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Impacts of pancreatic exocrine insufficiency on gut microbiota

Key words: Pancreatic exocrine insufficiency (PEI), Gut microbiota, Gut microbiome, Pancreatic enzyme replacement therapy (PERT)

Research Summary

This review mainly focused on the related animal and clinical studies on the effect of PEI on the gut microbiota, including the following aspects:

- Effect of pancreatic exocrine insufficiency on gut microbiota in clinical and animal studies**
- The mechanism underlying the effect of pancreatic exocrine function on gut microbiota**
- Effects of gut microbiota on the pancreatic exocrine acinus**

Innovation points

Three kinds of patterns for the effects of pancreatic exocrine secretions on the gut microbiota

- **pancreatic exocrine-secreted peptides and proteins that have regulatory or antimicrobial effects.**
- **pancreatic-secreted digestive enzymes that have antimicrobial effects on the gut microbiota.**
- **pancreatic secreted digestive enzymes, which could activate or catalyze antimicrobial activity**

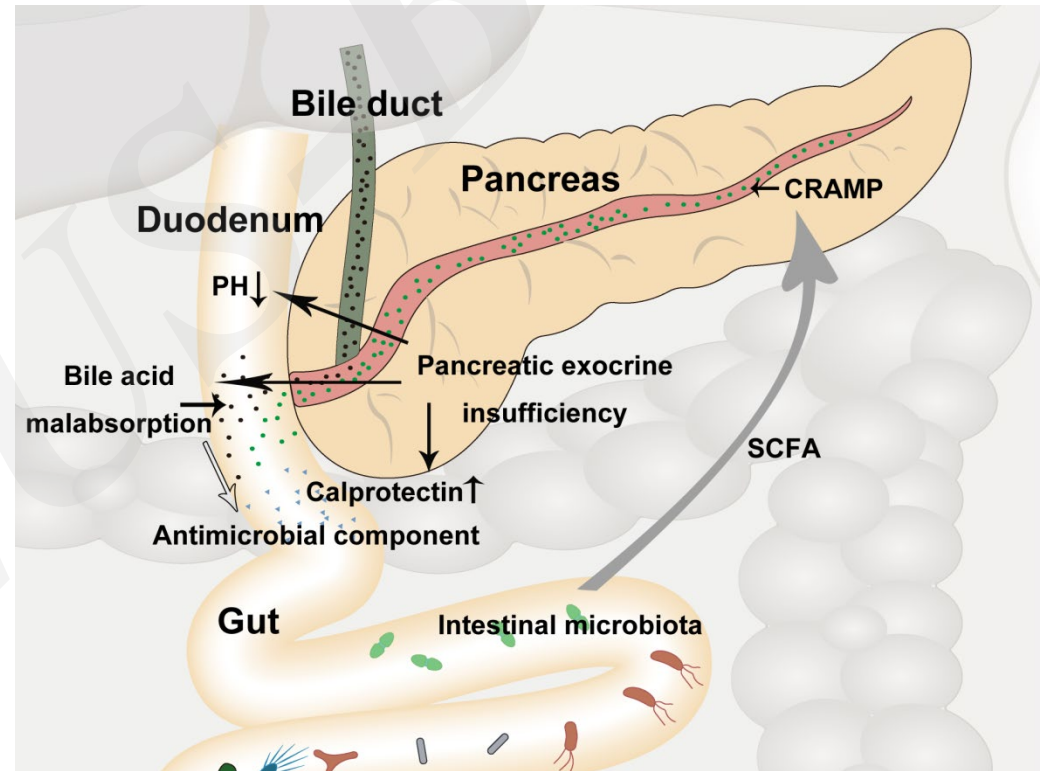


Figure 4

Innovation points

Gut microbiota abundance and composition may be affected and shaped by the following changes induced by PEI:

- 1 | pancreatic exocrine secretions
- 2 | relative oversupply of food
- 3 | changes in duodenal pH and bile salt malabsorption

The gut dysbiosis could be partially reversed by PERT.