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**Let-7, MiR-98 and MiR-181 as Biomarkers for Cancer and Schizophrenia**

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**Background:** Recent studies support an important role of microRNAs in cancer and major psychiatric disorders, through their regulatory role on the expression of multiple genes. The low incidence of cancer in patients with schizophrenia as a comorbidity status, is an old hypothesis which needs further investigation mainly on microRNAs function, through their oncosuppressive or oncogenic activity, in the development of psychiatric disorders.

**Material and Methods:** The expression pattern of a variety of different was investigated in a sample of patients suffering from schizophrenia (n=6), in a another sample wit a solid tumor (n=10) and in a sample of patients with both schizophrenia and tumor (n=8).MiRNAs analysis was performed in whole blood samples using the miRCURY LNA TM microRNA Aray technology.

**Results:** A number of 3 microRNAs showed a statistically significant differential expression between the 3 groups. Specifically, significant down-regulation of the let-7p-5p, miR-98-5p and miR-183-5p in the study groups of tumor alone and and tumorand schizophrenia.

**Conclusions:** The results of the present study that let-7, miR-98 and miR-183 might play an important oncosuppressive role through their regulatory impact in gene expression irrespective of the presence of schizophrenia. Further studies are warranted in order to investigate of these and other mico-RNAs in the molecular pathways of schizophrenia and of other major psychiatric disorders.