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Lactobacillus acidophilus DDS®-1, the broad spectrum probiotic

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Abstract

Lactobacillus acidophilus DDS®-1(DDS-1), a gram-positive, non-spore forming homo-fermentive, catalage-negative rod, is an inhabitant of the human intestinal tract. For more than two decades, DDS®-1 strain has been marketed commercially worldwide as an effective probiotic strain. It has been the subject of a variety of *in vitro*, human, animal studies for more than 40 years. The focus of the efficacy research on this strain has been on its nutritional, antibacterial and anti-pathogenic, anti-carcinogenic and technological properties. Studies confirm that DDS-1 is acid and bile resistant and has the ability to colonize in the digestive track. Several studies have demonstrated the diverse beneficial effects of DDS®-1 validating its use as a broad-spectrum probiotic. These studies show DDS®-1 produces an antibacterial compound called acidophillin that demonstrates activities against pathogenic bacteria. DDS®-1 protects human epithelial cell lines from invasion by enteroinvasive *Escherichia coli*. DDS-1 was demonstrated to be effective in controlling atopic dermatitis in preschool children and reducing incidence of cold and flu. Other studies show DDS-1 can increase phagocytic and lymphocytic activity in mice, modulates the immune system. Other studies have demonstrated that DDS-1 has the ability to produce enzymes such as protease and lipase, improve digestion and boost immune function. DDS-1 has demonstrated reduction of IBS symptoms, and cholesterol lowering effect in a rat model.

With the incorporation of a patented technology into manufacturing of DDS-1, it is stable for up to two years at ambient temperature (23 °C).

Biography

Dr. S. K. Dash is an adjunct professor of Health and Nutritional Sciences at South Dakota State University and Director of Research and President of UAS Laboratories, Inc. He has published more than 30 research papers in scientific journals and spoken at national and international conferences. Dr. Dash has served/ is serving on the National Probiotic Committee and International Probiotic Association. Dr. Dash is the former Food and Drug Director of South Dakota State. He has been honored as the distinguished man of the year and received the 2010 Frost & Sullivan Award for his probiotic research and innovations.