its de-fluoro analogue were prepared.

Key words: acyclic nucleoside phosphonates, T-705, favipiravir, T-1105, influenza, antiviral activity