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Medicinal Plant Images

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Figure 1: *Petalostigma triloculorae* (commonly known as quinine bush) unripe fruit and leaves. Petalostigma is an Australian Euphorbiaceae genus which consists of 7 species. They grow to between 2 and 10 metres in height and have bright orange fruit (when ripe). Petalostigma species were used extensively by indigenous Australians to treat a myriad of bacterial, fungal and viral diseases.[1] *P. pubescens* bark and fruit decoctions were used extensively by Australian Aborigines as an antiseptic and to treat sore eyes. Fruit were also held in the mouth to relieve toothache.[1] Despite its common name, there is no scientific evidence to support the presence of quinine in the fruit or leaves (the common name is presumably due to the extremely sharp bitter flavour of the fruit). Recent studies have confirmed the antibacterial, antifungal and antiviral activity of extracts of the leaves and fruit of this plant.[2,3] Interestingly, it has recently been reported that *Petalostigma* spp. extracts not only have inherent antibacterial activity, but they also contain synergising compounds that allow conventional antibiotics to function, even in bacterial strains otherwise resistant to their actions.[4] This photograph was taken at Griffith University, Brisbane, Australia in November 2020 by Dr Ian Cock.

Figure 2: *Scaevola spinescens* (commonly known as currant bush, maroon bush and prickly fanflower) is an endemic Australian plant which is distributed in arid areas of the Australian continent, particularly in the western regions. Australian Aborigines used *S. spinescens* as a medicinal plant to treat a wide variety of conditions.[1] An infusion of the roots was used to treat stomach pain and urinary disorders. A decoction of the stem was used to treat boils, rashes and skin disorders. Fumes from the whole plant were inhaled to treat viral disorders including colds and influenza. A recent study demonstrated the general inhibitory activity of *S. spinescens* extracts against RNA viruses using an MS2 phage model system, partially verifying the ethnobotanical usages.[5-7] Earlier studies have also reported the ability of *S. spinescens* extracts to inhibit more than 25% of human cytomegalovirus (CMV) late antigen production.[8] *S. spinescens* also had traditional uses in the treatment of various cancers.[1] Whilst the isolated compounds anticancer activity has yet to be confirmed, studies have indicated that *S. spinescens* taraxerene pentacyclic triterpenoids may be responsible for this anticancer activity.[7,9] Several studies have reported broad-spectrum antibacterial activity of several *S. spinescens* extracts against a panel of 14 bacterial pathogens.[6,7] Furthermore, a recent study not only confirmed the antibacterial activity of this plant, but also reported that *S. spinescens* extracts potentiated the activity of tetracycline against bacterial otherwise resistant to its actions.[10] Photograph was taken by Dr Ian Cock at Arid Lands Botanical Gardens, Port Augusta, Australia, February 2021.

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