

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



Figure 2: *Pittosporum angustifolium* Lodd. (Family Pittosporaceae; formerly known as *Pittosporum phillyreoides* DC.; commonly known as gumbi gumbi, native apricot, weeping pittosporum, butterbush, cattle bush, poison berry bush and berrigan) is an endemic Australian plant which is distributed in arid inland areas of the Australian continent. Australian Aborigines used *P. angustifolium* as a medicinal plant to treat a wide variety of conditions.^{1,16} Decoctions and infusions prepared from the leaves inhibit a variety of bacterial, fungal and viral pathogens.^{1,17} A decoction of fruit was also used both externally and by ingestion to treat eczema and pruritus. Anecdotal reports have also associated *P. angustifolium* leaf preparations with anticancer properties¹⁸ and this species is sometimes referred to as 'Queensland anticancer tree'. Furthermore, *P. angustifolium* extracts have been reported to have moderate cytotoxic activity towards A427 lung cancer cells,¹⁹ Despite its range of traditional medicinal uses, the phytochemistry and therapeutic potential of *P. angustifolium* has not been extensively examined. One study reported that *P. angustifolium* leaf extracts inhibit Ross River virus induced cytopathicity by more than 25%, but are ineffective against poliovirus and cytomegalovirus. A more recent study reported broad spectrum antibacterial activity of *P. angustifolium* leaf extracts against a panel of enteric bacteria.¹⁷ Furthermore, a recent study not only confirmed the antibacterial activity of this plant, but also reported that *P. angustifolium* extracts potentiated the activity of tetracycline against bacterial otherwise resistant to its actions.²⁰ Photograph was taken by Dr Ian Cock at Arid Lands Botanical Gardens, Port Augusta, Australia, February 2021.



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