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## A review on *Artabotrys odoratissimus* (Annonaceae)

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**Abstract**

*Artabotrys odoratissimus* is a plant of Annonaceae family and *Artabotrys* genus. It contains Essential Oils: Benzyl Acetate, Benzyl Benzoate Linalool, Caryophyllene, Geranyl Acetate, Methyl Benzoate, P-Cresyl Methyl Ether, Safrole, Monoterpenes, Sesquiterpenes etc. Medicinal Properties and Health Benefits of this plant are Anti Depressant, Mood Elevator, Antiseborrhoeic, Antiseptic, Aphrodisiac, Hypotensive, Hair Vitalizer, In Post Menstrual Syndrome, In Treating Motion Sickness, Nervine, Sedative, Emollient, Febrifuge. Apart from medicinal uses discussed above, this oil is extensively used in perfumes, deodorants, beauty soaps, shampoos, skin and hair lotions and creams, hair oils etc., in blends or alone. In contrast medicinal plants are widely available and affordable, even in remote areas. The cost of modern medicine is increasing by modern health technology and in many cases is inappropriate to the immediate needs of people in developing countries. Therefore there is a need for intensive research on this valuable medicinal plant species for discovery of its more medicinal properties.

**Keywords:** *Artabotrys odoratissimus*, annonacea family, chemical constituents, research

**Introduction**

*Artabotrys odoratissimus* Scientific classification <sup>[1]</sup>

Kingdom: Plantae

Clade: Angiosperms

Clade: Magnoliids

Order: Magnoliales

Family Annonaceae

Genus *Artabotrys*

Species: *A. odoratissimus*

**Binomial name**

*Artabotrys odoratissimus* R. Br. Ex Ker-Gawl. *Artabotrys odoratissimus* is a plant of Annonaceae family and *Artabotrys* genus. It is a large woody climber or half-scandent shrub originated in South China, Burma (Myanmar), The Philippines and India. Its flowers are axillary, solitary, or in clusters of two or three, greenish yellow in color when ripe and give a strong smell resembling that of ripened jackfruit. Hence its name in Bengali is 'Kanthali champa' (jackfruit-champa). It flowers almost all the year round but more during the summer and the rains. It is unsuitable for small gardens because of its huge size. It needs pruning to keep it in shape. Propagation is from seeds or layers <sup>[2]</sup>.

**Health Benefits of Ylang – Ylang essential oil**

Ylang-Ylang Essential Oil refers to the essential oil extracted from the flowers of Ylang-Ylang Tree, an inhabitant of tropical rain forests of some island nations of Asia-Pacific, namely Indonesia, Philippines, Java, Sumatra, Comoro and Polynesia. This oil is also sometimes known as Macassar Oil. The term Ylang-Ylang means "Flower of Flowers" and it is truly justified. Its medicinal properties were known to the natives of these islands since long, but were eluded from the modern world. Later, with advent of researchers & scientists of modern world into these dense rain forests and into the lives of the original inhabitants of these islands, the medicinal properties were disclosed and now the market full of cosmetics and other products containing (or at least using the name) Ylang-Ylang Essential Oil.

**Extraction**

Ylang-Ylang Essential Oil is extracted from fresh flowers through steam distillation.

**Physical Properties**

The physical properties of Ylang-Ylang Essential Oil are listed below;

- Colour: Transparent pale yellowish.
- Texture: Very light, watery.

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- Aroma: Sweet, pleasant & delicate.
- State: Liquid at room temperature.

### Chemical Composition

The essential oil is chiefly composed of the following;

- Essential Oils: Benzyl Acetate, Benzyl Benzoate, Linalool, Caryophyllene, Geranyl Acetate, Methyl Benzoate, P-Cresyl Methyl Ether, Safrole etc.
- Monoterpenes.

### Sesquiterpenes

Medicinal Properties & Health Benefits

- Anti Depressant & Mood Elevator:
- Anti Seborrhoeic
- Anti Septic Aphrodisiac
- Hypotensive
- Hair Vitalizer
- In Post Menstrual Syndrome
- In Treating Motion Sickness
- Nervine
- Sedative
- Emollient: Febrifuge: Other Uses

Apart from medicinal uses discussed above, this oil is extensively used in perfumes, deodorants, beauty soaps, shampoos, skin and hair lotions & creams, hair oils etc., in blends or alone.

### Isolation and characterization of a steroidal compound from the hexane extract of the leaves of *Artabotrys odoratissimus* <sup>[3-7]</sup>

*Artabotrys odoratissimus* has been investigated by many workers for its constituents. Previous phytochemical studies have revealed this genus to be rich in secondary metabolites including phenylcoumarins, xanthenes and triterpenoids. So far, not many studies have been carried out on this genus but there are some reports on this plant. Our recent study on the hexane extract of the leaves of *A. odoratissimus*, have led to the isolation of steroidal compound. The structure of the compound has been established by modern spectroscopic techniques such as IR, <sup>1</sup>H-NMR, <sup>13</sup>C-NMR and mass-spectroscopy and identified as tetracontan-15-one.

### Research on plants for fertility regulation in India <sup>[8]</sup>

This present review of Indian plants investigated for fertility regulation includes published literature of the country and unpublished data of the Central Drug Research Institute (CDRI), located in Lucknow, India. Publications without supportive experimental data have not been included. It is evident from the data presented in the tables that most of the investigators have failed to include the valuable information on the time and place of collection and proper botanical authentication, if conducted, in their publications. The plants evaluated at the Institute do contain this information and their herbaria sheets are available at CDRI. The plants, with part used, type of extract, isolated compound/chromatographic fraction, dose, route and schedule of administration with animal used, and percentage activity are given in tables. The plants are classified according to their activity profile and presented accordingly. Plants for which the hormonal profile or toxicity data have been reported are dealt with under each type of activity. Most of the investigators did not develop the active plants, probably because of inconsistent results in repeat tests or lack of facilities. Major attention has been

devoted to identifying plants with interceptive properties. The schedules used are more or less uniform and acceptable. On the basis of preliminary toxicity data, extracts/compounds from "*Aristolochia indica*," "*Artemisia scoparia*," "*Hibiscus rosa sinensis*," "*Laccardia lacca*," and "*Plumbago zeylanica*" exclude themselves from consideration for follow-up. Wherever done, the hormonal profiles revealed estrogenic activity in active extracts/fractions/compounds from "*Artabotrys odoratissimus*," "*Datura quercifolia*," "*Daucus carota*," "*Embelia ribes*," "*Hibiscus rosa sinensis*," "*Pueraria tuberosa*" and "*Tabernaemontana heyneana*." Thus they are not ideal for follow-up. Some more plants can be excluded initially because of low activity or equivocal reports on activity. The remaining plants, in order of priority, for follow-up should be "*Ensete superbum*," "*Achyranthes aspera*," "*Lygodium flexosum*," "*Sapindus trifoliatus*," "*Polygonum hydropiper*," and "*Abrus precatorius*." The next priority could be given to plants with weak estrogenicity. The CDRI has observed 100% anti-implantation activity by 4 plants in hamsters. These should be the potential plants for development since they appear to interfere with progesterone synthesis or utilization.

### Antifertility activity of medicinal plants on male and female reproduction <sup>[9-11]</sup>

Population control is a significant issue worldwide especially in developing countries like India. Population breakout has responsible for various deleterious effects on life surviving resources on the earth. Therefore fertility regulation is necessary for the conservation of life supporting resources as well as good reproductive life of both males and females. Various chemical methods of contraception are available today but these methods possess several side effects. Herbal medicinal plants have been used as safe alternatives of the chemical methods. Evaluation of the herbal medicinal plants has been in progress for several decades to identify effective and safe substances for fertility regulation. Several medicinal plant extract were investigated for their antifertility activity both in male and female animal models. This review covered scientific proven information on various medicinal plants used for antifertility activity in both males and females. This review provides information on botanical name along with their common name, antifertility activity, part used and their phytochemicals present in plants.

### Rising Trends towards Natural Contraception: A Review <sup>[13]</sup>

Despite many achievements in human health care in the twenty first century, population in developing countries lack regular access to affordable essential drugs. For these people, modern medicine is never likely to be a realistic treatment option. In contrast medicinal plants are widely available and affordable, even in remote areas. The cost of modern medicine is increasing by modern health technology and in many cases is inappropriate to the immediate needs of people in developing countries. This review concentrates on those recent advances in science and technology that offer possible inroads for shifting the paradigm for herb-based contraception.

### Conclusion

Herbs have been a source of medicine in the past centuries and today scientists and the general public recognize their value as a source of new or complimentary medicinal products. Recently, wide array of research investigations

highlight the potential health beneficial principles from plant sources. Medicinal plants constitute one of the main sources of new pharmaceuticals and health care products.

There has been an increase in demand for the phytopharmaceuticals all over the world because of the fact that the allopathic drugs have more side effects. This review makes an attempt to study and perform further research work on this *Artabotrys odoratissimus* plant.

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#### References

1. Wikipedia, the free encyclopedia.
2. J Ethnopharmacol. 1982; 6(2):191-226.
3. Kamboj VP, Dhawan BN. Research on plants for fertility regulation in India, J Ethnopharmacol. 1982; 6(2):191-226.
4. Faizan Danish Khaleel, Mehta BK. Isolation and characterization of a steroidal compound from the hexane extract of the leaves of *Artabotrys odoratissimus*. African Journal of Pure and Applied chemistry. 2015; 9(1):6-11
5. Ali MS, Saleem M, Ahmad VU, Shameel S, Naturforsch Z. Antioxidant and Antimicrobial activities of *Codium fragile* essential oil and extract". B: Chem. Sci. 2001; 56:837.
6. Gupta RS, Sharm Ali MS, Saleem M, Ahmad VU, Shameel S, Naturforsch Z. Antioxidant and Antimicrobial activities of *Codium fragile* essential oil and extract. B: Chem. Sci. 2001; 56:837.
7. Gupta RS, Sharm Ali. A review on medicinal plants exhibiting antifertility activity in males. Natural product radiance. 2006; 5:389-410.
8. Mamatha A, Elumalai A, Eswaraiah MC, Mathangi N. An updated review on antifertility plants. International Journal of Pharmacotherapy. 2012; 2:4-6.
9. Thakur DS, Kumar P, Kujur A, Kumar P, Kumar R. Contribution of Male Contraception in World Population. Journal of Pharmaceutical Sciences and Research. 2010; 1:384-393.
10. Parveena Devi, Pradeep Kumar, Nidhi, Isha Dhamija. Antifertility activity of medicinal plants on male and female reproduction. International Journal of Pharmaceutical Sciences and Research. 2013; 4:122-128.
11. Suresh Joshia, Aksha Sharma, Mridula Chaturvedib. Antifertility potential of some medicinal plants in males: an overview. Int. J Pharm. Sci. 2011; 3(5):204-217.
12. Sathiyaraj K, Sivaraj A, Thirumalai T, Senthilkumar B. Ethnobotanical Study of antifertility medicinal plants used by the local people in Kathiyavadi village, Vellore District, Tamil Nadu, India. Asian Pacific J Trop. Biomed. 2012, S1285-S1288:
13. Jaya Preethi P, Lohita M. Rising Trends towards Natural Contraception: A Review, Asian journal of research in pharmaceutical science. 2014; 4(3):129.