

Preparation of a cereal based probiotic drink and its antimicrobial activity

Silas Saka, Ch. Srikanth Samrat, I. Sarat Babu, V. Rama Rao and K. Aruna Lakshmi

Department of Biotechnology, GITAM Institute of Technology, GITAM University, India

Probiotics are live microorganisms that are similar to beneficial microorganisms found in the human gut. Probiotics are available to consumers mainly in the form of dietary supplements and foods. These produce important enzymes and increase the availability of vitamins and nutrients, especially vitamin B, vitamin K, lactase, fatty acids and calcium. They help to kill viruses and parasites thus providing benefits of increased health. Yeast and fungal infections are prevented, and sometimes eliminated with supplements of probiotics. In rural areas, people generally do not consume probiotics rich foods, thus making them prone to diseases such as diarrhea, dysentery and similar other stomach disorders. An attempt is made in the present study to make a millet based probiotic drink. *Lactobacillus* was isolated from curd and grown in lactose medium and incubated for 24 hrs. Fifty microlitres of this broth was inoculated into aqueous extracts of *Zea mays* (corn), *Oryza sativa* (rice) and *Eleusine coracana* (finger millet) and the growth of *Lactobacillus* after 48 h was quantified. Changes in pH, acidity, sugar content, and viable cell counts were monitored. Best growth was observed on rice extracts. Antimicrobial activity of the probiotics extract was evaluated against pathogens such as *Salmonella typhi*, *Shigella dysenterica* and *Mycobacterium smegmatis* and observed maximum zone of inhibition for *Lactobacillus* isolated from *Oryza sativa*. Thus, the present work gives scope for administering *Lactobacillus* inoculated rice extract as probiotic supplement especially for the economical weaker sections.

silaschem@rediffmail.com