



evropský
sociální
fond v ČR



EVROPSKÁ UNIE



MINISTERSTVO ŠKOLSTVÍ,
MLÁDEŽE A TĚLOVÝCHOVY



OP Vzdělávání
pro konkurenceschopnost



INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ

Propojení výzkumu a vzdělávání v oblasti medicínální chemie
reg. číslo: CZ.1.07/2.3.00/30.0060

Zpráva ze zahraniční stáže/ Report from foreign intership

Účel cesty/Aim of travel: Research of mechanism and scope and limitations of the new reaction; synthetic method development

Účastník/Participant: Ksenija Kisseljova

Doba trvání cesty/Duration of travel: 02. 02. 2015 – 31. 03. 2015

Místo/Location: University of Notre Dame, Southbend, USA

Zpráva/Report:

The major goal of the stay at Notre Dame was to research into the mechanism of the new discovered reaction (the so-called Faafa rearrangement). Our efforts were mostly directed at the identification of intermediate in this conversion. For this model compound was prepared and treated at various conditions in order to at least establish the factors which lead to the formation of either of the products. This task was accomplished only in part. We thought we have managed to work out the way to control the selectivity, but later discovered that the results suffered poor reproducibility. Back in Olomouc, the procedure failed to work in my hands.

Still, one more substrate was added to the series we already had, several more compounds were prepared and tested but failed to give the Faafa rearrangement (the somewhat expected result, giving their structure). LCMS, NMR and solid phase NMR techniques were used for compounds analysis.

Also, I've spent some time working on my other project, synthesis of unnatural beta-hydroxy alfa-amino acids on solid phase. I have managed to introduce the 2,2-dimethoxy ethyl group into a model compound by reductive amination reaction (between free amino group and 2,2-dimethoxyacetaldehyde in the presence of acetic acid and reducing agent, the one-pot imination and reduction). This task could not be accomplished using the Mitsunobu alkylation approach or alkylation with alkyl bromide.

Tento projekt je spolufinancován Evropským sociálním fondem a státním rozpočtem České republiky.

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V Olomouci dne

In Prague/Olomouc, date:.....

07.05.2015

Jméno, podpis/

Name, signature.....

Fotodokumentace/Photos:



