

# 3<sup>rd</sup> International Conference and Exhibition on **Probiotics, Functional & Baby Foods** September 23-25, 2014 Hotel Royal Continental, Naples, Italy

## *Lactobacillus* diversity isolated from normal human population in Iran

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Lactic acid bacteria have been considered as probiotic organisms due to their potential properties which can benefit human health. This study was conducted in order to evaluate the phenotypic characteristics and the probiotic potential of Lactobacilli isolated from healthy human fecal samples in Iran who were living in rural and urban areas. From 53 healthy individual, a total of 470 lactic acid bacteria (LAB) from fecal samples were isolated. The results showed 18% of the isolates were acid and bile resistant. Amongst the isolates, *L. plantrum*, *L. casei*, *L. rhamnosus* were 48%, 18% and 15%, respectively. The isolated bacteria were identified and characterized and potential probiotic properties were evaluated. Anti proliferation activity (XTT assay), anti bacterial effect and B12 production were examined. The results showed that 10 *Lactobacillus* spp. were resistant to acid and bile and could attached to Caco-2 cells. Examination of anti bacterial effects by the lactobacillus isolates using agar diffusion method showed anti bacterial activities against number of pathogens including Salmonella, Eschrichia, Yersinia, Shigella, Listeria and so on. Overall, the results showed that the probiotic microorganisms isolated from normal humans express various in vitro biological activities.

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