

# Dr. Fabrizio Giuliani



## Brief Abstract and Title:

### Neuroprotection and Neuroregeneration in Multiple Sclerosis

Multiple sclerosis (MS) has traditionally been described as a demyelinating disease of the central nervous system (CNS). In the last few years, a shift has occurred and it has become more evident that MS is also a neurodegenerative disease. An increasing number of reports show neuronal and axonal damage in MS patients and in its animal model, the experimental allergic encephalomyelitis (EAE). The mechanisms underlying this

neurodegenerative process are still unknown, but experimental data suggest an immune-mediated injury. This immune-mediated pathogenesis is supported by the significant infiltration of inflammatory cells in the brain and spinal cord. In addition, EAE is produced by an autoreactive immune cell response, and there is substantial similarity between active MS plaques and CNS lesions in EAE animals. In this presentation, the findings of immune-mediated injury in MS will be reviewed. New potential neuroprotective strategies and the potential neuroprotective role of some of the currently available MS treatments will also be addressed. Furthermore, we will review the importance and the potential neuroprotective effects of exercise for MS patients.

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**Dr. Fabrizio Giuliani** is an MS neurologist and neuroimmunologist at the University of Alberta, Edmonton, Alberta. He is currently Assistant Professor of Medicine at the same institution. Dr. Giuliani earned his medical degree cum laude at the University of Bari School of Medicine, Italy where he also completed his residency in Adult Neurology. Dr. Giuliani's research training was as an AHFMR clinical fellow at the University of Calgary, Calgary, Alberta under the guidance of Drs. Wee Yong and Luanne Metz. In 2006 Dr. Giuliani was the recipient of the prestigious Donald Paty Career Award from the MS Society of Canada His research interests are focused on the mechanisms of neurodegenerative processes of multiple sclerosis and the development of new therapeutic strategies to prevent neuronal injury in inflammatory diseases of the CNS.