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- 79-82 **LACTOBACILLUS RHAMNOSUS EXOPOLYSACCHARIDE REDUCES MUTAGENIC POTENTIAL OF GENOTOXINS**
D. Thapa and H. Zhang

ABSTRACT: *Probiotic bacteria such as strains of Lactobacillus acidophilus, Lactobacillus rhamnosus, and Bifidobacterium spp., and their products of fermentation, are claimed to be antimutagenic and anticarcinogenic. Exopolysaccharide (EPS) producing probiotics significantly attenuated experimental colitis, which may be mediated by the EPS in a dose-dependent manner. Therefore, EPS-producing probiotics show promise as therapeutics for the treatment of inflammatory bowel disease, and possibly in the control of cancer. In our investigations, the antimutagenic properties of acid and bile salt tolerant exopolysaccharide-producing LAB against the mutagens 4-Nitroquinoline-N-oxide (NQNO), and 2-Nitrofluorine (NF) were studied. The ability of live and dead cells of L. rhamnosus YHOC 137 to bind mutagens was compared with that of L. plantarum NYC 30 and Lactobacillus brevis NVC14. L. rhamnosus YHOC 137 showed 25 to 70% adsorption of both mutagens and L. brevis NVC14 showed less than 20% adsorption. Milk cultured with L. rhamnosus YHOC137 showed significant ($P < 0.001$) reduction of revertants in both mutagens. Fermented milk and acetone extract showed antimutagenicity levels of 29.18 to 38.91% and 8.67% to 54.46%, respectively, depending upon the tested strains. The high molecular weight neutral heteropolysaccharide had less effect against mutagenicity caused by 4NQNO but was effective against 2NF.*

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- 83-86 **DIET INDUCED CHANGES IN FECAL BACTERIAL ENZYMES**

Emilia Hijova, Anna Chmelarova, and Alojz Bomba

ABSTRACT: *We have investigated the modulatory effect of prebiotic, plant extract and polyunsaturated fatty acid on the activity of fecal bacterial enzymes in N,N-dimethylhydrazine (DMH)-treated Wistar rats fed high-fat diet and conventional laboratory diet. DMH treatment in combination with HF diet significantly increased the activities of β -galactosidase, β -glucuronidase, and α -glucosidase ($p < 0.001$) in comparison to DMH-treated control group on conventional diet. Treatment with inulin, *Hyppocastani extractum siccum* and *Lini oleum virginale* led to a significant decrease ($p < 0.001$) in the activity of β -galactosidase, β -glucuronidase, and α -glucosidase. These results show a protective effect of selected substances against DMH induced colon cancer and may be the useful candidate agents for colon cancer prevention and treatment.*

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A RANDOMIZED DOUBLE BLIND PLACEBO CONTROLLED TRIAL TO EVALUATE THE EFFICACY AND SAFETY OF BIFILAC IN CHILDREN WITH ACUTE ROTAVIRAL DIARRHEA
D. Narayanappa

ABSTRACT: *In a randomized double blind placebo controlled trial of a pre & probiotic formulation (Bifilac), in children in the age group of three months to three years, a statistically significant reduction in the frequency and duration of diarrhea and Rotavirus shedding was observed in those children treated with Bifilac along with oral rehydration solution (ORS). The rehydration solution was as per World health organization recommendation or intravenous fluids, as the case may be. Besides, the duration and volume of oral rehydration solution (ORS) and intravenous fluid therapy were also significantly reduced in those children treated with Bifilac. Bifilac was found to be safe for children in this study.*