

Animal Probiotics vs Plant Probiotics

Sejong Oh

Division of Animal Science, Chonnam National University, 77 Yongbong-ro, Puk-gu, Gwangju
500-757, South Korea

E-mail: soh@jnu.ac.kr

Abstract

Probiotics is largely used for the production of fermented products of animal (dairy) and plant origin. Recently, fruit or vegetable products containing probiotics are preferred by some consumers. In the formulation of fruit or vegetable probiotic products, *Lactobacillus acidophilus*, *L. casei*, *L. plantarum*, *L. rhamnosus* and *Bifidobacterium lactis* are most utilized. European, American and Asian (especially in Japan and South Korea) markets already commonly sell probiotic products from fruits and vegetables. *Lactobacillus plantarum*, as a heterogeneous and versatile species that is encountered in a variety of environmental niches, including fermented food products, such as dairy, meat, fish, and vegetables, as well as plant matter. This species exhibits various biological effects such as antitumor, anticoagulant, antiviral, immune modulatory and anti-inflammatory, anti-diabetic, and anti-oxidant or free radical scavenging activity. My research group discovered that *L. plantarum* strain isolated from infant feces has a high survival rate in low pH conditions. Proteins isolated from *L. plantarum* L67 could stimulate the apoptotic signals and then consequently induce programmed cell death in HT-29 cells. The results in this study suggest that *L. plantarum* L67 could be used as a probiotic culture for the production of dairy or vegetable fermented foods.

A common believe many people understand is that plant based fat is much healthier than animal fat. However, there is a huge misconception when it comes to probiotics. Many companies insist that plant origin-probiotics are superior than animal-origin probiotics without any scientific data that supports the claim. How are plant proteins much better than animal proteins for human health? Simple answer is that it is not. This claim is no different from a form of social gossip. Many people think this claim is true because many companies advertise their products in such matter. The advertisements are misleading and spread false ideations that animal based probiotics are nowhere near healthy as plant based.

In conclusion, we all need to focus on defining what types of probiotics are beneficial to us despite the origin.

Biography

Dr Sejong Oh earned his BSc degree from Korea University and his PhD majoring in Dairy Chemistry & Biotechnology from Korea University as well. He joined the R & D Center of Korea Yakult Co. Ltd in 1990. In 1998, Dr Sejong Oh has worked for the New York State Experimental Station in the Department of Food Science & Technology, Cornell University. In 2003 Dr Sejong Oh was appointed to the Division of Animal Science, Chonnam National University as a professor. In 2008 he was appointed as a Visiting Scientist at the Canadian Research Institute for Food Safety, University of Guelph. His current research interests include factors of controlling growth and survival of microorganisms in foods; beneficial uses of microorganisms; and applications of bacteriocins produced by lactic acid bacteria. Dr Sejong Oh has authored more than 100 peer-reviewed publications, five book chapters (3 Korean and 3 English) and 35 patents including 2 US patents. He is also an Editor at the *Journal of Milk Science & Biotechnology*, and the *Current Topics in Lactic Acid Bacteria and Probiotics*. Dr Oh is an Associate Scientific Editor at the *Journal of Animal Science & Technology*, and the *Korean Journal for Food Science of Animal Resources*. Dr Sejong Oh is currently a member of the American Society for Microbiology, the American Dairy Science Association, the Institute of Food Technologists, and the Microbiological Society of Korea.