



How olive oil can help fight breast cancer

Feb 19, 2009

Olive oil could help combat breast cancer as Spanish scientists have confirmed the bioactivity of the natural antioxidants (polyphenols) present in olive oil in breast cancer cell lines.

Researchers from the Catalan Institute of Oncology and the University of Granada (both in Spain) used solid-phase extraction methods of semi-preparative liquid chromatography to isolate fractions of commercial oils. Separation techniques (capillary electrophoresis and liquid chromatography connected to mass spectrometry) were used to check the purity and composition of the fractions, which were then tested in their anti-cancer capacity both against positive HER2 and negative HER2 breast cancers using *in vitro* models.

Fractions containing polyphenols, such as hydroxitirosol, tirosol, elenolic acid, lignans, pinorelinol and acetopinoresinol, and secoiridoids, diacetox oleuropein aglycone, ligustrosid aglycone and oleuropein aglycone, induced important tumouricid effects in a range of micromolar and in a selective way against HER2 oncogene.

The study, published in a recent issue of *BMC Cancer*, is believed to have confirmed the potential of polyphenols to inhibit HER2 activity and to promote its degradation. Such results, together with the fact that humans have consumed secoiridoids and lignans safely for a long time through oil and olive oil consumption, endorse the fact that such phytochemicals could be offer help create safe anti-HER2 compounds.

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