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Abstract Discussion Forum **(0)**

**Number: Mo1479**

EXCLUSIVE MIRNA EXPRESSION IN PANCREATIC DUCTAL ADENOCARCINOMA THROUGH HIGH-THROUGHPUT SEQUENCING

**Society:** AGA

**Track:** Pancreatic Diseases

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**Background**

Pancreatic ductal adenocarcinoma (PDAC) is a highly lethal cancer characterized by late diagnosis and limited treatment options. The potential role of microRNAs (miRNAs) in regulating gene expression and influencing cancer pathogenesis has prompted exploration of their involvement in PDAC.

**Methods**

miRNAs were isolated from Formalin-Fixed Paraffin-Embedded (FFPE) pancreatic tissue of 27 PDAC patients and processed for Next Generation Sequencing (NGS). Raw sequencing data were analyzed, and miRNAs with exclusive expression (expression value >5) were selected for further investigation. The identified miRNAs were subjected to target prediction and pathway enrichment analysis to elucidate their involvement in PDAC pathogenesis. Target gene prediction was performed using miRTarBase, and pathway enrichment analysis was conducted using the KEGG pathway databases to elucidate biological pathways potentially regulated by these miRNAs.

**Results**

Among the more than 500 miRNAs analyzed, 10 miRNAs demonstrated an expression value greater than 5, representing exclusive expression in PDAC samples. Target prediction and pathway analysis revealed significant associations between these miRNAs and key cancer-related pathways, including those involved in cell cycle regulation, apoptosis, and epithelial-mesenchymal transition. A detailed summary of the identified pathways and target genes is presented in Table 1, and their expression values are shown in Figure 1.

**Conclusion**

The study highlights the potential of specific miRNAs as biomarkers for PDAC and their involvement in critical cellular pathways associated with cancer progression. This analysis can contribute to the development of targeted diagnostic and therapeutic strategies for PDAC. Further validation studies are required to evaluate these miRNAs as therapeutic targets or diagnostic biomarkers.

**Keywords**

miRNA, pancreatic cancer, high-throughput sequencing, biomarkers, pathways, therapeutic targets

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