Author's response to reviews

Title: Small RNAs in metastatic and non-metastatic oral squamous cell carcinoma

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Author's response to reviews: see over
Dear Editor,

We would like you to consider for publication in BMC Medical Genomics the manuscript entitled “Small RNAs in metastatic and non-metastatic oral squamous cell carcinoma”.

Oral squamous cell carcinoma (OSCC) is a deadly disease and, when grouped with pharyngeal cancer, it is the sixth most common cancer in the world. This tumor is particularly risky because in its early stages it progresses without producing pain or symptoms that might be readily recognized by the patient. It is usually discovered when the cancer has metastasized to the lymph nodes of the neck and at this stage its prognosis is significantly worse than when it is caught in a localized intra oral area. In fact, the presence of cervical lymph node metastases is currently its strongest prognostic factor and markers associated with this phenotype are of great interest for the clinical setting.

Small non-coding regulatory RNAs have the potential to control fundamental cellular functions both at the transcriptional and post-transcriptional levels. Despite consensus on the role of miRNAs and of other small RNAs in cancer development, the part they play in the metastatic cascade is not well defined.

In this work we aimed at finding small RNAs expressed in OSCC that could be associated with the presence of lymph node metastasis. We used high-throughput sequencing for the quantification of small RNAs in tissue samples and selected markers were evaluated in plasma samples. The identification of a biomarker in plasma is of great use to the clinical practice due to the minimally invasive characteristic of such test. Additionally, we used in silico analysis to investigate possible new molecules, not previously described, involved in the metastatic process.

Data on small RNAs other than miRNAs in OSCC has not been previously addressed. Our results show that small RNAs other than miRNAs are expressed in this cancer type and could play a role in metastases. We also show that miRNA molecules are involved in the metastatic phenotype and could be used as markers for the presence of metastases. As such, the manuscript is of interest to molecular oncologists, small RNA researchers, and also to clinical oncologists.

We confirm that the above-mentioned manuscript has not been submitted elsewhere and there are no competing interests. We hope that you will find our manuscript acceptable for publication in BMC Medical Genomics.

Sincerely,

Patricia Severino, PhD
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