Title: Intestinal barrier functions in digestive diseases

Research emphasis:

My doctoral dissertation focused on determining the role of chloride channel ClC-2 agonist in regulation of tight junction barrier using experimental inflammatory bowel disease (IBD) models. In my current research, I have developed a hypothesis indicating that ClC-2 regulates crypt homeostasis and tumorigenicity via regulation of the apical junctional complex. To investigate my hypothesis, I have developed a colitis-associated colorectal cancer model and an intestinal organoid 3D culture model in ClC-2+/+ and ClC-2-/- mice. I continue to explore the role of the epithelial junctional complex in intestinal injury and tumor development.

Applications:

- Animal Models
- Intestinal barrier function
- Apical Junctional Complex
- Stem Cells

Research Strengths:

- Enteroid and colonoid culture
- Murine and porcine models
- Western blotting
- Confocal Microscopic Analysis

Publications and Abstracts:


* These authors contributed equally to this work.