Adriana Camargo Ferrasi et al., J Cancer Sci Ther 2017, 9:9(Suppl)
DOI: 10.4172/1948-5956-C1-112

Genetic variations of interleukin 28B (IL28B) in meningioma

Adriana Camargo Ferrasi, Aline Faria Galvani, Renata Zugaib, Luciana Moura Campos Pardini, Marco Antônio Zanini, Silvia Helena Barem Rabenhorst, Rejane Maria Tommasini Grotto and **Maria Inês de Moura Campos Pardini**
[1]São Paulo State University, Brazil
[2]Paulista University, Brazil

Meningioma is the most common tumor of the central nervous system and despite of their benign characteristic and slow growth, they frequently recur after surgical removal. Interleukin 28B seems to be involved in antiviral and antitumor immune response. Recently, IL28B rs12979860 C/T polymorphism was associated with outcome of treatment with IFNα and ribavirin in patients with Hepatitis C virus. Also, patients with CC genotype have higher chances of viral depuration than those with other genotypes. However, there are few data on this polymorphism in tumors, especially in meningioma. Thus, the aim of this study was to analyze allele and genotype frequencies of this polymorphism in patients affected by meningioma and healthy individuals (control) and to sequencing IL28b gene, searching for novel genetic variations. Sixty patients treated by UNESP Neurosurgery Service were included in this study. The Research Ethics Committee approved this study and each subject signed an informed consent form before tissue was obtained. Analysis of rs12979860 C/T polymorphism was performed by PCR-RFLP (PCR - Restriction Fragment Length Polymorphism) and the complete sequencing of the IL28B gene was performed by Sanger Sequencing Capillary Electrophoresis (Applied Biosystems™). The present study showed unpublished results that evidenced a greater frequency of TT genotype in the meningioma patients when compared to healthy individuals. Novel genetic variations (missense and silent) were detected in IL28B gene and only three have been reported in the scientific literature, but not in tumor samples. Amino acids exchanged as consequence of the missense variations are located mainly in the binding domains of IL28B protein to its receptor, reinforcing the probable importance of these alterations in protein function. These results suggest that IL28B protein and its genetic variations may participate in the molecular mechanisms of meningioma.

Biography

Adriana Camargo Ferrasi has completed her PhD from São Paulo State University - Institute of Biosciences and Post-doctoral studies from São Paulo State University - Botucatu Medical School. She is a Permanent Professor of the Post-Graduation Program (Stricto sensu) in Medical Biotechnology of São Paulo State University (UNESP) and Titular Professor in Paulista University (UNIP). She works in the area of molecular biology applied to cancer studies.

adriana.ferrasi@gmail.com

Notes: