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**Anticarcinogenic effect of coadministration of  $\alpha$ - $\beta$  unsaturated compounds and quercetin**

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The effect of co-administration of  $\alpha$ - $\beta$  unsaturated compounds derivatives of benzoic acid and the flavonoid quercetin were evaluated in a variety of established human cancer cell lines. The synergic effect of these two chemicals showed anti-proliferative activity in cancer liver cells of 90% and in cancer cervical cells of 60% at 48 hours post-treatment. Additionally significant events of apoptosis were observed in 90% of the cell population, when benzoic acid and quercetin were administered together. Independent treatments, quercetin or  $\alpha$ - $\beta$  unsaturated compounds decrease the migratory ability of HepG2, HuH7 and HeLa, however the coadministration of both exerted a higher effect. It is suggested by *in silico* studies of  $\alpha$ - $\beta$  unsaturated compounds, that through 1,4-addition reactions Michael type, they can selectively react with glutathione (GSH). High levels of GSH participate as a defense mechanism characteristic of cancer cells, thereby, inhibiting free radical induced cell death. Summarizing the co-administration of these compounds induce programmed cell death, probably by disrupting the cellular redox homeostasis, so further studies of the effect of independent or coadministration of these compounds, will give us the best way to use them as chemotherapeutic agents.

**Biography**

Gabriela Carrasco Torres is currently pursuing Master of Science in Pharmacology at the School of Medicine of the Instituto Politecnico Nacional. She has attended national and international conferences as well as scientific research summers. In 2015 she has published his first article in an indexed journal.

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