Ural Branch
of the Russian Academy
of Sciences

MedChem Russia 2019

4th Russian Conference
on Medicinal Chemistry
with international participants

June 10-14, 2019
Ekaterinburg, Russia

Abstract book

4th Russian Conference on Medicinal Chemistry with international participants. MedChem Russia 2019
Abstract book – Ekaterinburg : Ural Branch of the Russian Academy of Sciences, 2019. – 512 p.
ISBN 978-5-7691-2521-8

Abstract book includes abstracts of plenary lectures, oral and poster presentations, and correspondent presentations of the Conference

Synthesis of new hydrophobic analogues of aminophosphonic acids

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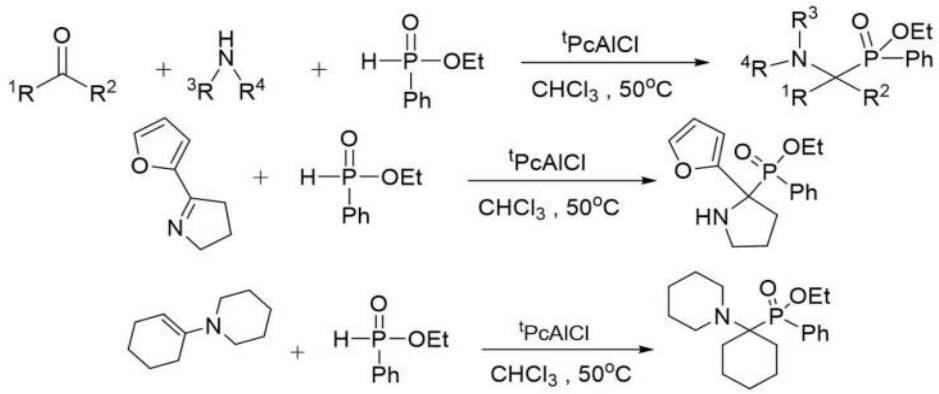
α-Aminophosphinic acids and their derivatives are of great interest for medical chemistry, as they have a high potential for creating structural diversity and have a range of pharmacological activities, including Alzheimer's disease, hepatitis, HIV, malaria. This makes them a promising tool in the development of new drugs [1].

Previously, we developed a universal catalytic method for the synthesis of phosphorus peptidomimetics using tetra-*tert*-butylphthalocyanine aluminum chloride (^{t}PcAlCl) as a catalyst for three-component (Kabachnik-Fields) and two-component (Pudovik) hydrophosphorylation reactions. The effectiveness of this catalyst has been confirmed in our previous studies [2]. Continuing to study the possibilities of this catalytic method, we used it to create an aminophosphinate site [3].

In the present work, we have obtained hydrophobic analogs of aminophosphonic acids - α-aminophosphinates based on secondary cyclic amines, including biogenic ones. The conditions of the three-component hydrophosphorylation reaction were also optimized for the production of α-aminophosphinates.



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