

## Serum IgG Antibodies to GM1, GM3 and GD1a Gangliosides in Patients with Relapsing Remitting Multiple Sclerosis under Treatment with Interferon, Copaxone and Laquinimod – Preliminary Data

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Multiple sclerosis (MS) is an inflammatory disease in which the myelin sheaths around the axons of brain and spinal cord's neurons are damaged by autoantibodies, resulting in demyelination and scarring. Our previous studies have shown that the amount of ganglioside in the brain may serve as a hallmark for the disease. Serum IgG anti-GM1 antibodies are associated as potential biomarkers for the diagnosis of demyelination. Serum IgG anti-GM3 antibodies may be accepted as biomarker for BBB integrity. Autoantibodies against gangliosides GD1a are associated with acute motor axonal neuropathy and acute motor-sensory axonal neuropathy. Interferons (INFs) and Glatiramer acetate (Copaxone) are immunomodulators. Laquinimod is a new experimental immunomodulator investigated as an oral treatment for MS.

*Key words:* multiple sclerosis treatment, serum IgG anti-ganglioside antibodies, Interferon, Copaxone, Laquinimod.