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Biomarkers in schizophrenia: A focus on blood based diagnostics and theranostics

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#### Abstract

Identifying biomarkers that can be used as diagnostics or predictors of treatment response (theranostics) in people with schizophrenia (Sz) will be an important step towards being able to provide personalized treatment. Findings from the studies in brain tissue have not yet been translated into biomarkers that are practical in clinical use because brain biopsies are not acceptable and neuroimaging techniques are expensive and the results are inconclusive. Thus, in recent years, there has been search for blood-based biomarkers for Sz as a valid alternative. Although there are some encouraging preliminary data to support the notion of peripheral biomarkers for Sz, it must be acknowledged that Sz is a complex and heterogeneous disorder which needs to be further dissected into subtype using biological based and clinical markers. The scope of this review is to critically examine published blood-based biomarker of Sz, focusing on possible uses for diagnosis, treatment response, or their relationship with schizophrenia-associated phenotype. We sorted the studies into six categories which include i) brain-derived neurotrophic factor (BDNF) ii) inflammation and immune function, iii) neurochemistry, iv) oxidative stress

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