

Medicinal Plant Images

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Figure 1: *Terminalia ferdinandiana* Exell. (Family Combretaceae), commonly known as Kakadu plum, gubinge, billy goat plum and salty plum, is an endemic Australian tree which occurs in tropical grassland regions of northern Australia. The fruit has traditional uses for indigenous Australians as nutritious food and as a medicinal plant.^{1,2} Recent studies have reported Kakadu plum to be extremely high in antioxidants and to be the richest naturally occurring source of Vitamin C.^{3,4} As high antioxidant levels have previously been demonstrated to act as preventative effects against the development of degenerative chronic diseases such as cancer, cardiovascular diseases, neural degeneration, diabetes and obesity, it has been postulated that Kakadu plum fruit may also be an effective preventative against these diseases.² Recent studies have shown Kakadu plum fruit extracts to be effective at inhibiting the growth of a panel of bacterial pathogens, including *P. mirabilis*, *K. pneumoniae*, *A. baylyi*, *P. aeruginosa*,⁵⁻⁷ *Clostridium perfringens*,⁸ and *Yersinia enterocolitica*,⁹ as well as food spoilage¹⁰ and body odour forming bacteria.¹¹ Notably, recent studies have demonstrated that *T. ferdinandiana* extracts are also effective against MRSA and some ESBL bacterial strains.¹² Fruit and leaf extracts of this species are also effective against dermal fungal pathogens.¹³ Additionally, extracts prepared from *T. ferdinandiana* fruit also inhibit *Giardia duodenalis* growth and may therefore be useful in the treatment of giardiasis.^{14,15} *Terminalia ferdinandiana* extracts also inhibit the proliferation of multiple cancer cell lines via the induction of apoptosis.³ The photograph depicts immature fruit and was taken in Darwin, Australia by Dr Ian Cock in January 2018.



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Figure 2: *Petalostigma trilocularae* (commonly known as quinine bush) tree. *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 *Petalostigma pubescens* and *P. trilocularae* bark and fruit decoctions were used extensively by Australian Aborigines as an antiseptic and to treat sore eyes. Fruit was 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.^{16,17} Additionally, a recent study also reported that *Petalostigma* spp. extracts also potentiated the activity of some conventional antibiotics, even against bacterial that are otherwise resistant to those antibiotics.¹⁸ This photograph was taken at Griffith University, Brisbane, 2022 by Dr Ian Cock.

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