

The potential of *Lactobacillus rhamnosus* and *Lactobacillus plantarum* isolated from goat's milk in inhibiting *Salmonella typhimurium* ATCC 14028 infections in rats

Publons ID	17899173
Wos ID	WOS:000427098500047
Doi	
Title	The potential of <i>Lactobacillus rhamnosus</i> and <i>Lactobacillus plantarum</i> isolated from goat's milk in inhibiting <i>Salmonella typhimurium</i> ATCC 14028 infections in rats
First Author	Setyawardani, T.; Rahayu, W. P.; Palupi, N. S.; Sumarmono, J.;
Last Author	
Authors	Setyawardani, T; Rahayu, WP; Palupi, NS; Sumarmono, J;
Publish Date	DEC 2017
Journal Name	INTERNATIONAL FOOD RESEARCH JOURNAL
Citation	2
Abstract	<p>Probiotic is live non-pathogenic microorganisms that give beneficial effects on health when they are administered in adequate amounts. The objective of the study was to evaluate the influence of Lactic Acid Bacteria (LAB) isolates (<i>L. rhamnosus</i> and <i>L. plantarum</i>) as well as cheese containing the probiotics on microflora profiles, morphological profile of ileum and caecum, and immunomodulator potency by measuring lymphocyte proliferation and IgA levels in rats. Male Sprague Dawley rats were fed with the probiotics or cheese containing the probiotics for 10 days, infected with <i>S. typhimurium</i> for 3 days, and continued to be fed with or without the probiotics or the cheese. A total of 6 treatments were applied, which were: (pro-typ-pro, pro-typ-std, che-typ-che, che-typ-std, pro-PBS-pro, and std-typ-std). The measured variables were the number of LAB and <i>S. typhimurium</i> colonies, lymphocyte cells, and the level of SIgA. The results showed that the highest number of LAB in the ileum and caecum in probiotic fed rats (pro-typ-std followed by pro-typ-pro) as compared to the control, whereas number of <i>S. typhimurium</i> was lower. The study showed that the treatment of probiotic isolate was able to improve the number of lymphocyte during the first 10 days, during the infection of <i>S. typhimurium</i>, and post infection stage. The treatment of probiotic isolate was able to improve SIgA at the time of <i>S. typhimurium</i> intervention. In conclusion, mixed isolates of <i>L. rhamnosus</i> and <i>L. plantarum</i> and cheese containing the probiotics were able to show preventive and remedial functions during <i>S. typhimurium</i> ATCC 14028 infection, thus demonstrate the potential to be used as probiotic cultures. (c) All Rights Reserved</p>
Publish Type	Journal
Publish Year	2017
Page Begin	2625
Page End	2631
Issn	1985-4668
Eissn	2231-7546
Url	https://www.webofscience.com/wos/woscc/full-record/WOS:000427098500047
Author	Dr TRIANA SETYAWARDANI, M.P.