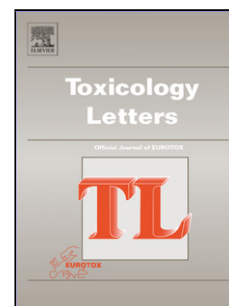


Accepted Manuscript

Title: *In vitro* pharmacological characterization of the bispyridinium non-oxime compound MB327 and its 2- and 3-regioisomers

Authors: K.V. Niessen, T. Seeger, S. Rappenglück, T. Wein, G. Höfner, K.T. Wanner, H. Thiermann, F. Worek



PII: S0378-4274(17)31421-2
DOI: <https://doi.org/10.1016/j.toxlet.2017.10.009>
Reference: TOXLET 9975

To appear in: *Toxicology Letters*

Received date: 21-8-2017
Revised date: 29-9-2017
Accepted date: 8-10-2017

Please cite this article as: Niessen, K.V., Seeger, T., Rappenglück, S., Wein, T., Höfner, G., Wanner, K.T., Thiermann, H., Worek, F., *In vitro* pharmacological characterization of the bispyridinium non-oxime compound MB327 and its 2- and 3-regioisomers. *Toxicology Letters* <https://doi.org/10.1016/j.toxlet.2017.10.009>

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.

***In vitro* pharmacological characterization of the bispyridinium non-oxime compound MB327 and its 2- and 3-regioisomers**

Niessen, K.V.^{1*}, Seeger, T.¹, Rappenglück, S.², Wein, T.², Höfner, G.², Wanner, K.T.², Thiermann, H.¹, Worek, F.¹

¹ Bundeswehr Institute of Pharmacology and Toxicology, Neuherbergstr. 11, 80937 Munich, Germany

² Department of Pharmacy – Center of Drug Research, Ludwig-Maximilians-University Munich, Butenandtstr. 7-13, 81377 Munich, Germany

* Corresponding author:

K.V. Niessen, Bundeswehr Institute of Pharmacology and Toxicology, Neuherbergstr. 11, 80937 Munich,

Tel.: +49 89 992692 2926, Fax: +49 89 992692 2331

E-Mail: KarinNiessen@bundeswehr.org

Highlights

- > *Tert*-butylpyridinium propane regioisomers are pharmacologically characterized. <
- > The pharmacology of the tested regioisomers is relatively comparable. <
- > The different methods allow an insight into the receptor-mediated interactions. <

Abstract

The primary toxic mechanism of organophosphorus compounds, i.e. nerve agents or pesticides, is based on the irreversible inhibition of acetylcholinesterase. In consequence of the impaired hydrolysis, the neurotransmitter acetylcholine accumulates in cholinergic synapses and disturbs functional activity of nicotinic and muscarinic acetylcholine receptors by overstimulation and subsequent desensitization. The resulting cholinergic syndrome will become acute life-threatening, if not treated adequately. The current standard treatment, consisting of administration of a

Download English Version:

<https://daneshyari.com/en/article/8553224>

Download Persian Version:

<https://daneshyari.com/article/8553224>

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