

Medicinal Plant Images

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Figure 1: *Rosmarinus officinalis* L. (family Lamiaceae), commonly known as rosemary is a woody perennial herb with fragrant acicular leaves and white, pink or blue flowers. Rosemary is native to the Mediterranean region but has been widely naturalised globally. The leaves have culinary uses to flavour food. Rosemary also has a wide range of traditional therapeutic uses including as a stimulant (and as a calmative), for the treatment of nerve and digestive disorders, to relieve headache and pain, reduce blood pressure, and for the treatment of colic.¹ Rosemary essential oils² and extracts³ have been reported to have good antimicrobial activity against broad panels of bacteria and fungi. These studies have attributed the therapeutic properties of rosemary to a variety of polyphenolic compounds including betulinic acid, caffeic acid, camphor, carnosic acid and carnosol, rosmarinic acid and ursolic acid. However, rosemary should be used with caution in individuals with diabetes as it has been reported to increase blood glucose levels and may therefore exacerbate the condition.¹ This photograph was taken in Brisbane, Australia in 2016 by Dr Ian Cock.



Figure 2: *Tulbaghia violaceae* Harv. (commonly known as wild garlic or society garlic) is a bulbous plant of the family Alliodeae. It is indigenous to the KwaZulu-Natal and Cape Province regions of southern Africa. All portions of the plant have a strong smell of garlic when damaged. *T. violaceae* has numerous traditional medicinal uses including the treatment of colds and fever, as well as in the treatment of asthma, inflammation, tuberculosis and oesophageal cancer.^{4,5} Decoctions are useful in the treatment of gastro-intestinal problems. Recent studies have also indicated the potential of *T. violaceae* in the prevention and treatment of rheumatoid arthritis⁶ and ankylosing spondylitis by blocking the microbial triggers (*Proteus mirabilis* and *Klebsiella pneumoniae* respectively).⁷ This photograph was taken in Johannesburg, South Africa in 2013 by Dr Ian Cock.

REFERENCES

1. Cock IE. The safe usage of herbal medicines: counter-indications, cross-reactivity and toxicity. *Pharmacognosy Communications*. 2015;5(1):2-50.
2. Bozin B, Mimica-Dukic N, Samojlik I, Jovin E. Antimicrobial and antioxidant properties of rosemary and sage (*Rosmarinus officinalis* L. and *Salvia officinalis* L., Lamiaceae) essential oils. *Journal of Agricultural and Food Chemistry*. 2007;55(19):7879-85. <http://dx.doi.org/10.1021/jf0715323> ; PMID:17708648
3. Moreno S, Scheyer T, Romano CS, Vojnov AA. Antioxidant and antimicrobial activities of rosemary extracts linked to their polyphenolic composition. *Free Radical Research*. 2006;40(2):223-31. <http://dx.doi.org/10.1080/10715760500473834> ; PMID:16390832
4. Van WykBE, van Oudtshoorn B, Gericke N. *Medicinal plants of South Africa*. 2nd Edition, Briza Publications 2009; Pretoria South Africa.
5. Hutchings A, Scott AH, Lewis G, Cunningham A. *Zulu medicinal plants: an inventory*. University of Natal Press 1996; Pietmaritzburg, South Africa.
6. Cock IE, van Vuuren SF. Anti-*Proteus* activity of some South African medicinal plants: their potential for the prevention of rheumatoid arthritis. *Inflammopharmacology*. 2014;22:23-36. DOI 10.1007/s10787-013-0179-3. <http://dx.doi.org/10.1007/s10787-013-0179-3>
7. Cock IE, van Vuuren SF. The potential of selected South African plants with anti-*Klebsiella* activity for the treatment and prevention of ankylosing spondylitis. *Inflammopharmacology*. 2015;23:21-35. DOI 10.1007/s10787-014-0222-z <http://dx.doi.org/10.1007/s10787-014-0222-z>