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### **Macadamia nut as an anti-Giardial agent**

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**Introduction** *Macadamia integriflora* (family Proteaceae) is an endemic Australian plant that has been used for thousands of years as a food. It is known to contain high levels of medium chain saturated fatty acids, raising the possibility that they may be useful in the treatment of Giardiasis

**Methods.** Macadamia nuts were extracted with various solvents and tested for inhibitory activity against the gastrointestinal protozoal parasite *Giardia duodenalis* using colorimetric cell proliferation assays. Toxicity was evaluated using an *Artemia franciscana* nauplii bioassay.

**Results.** Methanol, water and ethyl acetate extracts of macadamia nuts significantly inhibited *G. duodenalis* proliferation. The water extract was particularly potent, with an IC<sub>50</sub> of 13.7 µg/ml. The methanol and ethyl acetate extracts, whilst less potent, also displayed good anti-Giardial activity (with IC<sub>50</sub> values of approximately 125.2 and 143.5 µg/ml respectively). The chloroform and hexane extracts were ineffective as proliferation inhibitors, with no significant difference to the untreated control levels. With the exception of the water extract, all extracts were non-toxic or of low toxicity in the *Artemia* nauplii assay.

**Discussion.** The antiproliferative activity and low toxicity of these extracts indicate that macadamia nut may be useful in the treatment of Giardiasis.