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BO-111

STUDY ON MORPHOLOGICAL, ANATOMICAL, PHARMACOGONOSTICAL AND PHYTOCHEMICAL VARIATION BETWEEN THE TWO IMPORTANT MEDICINAL PLANTS *RUELLIA PATULA* JACQ. AND *RUELLIA TUBEROSA* LINN.

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Abstract:

The present study was carried out to identify the variation between the two important species viz., *Ruellia patula* Jacq. and *Ruellia tuberosa* Linn. belongs to family Acanthaceae. The plants are highly medicinal and used as one of the component in making of many indigenous medicines including Ayurvedha and siddha. The properties of the medicinal plants were determined by means of various parameters including morphological, anatomical, pharmacognostical and phytochemical analysis. The similar studies were also conducted for these two plants to find out the variation between these two species. Anatomically the plants exhibited the variation in number of cortical layers and in vascular elements too. In the pharmacogonostical studies also the two species showed a distinctive variation among them. The colour variation under visible and UV light of the plant stem powder was varied among the species due to presence of many additional components. The preliminary phytochemical evaluation exhibited the presence of all important phytochemicals. The amount of presence is varied among the species to a considerable extent. Hence, the study clearly depicts important characteristic features of the individual plant species to avoid adulteration in the field of Pharmacogonosy.

Keywords: Pharmacognosy, Phytochemicals, Anatomy, Medicinal plants

BO-127

EFFECT OF TRADITIONAL HERBAL PLANT EXTRACTS ON GLUCOSE LEVEL IN YEAST CELLS FOR DIABETIC DISORDER

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Abstract:

In the present study, the methanolic extracts of herbal plants such as *Justicia tranquebariensis* L.f., *Momordica charantia* L. and *Sesbania grandiflora* (L.) Poiret were tested for their anti-diabetic activity by glucose uptake in yeast cells. The yeast cells were suspended in various concentrations of plant extract (10, 25, 50, 75, and 100 %) with two different concentrations of glucose (50 mg/ml and 100 mg/ml). The plant extract enhances the yeast cells to take in the glucose and the amount of glucose uptake by yeast cells was estimated by spectrophotometrically at 540 nm. The results revealed the maximum percentage of glucose uptake 93.96 for *J. tranquebariensis* followed by 93.70 for *M. charantia* was observed at 50 mg/ml glucose concentration respectively and the maximum percentage of glucose uptake 93.66 for *S. grandiflora* was observed at 100 mg/ml glucose concentration. The present study provided results to justify the traditional claim of herbs for antidiabetic activity. Hence, the further extended the work to confirm anti-diabetic activity by acute toxicity studies and on *in vivo* models.

Keywords: Methanolic extracts, Concentrations, Glucose uptake, Yeast cells and Anti-diabetic activity.

BO-152

COMPARATIVE STUDY OF OYSTER MUSHROOM (*PLEUROTUS FLORIDA*) CULTIVATION ON PHYSICALLY AND CHEMICALLY TREATED PADDY STRAW

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Abstract:

Pleurotus florida is a common edible mushroom which is rich in carbohydrates, proteins and other nutrients. The present study was carried out to evaluate carbohydrate and protein contents of mushroom cultivated on physically and chemically sterilized paddy straw. The physical method of sterilization on the substrate has the highest carbohydrate and protein content (20 mg/ml, 10 mg/ml) and the chemical method of sterilization on the substrate has 12 mg/ml of carbohydrate and 5 mg/ml of protein. Phytochemical screening of aqueous extract showed the presence of secondary metabolites such as alkaloids and flavonoids. On the basis of the observation of the present study, consumption of chemically treated mushroom leads to health issue in humans and hence physically treated mushroom is recommended.

Keywords: Edible mushroom, carbohydrate, protein, sterilization, phytochemical screening.