

POTENTIAL ANTIATHEROGENIC EFFECTS OF *OCIMUM GRATISSIMUM*



Julius Ogeng'o PhD, MD
Professor of Human Anatomy
University of Nairobi
Email: jogengo@uonbi.ac.ke
Tel: +254720837592

Knowledge of potential antiatherogenic effects of plant extracts is important to inform strategies of improving alternative preventive and therapeutic approaches for atherosclerosis and related diseases (Salvamani et al., 2014). As atherosclerosis emerges to be of major public health concern in Sub Saharan Africa, there is need to mitigate the imminent epidemic of this disease through, for example, promotion of safe use of plant products which are readily available. *Ocimum gratissimum* is a herbaceous plant which belongs to the *Labiatae* family. It is indigeneous in tropical Africa where it is used to treat various conditions including bacterial, fungal and parasitic infections; degenerative and cardiovascular diseases (Mlitan et al., 2014; Yvette et al., 2014).

In the current issue of Anatomy Journal of Africa, Iyiola et al (2015) have detailed the chemical components and uses of *Ocimum gratissimum*. They have demonstrated that chronic use of its extracts causes neurodegeneration. This is consistent with toxicity associated with excessive or prolonged drug use. These observations call for judicious use of the extracts, without negating the positive applications of this plant, some of which manifest in morphological alterations, and hence interest among anatomists. Indeed, antiatherogenic effects of plant products have been confirmed through histological observations (El – Shatanovi et al., 2012).

The myriad uses of *Ocimum gratissimum* outlined by Iyiola et al have attracted me to consider that, based on its chemical composition, it may have potential to mitigate atherogenesis.



Ocimum gratissimum

The antiatherogenic effects of *Ocimum gratissimum* are based on two actions – (i) reduction of oxidative stress through its antioxidant effects and (ii) amelioration of known risk factors for atherosclerosis. *Ocimum gratissimum* contains alkaloids, tannins, saponins, steroids, flavonoids, terpenoids, phenol, Vitamin A, B, C, E, potassium, phosphorus, iron, copper, zinc, manganese and several other trace elements. Many of these components are known to be antioxidants and to display cardiovascular friendly actions (Mlitan et al., 2014; Efiog, 2014; Usoh et al., 2015). It also scavenges free radicals (Usoh et al., 2015). With respect to risk factors, *Ocimum gratissimum* lowers blood pressure and has been used to treat hypertension (Yvette et al., 2014). Secondly, it reduces blood sugar (Casanova et al., 2014) and has been applied to treat diabetes mellitus (Mlitan et al., 2014; Yvette et al., 2014). Thirdly, it possesses anti inflammatory (Ogunnaike et al., 2013) and anti hyperlipidemic effects (Omodamiro and Jimoh, 2015).

Plant products with such potential should therefore be considered essential ingredients in the fight against the imminent epidemic of atherosclerotic cardiovascular disease in Sub – Saharan Africa. I strongly advocate judicious intake of fresh fruits and vegetables as part of the strategy to prevent and mitigate the effects of atherosclerosis.

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