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Opinion Article

Toll-like-Receptor and Takeda-G-Protein-Receptor-5 Interplay in Immunomodulation of Inflammatory Colorectal Cancer and Cholangiocarcinomas: Cancer-Immunotherapy Snapshot

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Article Info

Received: August 07, 2024
Accepted: August 19, 2024
Published: September 04, 2024

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Citation: Saumya Pandey. (2024) "Toll-like-Receptor and Takeda-G-Protein-Receptor-5 Interplay in Immunomodulation of Inflammatory Colorectal Cancer and Cholangiocarcinomas: Cancer-Immunotherapy Snapshot.", J of Gastroenterology and Hepatology Research, 5(2); DOI: 10.61148/2836-2888/GHR/051.

Abstract

Dissecting the cellular/molecular/genetic regulatory biochemical immune-inflammatory signaling networks, primarily Toll-like-Receptor and Takeda-G-Protein-Receptor-5 intersections in "gastrohepatic disease-web" primarily colorectal/cholangio-carcinomas, is essential for diminishing the disproportionate share of morbidities and mortalities in susceptible "at-risk" American cohorts of Texas, Nebraska and New York states in USA and Indian cohorts in Asia-Pacific region for eventual design of promising evidence-based patient-friendly cost-effective predictive and prognostic biomarkers and/or pharmacological scaffolds for future immune-therapeutically potent drugs with minimal adverse effects in the post-Covid-19/Omicron global pandemic and vaccination era.

Aberrant "metabolic-flux" in the hypoxic/vascular-insufficient/inflammatory heterogeneous tumour-core infiltrated with proliferative and/or necrotic/apoptotic/autophagic cells of distinct phenotypes, is a major hallmark of gastro-hepatic-cancers [3]; therapeutic targeting of "immunogenic cell-death cascade(s)" viz. autophagy-necrosis-apoptosis, offers fascinating avenues for future stem cells'-translational research in the Covid-19 pandemic era.

Pandey [1,2,4] has elegantly emphasized the significance of age-/ethnicity-matched disease-free controls from the general random population in multi-centric epidemiology/ pharmacogenetics/genomics studies for demystifying the cellular/molecular/genetic basis of inflammatory gastro-hepatic ailments in susceptible cohorts. Moreover, receptor-based heterogeneity of ghrelin is indeed intriguing wherein a single ghrelin receptor and/or interrelated co-receptor may have differential binding affinity, leading to altered metabolic flux in the host cell and tissue in aberrant physiologic mileu in the inflammatory gastric epithelium.

Future multi-centric large sample size-based case–control prospective studies adhering to core tenets of good practice ethical research with long-term patient satisfaction trends are warranted for precision-based novel Toll-like-Receptor and Takeda-G-Protein-Receptor-5 immunotherapeutics in colorectal/cholangio-carcinomas.

Conflicts of interest:
The author declares that she has no conflicts of interest and financial disclosures.

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