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Comparison of local with imported probiotic species regarding oxidative stress, liver enzymes and hormonal dynamics in rat's model

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The gastrointestinal tract is a multifaceted ecosystem host to an assorted and highly evolved microbial community comprised of different microbial species. The interactions that occur between this multifarious microbial community and the host have become the focus of scientific research due to involvement of deficient or compromised microflora in the increased occurrence of illnesses. Probiotics are composite of these live microbial preparations which can be used as supplementation to boost or alter the gut microbial ecology. However, the viability and adaptation of these supplemented microbial population is of great concern. Current project is designed to investigate the efficacy of locally prevailing microbial species (LP group) compared with the commercially available probiotic supplements (IP group), which are imported in nature. The significance was tested regarding the oxidative stress markers, liver enzymes, cholesterol profile and hormonal dynamics in albino Wistar rat model. Total oxidant status decreased significantly ($P \leq 0.05$) in the LP group as compared to IP and control (Cont.). The TAC was improved ($P \leq 0.05$) in LP as compared to the IP group. Liver enzymes AST, ALT and total cholesterol decreased ($P \leq 0.05$) in LP group as compared to IP. Growth and luteinizing hormone decreased ($P \leq 0.05$) in IP as compared to LP. The use of local probiotic species shows promising results regarding the reduction in oxidative stress, liver enzymes and cholesterol over the imported probiotic species.

Biography

Haseeb Anwar has completed his Doctoral degree from the Institute of Pharmacy, Physiology and Pharmacology, University of Agriculture, Faisalabad, Pakistan in 2011. Thereafter, he joined the Department of Microbiology from Government College University, Faisalabad, Pakistan as an Assistant Professor. In 2013, he joined the Department of Physiology as an Incharge of the Department in the same University to date. He has published more than 30 articles in international journals, and presented in more than 15 conferences and won several research projects and international trainings since 2012 to date. He recently received certificate of appreciation and research productivity award.

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