Up-regulated specific MicroRNA-4640 in Brain Tumor Metastasis of Breast Cancer

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Abstract: Breast cancer is the common cancer in the women of the world(1). Primary tumors are not very important to rate of breast cancer mortality. Whereas the second tumors via metastas is the mortality reason of breast cancer death rate(1). So we have to designed this study to in better understanding breast cancer tumors.

Metastasis tumors of breast cancer from different tissues have different behavior. Our hypothesis is could be investigate the key role of tumor from different tissue in metastasis breast cancer with gene profiling analysis. We have extracted microarrays data with *GSE14018* accession number from *NCBI* database and analyzed with *GEO2R* software(2). We have compared 7 samples of tumors of breast cancer were metastasized to Brain tissue in contrast the 16, 8, 5 samples of tumors were metastasized to Lung, Bone, Liver repectivily. The results are showed 9 genes in up-regulated genes and the miR-4640 the only microRNA was up-regulated in tumor metastasized to brain tissue and down-regulated in tumors were metastasized to lung, bone and liver this finding reported for the first time in this study. In this study we showed that the expression level of miR-4640 was up-regulated this result could be open new vison of therapeutic approaches to brain tumor that metastazed from breast cancer.

Keywords: Gene expression profile; Metastazed brain tumor from breast cancer; breast cancer tumor; bioinformatics

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