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Colorectal cancer (CRC) is the second leading cause of deaths among all cancers. The colonic tumor microenvironment is strongly associated with chronic inflammation, in that immune cells' innate and adaptive responses usually favor tumor cell growth and progression. Sea cucumber extract Frondanol<sup>®</sup> A5 is known for its anti-inflammatory and immunostimulatory properties. In this study, Frondanol<sup>®</sup> A5 was tested for its chemopreventive activity against CRC using *Apc<sup>Min/+</sup>* mice. Frondanol<sup>®</sup> A5 had a significant inhibitory effect on small intestine and colon tumors. It increased innate immune responses against tumor formation; treated animals displayed an increase in phagocytosis and an increase in gamma-interferon-inducible lysosomal thiol reductase (GILT) expression. Frondanol<sup>®</sup> A5 markedly decreased inflammatory cytokines with decreased proliferation. Further, a significant decrease in the angiogenic marker VEGF was observed in treated tumors as illustrated by the cover micrograph (immunohistofluorescence staining of VEGF in Frondanol<sup>®</sup>-A5-treated small intestinal polyps). These results suggest that Frondanol<sup>®</sup> A5 is a safer agent, which exhibits significant chemopreventive potential against intestinal tumorigenesis. For more information, see the article by Janakiram et al. (beginning on page 327).



# Cancer Prevention Research

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