



## OliveNet™ Newsletter

### Molecule of the month

#### Oleic acid

Oleic acid, a monounsaturated omega-9 fatty acid, is the major fatty acid found in olive oil; IUPAC name: (9Z)-Octadec-9-enoic acid and lipid number 18:1 cis-9. Apart from the well-investigated beneficial health effects of oleic acid (Perez-Jimenez et al, *The influence of olive oil on human health: not a question of fat alone*, Mol Nutr Food Res, 51:1199-1208), and its extensive use in skin care and cosmetics (Vaughn et al, *Natural oils for skin-barrier repair: Ancient compounds now backed by modern science*, Am J Clin Dermatol, 2017 Jul 13. doi: 10.1007/s40257-017-0301-1), there are two very interesting facts about oleic acid, namely: 1) It forms the basis of the highly controversial Lorenzo's oil, which is composed of 4:1 parts of the triacylglycerol forms of oleic acid and erucic acid. Initially, the potential treatment for adrenoleukodystrophy, which is characterized by accumulation of long chain fatty acids and ultimate destruction of the myelin sheath of nerves, was popularized by the movie Lorenzo's oil in 1992. This led to considerable research in the following years peaking in 1994 and 1995. Despite the controversial findings typified by the high impact NEJM paper in 1993 (Aubourg et al, *A two-year trial of oleic and erucic acids ("Lorenzo's oil") as treatment for adrenomyeloneuropathy*, N Engl J Med, 329:745-752, 1993), the oil is still being investigated with peer-reviewed papers sporadically appearing every year. The patented formulation is currently used as dietary therapy in certain cases, and the current understanding is that although, it does not have an effect in symptomatic patients, it may reduce the risk of developing the disease in asymptomatic patients. The other interesting fact about oleic acid is that it is an insect pheromone which is released from certain dead insects, including bees and ants. The scent incites living workers to remove the corpse from the hive.

### Julia Liang's recipe of the month

#### Spaghetti with garlic and olive oil

Apart from being a talented McCord Research molecular modelling scholar, Julia Liang is an avid "foodie". This month Julia has prepared a relatively healthy spaghetti with garlic and extra-virgin olive oil dish – perfect as a light side-dish or main meal. For further details please see our [OliveNet Library Facebook page](#) and visit [Julia's Cooking Revista](#).



[Approximate calculations: Total EVVO = 120 mL (110 g); Serves 4. Per serve = 550 calories (or 28% of 2,000 calorie diet), 27.5 g EVVO (or 55% of typical daily recommendation), ~7 g olive polyphenols (assuming 250 mg/kg in average EVOO)].

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

### McCord Research and Forthcoming Event



Dr Nancy Ray (Scientific Officer at McCord Research, Iowa) strategising on the making of the OliveNet™ Library, with McCord research scholar Natalie Bonvino at the inaugural Wounds Australia Conference in Melbourne, Australia. The next major Wounds Australia conference will be held in Adelaide, Australia in 2018. Entitled: "Advancing healing horizons: Towards the cutting edge in wound care" and convened by our important collaborator Jan Rice, the conference will bring together leading national and international experts in wound care. The call for abstracts has recently been announced with dedicated sections in: 1) Industry innovation, 2) Ageing and 3) Natural therapies which are highly relevant to olive oil researchers. For further information please visit: <http://woundsaust2018.com.au/>