

INTESTINAL MICROBIOTA COMPOSITON AND THE RISK OF COLORECTAL CANCER - NOVEL APPROACH OF AN OLD ISSUE

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Abstract

Colorectal cancer is a multifactorial disease involving genetic, environmental and lifestyle risk factors. As a good example of chemical carcinogenesis, the recent studies increased a role of the intestinal microbiota in the development of this disease. This review is an attempt to summarize the current knowledge about the potential links between the intestinal microbiota, dietary style and colorectal cancer, emphasizing that changes in the intestinal microbiota composition, interfere with cell cycle regulation and the production of toxic metabolites that have deleterious effect on colorectal mucosa.

Different electronic databases such as PubMed, Google Scholar, and Web of Science were searched for relevant literature which has been reviewed in this article. We found that in this literature, several bacterial species have been shown to exhibit the pro-inflammatory and pro-carcinogenic properties, which could consequently have an impact on colorectal carcinogenesis. On the other side bacterial microbiota modifications through dietary style changes, could represent novel prognostic markers and/or targets for innovative therapeutic strategies. It means that exploitation of the gut microbiota offers opportunities for the personalization of chemotherapeutic regimens and the development of novel therapies for colorectal cancer patients.

Diversity of the microbial ecosystem favors organism homeostasis, particularly at the level of the cancer-immune dialogue. Therefore, the gut microbiota is both a target for nutritional intervention and a factor influencing the biological activity of other food compounds acquired orally, as well as a moderator of effective anticancer therapy.

Key words: *Colorectal cancer, Microbiota, Anticancer therapy, Dietary style.*