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# Immunomodulation and antimicrobial therapy in *Salmonella* infection

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## Abstract

Combined therapies which involve the immune system and antimicrobial drugs represent a successful model for the treatment of infectious diseases. In view of therapeutic failures on the treatment of local or systemic infections generated by *Salmonella* serotype Enteritidis, appear the need to optimize the therapy using the potentiation in combined treatments between immunomodulators and antimicrobials with suitable pharmacological properties. As immunomodulator was used cell wall extract of the probiotic strain *Enterococcus faecalis* CECT 7121 (PEFCECT7121). Combined therapy between PEFCECT7121 and Fluorquinolones in a LD99 Blab-c- infection model (representing a systemic infection model) were evaluated. The outcomes observed in this study, demonstrated a potentiation on the therapeutic effect when the combination of PEFCECT7121 and Ciprofloxacin were given to the experimental systemic infection mice-model, compared with separated administration. In line with these results, administration of PEFCECT7121 modified the cytokine pattern expressed by peritoneal macrophages. When these cells were stimulated with *Salmonella* serotype Enteritidis, higher levels of TNF_, IL- 6, IL-10 e IL-12 were detected. These findings indicate that PEFCECT7121 modulates the innate systemic immune response by inducing the synthesis of homeostatic cytokines (IL-12 and IL-10). Immunomodulation may be a useful complementary tool in combined suitable antimicrobial therapy.

## Biography

Monica Sparo has obtained the Academic Degree of Ph.D. in Biochemistry, Microbiology Area, from Universidad Nacional de Buenos Aires of Argentina. She is Professor at the Universidad Nacional del Centro de Buenos Aires, School of Medicine, Clinical Department. Her main research areas are antimicrobial resistance and bacterial pathogenicity determinants. She has been awarded 17 grants for research projects. In 1996, The House of Representatives of the Province of Buenos Aires has given her an award as outstanding scientist in the area of Public Health. She has published more than 50 papers in reputed journals.