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Novel compositions for treating colitis and/or preventing colon cancer

New formulations offer a therapeutic approach for managing colitis and reducing the risk of colon cancer.

Researchers at Purdue University have developed a colon cancer prevention strategy that uses a combination of 5-LOX inhibitors and aspirin or other non-steroidal anti-inflammatory drugs (NSAIDs). Aspirin and other NSAIDs are commonly used as cancer preventative agents as they inhibit COX proteins, one of the primary promoters of inflammation and cancer progression. However, studies have suggested that long term COX inhibition can lead to gastrointestinal side effects and alternative metabolism of COX substrates via the 5-LOX protein pathway. The latter is problematic, because 5-LOX is also commonly overexpressed in cancers. The Researchers' approach inhibits both COX and 5-LOX to synergistically decrease cancer cell viability. In mice, tumor growth was inhibited, and a side effect of aspirin was alleviated. This technology minimizes side effects of using NSAIDs alone, shows efficacy in cellular and mouse models of colon cancer, and may also prevent cancers outside of the colon.

Advantages

-Synergistic anti-cancer effects

-Decreased inflammation versus NSAID only treatment

-Minimization of Side Effects Associated with NSAIDs

Potential Applications

-Colon cancer preventative treatment option

TRL: 3

Intellectual Property:

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Pharmaceuticals/Drug Discovery & Development

Authors
Qing Jiang
Cindy Nakatsu
Yiying Zhao

Further information
Raquel Peron
rperon@prf.org

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