

# Certificate of English Language Editing



## Manuscript Title:

Blood exosomal miRNA profiling reveals the complexity of hepatocellular carcinoma and identifies potential biomarkers for differential diagnosis

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### Abstract:

**Background & Aims:** Hepatocellular carcinoma (HCC) is one of leading causes of cancer-related deaths worldwide, but there is a shortage of effective biomarkers for its diagnosis. We aimed to explore exosomal miRNAs as potential biomarkers for HCC diagnosis using exosomal miRNA sequencing.

**Methods:** This study enrolled 136 patients who presented to Xiangya Hospital of Central South University between August 2017 and May 2018. After the eliminations, this study included 89 patients, who were divided into two cohorts. Principal component analysis (PCA) was used to analyze the complexity of the exosomal miRNA profiles and to discover potential biomarkers to identify HCC and liver cirrhosis.

**Results:** The exosomes from the plasma of these 89 patients were successfully obtained. The PCA result suggested that multiple factors, not just the biological difference between HBV infected HCC and non-HCC patients, could significantly affect the blood exosomal miRNA profiles. Daily alcohol consumption and tumor stage could alter the blood exosomal miRNA profiles of HBV positive non-HCC patients. MiR-455-5p and miR-30c-5p showed significantly better overall survival in the patients with higher expression levels. When considering a sample that had the quotients of either of these mRNAs at a level that was higher than their cutoffs as HCC patients, we found that...

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