

Contraception and *In Vitro* Fertilization in Young Women with Multiple Sclerosis: Review

V. Kolyovska, V. Pavlova

*Institute of Experimental Morphology, Pathology and Anthropology with Museum,
Bulgarian Academy of Sciences, Sofia*

Multiple sclerosis (MS) is a chronic neurological disorder characterized by myelin sheaths damage, focal inflammation, gliosis and axonal degeneration. It affects predominantly women and the onset of the disease is at their child-bearing age. Myelination, a form of neural plasticity represents an important but poorly understood step to the process of repair. Unfortunately, cells that produce myelin can also be damaged which limits the ability of the brain to recover affected areas. The risks and benefits of using disease-modifying therapy during the various stages of a woman's reproductive life are topics that need attention. Since MS predominantly affects young women and is a hormone-dependent disease, then hormonal methods of contraception should be carefully discussed. Additionally, *in vitro* fertilization that also uses hormonal agents should be avoided. For that reason the pursuit of personalized medicine requires development of reliable biomarkers to predict the course of the disease and the response to therapies of this socially significant disease.

Key words: multiple sclerosis, contraception, contraceptives, *in vitro* fertilization, sex hormones.