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Modulation of the cytotoxic activity of murine macrophages by flavones

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The effect of flavonoids (13 flavones and isoflavones) on the production of nitrite and on luminol – dependent chemiluminescence by murine activated peritoneal macrophages (F4/80 positive) was studied *in vitro*. The accumulated nitrite as a stable final product of nitric oxide (NO) was determined by the Griess reaction. Nitrite production was inhibited by flavonoids. 3'-Amino-4'-hydroxyflavone were the most potent inhibitors of nitrite production. These compounds also inhibited chemiluminescence. Chemiluminescence was used in this study as an indicator for production of reactive oxygen species ((ROIs) by macrophages. These data suggested a causative connection between NO and ROIs production in macrophages. Also these results show that the flavones can modulate the immune response and the inflammatory reactions by controlling production of NO.