



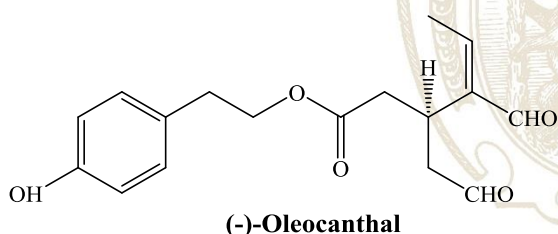
OliveNet™ Newsletter

OliveNet™ Library newsletter

Introducing the first issue of the OliveNet™ Library newsletter. Monthly issues will include the molecule of the month, upcoming events, latest research, and periodic interviews with key people in the Mediterranean diet and olive oil fields.

Molecule of the month

Oleocanthal



Oleocanthal (deacetoxy-ligstroside agyclone), a natural phenolic compound found in extra-virgin olive oil, was brought to light by Professors Amos Smith and Gary Beauchamp and co-workers from the Department of Chemistry, University of Pennsylvania and the Monell Chemical Senses Center in Philadelphia, with a seminal publication in *Nature* in 2005. [Sep 1;437(7055):45-6]

Initial findings indicated that oleocanthal is a potent anti-inflammatory agent displaying non-selective inhibition of cyclooxygenase (COX)-1 and COX-2 enzymes, akin to ibuprofen. Similarly, oleocanthal was described as a potent antioxidant with a likeness to α -tocopherol. Subsequent research has highlighted the anti-inflammatory effects of oleocanthal and accumulating evidence suggests potential utility as an anticancer agent and a neuroprotective in Alzheimer's disease.

The trivial name, oleocanthal, ascribed by the original authors is a composite derived from oleo = "olive", canth = "sting" and al = "aldehyde". The formal IUPAC chemical name is (E)-4-hydroxyphenethyl 4-formyl-3-(2-oxoethyl)hex-4-enoate.

Upcoming Events

Conferences

North American Olive Oil Association – The Olive Oil Conference – July 19 – 20, 2017, Westin O'Hare, Rosemont, IL

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

Short Courses

UC Davis Olive Center at the Robert Mondavi Institute (California) – Sensory Evaluation of Olive Oil Part I (Jun 26 & 27, 2017), Part II (Jun 28 & 29, 2017)

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)

Global Research Highlights

Oleocanthal and Alzheimer's pathology. There is accumulating evidence that oleocanthal has protective effects against Alzheimer's disease. In a recent study oleocanthal was shown to inhibit toxicity induced by amyloid- β oligomers in astrocytes and neuronal cells [amyloid- β plaque formation is a hallmark of Alzheimer's disease]. *Neuroscience*. 2017 Jun 3;352:204-215

Oleocanthal and anticancer effects. Numerous studies have highlighted the cytotoxic effects of oleocanthal in malignant and transformed cells. A recent indicates that lysosomal membrane permeabilization represents a mechanism by which oleocanthal induces necrotic and apoptotic cell death in cancer cells. *Mol Cell Oncol*. 2015;2(4):e1006077

McCord Research in Action



McCord Research Scholars in the Diabetes Department (Central Clinical School), Alfred Centre, Melbourne, Australia. The team is studying the biological effects of dietary antioxidants and chromatin modifying molecules in health and disease. Emerging epigenomic medicines, many derived from natural sources, are currently at the interface of translational research offering potential clinical benefits.