

Pancreatic Juice Pathological Microenvironment Induces Apoptosis of Human Pancreatic Duct Epithelial Cells through Autophagy by Activating p38 MAPK Signaling Pathway

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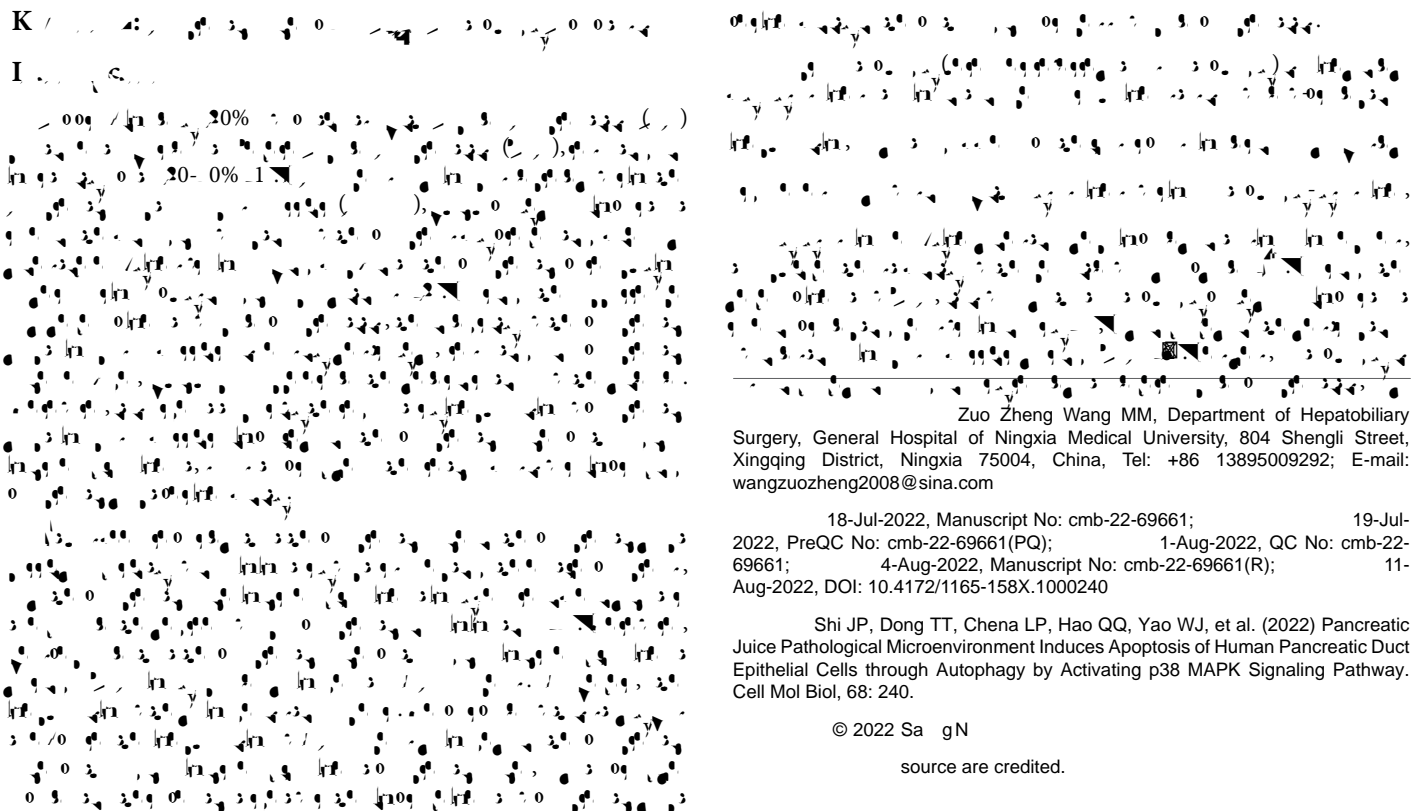
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Acute pancreatitis is a common acute abdominal disease in clinical practice, the essence of which is the inflammatory reaction to the pancreas. Patients with rapid progression of the disease may have local or systemic inflammatory reaction. In this pathological process, the pancreatic duct mucosal barrier function is impaired. However, the specific mechanism is still unclear.

Naso-pancreatic tube drainage was performed in the early stage of severe acute pancreatitis, pancreatic juice was extracted and exposed to detect cells apoptosis. Fluorescence microscope was used to observe the occurrence of autophagy in pancreatic juice pathological microenvironment. After HPNE cells were treated with 3-Methyl Adenine (3-MA), and detected the expression of apoptotic proteins by Western blotting. HPNE cells were treated with p38 MAPK signaling pathway inhibitors (SB203580) for 4 hours, and then detected the expression of apoptosis and autophagy proteins by western blotting.

The proliferation of HPNE cells was inhibited, and apoptosis of HPNE cells occurred in pancreatic juice pathological microenvironment. Besides, the pancreatic juice pathological microenvironment induced autophagy in HPNE cells. Interference with autophagy reduced the apoptosis of HPNE cells. Interference of p38 MAPK signaling pathway with SB203580 inhibited autophagy and reduced the apoptosis of HPNE cells.

In the pancreatic juice microenvironment of severe acute pancreatitis, the activation of p38 MAPK signaling pathway induced excessive autophagy and apoptosis of HPNE cells, and inhibition of p38 MAPK signaling pathway reduced the apoptosis of HPNE cells.



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18-Jul-2022, Manuscript No: cmb-22-69661; 19-Jul-2022, PreQC No: cmb-22-69661(PQ); 1-Aug-2022, QC No: cmb-22-69661; 4-Aug-2022, Manuscript No: cmb-22-69661(R); 11-Aug-2022, DOI: 10.4172/1165-158X.1000240

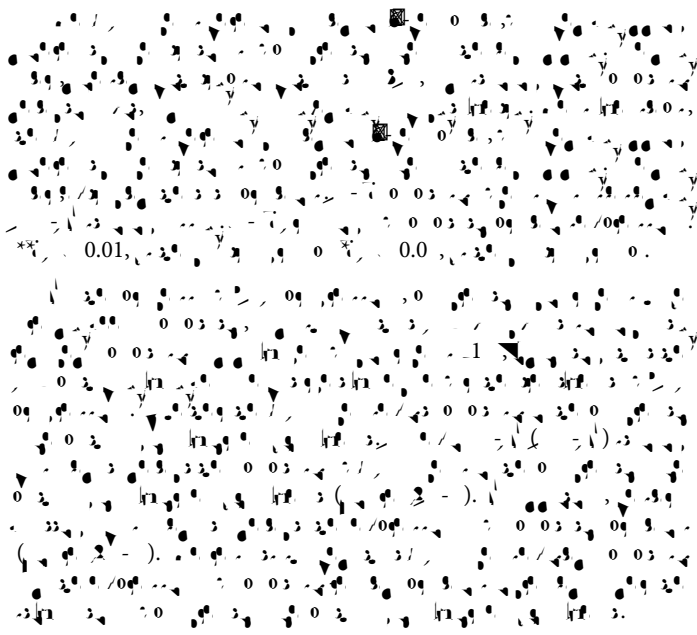
Shi JP, Dong TT, Chena LP, Hao QQ, Yao WJ, et al. (2022) Pancreatic Juice Pathological Microenvironment Induces Apoptosis of Human Pancreatic Duct Epithelial Cells through Autophagy by Activating p38 MAPK Signaling Pathway. Cell Mol Biol, 68: 240.

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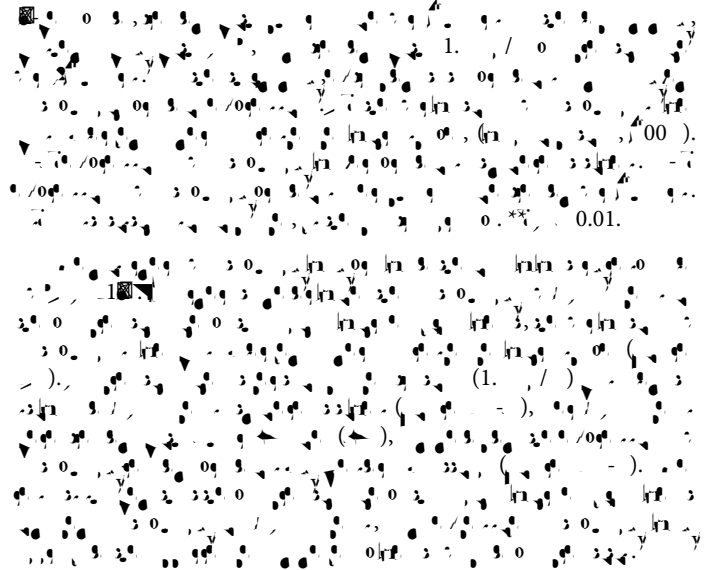
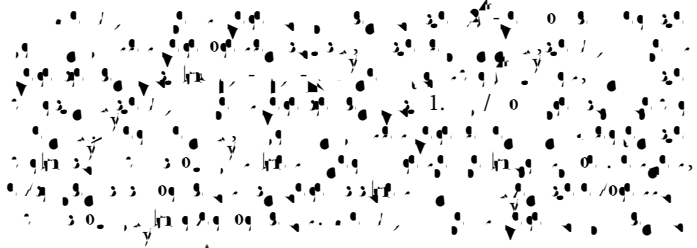
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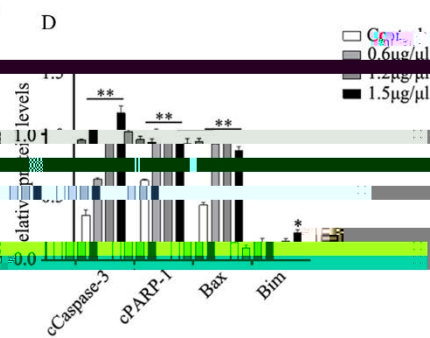
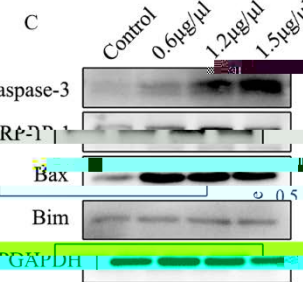
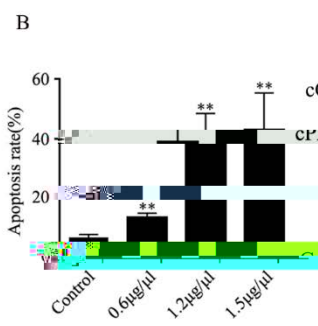
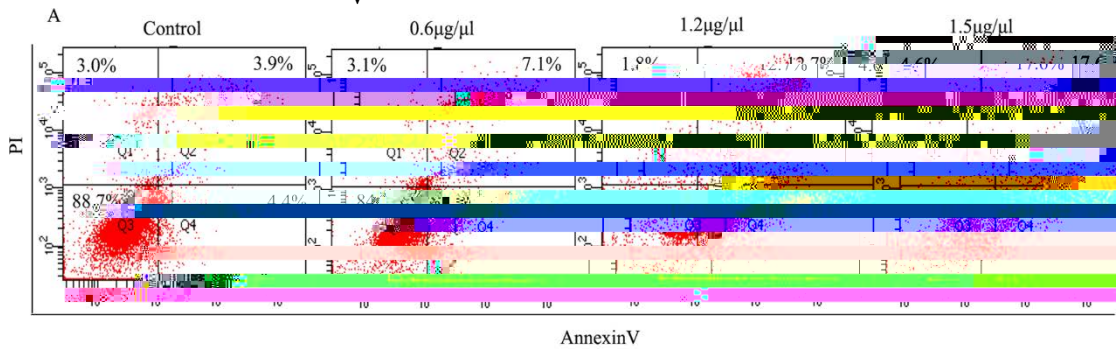
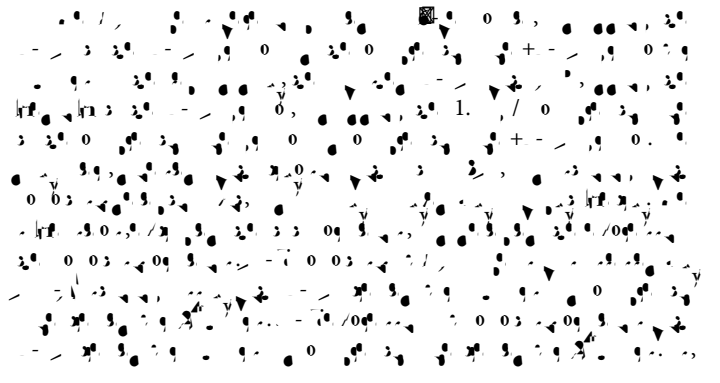
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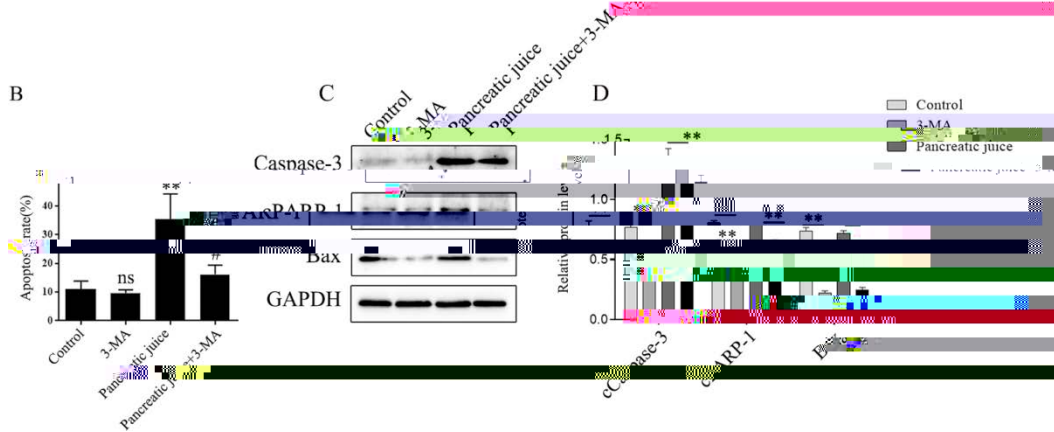
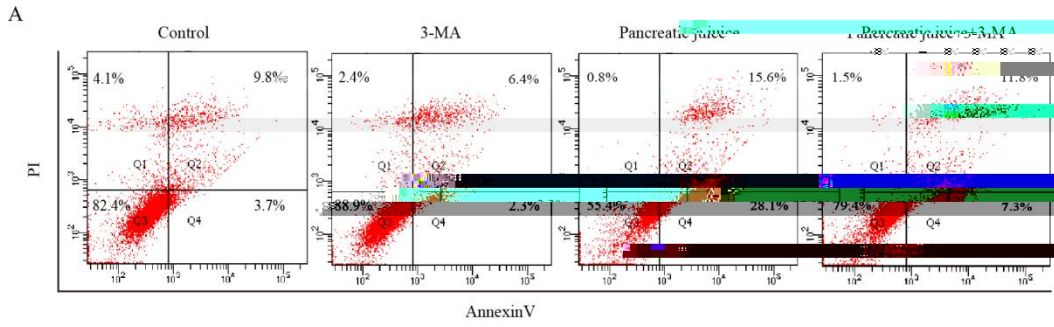
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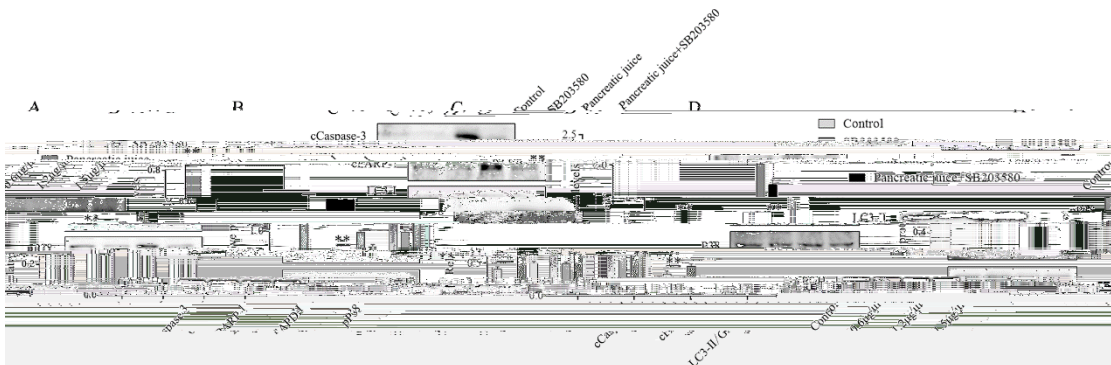
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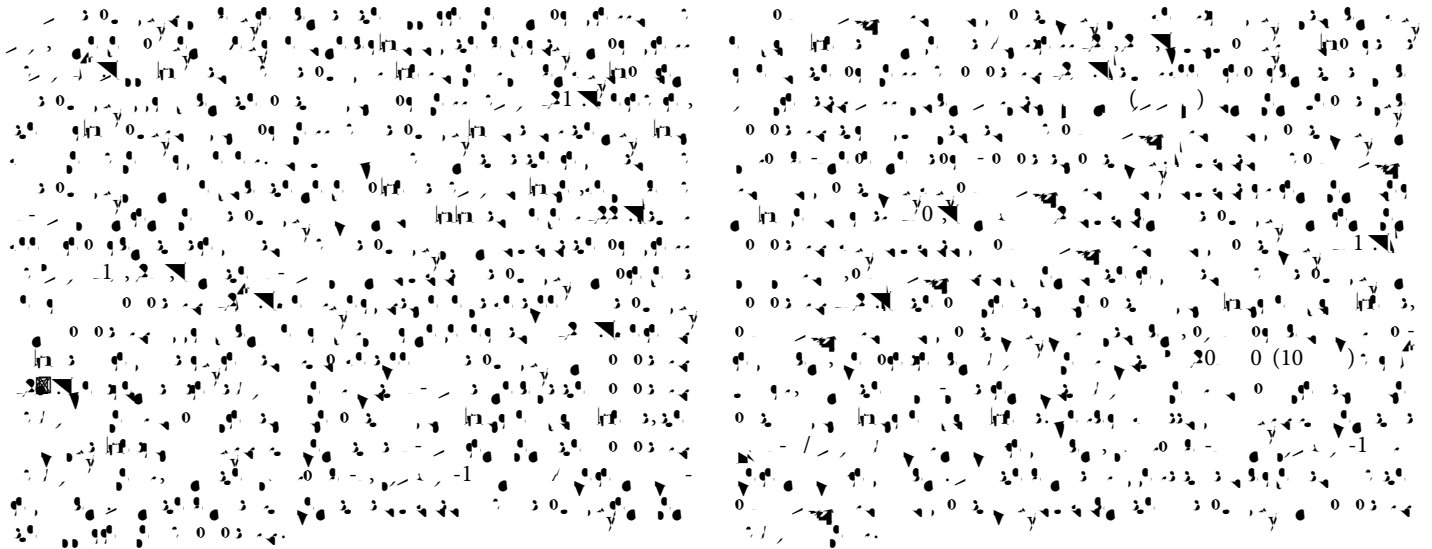
Pancreatic juice pathological microenvironment induced apoptosis of HPNE cells.

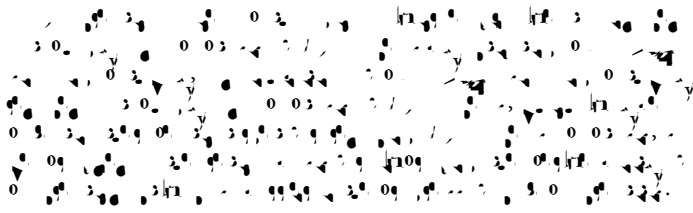


Inhibition of autophagy reduced the apoptosis of HPNE cells.

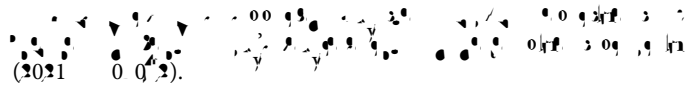


Inhibition of p38 MAPK signalling pathway reduced the apoptosis of HPNE cells.

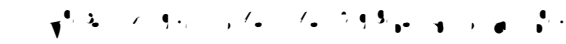




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