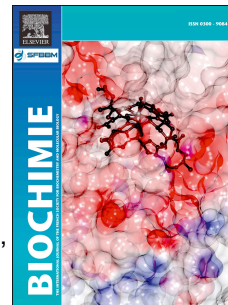


Accepted Manuscript

The effect of oxysterols on nerve impulses

Maryem Bezine, Amira Namsi, Randa Sghaier, Rym Ben Khalifa, Haithem Hamdouni, Fatiha Brahmi, Iham Badreddine, Wafa Mihoubi, Thomas Nury, Anne Vejux, Amira Zarrouk, Jérôme de Sèze, Thibault Moreau, Boubker Nasser, Gérard Lizard



PII: S0300-9084(18)30100-7

DOI: [10.1016/j.biochi.2018.04.013](https://doi.org/10.1016/j.biochi.2018.04.013)

Reference: BIOCHI 5397

To appear in: *Biochimie*

Received Date: 2 March 2018

Accepted Date: 16 April 2018

Please cite this article as: M. Bezine, A. Namsi, R. Sghaier, R. Ben Khalifa, H. Hamdouni, F. Brahmi, I. Badreddine, W. Mihoubi, T. Nury, A. Vejux, A. Zarrouk, J. de Sèze, T. Moreau, B. Nasser, G. Lizard, The effect of oxysterols on nerve impulses, *Biochimie* (2018), doi: 10.1016/j.biochi.2018.04.013.

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.

Abstract

The effect of oxysterols on nerve impulses

Maryem BEZINE et al.

The propagation of nerve impulses in myelinated nerve fibers depends on a number of factors involving the myelin and neural axons. In several neurodegenerative diseases, nerve impulses can be affected by the structural and biochemical characteristics of the myelin sheath and the activity of ion channels located in the nodes of Ranvier. Though it is generally accepted that lipid disorders are involved in the development of neurodegenerative diseases, little is known about their impact on nerve impulses. Cholesterol oxide derivatives (also called oxysterols), which are either formed enzymatically or as a result of cholesterol auto-oxidation or both, are often found in abnormal levels in the brain and body fluids of patients with neurodegenerative diseases. This leads to the question of whether these molecules, which can accumulate in the plasma membrane and influence its structure and functions (fluidity, membrane proteins activities, signaling pathways), can have an impact on nerve impulses. It is currently thought that the ability of oxysterols to modulate nerve impulses could be explained by their influence on the characteristics and production of myelin as well as the functionality of Na⁺ and K⁺ channels.

Download English Version:

<https://daneshyari.com/en/article/10156760>

Download Persian Version:

<https://daneshyari.com/article/10156760>

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