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Correction

Corrigendum: Antioxidant assessment of characterised essential oils from *Calophyllum inophyllum* Linn using 2,2-diphenyl-1- picrylhydrazyl and hydrogen peroxide methods



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Scan this QR code with your smart phone or mobile device to read online. In the version of the article initially published, Ojah, E.O., Moronkola, D.O. & Osamudiamen, P.M., 2020, 'Antioxidant assessment of characterised essential oils from *Calophyllum inophyllum* Linn using 2,2-diphenyl-1- picrylhydrazyl and hydrogen peroxide methods', *Journal of Medicinal Plants for Economic Development* 4(1), a83. https://doi.org/10.4102/jomped.v4i1.83, a reference was omitted on pages 2, 4, 6, 7 and 9. The text is now updated as follows:

The last paragraph in the Introduction section on page 2 should read:

Calophyllum inophyllum Linn is the most abundant species in genus Calophyllum and is widespread in tropical areas, with a wide variety of uses ranging from traditional, medicinal and industrial applications (Dweck & Meadowst 2002). The extracted oil from the fruit of C. inophyllum Linn is used as a remedy for sciatica, shingles, neuritis, rheumatism, ulcers and skin diseases, whilst the seed oil is reported to have medicinal and healing properties. The plant's dried leaves and its decoction are widely used in curing rheumatism, skin infections, cuts and sores (Uma et al. 2012). Its leaf and stem bark extracts have shown anti-hyperglycaemic and anti-hyperlipidaemic activities, whilst the leaf extract was identified to inhibit OS (Varsha et al. 2016). Its fruits are effectively utilised in the treatment of dermatitis (Yu et al. 2016). The broad spectrum of biological activities exhibited by C. inophyllum may be associated with the chemical composition of its different parts (Figures 1-3). Ojah et al., reported the chemical constituents and toxicity levels of ten essential oils from this plant. GC-MS analysis of volatile constitituents from the plant revealed that the plant is furnished with non-toxic volatile constituents with promising biological activities (Ojah et al. 2019). This article was therefore designed to evaluate the antioxidant properties of gas chromatography-mass spectrophotometry (GC-MS) characterised EOs from 10 parts of C. inophyllum Linn using the generally reliable 2,2-diphenyl-1-picrylhydrazyl (DPPH) and hydrogen peroxide models.

The first paragraph under the heading 'Essential oil composition of *C. inophyllum* Linn' in the Results and discussion section on page 4 should read:

The GC-MS characterisations of the leaf, leaf stalk, flower oil, pod, peel, stem wood, stem bark, root wood and root bark EOs extracted from *C. inophyllum* Linn showed a total of 102 compounds, which are mostly monoterpenes, sesquiterpenes and their oxygenated derivatives as shown in Table 2 (Ojah et al. 2019).

The footnote for Table 2a and Table 2b on page 6 should read:

Source: Ojah, E.O., Moronkola D.O., Riccardo P., Nzekoue F.K., Loredana C., Cristiano G., Marcel J. & Jioji N.T., 2019, 'Chemical Composition of ten Essential oils from *Calophyllum inophyllum* and their Toxicity against *Artemia salina'*, *European Journal of Pharmaceutical and Medical Research* 6(12),185–194.

The third last paragraph under the heading 'Essential oil composition of *C. inophyllum* Linn' under the Results and discussion section on page 7 should read:

Stem bark oil contains nine compounds that make up 69.38% of it. This oil is rich in hexadecanal (46.80), E-anethole (6.12) and limonene (3.24). The oil is dominated by non-terpenes (60.90%) and monoterpenes (8.48%), whilst sesquiterpenes were absent. Root wood oil contains 51 compounds that make up 58.73% of it. This plant part is rich in non-terpenes (45.80%) and sesquiterpenes (12.83%), whilst monoterpenes were absent. This oil is rich in hexanedioic acid (9.86), E-nerolidol (5.83) and α -bisabolol (4.36). The oil also contains methyl eugenol, a phenylpropanoid. Root bark oil has 24 compounds that make up 74.66% of it, which are mainly with monoterpenes (44.01), diterpenes (15.05) and non-terpenes (14.46). This oil is rich in cembrene-3*Z* (15.05), limonene (13.93) and hexadecanal (10.61) (Ojah et al. 2019).

Note: DOI of original article: https://doi.org/10.4102/jomped.v4i1.83.

The last paragraph under the heading 'Essential oil composition of *C. inophyllum* Linn' under the Results and discussion section on page 7 should read:

The high content of γ -terpinene in leaf stalk (13.06%), seed coat (6.77%) and root bark (7.75%) oils of C. inophyllum Linn is responsible for the anti-inflammatory and antioxidant effects, thus supporting the plant's anti-osteoarthritic activity. The presence of Terpinene in Hyptis species inhibited gastric lesions, reduced volume and acidity of the gastric juice and increased gastric wall mucus (Marcelo, Rafael & Lucio 2015). Limonene, which is found in an appreciable amount in stem heartwood (23.79%), stem bark (3.24%) and root bark (13.93%) EOs of *C. inophyllum* Linn, is known to have sedative and stimulative effects in Lippia alba (Vale et al. 2002; Viana, Vale & Matos 2000). Consumption of diets containing fruits and vegetables rich in monoterpenes, such as limonene, is known to reduce the risk of developing cancer of the colon, mammary gland, liver, pancreas and lung. Limonene, which is known to possess high anticancer properties (Chistani et al. 2007; Marostica et al. 2009),

is abundant in *C. inophyllum* Linn: leaf stalk (25.40%), seed (25.40%) and root bark (13.93%) oils. The presence of phenylpropanoids, norisoprenoids and other non-ubiquitous compounds, such as β -alaskene, β -acoradiene and E-anethole, is a unique feature of oils from *C. inophyllum* Linn as shown in Table 2 (Ojah et al. 2019).

In the references list on page 8, the following reference should be added:

Ojah, E.O., Moronkola D.O., Riccardo P., Nzekoue F.K., Loredana C., Cristiano G., Marcel J. & Jioji N.T., 2019, 'Chemical Composition of ten Essential oils from *Calophyllum inophyllum* and their Toxicity against *Artemia salina'*, *European Journal of Pharmaceutical and Medical Research* 6(12),185–194.

This correction does not alter the study's findings of significance or overall interpretation of the study's results. The authors apologise for any inconvenience caused.