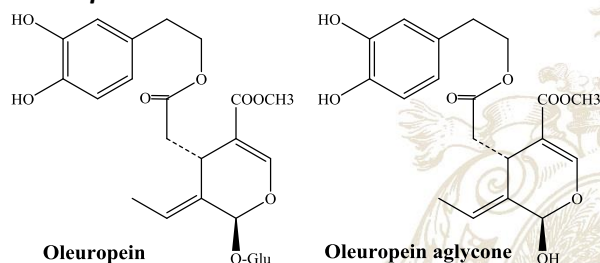




OliveNet™ Newsletter

Molecule of the month

Oleuropein



Oleuropein represents the major *Olea*-associated phenolic compound reaching concentrations of more than 100 mg/g in green olives and ~50 mg/g in leaves (dry weight). Apart from potent anti-inflammatory and antioxidant effects, a large body of evidence has indicated a variety of beneficial effects of oleuropein in models of human disease including, anticancer effects, beneficial cardiovascular effects, anti-Alzheimer's and anti-aging effects. Excellent reviews of the pharmacological and biological effects of oleuropein include that by 1) Omar. Oleuropein in olive and its pharmacological effects. *Sci Pharm*. 2010 Apr-Jun;78(2):133-54 and 2) Farooqi et. al. Oleuropein and Cancer Chemoprevention: The Link is Hot. *Molecules*. 2017 Apr 29;22(5). pii: E705. doi: 10.3390/molecules22050705. It is important to note that the potent antioxidant, hydroxytyrosol, is a key metabolite of oleuropein (see newsletter #2, July 2017 and global research highlights in this issue).

Global Research Highlights

Hydroxytyrosol, autophagy and the SIRT1-mediated signaling pathway. A recent in vitro study in vascular adventitial fibroblasts indicates that hydroxytyrosol mediates the inflammatory responses via autophagy and upregulation of the sirtuin 1 (SIRT 1) protein (*Can J Physiol Pharmacol*. 2017 Aug 3. doi: 10.1139/cjpp-2016-0676). This extends the function of hydroxytyrosol as a potent antioxidant indicating a potential epigenetic mechanism of action. The SIRT family of proteins have been linked with anti-aging effects and longevity.

Hydroxytyrosol supplementation and reduced oxidative stress and cardiovascular risk in healthy volunteers. A recent randomized, placebo-controlled crossover study in healthy volunteers indicated that supplementation with hydroxytyrosol (15 mg per day) for three weeks, altered body composition parameters and regulated genes associated with inflammation and oxidative stress, particularly superoxide dismutase 1 (*Oxidative Medicine and Cellular Longevity*. 2017, article ID. 2473495).

McCord Research in Action



McCord Research scholar (PhD candidate), Ms Natalie Bonvino from the EpiMedi Lab and RMIT Uni is focussed while answering questions following her presentation at the inaugural Wounds Australia Conference, held in Melbourne. Natalie, has had an instrumental role in the development of the OliveNet™ database, liaising closely with Professor Dimitrios Boskou (Professor Emeritus, Aristotle University, Thessaloniki, Greece) and Dr Nancy Ray and Kariel Post (McCord Research, Iowa, USA), to ensure successful completion of the project.

Upcoming Events

Conferences

16th World Congress on Nutrition and Food Chemistry, September 18 – 20, 2017, Zurich, Switzerland

8th International Conference on Polyphenols and Health – October 3 – 6, 2017, Rendez-vous in Quebec City, Canada

Short Courses

UC Davis – 2017 Master Milling Certificate Course (with Dr Leandro Ravetti), 28 September 2017, Robert Modavi Institute Silverado Sensory Theater

OliveOilTimes Education Lab at the International Culinary Center (California) – Olive Oil Sommelier Certification Level 1 (October 2 – 4, 2017), Level 2 (October 5 – 7, 2017)

Olive Oil Academy, Olive Oil Sommelier Course, October 23 – 27, 2017, Pienza Val d'Orcia, Siena, Italy