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Prunus serotina Erth rich in flavonoids and coumarins, is cytotoxic to the tumor cell line Hela

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There is great diversity in Mexico and many flora and faunaspecies that remain to be studied. One example is *Prunus serotina* Erth. An ethanolic extract from the fruit was prepared, in its chemical composition showed a lot of secondary metabolites. Besides, since cancer is a disease with high incidence rate and mortality, there is much interest in developing new treatments for chemotherapy or chemoprotection, based in Mexican plants. In Mexico, breast and cervical cancer stand out with high figures of impact and mortality. Cancer is defined as the alteration of cell cycle, resulting of uncontrolled proliferation and inhibition of apoptosis. Certainly, secondary metabolites from plants may perform as inhibitors of proliferation or directly as cytotoxic molecules, inducing apoptosis or necrosis in tumor cells. A probable antitumor effect of the fruit from *Prunus serotina* Erth (locally named capulín), is currently being conducted in our labs, using the HeLa cells *in vitro* model. The ethanolic extract from the fruit was further chromatographed on a dry silica gel column. The fractions were chemically and biological tested for their content. The extract and fractions were used for treatments to the HeLa cells *in vitro* and the cytotoxic effect was initially observed by inverted optic microscopy and death was estimated by flow cytometry techniques. The fractions were obtained using 80-20 % methanol-acetone and numbers 3 and 4 tested positive for alkaloids, flavonoids and coumarins. Both showed cytotoxic effect and the fractions had better cytotoxicity than the ethanolic extract.

Biography

Rafael Silva Torres has completed his PhD. at the age of 57 years from Escuela Nacional de Ciencias Biológicas of National Polytechnic Institute and abroad studies M. Phil. from Loughborough University of Technology Great Britain and sabbatical year from Museum National D'Histoire Naturelle Paris France. He has published more than 14 papers in reputed journals and 1 book chapters and has been serving as an editorial board member of reputed journals. He was director of 45 Bsc. Thesis and he was participated in more than 150 national and international congress. He is membership of National Association of Pharmaceutical Sciences and American Chemical Society. He is investigating the properties antitumor of medicinal plants such as: *Sedum praealtum* DC., *Prunus serotina* Erth and *Hylocereus polyhizus*.

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