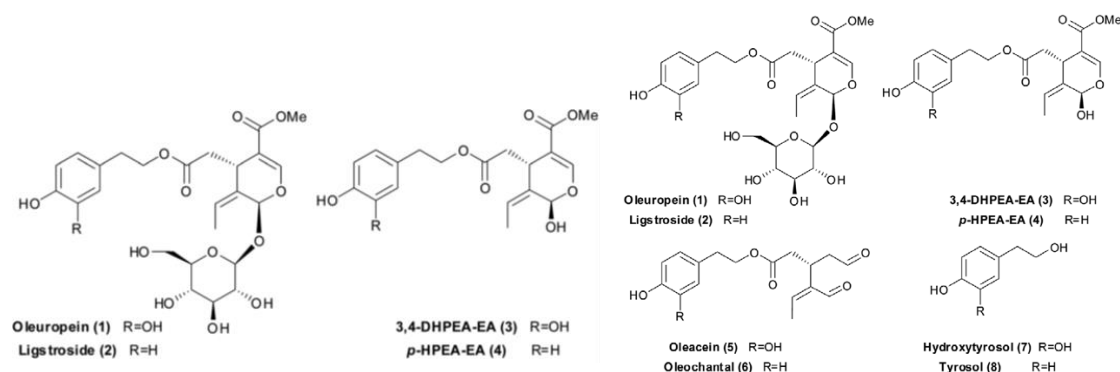


SEMI-SYNTHESIS AS A TOOL FOR BROADENING THE HEALTH APPLICATIONS OF BIOACTIVE OLIVE SECOIRIDIODS

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Numerous studies indicate that the consumption of extra virgin olive oil (EVOO) is associated with a lower risk of cardiovascular diseases, metabolic syndromes, type 2 diabetes and neurodegenerative diseases.^a These beneficial effects on human health have been attributed mainly to the phenolic compounds found in the olive plant so that,^b a few years ago, the European Food Safety Authority (EFSA) recognized a direct relationship between certain olive oil phenols and the protection of low-density lipoprotein (LDL) particles from oxidative damage.^c According to the EFSA claim, "*olive oil polyphenols contribute to the protection of blood lipids from oxidative stress*", specifying that "*the claim may be used only for olive oil containing at least 5 mg of hydroxytyrosol and its derivatives (e.g. oleuropein complex and tyrosol) per 20 g of olive oil*".



Chemical structures of olive oil bioactive phenols responsible for the beneficial effects recognized by the EFSA claim

In the last twenty years, numerous efforts have been dedicated to the study of each of these individual compounds, many of which are currently available through synthetic and semi-synthetic approaches.⁴

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