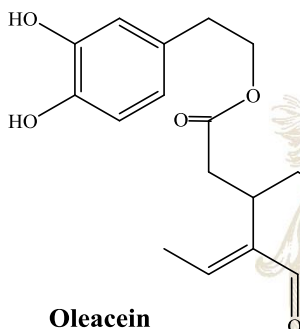




## OliveNet™ Newsletter

### Molecule of the month

#### Oleacein



Oleacein

Oleacein is a relatively abundant phenolic compound found in extra-virgin olive oil. It is a secoiridoid derivative of oleuropein composed of the dialdehydic form of elenolic acid conjugated with 3, 4-(dihydroxyphenyl)ethanol. The trivial name, oleacein, was attributed following the finding that the compound inhibits angiotensin converting enzyme *in vitro* (ole = olive; ace = ACE; in = inhibitor; Hansen et al, *Phytomedicine*, 1996, 2: 319-25). Numerous studies have highlighted the potent anti-inflammatory and antioxidant effects of oleacein culminating to a recent *ex vivo* study, highlighted below, indicating potential antiatherosclerotic effects.

### Julia Liang's recipe of the month

#### Lemon olive oil cake

Apart from being a talented McCord Research molecular modelling scholar, Julia Liang is an avid "foodie". This month Julia has prepared a relatively healthy sponge-like cake with extra-virgin olive oil and lemon – perfect for morning or afternoon tea! For further details please see our [OliveNet Library Facebook page](#) and visit [Julia's Cooking Revista](#).



[Approximate calculations: Total EVVO = ¾ metric cup (174 g); Serves 8. Per serve = 360 calories (or 18% of 2,000 calorie diet), 22g EVVO (or 43% of typical daily recommendation), ~5g olive polyphenols (assuming 250 mg/kg in average EVOO)].

\*All of Julia's recipes are tried and tested.

### Global Research Highlights

**Oleacein and atherosclerotic plaques.** Using carotid atheromatous plaque tissue from 20 people with hypertension who suffered transient ischemic attacks, it was shown that oleacein may attenuate plaque destabilization, with implications as a protectant in patients with arterial hypertension. Filipek et. al., *Phytomedicine*, 2017, 32: 68-73.

**Extra-virgin olive oil classification.** The classification and stratification of different qualities of extra-virgin olive oils remains an important issue given the large variations in composition and quantity of minor constituents in commercial oils. Ruiz-Aracama et. al., *Food Chemistry*, 2017, 228: 301-14, describe these issues and present a 1HNMR-based methodology for characterization of extra-virgin olive oil.

### McCord Research in Action



Dr Nancy Ray (Scientific Officer at McCord Research, Iowa) along with McCord research scholars Natalie Bonvino and Julia Liang in the Epigenomic Medicine Laboratory in Melbourne, Australia. Apart from participating at the inaugural Wounds Australia Conference, Nancy's visit was instrumental in finalising the McCord Research OliveNet™ library and setting research goals for the McCord dietary antioxidants and chromatin modifying compound project.