



Google Custom Search

GO

HOME | NEWS | TRAVEL | ART & STYLE | COMPENDIUM | SC BLOG

Physics | Chemistry | Geology and palaeontology | Biology | Environment | Astronomy | Health | Technology | — In pictures | — InMotion |

Where am I? > [Home](#) > [News](#) > [Health](#)

Tags: [aglycone](#), [breast](#), [cancer](#), [chromatography](#), [fractions](#), [oil](#), [oleuropein](#), [olive](#), [polyphenolic](#), [polyphenols](#)

Spanish scientists confirm extra virgin olive oil helps to combat breast cancer

Science Centric | 7 February 2009 12:06 GMT —

50 Hotels in Granada

Book your hotel in Granada online. Find your hotel on a city map!

www.booking.com/Hotels-Granada

Cursos Técnicos Granada

Cursos Técnicos En Granada Cursos Con Prácticas y Bolsa Empleo

www.MasterD.es/Cursos_Granada

Luxury Rural Villas Spain

Unforgettable holidays in Andalucia Special offers for August! Book now

www.viasur-andalucia.com

Vuelos a Granada, 28€

Ofertas Vuelos regulares y Low Cost ¡Ahorra tiempo y dinero con logi!

www.logitravel.com

Ads by Google

Researchers of the Catalanian Institute of Oncology (Spain) and the University of Granada (Spain) have discovered that extra virgin olive oil may help to combat breast cancer, according to a paper published in the last issue of the renowned scientific journal BMC Cancer. The scientists have confirmed the bioactivity of polyphenols (this is, natural antioxidants) present in olive oil in breast cancer cell lines.

The study has proved the anti-HER2 effect of fractions of phenolic compounds directly extracted of extra virgin olive oil in breast cancer cell lines. They have used solid-phase extraction methods of semi-preparative liquid chromatography to isolate fractions of commercial oils and, later, separation techniques (capillary electrophoresis and liquid chromatography connected to mass spectrometry) to check the purity and composition of the fractions.

Such fractions were tested in their anti-cancer capacity both against positive HER2 and negative HER2 breast cancers, using in Vitro models and evaluating the effect of polyphenolic fractions in the expression and activation of HER2 oncoprotein through ELISA specific methods for HER2. Fractions containing polyphenols such as hydroxitirosol, tirosol, elenolic acid, lignans, pinoresinol and acetopinoresinol, and secoiridoids, diacetox oleuropein aglycone, ligustrosid aglycone and oleuropein aglycone were able to induce important tumouricid effects in a range of micromolar and in a selective way against HER2 oncogene.

Therefore, this study confirms the potentiality 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 an excellent and safe basis for the design of new antiHER2 compounds.

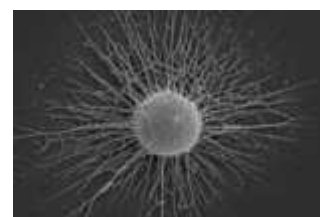
This work has been carried out by Javier A. Menendez, coordinator of the Translational Research Unit of the Catalanian Institute of Oncology (ICO) in Girona, and by doctors Alberto Fernandez Gutierrez - in charge of the 'Research Group of Analytic, Environmental, Biochemical and Food Control' - and Antonio Segura Carretero, member of such group.

This Research Group of the Department of Analytical Chemistry of the University of Granada (Spain) has developed other interesting research works in the characterisation of polyphenolic profiles of an important number of plants and metabolomic studies of extracts with proved bioactivity through the use of advanced separation techniques.

Source: [Universidad de Granada](#)



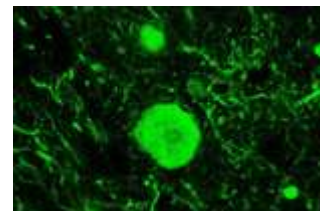
DON'T MISS —



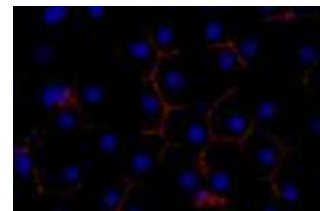
[Scientists discover how deadly fungus protects itself](#) — [4 Feb] — Researchers at Albert Einstein College of Medicine of Yeshiva University have discovered how a deadly microbe evades the...



[Exercise critical to recovery after knee replacement](#) — [3 Feb] — It may be uncomfortable at first, but doing exercises to strengthen your quadriceps after you've had knee replacement surgery...



[New pathway is a common thread in age-related neurodegenerative diseases](#) — [2 Feb] — How are neurodegenerative diseases such as Alzheimer's initiated, and why is age the major risk factor? A recent study of...



[Discovery could lead to a new animal model for hepatitis C](#) — [2 Feb] — During its career, the potentially fatal hepatitis C virus has banked its success on a rather unusual strategy: its limitations....



[Roadkill study could speed](#)

AGENCY SCIENCE



— [Advertise here](#)

LATEST | MOST E-MAILED | ARCHIVE

Biologists find gene network that gave rise to first tooth
Study proves that practice makes perfect in PCI for heart attack
MRI shows brain atrophy pattern that predicts Alzheimer's
Camouflaging of viral DNA could be crucial step in progression of cancers
Scientists uncover a dramatic rise in sea level and its broad ramifications
First genome-wide expression analysis yields better understanding of how leukaemia develops
Bar workers who smoke also benefit from smoking ban
Increasing prosperity has prompted Irish kids to balloon 24 kilos since 1948
Smokers would rather give up for their pooch's health rather than their own
Minority health-care clinics separate but unequal
City of light to turn lights off
Link found between influenza, absolute humidity

[More](#) recent stories...

Cumulative radiation exposure shows increased cancer risk for emergency department patients
Dye-coated glass to channel energy into solar cells
Intestinal bacteria promote - and prevent! - inflammatory bowel disease
Scientists discover how rheumatoid arthritis causes bone loss
The upside to allergies: Cancer prevention Protein on 'speed' linked to ADHD
Study links seismic slip and tremor, with implications for subduction zone
Fish scales show ocean fate of Atlantic salmon
Common bronchodilator linked to increased deaths
Robots designed to save lives of construction workers
High caffeine intake linked to hallucination proneness
Mast cells play a role in assisting immune system to combat tularemia

2007 — [I](#) [II](#) [III](#) [IV](#) [V](#) [VI](#) [VII](#) [VIII](#) [IX](#) [X](#) [XI](#) [XII](#)

2008 — [I](#) [II](#) [III](#) [IV](#) [V](#) [VI](#) [VII](#) [VIII](#) [IX](#) [X](#) [XI](#) [XII](#)

2009 — [I](#) [II](#)