

天津医科大学研究生院实验伦理申请表

课题名称	The Effect of Lactobacillus Rhamnosus GG Supernatant on Serotonin Transporter Expression in Rats with Post-Infectious Irritable Bowel Syndrome		
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摘要	<p>Background The probiotics are approved to be used to relieve irritable-bowel syndrome (IBS), but the mechanism is unclear. This study tests the expression levels of SERT (serotonin transporter expression) mRNA and SERT-protein (SERT-P) to evaluate the affection of Lactobacillus rhamnosus GG supernatant (LGG-s) in the PI-IBS (post-infectious IBS) rats.</p> <p>Methods 10^{10}cfu/ml Campylobacter-jejuni 81-176 was used to make an intestinal-infection to build the PI-IBS models. After evaluation of the post-infectious phase, the control and four PI-IBS groups received supplements of different concentrations for 4 weeks. SERT-mRNA and SERT-P levels were detected by Real-Time-PCR and Western-blotting.</p> <p>Results The levels of SERT-mRNA and SERT-P were higher than those in control-group and PI-IBS gavaged with PBS-group in intestines of rats during the whole study. Undiluted-LGG-s up-regulated SERT-mRNA levels by 2.67-times the control-group by second week and continued increasing. Double-diluted LGG-s was similar to undiluted-LGG-s, maintaining a high-level of SERT-mRNA. Triple-diluted LGG-s up-regulated SERT-mRNA expression levels by 6.9-times the control-group, but decreased rapidly at the end of second week. SERT-P levels were basically flat for undiluted-LGG-s, double-diluted LGG-s and triple-diluted LGG-s, higher than control-group and PI-IBS PBS group. It was basically flat for B, C and D by the second and third week in the intestines of rats. SERT-mRNA and SERT-P levels in the brain of the rats had no statistical significance in the groups during the experiment.</p> <p>Conclusions LGG-s could up-regulate SERT mRNA and SERT-P levels in rat intestinal tissues and has no influence in rat brain tissues.</p>		
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