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## Exploring the ameliorative potential of probiotic dahi containing *Lactobacillus acidophilus* and *Bifidobacterium bifidum* on dextran sulfate sodium induced ulcerative colitis in mice

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Conventional medical therapies for ulcerative colitis (UC) are still limited by its adverse effects and not potent enough to keep in Gremission for long-term periods. So, new alternatives that provide more effective and safe therapies for ulcerative colitis are constantly being saught. In the present study, probiotic LaBb Dahi was selected to investigate its therapeutic effect on DSS-induced UC model in mice. LaBb Dahi was prepared by co-culturing Dahi culture of Lactococci along with selected strain of *Lactobacillus acidophilus* LaVK2 and *Bifidobacterium bifidum* BbVK3 in buffalo milk. Four groups of mice (12 each) were fed for 17 days of buffalo milk (normal control), buffalo milk plus DSS (UC control), Dahi plus DSS, and LaBb-Dahi plus DSS, respectively, with basal diet. The disease activity scores, weight loss, organ weight, colon length, myeloperoxidase (MPO) and  $\beta$ -glucoronidase activity was assessed, and the histopathological picture of the colon of mice was studied. All UC control mice evidenced significant increase in MPO,  $\beta$ -glucoronidase activity and showed high disease activity scores along with histological damage to colonic tissue. Feeding with LaBb Dahi offered significant reduction in MPO activity,  $\beta$ -glucoronidase activity and improved disease activity scores. We found significant decline in length of colon, organ weight and body weight in UC induced controls which were improved significantly by feeding LaBb Dahi. The present study suggests that LaBb Dahi can be used as a potential nutraceutical intervention to combat UC related changes and may offer effective adjunctive treatment for management of UC.

## Biography

Sagar Jadhav has completed his B.V.Sc & A.H. with distinction from Maharashtra Animal and Fishery Science University Nagpur and completed his post-graduation studies from National Dairy Research Institute, Karnal, Haryana. He has consistent academic record with distinction. He has been awarded as Junior Research Fellow by Indian Counsil of Agricultural Research. He has published one research and review article in international journal. He also published three abstracts in International conferences and has been invited for oral presentation.

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