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Characterization of a microRNA expression signature associated with recurrence in oral cavity cancer patients

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Oral cavity cancer is one of the most prevalent and lethal cancers worldwide. In this type of cancer the local, regional and distal recurrence develops in up to 76% of the cases. This is associated with treatment failure, as well as high mortality rates. Therefore, there is a need to identify biomarkers that allow the recognition of patients at high risk of developing cancer recurrence. MicroRNA (miRNAs) are short single stranded RNA molecules, which regulate genetic expression at the post-transcriptional level. Changes in the expression profiles of miRNAs have been associated with diagnosis and prognosis in different types of cancer. Since miRNAs can be recovered from paraffin embedded biopsies, they could have a potential as biomarkers to understand the course of the disease. Hence, the aim of this work is to characterize a microRNA expression signature associated with recurrence, in oral cavity cancer patients. A total of 40 paraffin-embedded biopsies from patients with oral cavity cancer were analyzed. These biopsies were separated in groups of recurrence (n=16, <1 year) and no recurrence (n=24, >4 years). Total RNA was extracted and quantified for microRNA microarrays analysis (GeneChip® miRNA 4.0, Affymetrix). The data are being analyzed to determine the differentially expressed miRNAs between the groups, which will be validated in public databases, and by qRT-PCR. In addition, the expression levels of some targets at the level of mRNA and protein will be determined by qRT-PCR and immunohistochemistry.

Biography

Ashlin Ninibeth Lara Holguin has completed her Bachelor's Degree from the Faculty of Superior Studies Iztacala in Universidad Nacional Autónoma de México, where she obtained Honorary Mention. She is currently studying her Master's Degree in Biochemical Sciences from National Cancerology Institute, México in Universidad Nacional Autónoma de México.

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