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## Detection of circulating miRNA levels in large cohort schizophrenia

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### Statement of the problem:

Schizophrenia is one of the most common severe mental disorders, with a lifetime risk of 1% in the population worldwide. Over the years, the diagnosis of schizophrenia has remained symptom-based, relying mainly on self-reports from patients, mental state examination, and clinical interviews, and lacking objective laboratory tests. Such a diagnostic strategy can sometimes lead to misdiagnosis and has been criticized widely. To remedy this embarrassing state of affairs, a set

of biomarkers has been proposed based on physical and biological tests. In a currently finished study, global plasma miRNAs were profiled in a test cohort of 850 schizophrenia patients and 963 control subjects, using RNA sequencing, TaqMan Low-Density Array, and quantitative reverse transcription polymerase chain reaction (qRT-PCR) assays. The captured miRNAs were then validated by qRT-PCR assays in an independent cohort of 623 schizophrenia patients, 654 control subjects. The global plasma miRNA screening revealed eight miRNAs that were up-regulated in schizophrenia, as revealed by both assay platforms. The qRT-PCR analysis showed the up-regulation of miR-17-5p and miR-193a-3p in schizophrenia but not in non-schizophrenia

disorders.

**Conclusions:** The up-regulation of miR-17-5p and miR-193a-3p is a state-independent biomarker for schizophrenia, and these two miRNAs could be used to develop a diagnostic tool for schizophrenia.

### Biography

Xu Qi received her PhD from Peking Union Medical College (PUMC) in 2004. Dr. Xu is a Principal Investigator at Institute of Basic Medical Sciences and Peking Union Medical College (CAMS). In the past 20 years, Dr. Xu leads translational research studies that combine functional genomic and biochemical approaches in pursuit of molecular mechanisms, biomarkers, and potential drug targets underlying neuropsychiatric disorders. Dr. Xu published over 60 research articles as corresponding author or first author, some on high-ranking Journals e.g. Nature, Nature Genetics, Nature Structural & Molecular Biology, Molecular Psychiatry, American Journal of Psychiatry, Journal of Experimental Medicine, and Biological Psychiatry

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