

The cardioprotection for Diabetes Mellitus rat cardiomyocyte of lactic acid bacteria

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We aim to investigate the impact of diabetes mellitus (DM) on the wistar rats heart, and evaluate the role of lactobacillus against DM induced cell apoptosis in wistar rats heart. The 5-week-old male wistar rats were divided into normal control group, DM group (10mg / kgw, for Intraperitoneal injection), and DM animals with lactic acid bacteria (500mg / kg / day, treatment for 4 weeks). The H&E stain, TUNEL assay and Western blotting were performed. The abnormal heart architecture, TUNEL-positive cells proteins, as well as the activity of Fas-dependent and mitochondrial-dependent apoptotic pathway, were significantly increased in DM group compared to control. The evidence for which is based on increases in Fas, Fas ligand, FADD, activated Bak, Bax, Cytochrome C and activated Caspase-3. Furthermore, we found all of which are significantly attenuated by lactic acid bacteria treatment.

Keywords : diabetes mellitus, apoptosis, lactic acid bacteria, cardiomyopathy