



# Beta-Catenin Inhibitors

**IP Status:** Issued US Patent; **Application #:** 14/788,373

## Colorectal Cancer Treatment

Small molecule inhibitors of beta-catenin ( $\beta$ -catenin) have been created to treat colorectal cancer (CRC). The new small molecule inhibitors have shown no obvious side effects unlike current treatments for CRC, including surgery, chemotherapy, radiation, biological therapy, or a combination of these treatments, which can result have serious side effects. In the United States, CRC is the third leading cause of cancer-related deaths.

## $\beta$ -catenin Inhibitors

Up to 80% of colorectal tumors accumulate  $\beta$ -catenin because of inactivating mutations in the gene for adenomatous polyposis coli (apc). Rather than inhibiting the transcription of  $\beta$ -catenin, these new small molecule inhibitors disrupt the interaction of  $\beta$ -catenin and a related protein, Tcf-4, in the Wnt/ $\beta$ -catenin signaling pathway. Unlike other inhibitors and chemotherapeutic agents, this disruption results in potent anti-cancer activity without impacting important non-carcinogenic functions of  $\beta$ -catenin.

### BENEFITS AND FEATURES OF SMALL MOLECULE BETA-CATENIN INHIBITORS:

- Could be used to prevent and treat colorectal cancer (CRC)
- Demonstrates strong anti-cancer activity without obvious side effects
- Doesn't disrupt other necessary, non-carcinogenic functions of  $\beta$ -catenin, specifically in the Wnt/ $\beta$ -catenin signaling pathway

**Phase of Development** In vitro assessment

**Researchers:** Ann Bode, PhD Professor, Section Leader, Hormel Institute

**Technology ID**

20140141

**Category**

Life Sciences/Pharmaceuticals

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