



SHORT COMMUNICATION

# Increase systemic levels of IL-23 as a possible constitutive marker in schizophrenia



Milica Borovcanin<sup>a,\*</sup>, Ivan Jovanovic<sup>b</sup>,  
Slavica Djukic Dejanovic<sup>a</sup>, Gordana Radosavljevic<sup>b</sup>,  
Nebojsa Arsenijevic<sup>b</sup>, Miodrag L. Lukic<sup>b</sup>

<sup>a</sup> Department of Psychiatry, Faculty of Medical Sciences, University of Kragujevac, Kragujevac, Serbia

<sup>b</sup> Center for Molecular Medicine and Stem Cell Research, Faculty of Medical Sciences, University of Kragujevac, Kragujevac, Serbia

Received 6 October 2014; received in revised form 22 February 2015; accepted 3 March 2015

## KEYWORDS

IL-23;  
First episode  
psychosis;  
Schizophrenia in  
relapse;  
Antipsychotic

**Summary** Inflammation appears to play significant role in schizophrenia. IL-23 is key molecule in mediating IL-17 dependent inflammatory response. Therefore, we analyzed the serum concentrations of IL-23 levels in patients with first episode psychosis (78 subjects), in patients with acute exacerbation of schizophrenia who were already treated with antipsychotics (47 subjects) and healthy controls (35 subjects). Diagnoses were established using International Statistical Classification of Diseases and Related Health Problems, Tenth Revision (ICD-10). Psychopathology was evaluated using the Positive and Negative Syndrome Scale (PANSS) and serum levels of IL-23 were measured using sensitive enzyme-linked immunosorbent assay (ELISA). Serum levels of IL-23 were higher in patients with first psychotic episode and in patients with schizophrenia in relapse than in healthy subjects ( $p = 0.000$ ) and no difference was established between these two groups of patients before therapy. Also, after 4 weeks of antipsychotic therapy levels of IL-23 remains elevated in both groups of patients with no differences between two groups. It appears that increased level of IL-23 in psychotic patients independently of antipsychotic therapy can be a constitutive marker in this disorder.

© 2015 Elsevier Ltd. All rights reserved.

## 1. Introduction

The cytokines are key signaling molecules in communications of immune cells and interactions between immune effector cells and target cells in different tissues, including

\* Corresponding author. Tel.: +381 642746727;  
fax: +381 34370257.  
E-mail address: [milicaborovcanin@yahoo.com](mailto:milicaborovcanin@yahoo.com) (M. Borovcanin).







