

Accepted Manuscript

Regioselective synthesis of bifuroxanyl systems with the 3nitrobifuroxanyl core
via a one-pot acylation/nitrosation/cyclization cascade

Leonid L. Fershtat, Alexander A. Larin, Margarita A. Epishina, Alexander S
Kulikov, Igor V. Ovchinnikov, Ivan V. Ananyev, Nina N. Makhova

PII: S0040-4039(16)30998-4
DOI: <http://dx.doi.org/10.1016/j.tetlet.2016.08.011>
Reference: TETL 47982

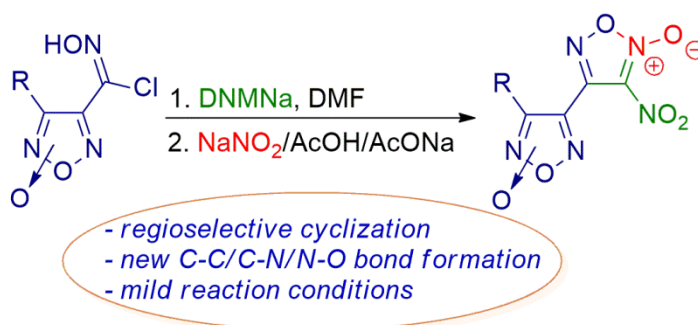
To appear in: *Tetrahedron Letters*

Received Date: 24 June 2016
Revised Date: 28 July 2016
Accepted Date: 3 August 2016

Please cite this article as: Fershtat, L.L., Larin, A.A., Epishina, M.A., Kulikov, A.S., Ovchinnikov, I.V., Ananyev, I.V., Makhova, N.N., Regioselective synthesis of bifuroxanyl systems with the 3nitrobifuroxanyl core *via* a one-pot acylation/nitrosation/cyclization cascade, *Tetrahedron Letters* (2016), doi: <http://dx.doi.org/10.1016/j.tetlet.2016.08.011>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.





Regioselective synthesis of bifuroxanyl systems with the 3-nitrobifuroxanyl core *via* a one-pot acylation/nitrosation/cyclization cascade

Leonid L. Fershtat,^a Alexander A. Larin,^a Margarita A. Epishina, Alexander S Kulikov,^a Igor V. Ovchinnikov,^a Ivan V. Ananyev,^b Nina N. Makhova^{a*}

^a*N. D. Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences, 47, Leninsky prosp., 119991, Moscow, Russian Federation. Phone: +7 (499) 1355326; Fax: +7 (499) 1355328; E-mail: mnn@ioc.ac.ru*

^b*A. N. Nesmeyanov Institute of Organoelement Compounds, Russian Academy of Sciences, 28 Vavilova str., 119991 Moscow, Russian Federation. Fax: +7 (499) 135 5085. E-mail: i.ananyev@gmail.com*

Abstract.

A regioselective method for the synthesis of previously unknown bifuroxanyl systems containing the 3-nitrobifuroxanyl core, based on a cascade of one-pot reactions comprising of the acylation of dinitromethane sodium salt with furoxanyl hydroxamic acid chlorides, nitrosation of the acylation product with NaNO₂/AcOH/AcONa, and intramolecular cyclization of the nitrosation product to give the 3-nitrobifuroxanyl moiety, has been developed.

Keywords: bifuroxanyl systems; 3-nitrobifuroxanyl core; acylation; nitrosation; cyclization; cascade reactions.

Since the significant discoveries of Nobel Prize winners, Furchgott, Ignarro, and Murad, in the late 1990s, nitric oxide (NO) has been recognized as an ubiquitous and crucial regulator molecule for cellular metabolism, affecting various physiological and pathophysiological processes. One of the most active areas of medicinal chemistry is the search for compounds

Download English Version:

<https://daneshyari.com/en/article/5260429>

Download Persian Version:

<https://daneshyari.com/article/5260429>

[Daneshyari.com](https://daneshyari.com)