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 IC50 of 13.7 µg/ml. The methanol and ethyl acetate extracts, whilst less potent, also displayed good anti-Giardial activity (with IC50 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.