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A Method of Treating Colorectal Cancer Using Atypical Protein Kinase C Inhibitors

Researchers at the University of South Florida have developed a method of treating colorectal cancer through the enzymatic inhibition of atypical protein kinase C (aPKC).

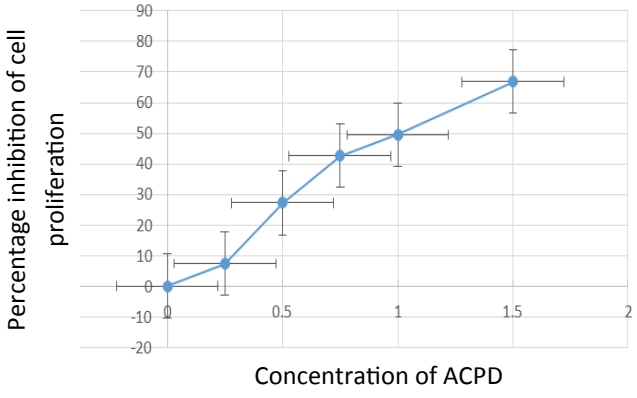
Worldwide, colorectal cancer is reported to be the second most common cancer. In regards to gender, it is the third most common cancer in men and the second most common cancer in women. Death from colorectal cancer accounts for about 8% of all cancer deaths. These cases are difficult to treat because the cells are notoriously known to be resistant to therapeutics. The exact mechanisms of cell growth, survival, metastasis and inter– and intracellular signaling pathways involved in colorectal cancer are not fully understood. However, researchers continue investigations in an attempt to further understand these mechanisms.

USF scientists have discovered that by inhibiting PKC-iota and PKC-zeta with certain drugs (ACPD, DNDA and ICA-1), a significant decrease in cancer cell proliferation is shown. Furthermore, an additional protein kinase inhibitor (zeta-Stat) demonstrated an increase in colorectal cancer cell death without compromising normal colon cell health. This novel method could improve treatments in colorectal cancer.

ADVANTAGES:

- **Reduces colorectal cancer cell growth and proliferation**
- **Does not harm healthy cells**
- **Applicable as anti-atypical PKC therapy**

Effective Inhibition of Colorectal Cancer Cell Growth and Proliferation



Percentage Inhibition of HT-29 Colorectal Cancer Cell Growth by the aPKC Inhibitor ACPD

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