

PREVENTION OF RECURRENT URINARY TRACT INFECTIONS: EFFICACY OF A FORMULATION CONTAINING THE SELECTED LACTOBACILLUS PARACASEI LC11, CRANBERRY AND D-MANNOSE

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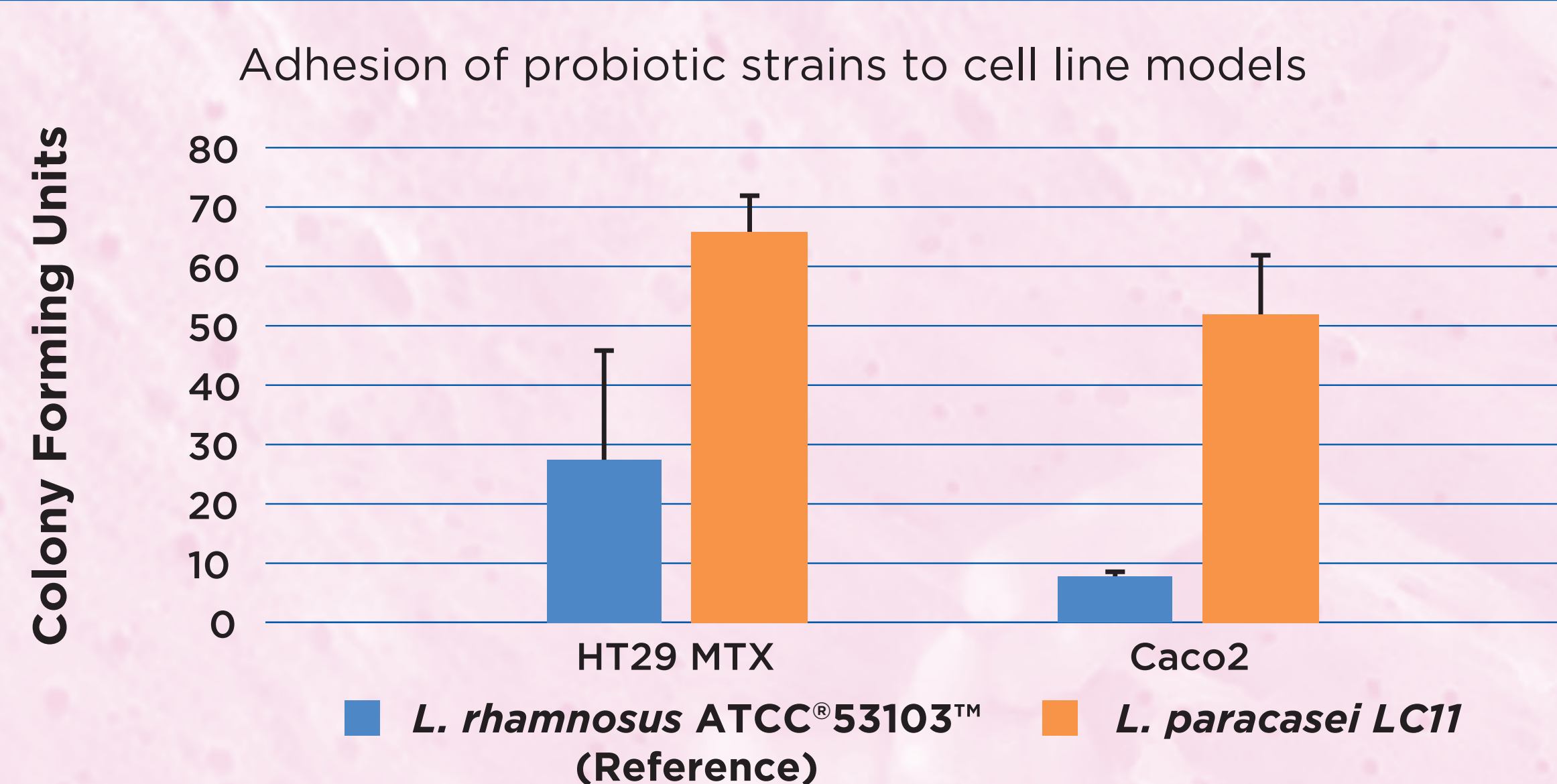
ABSTRACT:

OBJECTIVE: *Lactobacillus paracasei* LC11, (Proge Farm, Italy) has been tested in vitro for antimicrobial activity versus different microorganisms including *E. coli*, and for adhesion to the intestinal mucosa.

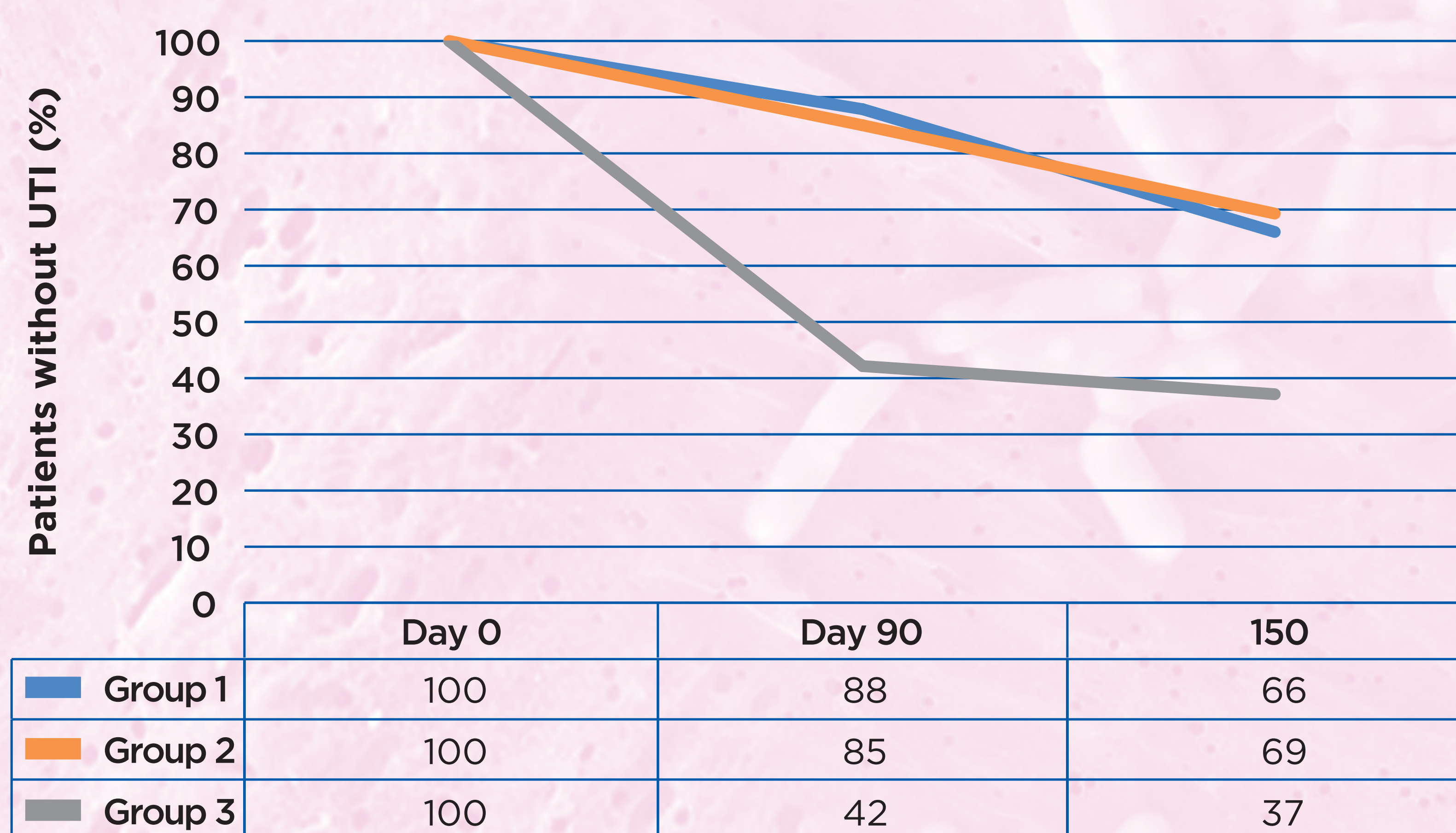
Considering the promising results, LC11 has been included in the formulation of a probiotic food supplement (Lactoflorene® Cist) in combination with Cranberry extract and D-Mannose.

The high antagonist activity against *E.coli*, the high resistance to gastro-intestinal conditions, the efficient adhesion to intestinal epithelial cells are key factors of success for LC11 strain in the prevention of uncomplicated recurrent UTI, in synergistic combination with the other ingredients.

METHODS: 45 premenopausal women aged 18-50 years with acute UTI and a history of recurrences have been enrolled. Patients received fosfomycin once a day for two consecutive days and were randomly assigned to **GROUP 1** (receiving Lactoflorene® Cist once a day for 10 days/month for 3 months), **GROUP 2** (receiving Lactoflorene® Cist once a day for 90 days) and **GROUP 3** no treatment (control). Three visits were scheduled: inclusion and first visit (day 0), a control visits after the end of treatment with Lactoflorene® Cist (day 90) and a final visit of follow up (day 150).



E. coli inhibition halos by LC11 living cells and acidic crude extract from culture supernatant



Percentage of patients remaining cystitis-free during the 150-days clinical trial period

RESULTS: the recurrent cystitis episodes were significantly lower in both group 1 and group 2 (53% vs 16%, $p < 0,01$) compared to control. During the 6 months follow up there were no differences in recurrent cystitis episodes in group 1 and group 2 (66% vs 69%, $p < 0,02$). The number of recurrent cystitis episodes was significantly higher in no prophylaxis group compared to Lactoflorene®Cist groups (53% vs 16% $P < 0,01$).

CONCLUSIONS: Lactoflorene®Cist was effective in the prevention of recurrent cystitis episodes.

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