

Effects of soy-derivatives ingestion in experimental breast cancer

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Breast cancer is one of the most common sicknesses among women and its incidence is worldwide. Soy-derived foods and foods fermented by the "probiotic" lactic bacteria can inhibit the disease progression, stimulating macrophages, which are cells involved in the resistance to neoplasia development. In this study we evaluated antitumoral activity of macrophages in a mammary murine adenocarcinoma tumor cell (LM3) inoculated in Balb/c female mice that were given soy-derivatives and fermented foods (Yogurt and Supplemented with isoflavones) from lactic bacteria *Enterococcus faecium* CRI 183 and *Lactobacillus jugurti* 416. Animals were separated into 5 different groups: Control, Tumor (without treatment, inoculated with LM3 cell), Milk, Yogurt and Supplemented (inoculated with LM3

cell). We analyzed the host commitment in corporal weight and tumor volume (verifying that Tumor group animals presented a higher weight and tumor volume compared to other groups). We also analyzed the *in vitro* performance of peritoneal macrophages on cytotoxicity, nitric oxide (NO) and tumor necrosis factor-alpha (TNF- α) production. Tests were concordant among themselves, and showed a significant response of decreasing order: Supplemented>Yogurt>Milk>Tumor, leading us to conclude that the tumor presented a less effective immunological system, compared to the others. The presence of lactic bacteria in the yogurt and supplemented groups presented an improvement in the immunological response; and the isoflavones added to fermented food (Supplemented) was shown to be the best combination tested by us.