

Sceletium tortuosum

(From Wikipedia, the free encyclopedia)

Sceletium tortuosum (Mesembryanthemaceae) is a succulent herb commonly found in South Africa, which is also known as Kanna, Channa, Kougoed (Kauwgoed/ 'kougoed', prepared from 'fermenting' *S. tortuosum*[2]) - which literally means, 'chew(able) things' or 'something to chew'. The plant has been used by South African pastoralists and hunter-gatherers as a mood-altering substance from prehistoric times. [3] The first known written account of the plant's use was in 1662 by Jan van Riebeeck. The traditionally prepared dried *Sceletium* was often chewed and the saliva swallowed, but it has also been made into gel caps, teas and tinctures. It has also been used as a snuff and smoked. [4]

It is possible that *Sceletium* may cause elevated mood and decreases anxiety, stress and tension. [3] The plant is mildly hallucinogenic, [4] contrary to some literature on the subject, and no adverse effects have been documented. According to some anecdotal reports kanna may potentiate the euphoriant effects of cannabis. [4]

S. tortuosum has been reported to possess significant mood-elevation and anxiolytic (anti-anxiety) properties. [3][5]

The alkaloids contained in *S. tortuosum* believed to possess psychoactivity include: mesembrine, mesembrenone, mesembrenol and tortuosamine. [4] Mesembrine is a major alkaloid present in *Sceletium tortuosum* and serves as a selective serotonin reuptake inhibitor (SSRI) with less prominent inhibitory effects on phosphodiesterase 4 (PDE4). Mesembrenone on the other hand serves as a more balanced serotonin reuptake inhibitor and PDE4 inhibitor.[5] A standardised ethanolic extract of dried *S. tortuosum* had a IC50 for PDE4 inhibition of 8.5µg/ml and for SERT of 4.3µg/ml.[5]

S. tortuosum contains about 1–1.5% total alkaloids. There is about 0.3% mesembrine in the leaves and 0.86% in the leaves, stems, and flowers of the plant. [4]

Interactions

Little is known about the interactions of *S. tortuosum*, although it should not be combined with other SSRIs, MAOIs, or cardiac medications. Headache in conjunction with alcohol have been noted with kanna use. Some reports suggest a synergy with cannabis. [4]

References

1. "SCELETIUM TORTUOSUM HERBA" (pdf). South African National Biodiversity Institute.
2. Smith, M. T.; Field C. R.; Crouch N. R.; Hirst, M. (1998). "The Distribution of Mesembrine Alkaloids in Selected Taxa of the Mesembryanthemaceae and their Modification in the *Sceletium* Derived 'Kougoed'". *Pharmaceutical Biology* 36 (3): 173–179. doi:10.1076/phbi.36.3.173.6350.
3. Gericke, N.; Viljoen, A. M. (2008). "Sceletium - A Review Update". *Journal of Ethnopharmacology* 119 (3): 653–663. doi:10.1016/j.jep.2008.07.043. PMID 18761074.
4. Smith, M. T.; Crouch, N. R.; Gericke, N.; Hirst, M. (1996). "Psychoactive Constituents of the Genus *Sceletium* N.E.Br. and other Mesembryanthemaceae: A Review". *Journal of Ethnopharmacology* 50 (3): 119–130. doi:10.1016/0378-8741(95)01342-3. PMID 8691846.
5. Harvey, A. L.; Young, L. C.; Viljoen, A. M.; Gericke, N. P. (2011). "Pharmacological Actions of the South African Medicinal and Functional Food Plant *Sceletium tortuosum* and its Principal Alkaloids". *Journal of Ethnopharmacology* 137 (3): 1124–1129. doi:10.1016/j.jep.2011.07.035. PMID 21798331.