



# The 2<sup>nd</sup> International Neurotrauma Congress & the 4<sup>th</sup> International Roads Safety Congress

Shefa Neuroscience Research Center, Tehran, Iran, 18-20 February, 2015

*The Neuroscience Journal of Shefaye Khatam*

Volume 2, No. 4, Suppl. 3

## Poster Presentation

### Depakine Improve Axonal Growth In Vitro and In Vivo after Spinal Cord Injury

Marzieh Darvishi<sup>1,2</sup>, Taghi Tiraihi<sup>1,2\*</sup>, Taher Taheri<sup>1</sup>

<sup>1</sup>Shefa Neuroscience Research Center, Khatam Alanbia Hospital, Tehran, Iran.

<sup>2</sup>Department of Anatomy, Tarbiat Modares University, Tehran, Iran.

**Published: 18 February, 2015**

#### Abstract

Central nervous system axons fail to regenerate after spinal cord injury (SCI), partially due to the accumulation of extracellular matrix molecules in the lesion and formation of the glial scar. Depakine, as known as histone deacetylase inhibitor, has neuroprotective effects. This study evaluated the histological changes (cavitation and axon regeneration) after SCI associated with (following administration of Depakine in rat model) Depakine treatment in a rat model. Sections were stained with silver impregnation to assess demyelination, and axonal regeneration. The injured spinal cord was then examined histologically, including quantification of cavitation. The cavity volume in the Depakine group was significantly reduced compared to the control (saline-injected) group ( $P<0.05$ ). There were few axons could be noticed in the untreated group while the treated showed many axons in the regenerating spinal tissues. Depakine reduce inflammation after SCI, and is effective for histology and higher axonal regeneration.

**Keywords:** Depakine, Axonal Regeneration, Neuroprotection, Demyelination.

**\*Corresponding Author:** Taghi Tiraihi

**E-mail:** ttiraihi@yahoo.com