Micro-RNAs, the new strategy in the diagnosis and treatment of melanoma

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miRNAs are non-coding RNAs, which have different biological and pathological functions. MiRNAs have an important role as post-transcriptional regulators of gene expression in many physiological processes, including development, cell differentiation and cell signaling. MiRNA as modulators of gene expression programs operate in various diseases, especially cancer, by suppressing genes that are crucial for carcinogenesis. Thus, these compounds can be utilized as a potential biomarker for early diagnosis, prediction and treatment of diseases, especially cancer and its follow up. We used PubMed and Web of Science Core Collection search engines for the Melanoma MicroRNA expression profiling studies between the periods 2000 and 2015. Search terms “miR, microRNA and Melanoma” were used. A miRNA ranking system was used that took the frequency of comparisons, direction of differential expression and the total sample size into consideration. We identified twenty-one miRNAs that were most consistently reported to be up-regulated and thirty-four miRNAs that were down-regulated. In the group of consistently reported microRNAs, miR-21 and miR-210 were reported up-regulated in 3 studies. MiR-203 was found down-regulated in six studies, respectively, followed by miR-211 and mir-34a in four studies. MiR-17, miR-193b and mir-20a were reported some studies, but their expression were inconsistent. This review study of human Melanoma microRNA expression profiling studies would provide information on microRNAs with potential role as the biomarkers in malignant melanoma and in the development of novel strategies for disease prevention and therapy.

Biography
Mehran Panahi has received his high school diploma in 2009 and graduated from pre-university course in 2010. He entered into the university in 2011. He is a member of the Scientific Research Center of Zahedan University of Medical Sciences and New Innovation Foundation of Khiv. In addition, he works in histological research laboratory under the supervision of Prof. Zahra Heidari and Dr.Sagheb. His current study concentrates on the diagnosis and prevention of cancers.

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