DDC RESEARCH FORUM

DDC
Texas Medical Center Digestive Diseases Center

"HES1-loss in Colon Shapes an Immunosuppressive and Pro-tumorigenic Niche BD and Colorectal Cancer "

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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):

- Wang Y, Huang D, et al. Fucosylation-deficiency in Mice Leads to Colitis and Adenocarcinoma. Gastroenterology. 2017 Jan; 152(1):193-205.e10. PMCID: PMC5164974
- Wang L, Yu S, et al. Notch-regulated Dendritic Cells Restrain Inflammation-associated Carcinogenesis. Cancer Immunology Research 2021 Mar;9(3):348-361. PMCID: PMC7925430
- Wang L, Gu W, Zou B, et al. Loss of HES1 expression is associated with extracellular matrix remodeling and tumor immune suppression in KRAS mutant colon adenocarcinomas. Sci Reports 2023 (13): 15999. PMCID: PMC9949260

Baylor Main Campus
DeBakey Building
Auditorium M112

Refreshments provided.

Special raffle for in-person attendees who scan QR code to confirm attendance

Join via Zoom
951 0349 9512
Password: 2020

MAR 7
4:00 PM

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