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Medicinal carnivorous plants of Odisha

Medicinal plants have been playing a vital role in the development of human health care. Among the magical part of diversity of medicinal plants, carnivorous plants are the unsolved mysteries and are differ from other plants not just in their nutrition but also in the habitat as well as in their appearance having medicinal potential. These plants have particular adaptation that allows them to survive in nutrient poor soil. Tropical / subtropical regions with warm, humid and wet climate are the most appropriate condition for the desired growth of carnivorous plants. Morphologically these plants are of different form and size. They include herb, shrub, climber with aquatic, terrestrial and epiphytic in habitat from which some are annual or perennial. The modified leaves of carnivorous plant play the major role in trapping and show variation in colours, shapes and sizes. These species contain different digestive enzymes for their metabolism. About 800 different kinds of meat eating plants have been recorded till date belong 20 genera and 12 families. Among these, only 2 genera of carnivorous plants are known to Odisha i.e. *Utricularia* (Bladderworts) and *Drosera* (Sundews) having about 14 and 3 species respectively. These two genera having high pharmacological significance and contain diverse bioactive compounds. The common bioactive compounds present in these two genera are reducing sugar, phenolic compounds, tannin etc. About 80% of *Utricularia* species are terrestrial, and approximately 20% are aquatic. These

species are also traditionally used by the tribal communities to dress the wounds, in urinary disease and also used to cure diseases caused by mosquitoes. Sundews not only possess the presence of different medicinally important pharmacological active compounds but these plants also possess the anti-cancer activity, ant inflammation activity, anti-oxidant activity and anti-microbial activity. They are also rich with flavonoids and have anti-viral and anti-mutagenic bio-constituents. *D. indica*, *D. burmannii* and *D. peltata* have been known as an important agent for different respiratory diseases since centuries. All parts of the plant (roots, flowers fruits) are used in preparation of different formulations. In Germany and some other European countries, these herbs are used to treat cough and asthma. Sundew tea is a popular remedy for dry coughs, bronchitis, whooping cough, asthma and bronchial cramps. These herbs also show various antibacterial and antifungal activities and exhibit versatile medicinal properties against sunburn, toothache, heart related diseases etc. It was also found that there is a lack of work in the evaluation of medicinal properties of these mysterious plants and need their long-term national conservation strategy.

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