# Article information:

Transcriptomic Analyses and Potential Therapeutic Targets of Pancreatic Cancer With Concomitant Diabetes - PMC
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7672183/>

# Article summary:

1. This study investigated the molecular mechanisms of pancreatic cancer in mice with type 2 diabetes mellitus (T2DM).

2. Two mouse models of T2DM were generated, one through chemical induction with streptozotocin (STZ) and the other through systemic mutations of leptin receptor (db/db).

3. Transcriptomic analysis revealed 136 and 64 significantly differentially expressed genes (DEGs) in STZ and db/db mice respectively, which could act as potential therapeutic targets for suppressing malignant progression.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

The article is generally reliable and trustworthy, as it provides a comprehensive insight into diabetes as a risk factor for pancreatic cancer. The authors have used two mouse models to simulate the pathophysiology of obesity-associated and non-obesity-associated T2DM, which is an appropriate approach to investigate the underlying molecular mechanisms of pancreatic cancer in diabetic mice. Furthermore, transcriptomic analysis was performed to identify potential genes that were abnormally expressed, which could be targeted or suppressed to search for a more effective therapeutic strategy.

However, there are some points that should be noted when assessing the trustworthiness and reliability of this article. Firstly, although the authors have used two mouse models to simulate the pathophysiology of T2DM in humans, they have not discussed any potential limitations associated with using animal models instead of human subjects. Secondly, although the authors have identified several potential therapeutic targets for suppressing malignant progression in pancreatic cancer under diabetic condition, they have not provided any evidence to support their claims or discussed any possible risks associated with targeting these genes or proteins. Finally, while the authors have proposed an optimizing therapeutic strategy combining MMP-2/9 inhibitor with gemcitabine to enhance anti-tumor effects on pancreatic cancer under diabetic condition, they have not explored any counterarguments or presented both sides equally when discussing this strategy.

# Topics for further research:

* Limitations of animal models in diabetes research
* Risks associated with targeting genes in pancreatic cancer
* Advantages and disadvantages of combining MMP-2/9 inhibitor with gemcitabine
* Alternative therapeutic strategies for pancreatic cancer in diabetic patients
* Clinical trials for diabetes-associated pancreatic cancer
* Molecular mechanisms of pancreatic cancer in diabetic mice

# Report location:

<https://www.fullpicture.app/item/ef9197eb7475193bb303032959e11495>