Kawakawa Extracts Demonstrate Anti-Inflammatory Activity

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Kawakawa (Macropier excelsum), a plant native to New Zealand, is considered to be very significant to Maori (the indigenous people of New Zealand) as a key tool in rongoa (the holistic medicine system used traditionally by Maori). Kawakawa was used as a medicinal plant in the treatment of ailments, many of which can be linked to inflammation, including cuts and wounds, toothache, rheumatic pains, and chest complaints. There have been only two previous studies on Kawakawa, neither of which showed any significant anti-bacterial or anti-viral activity. However, both utilised organic solvents in the extraction of the Kawakawa which may not be suitable for the extraction of the bioactive compounds perhaps contained in the leaves. This study sought to address the disparity in the literature by measuring the anti-inflammatory properties of Kawakawa leaves. Inflammation is one of the body's innate responses to a stimulus. It is one mechanism that could explain the medicinal properties of Kawakawa observed by Maori in rongoa. The Kawakawa leaves were extracted into a liquid form then testing using two different methodologies, an aqueous infusion, and a mixture of chloroform, methanol and water. These extracts were tested for cytotoxicity to ensure that any potential change in the production of the inflammatory markers measured was due to genuine bioactive activity rather than cytotoxicity. No cytotoxicity was observed. The anti-inflammatory properties of these extracts were tested using three inflammatory markers (nitric oxide, Il-6 and TNF-a). Anti-inflammatory activity was observed in all 3 markers using the aqueous extract, supporting the traditional uses of Kawakawa in rongoa with scientific evidence for the first time

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