

Role of Nitric Oxide Produced by Lactobacilli in Relaxation of Intestinal Smooth Muscles

Yarullina D., Mikheeva R., Sabirullina G., Zelenikhin P., Ilinskaya O., Sitdikova G.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© 2016, Springer Science+Business Media New York. Application of NO-producing lactobacilli to a rat jejunum segment induced muscle relaxation that was potentiated after activation of bacterial NO production with NO synthase substrate L-arginine. Similar changes in the intestinal contractile activity were observed in response to exogenous NO formed by sodium nitroprusside. These results indicated the involvement of NO synthesized by probiotic lactobacilli in the regulation of the intestinal motor function.

<http://dx.doi.org/10.1007/s10517-016-3166-z>

Keywords

Lactobacillus plantarum, nitric oxide, rat jejunum, smooth musculature, spontaneous contractile activity