Effectiveness of an association of a cranberry dried extract, D-mannose and the three microorganisms *L. plantarum* LP01, *L. paracasei* LPC09 and *S. thermophilus* ST10 in women affected by cystitis: A pilot study

**Objective:** Urinary Tract Infections (UTIs) are the most common bacterial infection in women. Most UTIs are acute uncomplicated cystitis caused by *Escherichia coli* (86%). This study was undertaken to assess the effectiveness of an association of a cranberry dried extract, D-mannose and the three microorganisms *L. plantarum* LP01 (LMG P-21021), *L. paracasei* LPC09 (DSM 24243) and *S. thermophilus* ST10 (DSM 25246) in women affected by cystitis.

**Methods:** 33 premenopausal, non-pregnant women diagnosed with acute uncomplicated cystitis were enrolled in a pilot prospective study. Subjects were directed to take two doses per day during the first month, then to continue with 1 sachet per day until the sixtieth day. Nitrites and leukocyte esterase on urine dipstick testing were used as indicators of cystitis, with analysis performed at enrolment, after 30 and 60 days, and after one month of follow-up.

**Results:** Positive results for the presence of nitrites and leukocyte esterase were found in 14 and 20 subjects after 30 days and in 9 and 14 women after 60 days, respectively (p<0.001). At the end of the follow-up period relapses were recorded in only 4 out of 24 subjects (16.7%, p=0.103) with negative results after 60 days, therefore suggesting the long-term barrier effect exerted by the product. Typical symptoms of cystitis, like dysuria, frequent voiding and urgency were significantly improved as well.

**Conclusions:** The long-term ability of an association of cranberry, D-mannose and the three microorganisms tested to significantly improve the uncomfortable symptoms reported by women with acute cystitis has been verified.

**Biography**
Franco Vicariotto, Medicine Doctor (PhD-medicine), is a specialist in Obstetrics and Gynecology and is now senior consultant of San Pio X Hospital of Milan. He has been deputy head of division of Ob/Gyn. of Niguarda Hospital of Milan for almost 20 years where he had conducted important researches in the field of Infectious Diseases in Obstetrics and Gynecology. He is one of the founders and Vice-president of the scientific society Esidog Italia (European Society for Infectious Diseases in Obstetrics and Gynaecology) and the member of the National board of S.I.C. (Italian society of Contraception). He is author of many publications and recognized moderator-spokesman in specialized conferences in Italy and abroad.

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