About this seminar: Dr. Zhou will describe that loss of HES1 expression is frequently found in human sessile serrated adenoma/polyps (SSA/p), ulcerative colitis (UC) and IBD-associated colorectal cancers (CRC). HES1-loss in KRAS mutant CRCs suppresses proliferation but promotes EMT and M2 macrophage polarization. By using a mouse model that resembles human HES1-negative UC and CRC, her lab investigated how colonic epithelium with disabled Notch/HES1 promotes inflammation and tumorigenesis by affecting gut mucosal integrity, influencing gut microflora, and impacting dendritic cell immunity. I will then describe that altered HES1 and ATOH1 dynamics is a prominent feature of UC. By using GEMM targeting Atoh1 in the colonic epithelium of the colitic mice, they investigated how Atoh1 influences inflammation and promotes tumorigenesis by disrupting tight junction and enhancing IL1-mediated transformation.

Reference(s):