

# Evaluation of microRNA expression in metastatic and non-metastatic mucoepidermoid carcinoma

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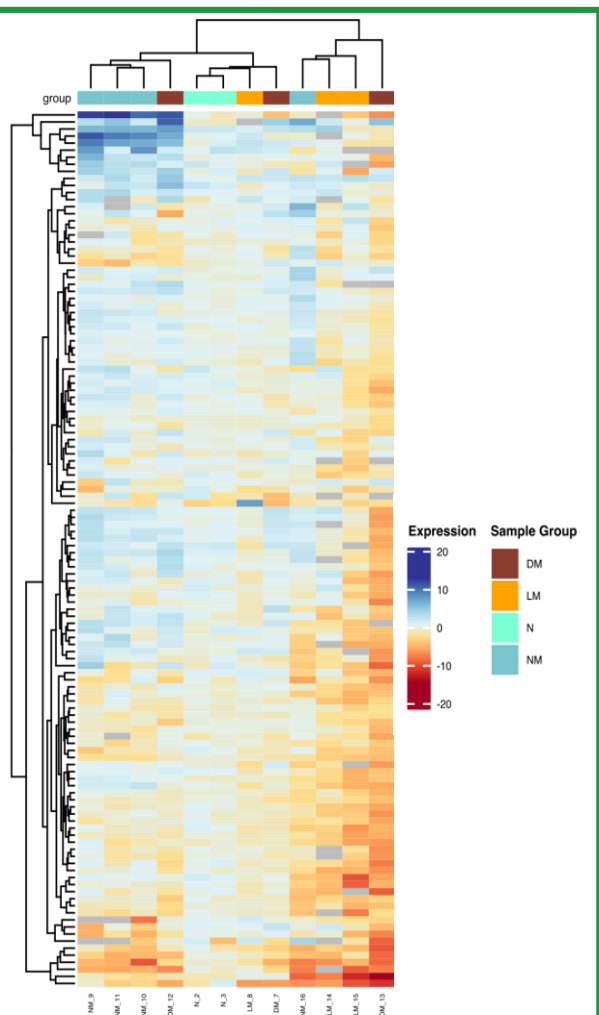
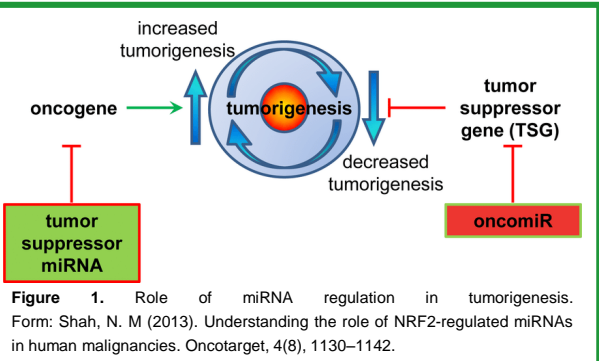
## Introduction

Mucoepidermoid carcinoma (MEC) is the most frequent malignant neoplasm among salivary gland tumors, mostly present in the parotid glands, with a prognosis value dependent on the tumor grade. The tendency of metastasis in MEC is mainly related with high-grade MEC, associated with a worse prognosis, and may occur in regional lymph nodes or at distant sites.

Several studies have demonstrate the role of microRNAs (miRNAs), which are small non-coding RNAs involved in post-transcription regulation of targets messengers RNAs, as possible hallmarks used in the diagnosis, classification and prognosis of tumors. The potential role of miRNAs in cancer have been suggested due to their involvement in cell cycle regulation, controlling the expression of suppressor tumor genes (Figure 1).

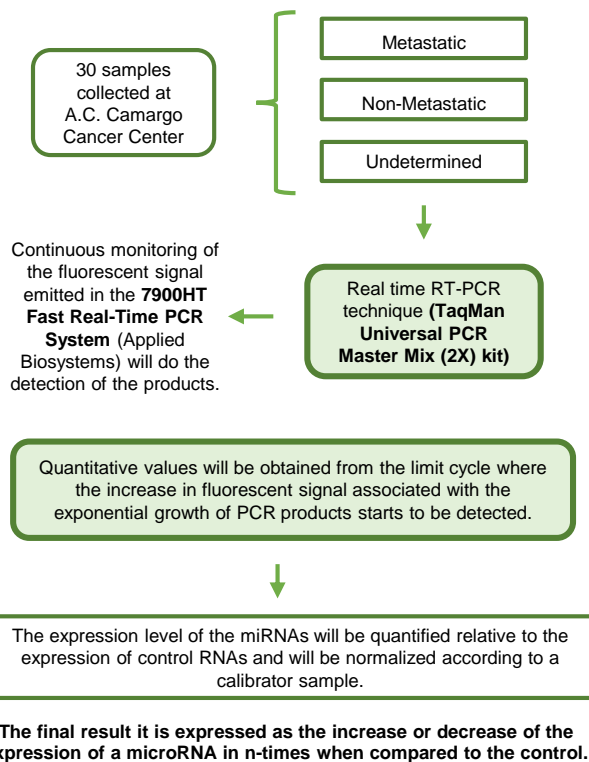
Previous study from our group evaluated the differential expression of miRNAs in samples of non-metastatic MEC, MEC with lymph node metastasis, MEC with distant metastasis, and histologically normal salivary gland and identified microRNAs that might be associated with the metastatic potential of these tumors (Figure 2).

The aim of the present study is the confirmation of the differential expression of miRNAs expressed in mucoepidermoid carcinoma samples and the determination of the target messenger RNAs of these miRNAs, associating their expression with clinical and pathological characteristics of the tumors.



**Figure 2.** Hierarchical clustering analysis of miRNA expression in metastatic and non-metastatic mucoepidermoid carcinoma (MEC) and non-neoplastic salivary gland samples from previous study. The relative up and down regulation of miRNAs is indicated by red and blue respectively. DM, MEC with distant metastasis; LM, MEC with lymph node metastasis; N, normal salivary gland; NM, non-metastatic MEC.

## Methodology



## Results

The determination of a microRNA panel that distinguishes mucoepidermoid carcinoma samples according to their metastatic potential.

## Conclusion

Profiling the miRNA in MEC could provide a better understanding of the molecular basis of the lesions and better targeting of treatment in patients with more or less aggressive profiles of the disease profiles.

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