

Phytochemical screening of ethno veterinary plants commonly used by farmer of westernghats for mastitis of cattle

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ABSTRACT

Medicinal plants are a source of naturally active compounds used extensively by tribal people worldwide for many ailments. Village farmers using medicinal plant for veterinary medicine. The study based on the idea from village farmers, Tapeworm plant (*Homalocladium platycladium*) and Bannimbu (*Glycosmis mauritiana*) commonly using mastitis medicine for cattle. The current investigation aimed at extraction and detection or screening of active phytochemical compounds from extract of leaves of medicinal plant. Phytochemical screening of different extractions revealed the presence of phenols, flavonoids, tannin, saponins, alkaloids, steroids, terpenoids, and glycosides which could account for anti-inflammatory activity, and find the common components present in both plants.

Keywords : Phytochemical screening, ethno veterinary plants, Secondary metabolism

INTRODUCTION

The medicinal plants are useful for healing or curing of both humans and animals diseases because of the presence of phytochemical constituents. Phytochemical are secondary metabolites are naturally occurring in the plants leaves, stem bark, fruits, flowers and root

that have defense mechanism and various diseases. Secondary metabolism produces a large number of specialized compounds (estimated 200,000) that do not aid in the growth and development of plants but are required for the plant to survive in its environment. Secondary metabolism is

Valuation of Human Capital: An Accounting Perceptive with special reference to Banking Sector in Kerala

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ABSTRACT

It is widely accepted fact that the success of any organisation, business or otherwise, to a great extent, depends upon the quality, calibre and character of the people working in it. An organisation having vast physical resources, with latest technology, may find itself in midst of severe crisis, in case it does not have the right people to manage and conduct its affairs. Human resource accounting is of recent origin and is striving for acceptance. Human resources accounting is an accounting analysis system and in the last decade a large body of literature has been published setting the various procedures for analysis. At the same time from academicians the theory and underlying concepts of accounting measurement have received sizeable attention and a considerable body of literature has developed. Thus in spite of all technological developments, the importance of human resources has in no way diminished. It is unfortunate that even till now accountants have not been in a position, to evolve a generally accepted system to value and record this important asset, viz human resources. This study mainly focuses on the models used for valuation of human capital in banking business in Kerala.

Keywords: Human Resource, Technological Development, Banking Business, Kerala.

INTRODUCTION

The first attempt to value human beings in monetary terms was made by Sir William Petty as early as 1961. Further efforts in connection, were made by William Farr in 1853 and Earnest

Engel in 1883. In worth, previous study have shown and debated various magnitudes related to valuing human resource. For accounting human resources, different models have been developed which are helpful to identify and

A Pharmacological Review of *Tinospora Cordifolia*, The Magic Healer Plant of Ayurveda

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ABSTRACT

The traditional system of medicine, ayurveda operates on the concept of rasayana which ultimately means substances that promote physical and mental health and that which improves the immunity of the body thereby enhancing the human longevity. *Tinospora cordifolia* has been an integral part of many ayurvedic formulations and have been used for centuries as a rasayanic preparation. It has several medicinal properties like anti-inflammatory, immunomodulatory, anti-diabetic, gout relieving etc. and determines the significance of its presence in Ayurveda. The plant could act as a potential candidate for the development of adaptogens that serve the purpose of a generalised well-being of individuals.

Keywords : Medicinal plants, *Tinospora cordifolia*, diabetes, anti-inflammatory, guduchi, Ayurveda

INTRODUCTION

Ayurveda believes in the concept of rasayana which can be compared to the modern concept of adaptogens. Adaptogens are defined as "a new class of metabolic regulators (of natural origin) which increase the ability of an organism to adapt to environmental factors and to avoid damage from such factors" (Panossian *et al.*, 1999). A number of plants used in ayurveda have been selected as probable

adaptogenic candidates with *T. cordifolia* ranking high in the list. *Tinospora cordifolia*, also known as guduchi was introduced as an adaptogen by the study conducted by Rege *et al.* (1999), where experimental animals were exposed to biological, physical, and chemical stressors. *T. cordifolia* was found to exert a normalizing effect against these stressors together with five other possible adaptogens all used in ayurveda as rasayanas. Guduchi has

Study on Treatment Process of Effluent Drug in Industry

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ABSTRACT

Drug industry is one of the major industries causing water pollution. In India, Drug industry generates about Gallons of waste water processed depending upon the process employed and product manufactured. Considering the increased demand for Drugs, the Drug based industries in India is expected to grow rapidly and have the waste generation and related environmental problems are also assumed increased importance. Poorly treated waste water with high levels of pollutants caused by poor design, operation or treatment systems creates major environmental problems when discharged to surface water or land. Considering the above stated implications an attempt has been made in the present project to evaluate one of the WWTP for Drug industry. The waste water is treated in two units based on characteristics namely LTDS (Unit-I), it is a common ETP process and HTDS (Unit-II) is Multiple evaporating system (MEE). Samples were collected from six points; Raw effluent [P-1], Oil and grease trap [P-2], Equalization tank [P-3], Aeration tank 1 [P-4], Aeration tank 2 [P-5] and Secondary clarifier [P-6] to evaluate the performance of WWTP. Parameters analyzed for evaluation of performance of WWTP are COD, BOD at 20° C, TSS, TDS, oil and grease, Chloride and Alkalinity. Mass balance of COD, TSS and TDS was performed to find the fate of pollutants in WWTP. Parameters like pH and oil & grease were used to access the suitability of secondary effluent for reuse in irrigation. The COD, BOD5 at 20° C and TSS removal efficiency of WWTP were 96%, 95% and 94% respectively, which are in acceptable range for Disposal in to marine.

Key words: WWTP: Water waste treatment plant, MEE: Multiple Evaporation System, APS: Activated sludge process, LTDS: Low total dissolved solids, HTDS: High total dissolved solids, TSS: Total suspension solids, TDS: Total dissolved solids, COD: Chemical oxygen demand, BOD: Biological oxygen demand.

A Combined Classifier for Offline Malayalam Handwritten Character Recognition

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ABSTRACT

Offline Handwritten Character Recognition of Malayalam scripts have gained remarkable attention in the past few years. The complicated writing style of Malayalam characters with loops and curves make the recognition process highly challenging. The proposed method of combining classifiers overcomes the limitations of single classifiers in solving difficult pattern recognition problems involving large number of out-put classes. This paper presents a combined classifier system for the recognition of offline handwritten Malayalam characters. The features used are density features, RLC features and projection profiles. These feature sets are fed as input to three feedforward neural networks. The results of these three neural networks are combined using a weighted majority voting scheme.

Keywords : Neural Networks; charcter recognition; feature extraction; weighted majority voting

I. Introduction

Automatic recognition of handwritten text has been a frontier area of research for the past few decades. Here, we investigate the results of combining the results of multiple classifiers for the recognition of handwritten Malayalam characters. The extracted features are based on

the Density features, Run-length count and Projection profiles. These features are fed as input to three different neural networks and finally the results of these three networks are combined and evaluated using weighted classifier combination methods.

A Review on Mind Reading Computer using Brain Signals

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ABSTRACT

A Computer can be easily be defined as a machine that can solve extraordinary complex problems with high speed and accuracy. For a computer, the technique of reading the mind of a human being involves more than a regular programming work. Although the computer have the capability to perform complex operations, the part which the information or the input is fed to them is so slow. This delay in the operation is caused due to the way in which the information is transferred to the system that is using typewriters, Keyboards or punch cards etc... The Electroencephalograph is a device that is used by the medical researchers to pick up electrical signals or currents from various parts of the human brain. So if it is possible to identify the brain waves that is generated from a person's thoughts or commands, it might be able to teach the computers with the same skills. Still there exists computers that has been taught to recognize different commands like, UP, DOWN, LEFT, RIGHT, FAST, SLOW, STOP and more... This paper study and explain various mind reading techniques by exploiting the facial expression and elaborate the functionality of the same.

Keywords : mind reading, facial expression, Electroencephalograph, brain waves, information

Introduction

Humans will express their emotions, states, thoughts and their desires all the time through different facial expressions, voice sounds, and gestures. It also happens likewise automatically when they are interacting with the machines. The mental

states and the gestures that make will govern how each others are communicating, and this mental states will gradually affect a person's performance. So the ability to identify the knowledge from the mental states, gestures, facial expressions and brain signals, and use this knowledge to guide our

Studies need for the Assessment of Sex Determination in Zebrafish (*Danio rerio*)

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One of the most popular model organisms among teleosts is the zebrafish (*Danio rerio*). Natural habitats of the zebrafish stretch from South Asia (e.g. Pakistan, Nepal and India) to Southeast Asia (e.g. Myanmar) (Spence *et al.*, 2008). This small-bodied freshwater species is most commonly found in slow or stagnant waters, such as rivers, ponds and paddy fields. The ambient water temperature at these natural habitats typically ranges from 26–32°C (Engeszer *et al.*, 2007). Among the reasons that make zebrafish a popular laboratory model is its short generation time. In the laboratory, zebrafish reach reproductive maturity at around 3–4 months. Despite its relatively small size, the species is quite fecund, mature females produce 200–300 eggs/week regularly.

Zebrafish (*Danio rerio*) has emerged as a model organism in drug discovery, disease studies and developmental biology (Streisinger *et al.*, 1981;

Grunwald and Eisen 2002). An advantage of zebrafish as a model organism is that the embryos and larvae are small, transparent and undergo rapid development outside the mother's body, allowing phenotypic analysis of embryogenesis and organogenesis *in vivo* (Coley-smith *et al.*, 1996). The gonadal sex differentiation mechanism(s) in zebrafish is however an elusive phenomenon. Unraveling the molecular mechanisms could facilitate the use of zebrafish in exploring human reproductive diseases such as polycystic ovary syndrome (PCOS) and testicular dysgenesis syndrome (TDS). Despite the popularity of zebrafish as a research model, its sex determination (SD) mechanism is still unknown.

In vertebrates, sex is determined either by genetic mechanisms (genetic sex determination or GSD) or by the environment (environmental

Present Environment for Entrepreneurship Developments in India

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ABSTRACT

In India, various initiatives have been taken by the government from time to time for entrepreneurship development in the country. However, literature reveals that entrepreneurs face a number of problems which obstruct the growth of entrepreneurship. To meet these challenges, a need was felt by government to initiate a new set of policy reforms in India which has led to a improvement in recent years. Therefore, an attempt has been made to study the implications of the recent remarkable policy reforms of entrepreneurship in India which has made India a hotspot destination for start-ups. The study found that most of these recent reforms are focusing on skills development measures giving birth to technology enabled start-ups. The government and the non-government organizations and academicians are in favor to enhance the skill and the quality of the entrepreneurship in our country. The solutions to this problem can be easily made if positive attitude and the tilt for entrepreneurship from us can be charmed.

Keywords: Entrepreneurship, employment, policy reforms, skills development

Introduction

The entrepreneurship is very a old concept according to which any one who runs business is called an entrepreneur. The more precise meaning of entrepreneur is; one who perceives a need and then brings together manpower, material and capital required to meet that need. The word „entrepreneur“ is derived from the

French verb „enterprendre“. It means “to undertake. Around 1700 A.D. the term was used for architects and contractor of public works.” The entrepreneur in an advanced economy is an individual who introduce something new in the economy- a method of production not yet tested by experience in the

Seaweed Biotechnology

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Introduction

Seaweeds or marine macro algae are primitive non-flowering plants without true root, stem and leaves. They form one of the commercially important marine living renewable resources. They are the only source for the production of phytochemicals such as agar, carrageenan and alginate. Seaweeds occur in the intertidal, shallow and deep waters of the sea upto 180m depth and also in estuaries and backwaters. They grow on rocks, dead corals, stones, pebbles, solid substrata and on other plants. Based on the type of pigments, external and internal structures, seaweeds are divided into green, brown, red and blue-green algae. Seaweeds contain many trace elements, minerals, protein, iodine, bromine, vitamins and many bioactive substances. The luxuriant growth of seaweeds is found in southeast of Tamil Nadu, Gujarat Coast, Lakshadweep and Andaman-Nicobar Islands. Rich seaweed beds occur at Mumbai, Ratnagiri, Goa, Karwar, Varkala, Vizhinjam, Pulicat Lake and Chilka Lake. About 220 genera and 740 species of marine algae have

been reported so far from Indian waters. The total standing crop of seaweeds from intertidal and shallow waters of all maritime states and Lakshadweep was estimated as 91,333 tonnes (wet wt.). The quantity of seaweeds estimated in deep waters of Tamil Nadu was 75,373 tonnes (wet wt.) in an area of 1863 sq. km. from Rameswaram (Dhanushkodi) to Kanyakumari (Kaliaperumal, 1987a; Kaliaperumal, 1994).

Seaweeds are utilized for the production of phytochemicals such as agar, carrageenan and alginate which are widely used as gelling, stabilizing and thickening agents in many industries such as food, confectionary, pharmaceutical, dairy, textile, paper, paint and varnish etc. Agar is manufactured from red algae like *Gelidiella*, *Gracilaria*, *Gelidium* and *Pterocladia*. Some other red algae viz. *Eucheuma*, *Chondrus*, *Hypnea* and *Gigartina* are used for the production of carrageenan. Alginate is obtained from brown algae such as *Sargassum*, *Turbinaria*, *Laminaria*, *Undaria*, *Macrocystis* and *Ascophyllum*. Other chemical products namely mannitol,

Establishment of an Efficient *in vitro* Regeneration Protocol for Rapid and Mass Propagation of *Dendrobium chrysotoxum* Lindl. Using Seed Culture

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ABSTRACT

An efficient *in vitro* regeneration protocol from seed culture has been established successfully for *Dendrobium chrysotoxum*, an epiphytic orchid having tremendous ornamental and medicinal values. Seed germination response was encouraging in MS medium enriched with different combinations of auxins and cytokinins. Medium supplemented with 0.4% citric acid, 2 mg/L 6-benzyl amino purine (BAP), and 0.5 mg/L indole-3-acetic acid (IAA) produced best seed germination percentage in 2 weeks of culture. Incorporation of higher concentration of kinetin (KN) or BAP in combination with low auxin in medium induced pronounced shooting and leaf formation. Reduction in leaf development was evident when cytokinins exist singly in medium indicating synergistic effect of auxin and cytokinin in leaf induction. Presence of elevated level of indole-3-acetic acid (IAA) or 1-indole butyric acid (IBA) with low cytokinin content in medium generated more *in vitro* rooting, though IAA was found to be more effective in rooting induction as compared to IBA. The *in vitro* protocol for asymbiotic seed germination developed from the present investigation can be used for rapid mass propagation of this highly important *Dendrobium* orchid species.

Keywords: 6-Benzyl Amino Purine [BAP], Indole-3-Acetic Acid [IAA], Kinetin [KN], Indole Butyric Acid [IBA], Naphthalene Acetic Acid [NAA], *Dendrobium* Orchid Seeds, Mass Propagation

Review on Antidiabetic Properties of Indigenous Medicinal Plants in Kerala, India

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ABSTRACT

Diabetes mellitus is a chronic metabolic disorder affecting people worldwide. It is caused mainly by insulin insufficiency or insulin dysfunction. Various medicinal plants of India have been studied for diabetes treatment. Even though various approaches exist to reduce the ill effects of diabetes herbal drugs are more preferred due to fewer side effects. Medicinal plants such as *Allium sativum*, *Coccinia indica*, *Gymnema sylvestre* etc. used in the traditional ayurvedic medicine can lead to the development of drugs and nutraceuticals for controlling diabetes mellitus. Therefore, this work is on traditional medicinal plants in Kerala, India that show antidiabetic activity.

Keywords: Diabetes mellitus; Insulin; Medicinal plants; Antidiabetic activity; Hyperglycemia; Beta cells

Introduction

Diabetes mellitus is a metabolic disorder of the endocrine system. According to WHO, around 347 million people suffer from diabetes and in India 62 million people suffer from this disease (<http://www.searo.who.int/india/mediacentre/events/2016/en/>). Diabetes is caused when human body does not produce or utilize

insulin. The insulin hormone acts via IGF-1 (Insulin like growth factor-1) protein. Insulin acts on cells to stimulate glucose, protein and lipid metabolism by modifying the activities of enzymes. The action of insulin is initiated by insulin binding to its plasma membrane receptor. Partial failure of insulin signalling system leads to various metabolic disorders like

Plant defense arsenal against insect herbivores

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ABSTRACT

Plants and insect herbivores have acquired diverse mechanisms to fight against each other in their prolonged course of interactions and coevolution. In this concealed war that we seldom notice, chemicals act as both weapons and messengers. This complex interface has led to the development of a number of direct and indirect plant defensive traits and the counter-adaptive features in insects as well. In both cases these traits comprise morphological and biochemical defensive traits and the latter are considered more significant and effective than the former. From an economic point of view herbivorous insects cause considerable damage to global crop production which makes it is more important to understand the plant defensive traits against insect herbivory. In this review, direct and indirect line of plant defense against insect herbivory with detailed account of specialized phytochemicals including phenolic compounds and alkaloids, and plant proteins are discussed.

Key words: insect herbivory, plant defense, phenolics, defense proteins

Introduction

Plants are sessile organisms which do not have a devoted immune system such as found in higher animals. They are under attack from a wide range of potent enemies which mainly comprises bacteria, virus, nematodes, fungus and insect herbivores. However, plants are found to possess vast and specialized arsenal against each class of invading species. The defense response of plants varies depending on

the nature of the invading species, majority of which are attributed to fungal pathogens and insect herbivory. Based on observations in plants, inducible defenses against herbivory can be classified into two: direct defenses and indirect defenses. Direct defenses include any plant traits that by themselves empower the host plants against insect attacks. Plant traits that by themselves do not affect the susceptibility of host plants, but can serve as

Integrated fuzzy dematel and fuzzy topsis to evaluate supplier in green supply chain

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ABSTRACT

To stay competitive in the present global market, it's essential for a company to select the best supplier because company performance not only depends on its internal efforts but also on supplier's performance. Due to growing environmental issues & increased awareness among public, and stricter environmental laws imposed by the government made the companies consider environmental sustainability matters while selecting suppliers. If in case suppliers have any capacity constraint or any other constraints, then complexity in selecting suppliers who fulfill company's demand and standards increases. Information from the literature review and through the opinion of experts, the effort has been made to find essential criteria for the evaluation and at the same time for the selection of a green supplier. For the same an integrated decision-making tool, on the basis of fuzzy TOPSIS and fuzzy DEMATEL has been presented to show the procedure for the selection of the best supplier. Due to vagueness in human judgment fuzzy concept has been used.

Keywords— Green supplier selection, MCDM techniques, Fuzzy DEMATEL, Fuzzy TOPSIS.

Introduction

We are in the midst of a competitive environment and here finding the best suppliers is the major critical issues that manufacturing firms are confronting. In such

firms, the final cost of a product essentially relies upon the initial cost of raw material, and to reduce purchasing price selection of the best supplier is necessary (Amid et al., 2011). Due to expanding awareness between people for the

Biosynthesis of Silver Nanoparticles by *Lactobacillus* spp. and its Activity against *Pseudomonas aeruginosa*

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ABSTRACT

Tomorrow technology is going to depend on nanostructured metals. The impact of this technology will be felt greatly at the interphase of chemistry and biology. The desire to synthesize nanoparticles using efficient and green chemistry approaches has led to the use of microorganisms. Among microbes prokaryotes have received most attention in the area of silver nanoparticles production. Here we report the eco-friendly production of silver nanoparticles assisted by *Lactobacillus* strain found in curd when exposed to appropriate ions. *Lactobacillus* sps isolated from curd was inoculated to Sterilized milk and latter (after 24hr) the whey was collected by coarse filtration (Whatman no.40). Silver nitrate (1 mg) was added to 5 ml of pale yellow filtrate then incubated at 37p C. UV-Vis measurements were done with Spectrophotometer (Thermo Spectronic Genesys 10 UV) for the samples drawn at every 12 hours. The silver nanoparticles of size ranging from 2 to 20nm were synthesized by *Lactobacillus* sp VRS2 which was confirmed by TEM. The biosynthesized silver nanoparticles (AgNPs) showed excellent antibacterial activity against *Pseudomonas aeruginosa* (MTCC strain no: 424).

Key words: Silver nanoparticles, Nosocomial pathogen, TEM, *Lactobacillus* sps, Antibacterial activity