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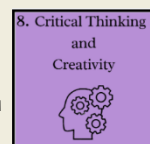
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Research Article

Synthesis of Chitosan-based Nanoparticles from Plant Extract of *Clitoria ternatea* and Study of their Antibacterial Activity

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ABSTRACT

This research focuses on preparing chitosan-based nanoparticles from the extract of different parts of *Clitoria ternatea* and their inhibitory effect against bacteria. Chitosan is a polymer found in nature and is used in the medical and food industry due to its non-toxic and biocompatible nature. Chitosan and chitosan-based nanoparticles have a positively charged surface and can bind to mucosal tissues, making them useful for studies related to drug delivery and laboratory trials of drugs. Chitosan-based nanoparticles have broad-spectrum antibacterial activity; however, the inhibitory effect differs according to the structural and chemical differences in the bacterial membrane. Many secondary metabolites have been isolated from *Clitoria ternatea* that have been historically used in Ayurveda. The physicochemical analysis of chitosan-based nanoparticles from the leaf extract is done using Fourier Transform Infrared Spectroscopy (FTIR) and their antibacterial activity is studied against *Escherichia coli* (gram-negative) and *Staphylococcus aureus* (gram-positive) using Minimum Inhibitory Concentration (MIC) values.

Keywords: Antibacterial activity, chitosan-based nanoparticles, *Clitoria ternatea*, FTIR, green synthesis, nanoscience, nanotechnology.

QUICK RESPONSE CODE →

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INTRODUCTION

The word 'nano' originated from a Greek prefix meaning 'dwarf', which represents one thousand millionths of a meter (10^{-9} m). Nanoscience deals with the study of molecular structures and particles whose size lies in the range of 1 to 100 nm. The history of nanoscience can be mapped back to the 5th century B.C., when the Greek scientists questioned whether matter is continuous or made up of indivisible particles (now known as atoms). Nanotechnology is the technology that can utilize the concepts of nanoscience and develop practical applications by careful implementation of scientific method at the Nano level. The definition, according to the National Nanotechnology Initiative (NNI) in the USA, suggests two significant challenges in nanotechnology. Firstly, altering and controlling the shape and size of particles at the nanometer scale and secondly, dealing with nanoparticles to use their properties advantageously at the Nano level.¹

Classification of nanoparticles can be done according to their morphology and physicochemical characteristics. They can also be classified as inorganic and organic nanoparticles. In general, inorganic particles are more stable than organic structures at the nanometer scale. Organic nanoparticles still have issues of limited chemical and mechanical stability, amongst others.² There are multiple types of inorganic nanoparticles found to be present naturally, like gold (Au), silver (Ag), copper oxide (CuO), platinum (Pt), palladium (Pd), and zinc oxide (ZnO). The existence of naturally-occurring nanoparticles is controlled by different environmental factors like temperature, pH, sunlight, concentration, to name a few. Each nanoparticle possesses unique properties and applications, which increases the demand for its use in different fields.³

Silver nanoparticles possess properties that enable them to inhibit biofilms. Many known antibiotics, detergents, and disinfectants cannot degrade biofilms, which can be a significant hurdle in the medical field. Silver nanoparticles are considered a promising alternative to commercially used antibiotics in this regard.⁴ Similarly, gold nanoparticles have specific optic and electronic properties, which make them biocompatible. These properties are used advantageously in drug delivery systems, gene regulations on intracellular level, bioimaging, anti-inflammatory therapy, and anticancer therapy.⁵ Due to their antibacterial and antifungal activity and non-toxic nature, copper nanoparticles have garnered much interest in recent times.⁶ Zinc oxide-chitosan nanoparticles are found to have significant antimicrobial activity as well as biofilm inhibition activity. Research in this field indicates that these nanoparticles have the potential to prevent bacterial infections.⁷

The deacetylation of chitin forms chitosan. Chitin is a polysaccharide that is found in crustacean shells and cell walls of fungi, naturally bound to the cellular proteins. The chitin needs to be purified by acidification and alkalization and then N-deacetylated to chitosan under a controlled

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154

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Article

Isolation of bio-molecule Baicalein (5, 6, 7-Trihydroxy flavone) from root of *Oroxylum indicum* L. Vent and its prospective interaction with COVID-19 Viral S-Protein Receptor Binding Domain

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References (39)

Abstract

Newly emerged COVID-19 performs its activity through spike protein receptor binding domain (RBD). A strong competitive binding on this site can inhibit the COVID-19 (SARS-CoV-2) activity against host cells. A significant plant bioactive molecule, Baicalein (5,6,7-Trihydroxyflavone), has noteworthy effects on viral S protein. The biomolecule was isolated from an endangered medicinal tree *Oroxylum indicum* L. Vent. Therapeutic use various parts of *Oroxylum* have been mentioned in ancient literature, Ayurveda and is also being used a folklore medicine in many tribal areas of India. Molecular docking has been applied to screen the binding pattern and bond strength of biomolecule with ten amino acids. The binding site was defined with site finder algorithm. The residues were found Arg403, Glu406, Lys417, Tyr453, Ser494, Tyr495, Gly496, Phe497, Asn501, Tyr505. The biomolecule Baicalein showed effective binding capacity towards active site residues of SARS-CoV-2 spike receptor-binding domain. It was found to have a strong binding affinity with RBD of S-protein of viral residues with high negative binding free energy (-12.5545 kcal/mol). Such competitive interruption of hydrogen bond formation between the viral S- protein and biomolecules' active sites would inhibit the potency of COVID-19 infectivity.



Toxicity of Imidacloprid on Peripheral Blood Lymphocytes by MTT Assay and the Ameliorative Effect of Extract of *Tinospora cordifolia* (Gilroe) Extract

Research Article

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Abstract

Imidacloprid (IMI) is a widely used insecticide which has a specific affinity for insect neonicotinoid acetylcholine receptors. Like all insecticides which are used in excess it tends to bioaccumulate in the environment. So it was thought worthwhile to study its cytotoxicity to human peripheral blood lymphocytes in concentrations ranging from 1.5mM to 4mM after 2 hours and 18 hours exposure by MTT method. Trypan blue test was also used to determine the percentage of living cells. The ameliorative effect of an extract of the stem in water and ethanolic extract of leaves of *Tinospora cordifolia* (Thunb.) Miess, was also studied. The viability of the lymphocytes showed a fall with increasing concentrations at an exposure of 2 hours. After 18 hours exposure to the IMI only, the viability showed a significant dose dependent drop. Trypan blue test for viability was also conducted. Addition of *Tinospora* extract raised the viability significantly at 2 hours of incubation. In fact this increase was greatest at 3.5mM and 4mM concentration of drug. The ameliorative effect was maximum at 2 hours. Addition of *Tinospora* leaf extract showed a significant increase in cell viability at 18 hours of incubation as compared to values obtained with only the drug. Thus a considerable loss of viability of lymphocytes was seen after exposure to the drug in the selected concentrations but herbal extracts seem to help to make the damage less marked. The cells showed a significant rise in viability when incubated with *Tinospora* leaf extract only, confirming its supportive action in cell proliferation. However, taking into account the evident fall in cell viability caused by exposure to the considerably dilute concentrations tested, caution is needed to prevent over exposure to the pesticide while spraying.

Key Words: Imidacloprid, Lymphocytes, MTT, Toxicity, *Tinospora cordifolia* (Thunb) Miess, Trypan blue.

Introduction

The use of pesticides has been an established agricultural practice to ensure a good crop yield. This is essential to feed our ever-increasing population. The term pesticide can be replaced with plant protective products (PPP) according to European food safety authority.

Pesticides are one of the very common substances that cause deterioration of the environment

However, indiscriminate use of these pesticides or insecticides leads to pollution of soil and water. Once incorporated in the soil or water they are taken up by the plankton and then gradually reach the higher trophic level and finally man through the food chain.(1,2) Thus

study of the toxic effect of pesticides on organisms and cells of the human system is very relevant.

Imidacloprid (IMI) belongs to the neonicotinoid category which includes selective systemic and single mode activity pesticides introduced in the 1990s. It was patented by Bayer and marketed in 1991. It is a compound derived from nicotine and it inactivates insect nicotinoid acetylcholine receptors. It is favoured for use due to its selective toxicity to insects over vertebrates.(3) Neonicotinoids are neurotoxic insecticides that act by binding covalently to nicotinic acetylcholine receptors and as a result they obstruct the acetylcholine to bind to its receptor. Thus it inhibits the post synaptic transmission, so the insect is paralysed and it may lead to death of the organism.(4) IMI is reported to be toxic to non target insects such as honeybees etc, so it may be disturbing the ecosystem.

IMI also known as N-[1-[(6-chloropyridin-3-yl)methyl]imidazolidin-2-ylidene]nitramide has molecular formula C₉H₁₀ClN₅O₂, with a molecular weight of 255.6 g/mol, its melting point is 136.4 to 143.8 °C (277.5 to 290.8 °F). In appearance, it consists

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RESEARCH ARTICLES



Enhancement in production of baicalein through transformation in *Oroxylum indicum* (L.) Vent by *Rhizobium rhizogenes*

Rumana Faraz¹ · Mamta Gokhale² · Ragini Gothalwal³

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Abstract

Oroxylum indicum (L.) Vent (*O. indicum*), a significant endangered medicinal plant, was transformed by the *Rhizobium rhizogenes* (*R. rhizogenes*) mediated transformation method using the bacterial strain MTCC 532. For a successful transformation, factors such as explant selection, Co-cultivation time, temperature for induced root development, transformation technique, and antibiotic concentration were optimized. Various methods were employed for enhancing the rate of transformation. A drastic increase in transformation frequency was observed when CaCl₂ was used in concentration of 10 mM and 15 mM along with ultrasonication during Co-cultivation. Total phenolic and flavonoid content was determined in various extracts of *O. indicum* by using Folin–Ciocalteu reagent and Aluminium chloride colorimetric method respectively. Moreover, the antioxidant potential of different extracts of *O. indicum* were assessed with the 2, 2-diphenyl-1-picrylhydrazyl (DPPH) method. Using specific *rolA* primers, molecular analysis was performed, revealing T-DNA integration in the hairy roots and confirming the expression of hairy root inducible genes. Murashige and Skoog (MS) medium with 3% sucrose was shown to have the maximum induction rate of hairy roots after 28 days of Co-cultivation. TLC as well as spectroscopic methods (UV–VIS and FTIR) were performed to compare the specific flavonoid (baicalein) in transformed roots as well as several non-transformed extracts. Comparing hairy roots to non-transformed roots, the total phenolic, flavonoid contents, and antioxidant activities were greater in hairy roots. The findings indicate that *O. indicum* hairy root cultures have a greater capacity for producing beneficial chemicals and researching their biological activities. The transformation of *O. indicum* by *R. rhizogenes* (MTCC 532) has been reported for the first time.

Keywords *Rhizobium rhizogenes* · Hairy roots · *Oroxylum indicum* · Flavonoid · UV–VIS spectroscopy · FTIR

Introduction

Oroxylum indicum (L.) Vent of family Bignoniaceae, is a medicinally important plant bearing vital secondary metabolites. It is an endangered medicinal tree species, which possesses several antimicrobial, antiarthritic, anti-hepatic qualities in its various parts (Laupattarakasem

et al. 2003; Begum et al. 2019). Parts of the tree are often used to cure inflammation, dropsy, bronchitis, jaundice, piles, smallpox, leucoderma, scabies, enlarged spleen, helminthiasis, gastropathy, hemorrhoids, cholera and rheumatoid arthritis (Bansal and Gokhale 2012). Root of the tree has long been used in Ayurveda for preparation of *Amaratarista*, *Awalwha*, *Brahmarasayana*, *Chyavanaprasha*, *Dantadarishta*, *Dhanawantaraghrita*, *Mulayadikwath*, *Narayanataila*, *Shyonaka patpak*, *Bruhatpanchamulaya dikwath* and *Dashmularisht* (Singh 2015). *O. indicum* is characterized by brown bark and large pinnate leaves. *Oroxylum* is a genus of medium sized, deciduous trees, distributed in India, Sri Lanka, Malaysia, China, Thailand, Philippines and Indonesia. In India, the tree is indigenous to Eastern and Western Ghats and is also found in North-East regions (Ahad et al. 2012). *O. indicum* is commonly known as “Indian Trumpet tree” due to its resemblance to trumpet. The plant is known for its high commercial and

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A CASE STUDY OF MEDICINAL PLANT CONSERVATION IN THE JABALPUR DISTRICT, INDIA

ZAREEN BAKSH

MOHD KAFEEL AHMAD ANSARI

Abstract

Medicinal and aromatics plants play a vital role in health care around the world. Biodiversity is the natural biological capital of earth. Therefore, there is a need to improve basic knowledge about medicinal plants species and their distribution; promote conservation of vulnerable species at the grass-roots level; adopt sustainable collection and management practices on public lands and conservation of medicinal plants with their commercial development. Cultivation is a vital tool for the biodiversity conservation of medicinal plants, with gene banks and botanic gardens contributing additionally to the conservation of species diversity. Both *in situ* and *ex situ* methods of biodiversity conservation are equally important and efficient. This chapter describes the significant role of ethnic people who have conserved the biodiversity in and around localities of their natural habitat since the beginnings of civilization.



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Issue



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GRADIVA REVIEW JOURNAL

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INFLUENCE AND RELATIONSHIP OF PEER PRESSURE WITH META-COGNITION

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ABSTRACT

Meta-cognition is an awareness of one's thought process and an understanding of the Patterns behind them. In term "Meta-cognition" the root word "Meta" means "beyond". Metacognition means thinking about thinking or cognition about cognition. Whereas peer pressure is the direct or indirect, be it positive or negative influence on people of peers, members of social group with similar interest, experiences or social statuses. "Students who know about the different kinds of strategies for learning, thinking, and problem solving will be more likely to use them" Metacognitive practices help students become aware of their strengths and weaknesses as learners, writers, readers, test-takers, group members, etc. A key element is recognizing the limit of one's knowledge or ability and then figuring out how to expand that knowledge or extend the ability. The social pressure by members of one's peer group to take a certain action, adopt certain values or otherwise conform in order to be accepted. The main aim of this research is to analyse the influence of peer pressure on one's Meta cognition i.e., the way peer group affects the individual's way of thinking. Interrogator prepared a questionnaire and a quantitative data has been collected. Survey method is used and data is collected through virtual mode. Questionnaire was designed in multiple Choice question form in which 25 questions were included.

KEYWORDS: Meta-cognition, Peer pressure, Metacognitive-Awareness

INTRODUCTION

The modern education mode is different from education mode in the past. Meta-cognition is a process about thinking about our own thinking. It involves knowing about our own self. It is an important skill that a person acquires, which helps lifelong. These skills help to process information and gain experiences through it.

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GRADIVA REVIEW JOURNAL

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- Biosynthesis of heterologous protein by *C. glutamicum* is discussed.

Abstract

Ever since its discovery in 1957, *Corynebacterium glutamicum* has become a well-established industrial strain and is known for its massive capability of producing various





Role of Polyamines in Molecular Regulation and Cross-Talks Against Drought Tolerance in Plants

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Abstract

Global agricultural demand and the impact of fluctuating climatic conditions including global warming have catastrophically limited crop productivity and immensely outstretched the market value of agricultural products leading to acute inflation. The effect of desiccation or drought stress in plants is manifested at three levels viz. morphological, biochemical, and molecular and plants possess their own molecular and signaling arsenal to combat or ameliorate various stresses. For decades, stress-tolerant cultivars have been investigated and modulation of polyamine (PA) signaling was found to play a major role in attenuating environmental stresses including drought as major abiotic stress. PA metabolism pathways with their ability to crosstalk with both primary and secondary metabolic pathways have been correlated with several other responses such as seed germination, plant growth, development, defense, hormonal regulation, stress tolerance, and crop yield. Recent transcriptomic and metabolomic approaches have expanded the knowledge on the regulation of stress-induced biochemical, molecular, and physiological alterations. To fully comprehend the intricate biochemical network of plant stress physiology, it is necessary to identify exact responses against specific stress stimuli, interpret concurrent epigenetic alterations, and use molecular switching. The present review encompasses recent updates on drought tolerance mechanisms mediated by diverse polyamines playing significant roles in metabolic regulation, oxidative stress management, and systematic stress-reversal signaling. Besides, the drought stress-reversal role of polyamines and their cross-talks with other signaling molecules have also been documented. Gene, enzyme, and transcription factor (TF) functional features were retrieved from the published papers involving transgenic or mutant plants with over-expression or loss-of-function investigations.

Keywords Polyamines · Drought stress · Stomatal closure · Abscisic acid · Cross-talks · Genetic manipulation · Seed germination

Introduction

Polyamines (PAs) are polycationic, low molecular weight, ubiquitous compounds, with aliphatic nitrogenous bases. In both prokaryotic and eukaryotic organisms, some important category of compound mediates the fundamental metabolic aspects like cell growth, differentiation, maturation, and apoptotic phenomenon. However, in plants, polyamines

play a critical regulatory role in different phases of growth and developmental processes along with their pivotal role in biotic and abiotic stress responses. These basic traits have been considered quite “stimulative with broad prospects of application” in the recent era of molecular biotechnology and genetic engineering, to enrich overall plant physiology and biotechnology-based research (Chen et al. 2019; Alcázar et al. 2020; Nandy et al. 2022). Besides PAs, there are other plant bio-stimulants like inorganic compounds, biopolymers, and microbial metabolites. However, the mode of action, as well as the impact of polyamines on secondary metabolites, are exclusive (Jardin 2015; Pal et al., 2021). The significant regulatory role of polyamines has been observed in basic molecular, and physiological processes viz. central dogma,

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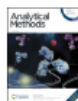
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Issue 12, 2023

[Previous Article](#)

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From the journal:
Analytical Methods

A rapid and green GC-MS method for the sampling of volatile organic compounds in spices and flowers by concurrent headspace single-drop microextraction and solid-phase microextraction



Manju Gupta,^{a,b} Soumitra Soni,^a Archana Jain^a and Krishna K. Verma^{id} *^a

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Abstract

The equilibrium rather than the exhaustive nature of headspace single-drop microextraction (HS-SDME) and headspace solid-phase microextraction (HS-SPME) allowed the concurrent sampling of volatile organic compounds (VOCs) on the same sample in the same vial in a dual extraction configuration. This has avoided the necessity of conducting a separate set of experiments and was found to produce results in the time duration of a single sample preparation experiment. The results obtained by HS-SDME were validated against those found by the standard method of HS-SPME. Rectilinear calibration was made for certain VOCs tested as analytes over the range of 0.01–8 $\mu\text{g g}^{-1}$, and the average values of R^2 , LOD and LOQ were found to be, respectively, 0.9992, 1.9 ng g^{-1} and 5.7 ng g^{-1} in HS-SDME, and 0.9991, 3.1 ng g^{-1} and 9.1 ng g^{-1} in HS-SPME. The spiked recoveries and RSD were, respectively, 100.5% and 3.3% in HS-SDME and 98.1% and 3.6% in HS-SPME. HS-SDME is convenient to perform and produce results in a much cheaper way than HS-SPME and free from the inconveniences of memory effects. With GC-MS, this method has also been implemented as a rapid, reliable and green procedure (by GAPI and AGREE tools) for the sampling of VOCs in real samples of spices, flowers, and a beetle nut chewing sample illicitly containing tobacco.





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Controlled Releases of Paclitaxel Drug investigation and Impact Analysis from Casein

Section A-Research paper

ISSN 2063-5346



Controlled Releases of Paclitaxel Drug investigation and Impact Analysis from Casein

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Abstract:

This paper deals with the effects of Paclitaxel drug on casein nanoparticles and its used in control drug therapy. Such systems have shown potential in releasing drugs controllably chemotherapy. In the present investigation casein nanoparticles were synthesized by emulsion cross linking method and characterized by various techniques such as Fourier transform-infrared spectrometry, Transmission electron microscopy, XRD. The average diameter of prepared native casein nanoparticles is 6nm to 100nm through W/O emulsification-cross linking method. The release behavior of casein nanoparticles was studied as a function of various factors such as chemical composition of nano-carrier, pH, temperature, biological fluids. The results revealed that the casein nanoparticles prove to be an excellent option for controlled and targeted delivery of Paclitaxel. Therefore, there is a strong incentive to develop a new strategy for the synthesis of casein nanoparticles and investigated their properties.

Keywords: Casein, Nanoparticle, Paclitaxel, Polymer, Protein

1. Introduction:

The number of people suffering from cancer is projected to increase to 29.8 million in 2025 from 26.7 million in 2021. Cancer ranks either first or second among the leading causes of death before the age of 70 years, across 91 out of the 172 countries worldwide. The process of uncontrolled division of cells has been identified as the only responsible factor for the origin of cancer, which is a multi phasial disease and may appear in any organ or cell type [1].

Eur. Chem. Bull. 2023, 12(Special Issue 4), 16175-16186

16175



Article

Aloe vera Loaded (Polyvinyl Alcohol) Cryogel: Potential Wound Healer

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Abstract

The present work describes the preparation methodology of polyvinyl alcohol and Aloe vera hydrogels and their potential role in wound healing. Aloe vera is frequently used in treating many diseases due to its spectacular properties (anti-inflammatory, antiviral, antitumor and antibacterial) which assist in wound healing and help in treating many diseases a range of ailments. The designing of Aloe vera loaded polyvinyl alcohol (PVA) blend hydrogels (coined as cryogels) was done following repeated freeze-thaw cycles method. Characterization of the cryogels was done using some analytical techniques to study its properties and possible applications. The FTIR spectra shows that Aloe vera loaded PVA cryogels are interconnected by hydrogen bonding. Scanning electron microscope analysis established the porous nature of cryogels. These hydrogels show water imbibing capacity, which depends on the experimental conditions and the chemical composition of the gel. The factors affecting the swelling ratio of cryogels are amount of PVA, Aloe vera, number of Freez-Thaw cycles, pH and medium. The pore size of the cryogels also decreases with increasing number of freeze-thaw cycles. The Aloe vera-PVA cryogel is healing compatible with blood as there is less than 2% hemolysis.





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High Technology Letters

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Prospects of Machine Learning for Decision Making

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Abstract: Artificial intelligence (AI) encompasses the field of machine learning. Generalizing machine learning is the process of analysing data structures and fitting them into models that can be understood and used by people. Despite being a branch of computer science, machine learning differs from traditional algorithms. By definition, algorithms are sets of explicit instructions that computers use to solve problems or perform calculations. Rather than relying on human judgment, computers can learn from analysing data inputs and then output values that fall within a certain range. Using machine learning, computers can build models based on sample data in order to automate data-driven decision-making processes. Almost all technology users today have benefited from machine learning. Users of social media platforms can tag and share photos of friends through facial recognition technology. Images of text are converted into movable type using optical character recognition (OCR) technology. The field of machine learning is constantly developing. As a consequence, there are some things to keep in mind when working with machine learning methodologies, or when analysing the impact of machine learning processes. In this Chapter, we'll look at supervised and unsupervised methods of machine learning, as well as approaches to learning algorithms, such as the machine Learning algorithm, decision tree learning, and deep learning.

Keywords: Machine Learning, Artificial Intelligence, Supervised & Unsupervised Learning, Decision Making through Machine Learning



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Conjoint Analysis of Buyers' Behaviour towards Instant Food Products

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Abstract

Human wants are endless; the process of searching, selecting, purchasing and using the good and services for meeting the unlimited wants is considered as buyer behavior. The buyer behavior shows the actions and response of buyer towards a product. The study is an attempt to unearth the conjoint analysis of consumer behavior for instant food. Efforts were also made to study the factors influencing the buyer behavior for instant food. Snacks & Savories, Instant Meals and Beverages are the three categories on which this study is based. The present research helps to identify the most demanded instant food and correlate with buyers' behavior. The study finds that age has no impact on buying preference for instant food whereas gender, nature of family and occupation has a positive impact. It concludes that buying preference for instant meals has more consistency as compared to beverages and snacks & savories and staying out (.992), motivation (.987), ready to serve (.986), size (.962) and brand availability (.968) are important variables influencing buyers' behavior for instant food.

Keywords: Buyer behavior, Instant food, conjoint analysis, Snacks & savories, Instant meals, Beverages and buying preference.

INTRODUCTION

Modern marketing is all about identifying the needs of consumers and offering the

best product to them. Consumer satisfaction is the primary need of all the organization and every organization



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A COMPARATIVE STUDY ON FACTORS AFFECTING EMPLOYABILITY OF GRADUATES IN RURAL AND URBAN AREAS OF JABALPUR DISTRICT.

Dr. Surbhi Jain, Assistant Professor, St. Aloysius' College (Autonomous), Jabalpur, M.P.
Ms. Nidhi Rajak, Assistant Professor, St. Aloysius' College (Autonomous), Jabalpur, M.P.

Enhancing Graduate Employability skills is considered as significant task within the college and university of Jabalpur. In the era of technological disruption and cut throat competition, the qualified human resources with high competitiveness and employability skills are needed. Now days employers find a lack of expertise and skills among graduates who are seeking job. Insufficient skills are related to the issue of education system and its quality. This study makes an attempt to identify the factor affecting employability in graduates in rural and urban areas. Primary Data were collected through structured questionnaire. Using simple random sampling, this study collected data from 120 respondents i.e. 60 respondents from urban areas and 60 respondents from rural areas covering colleges and university of Jabalpur district. Percentage method was used to analyze the data. It has been found that there is a huge variation in factors which influence the employability of graduates in rural and urban areas. Suggestions were incorporated to reduce the differences in employability factors in rural and urban areas.

Keywords: Employability, Graduates, Skills, Rural and Urban areas

1.1 Introduction:

In the current scenario, the world is changing rapidly, and so does the world's economy is developing which creates a buzz about the skills required in the present times. Higher education aims to do students' overall development to face the competition of the real world and the biggest challenge after education is to be employable. Employability is not just about getting a job it's about the skills, understanding, and attributes of a person which help to get the desired job and add value to oneself and to the society and economy. It is a set of achievements – skills, understanding, and personal attributes – that makes individuals more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workplace, the community, and the economy. It has been observed that is not even 50% of graduates are getting jobs after graduation. On the basis of rural and urban areas, there are variances in the nature of employment opportunities. The main problem is not the availability of the job and employment, but the mismatch or lack of skills to carry out a particular job and. The employment opportunities can be obtained by the person on the basis of number of factors which leads to enhance employability in rural and urban area. This study will help to identify the factor to develop skilling models in order to fulfill the gap of employment opportunities in rural and urban areas.

1.2 Review Of Literature

- **Tinashe Timote Harry, Themba Quadra Mjoli, Willie T Chinyamurindi (2018)** Explore final-year students' perceptions of factors that affect employability. Their study provides an understanding of the complex issues faced by potential graduates throughout their journey. It provides an understanding of student perceptions towards employability, which policymakers can consider when addressing the issue of unemployment in the country.
- **In his research, Kong Jun (2017)** studies the factors that affect the job search prospects of graduates. By using parametric, semiparametric, and nonparametric approaches, and found out that University goodwill, course selection such as management, and engineering graduates find jobs more easily as compared to other fields.
- **Rajanibala Shah (2014)** In her studies focused on the skills that affect the employability of graduate students and found four independent factors that affect employability and stated that

Page | 42

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A Study on Mentoring of Undergraduate Student: A Pragmatic Approach

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Abstract: Education is something more than learning chapters or topics; education is associated with the overall development of one's life. To make this statement a reality the student mentoring system is introduced in the colleges which are popularly known as education mentoring. This system is implemented to help the students to cope up with the problems and challenges faced in this real world. Research regarding mentoring increased rapidly during the last twenty years and described qualities of mentors, relationship, importance etc. The purpose of this study is to analyze the impact of mentoring on undergraduate student's life in different aspects such as in understanding roles and duties as student towards organization and his studies, understanding culture of organization which will them to adapt the environment, building new skills which are required to be future ready, solving difficult issues of academics as well as of personal life, identifying their strength and weaknesses to make plan for future. For this research 120 students were surveyed from different colleges of Jabalpur of different streams. For collection of data questionnaire was distributed among 150 students out of which 120 responses were received. The result shows that mentoring has positive impact on undergraduates. This paper will look at the impact of mentoring on undergraduates; problems faced in the process and present some concrete suggestions to remove barriers in the process. Teachers and mentors can point out all new approaches and ways for mentoring.

Keywords: Mentor, Mentee, Students, Mentoring Session, Positive Environment, Positive Outcomes

1. Introduction

"Mentoring is to support and encourage people to manage their own learning in order that they may maximize their potential, develop their skills, improve their performance and become the person they want to be." By Eric Parsloe.

College is an important phase of a student's life, it plays a significant role in their life because their future is built from here when students enter this new world it's not easy for them to mould themselves according to the new culture, system, atmosphere around them. There are different challenges waiting for them such as socializing, achieving academic goals, developing skills, adopting new culture, dealing with finances etc. [1] College life exposes us to all new experiences thus it is a crucial time when one can shape or destroy his career. For helping students to cope with these challenges colleges provide mentoring to students for producing good college graduates because teaching is something more than giving lectures and

explaining topics to students, today teaching is associated with providing quality education to students. [2]

Mentoring is a relationship between a more experienced person that is a mentor and a less experienced person that is a mentored or mentee, it is a relationship based on mutual trust, confidence in each other, encouragement, openness, respect, guidance and many more. [3] One can experience mentoring in different stages of life because there are different streams of mentoring and some of those streams are educational/academic mentoring. Education mentoring is a model of education system where the faculty of the institute provides students (mentees) with their knowledge, guidance, support. It creates a supportive environment for students which makes them feel more connected, secure, confident, in college life. [4] In nutshell mentoring is a process where mentor helps mentee to set targets and strategies to achieve them and gives them guidance by their experiences. Educational mentoring helps youngsters of our nation to achieve their overall academic and non-academic goals, mentors help students in different fields such as in communication skills, boosting confidence developing



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RECENT CHANGES IN EMPLOYEES EXPECTATIONS WITH REFERENCE TO QUALITY OF WORK LIFE

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ABSTRACT

The objective of the study is to identify the recent major changes in employees' expectations with reference to Quality of Work Life (QWL). The research methodology adopted is a secondary method of data collection, as all the major reviews of HR Leaders and Major magazines are reviewed. The research would aim at identifying the major reasons along with the changes in employees' expectations, as a result of a change in the mind set of employees post and continuing COVID impact. It concludes with the suggestions that corporate houses need to understand and adapt with, so as to ensure employees' retention and getting the work done for attaining organizational goals.

KEYWORDS :- Quality of Work Life, Employee Expectations, HR Practices.

INTRODUCTION

Quality Of Work Life .

Quality of Work Life (QWL) is a philosophy, a set of principles, which holds that people are the most important resource in the organization as they are trustworthy, responsible and capable of making valuable contribution and they should be treated with dignity and respect. The elements that are relevant to an individual's quality of work life include the task, the physical work environment, social environment within the organization, administrative system and relationship between life on and off the job. QWL consists of opportunities for active involvement in group working arrangements or problem solving that are of mutual benefit to employees or employers, based on labour management cooperation. People also conceive of QWL as a set of methods, such as autonomous work groups, job enrichment, and high involvement aimed at boosting the satisfaction and productivity of workers. It requires employee commitment to the organization and an environment in which this commitment can flourish. Thus, QWL is a comprehensive construct that includes an individual's job related well-being and the extent to which work experiences are rewarding, fulfilling and devoid of stress and other negative personal consequences.



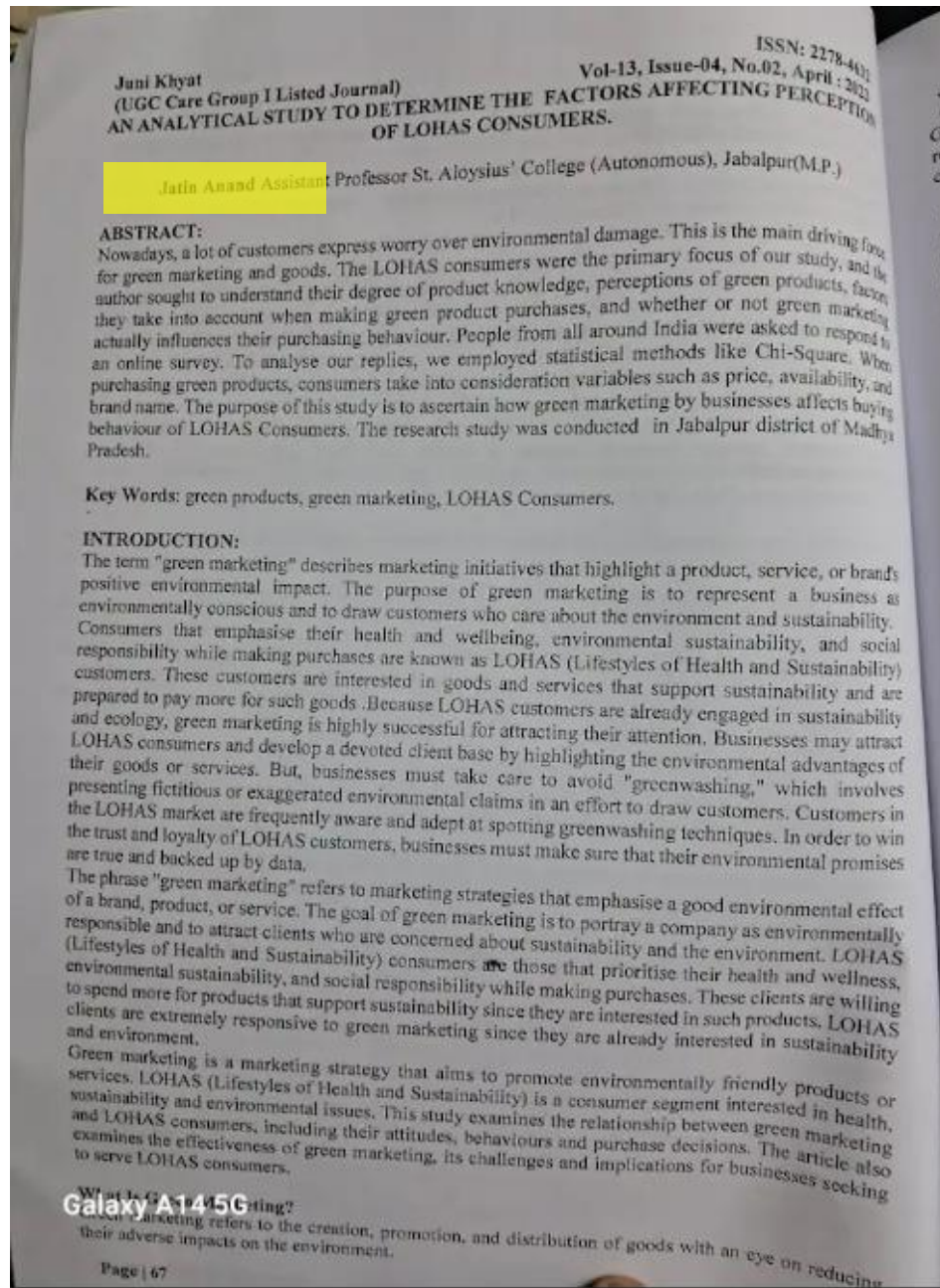
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Breaking New Ground: Emerging Trends in Postcolonial Indian Poetry in English

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"Poetry is the record of the best and happiest moments of the happiest and the best minds."
Shelley (*A Defence of Poetry*)

If this is true can there be any true poetry in colonized lands, where happiness is but a distant hope?

A pressing need for the once colonized countries to defy the imperialist moves that had long tried to commodify their tradition and culture, led to an upsurge of nationalist, nativist, literature termed 'post-colonial' suggesting decentering of colonial literature. The term gained currency by the end of the twentieth century and includes literature which is alive with creative energy of recently liberated minds, offering immense possibilities of approach. One may agree with the opinion of B K Das that "like colonialism, post colonialism is a state of consciousness", a crucial stage in the continuum of our cultural process and self awareness" (7). Since Postcolonial literatures in English are a focal point of literary debate, it is legitimately contended that the study of colonialism and its chronological successor post colonialism, is very crucial to scholars of all disciplines under humanities. In the context of literature, Postcoloniality suggests not merely the era of political independence but more significantly a state of mind, emancipation of spirit and broadening of outlook. Analysis of the literary output of different orientations within the post colonial world demonstrate that in the evolution of a world literature or globalization, national boundaries do not any longer stand tall enough to remain impediments.

The literary renaissance that resulted from India's response to the literary movements of the other nations of the Third World, invited a radical reappraisal of the prevalent poetic trends. Poetry had to evolve towards Indianisation and drift away from incipient romanticism, in order to gain global critical acceptability as postcolonial poetry from India in English. It had to be moulded as poetry of Indians, by Indians, but certainly not merely *for* Indians. This paper emerges from an ongoing research into the trends and themes of recent Indian poetry in English. Our propositions

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Language and Rituals as Transcultural Motifs in South Asian Novel - Anil's Ghost.

- **Source:** Poetcrit . Jul-Dec2022, Vol. 35 Issue 2, p17-24. 8p.
- **Author(s):** Bose, Tuhina; Pathak, Neelanjana
- **Subject Terms:** *SRI Lanka *ONDAATJE, Michael, 1943- *DIASPORA *SOCIAL change *RITES & ceremonies *MODERN society *RITUAL *LANGUAGE & languages
- **Abstract:** Diasporic fiction works as a wheel to connect the mother nation with the adopted nation in time and space, and as more and more diasporic narratives gain popularity, the nuanced stories from the previously colonised nations are gaining a momentum. Ondaatje who has spent his childhood in Sri Lanka and now is a Canadian citizen, weaves Anil's Ghost as a tapestry heaped with transnational sentiments, he looks back at South Asia as a cultural hub; for writers like Ondaatje, it is extremely important to create space for the unheard stories of their people and connect it with the mainstream literature, as a commitment to the honesty of writing. Having gone through the experience of diaspora such writers have endowed their fiction with the sentiments of hybridity, multiculturalism and globalization in abundance. As these metanarratives speak of the people who were either never spoken about or were subjugated, they attempt to explore the historical facts and dig deeper into the archives to unearth these disembodied voices, perhaps for emancipation and for challenging the disavowal of native cultures. The two major pillars that are indicative of cultural changes for any kind of people are language and religious/ritualistic practices. Language, the basic element of dialogue, is still an inexhaustible source of conflicts and coexistence, which engages with people and can result in the fact that they might be living in different worlds even if they live in the same neighborhood. Intercultural dialogue thus appears a sine qua non of contemporary society enroute to a transcultural future, where the sheer preaching of multiculturalism may echo the evolution of hybridity, new ritualistic practices, and greater tolerance. Ritualistic practices could be social or religious, the blending of practices, for instance in food, clothing and lifestyle have always been the markers for an evolving culture. Moreover, south Asia has been a fecund space for thriving of hybrid cultures with the Indian ocean being the fluid medium for navigation of languages and rituals. The south Asian diasporic author, Michael Ondaatje has enriched the aesthetics of literature by enmeshing his narratives with many cultural instances from countries like Sri Lanka and Canada. This paper has attempted to address language and ritualistic ceremonies (religious and social) as transcultural motifs in south Asian novel Anil's Ghost.
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बहुमुखी प्रतिभा की धनी महादेवी वर्मा : एक विश्लेषण

डॉ. विमल शर्मा, एम. ए. प्रशासनिक विज्ञान
श्री. अशोकजी प्रसाद महादेवी साहित्यालय, जबलपुर (M.P.)

हिंदी साहित्य जगत् की एक लोकप्रिय कर्तवीरिणी के रूप में महादेवी वर्मा को जाना जाता है। कथक्कार के पार प्रमुख अक्षर संकेत में से वह एक थीं। उन्होंने हिंदी गद्य एवं पद्य साहित्य के विभिन्न क्षेत्रों पर अपनी लेखनी कक्षाओं और अपनी समीक्षण, पौरु, कलात्मक और साहित्यिक के विवेका के द्वारा उन्हें आधुनिक गीत बना कर लिया। महादेवी वर्मा ने अनुपमि की शक्तों से समाज के विभिन्न वर्गों और वर्गों को पेशा और गृह परिवारों के साथ उन्हें लोकप्रिय बनाकर साहित्यिक रूप प्रदान किया। यही कारण है कि उन्हें आधुनिक हिंदी साहित्य के समर्थक हस्ताक्षर के रूप में पहचान मिली।

महादेवी का जन्म सन् 1907 में पारंगलबाग, उदा प्रदेश में हुआ था। उनके पिता श्री गेभिर शर्मा वर्मा एक प्राथमिक थे और माता श्रीमती देवदारी देवी एक गृहिणी थीं। वर्मा पौकार में माता पौदियाँ के घर दुर्गेश्वर की प्रविष्ट हुई थीं। इन पर परिवार ने इतना होकर इसे अपनी कुलदेवी की रूपों का प्रसाद माना और उनके नाम पर ही ललित गृही का नाम महादेवी रखा गया। विद्या प्रकाश एके दुर्ग दुर्गा का नाम करवां हुईं स्मृत, अभिजात रक्षण और ज्ञान का निष्कर्ष करती थीं, रीक उन्हें प्रकाश महादेवी ने भी जीवन-पर्यंत साहित्यिक विषयों का समर्थन किया और यही अभिजात के पक्ष में अपनी अक्षरक शक्ति को और अक्षर, उन्होंने अपने नाम को साहित्यिक विद्वत् का दिया।

महादेवी वर्मा ने साहित्य के क्षेत्र में अपनी थीं से ही प्रवेश पाकर करण रखा। साहित्य का बीजबोधन उनके बचपन में ही हो गया था। महादेवी वर्मा को बचपन से ही हीं द्वारा कथाकार, साहित्यकार की कक्षाओं मिलने का अवकाश मिला, इससे उनके ज्ञान मन में साहित्य के प्रति अनुपम उत्पन्न हो गया। पूरा के प्रति साहित्य में ही विद्वत् जगत् है इन जगत् को साहित्य में करने हुए उन्होंने बहुत खोटी अनुप से ही कथन मुक्त प्रदान कर दिया। साहित्य के प्रति सख्त रहने वाली माता का साहित्यिक उन्हें संलग्न की और उन्मुख कर गया। इनके का परिचय था कि 5 वर्ष की आयु में मैं अपनी प्यारी कविता को सुनित कर सकती थीं इस प्रकार है-

उईं प्यारी मे महलरी,
उन्का भोग खुन खा खाते,
धिर थीं यहीं कुछ बोले हैं,
मैंं हाकुर जो भोले हैं।

महादेवी के मन में साहित्य के विषयों को पौकार करने में उनकी विद्या कक्षा मुपहासकमारी पौकार का भी विद्वत् योगदान रहा। मुपहासकमारी पौकार और महादेवी वर्मा एक ही विद्यालय में अध्ययनरत थीं। उन समय महादेवी पौकारों कक्षा में और मुपहासकमारी कक्षा में थीं। एक दिन मुपहासकमारी ने महादेवी को कक्षा में अक्षर उन्को कक्षा पहा कि जब वह कविताएँ लिखती

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अक्टूबर-सुपर 2023 ■ 139



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AN INTERNATIONAL JOURNAL OF INTERDISCIPLINARY STUDIES **VOL 8, ISSUE 1**

PRIORITY AREAS OF INDIA AT G20 PRESIDENCY: AN OVERVIEW

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ABSTRACT

This paper aims to highlight the role of India as the President of G20 Summit in bridging the gap arisen due to COVID, Russia- Ukraine war and the rise of inflation globally. It gives the overview on what India can offer to the world with its success stories like vaccination drives, women-led development, digital platforms etc. The paper also gives insights about the reformation which has to be brought in the governance of G20 and the need to use this platform to encourage the G20 nations to abide to the SDGs and promote initiatives such as Lifestyle for the Environment (LiFE) and One Solar Alliance

INTRODUCTION

Our Priorities will focus on healing our 'ONE EARTH', creating harmony within our 'ONE FAMILY' and giving hope for our 'ONE FUTURE'

– PM Shri Narendra Modi

The Group of Twenty (G20) is the premier intergovernmental forum for international cooperation, established with the objectives to maintain coordination between its members in order to achieve global economic stability, sustainable growth, promote financial regulations

DR. REETA CHOUHAN

DEEKSHA JAIN

1Page

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MAR - MAY 2023



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ROLE OF INDUSTRIES IN THE LIVELIHOOD OF SURROUNDING RURAL AREAS: AN OVERVIEW

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ABSTRACT

This paper tries to explain the relationship between the industries and Rural Area Surrounding. In much literature so far review a mixed impact of industry and rural area surrounding. Financial capital, human capital, social capital is observed further the assets that also be found interlinked achievement has also be found due to industries affect the other components the ones livelihood assets positively and adversely. Due to link amongst the livelihood assets achieving livelihood output some industrial development is a challenge.

Keyword:- Financial Capital ,Human Capital, sustainable development

INTRODUCTION

Foregoing analysis shows that India has made sufficient achievement in industrial development during the last five decades and has emerged as the tenth largest industrialized country of the world. But considering the size of the country this development is far from satisfactory. Foregoing analysis shows that India has made sufficient achievement in industrial development during the last five decades and has emerged as the tenth largest industrialized country of the world. But considering the size of the country this development is far from satisfactory. Among the several aspect that are influence by a industries one important issues is people livelihood challenge of a surrounding region. Livelihood is very complex and dynamic matter. The general perception the industrialization brings the positive

DR RENU MARKANDEY

DR. ANTHONIMA ROBIN

1P a g e

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Strad Research

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EFFECT OF HYBRID LEARNING MODEL ON ACADEMIC ACHIEVEMENT OF STUDENTS

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ABSTRACT

In today's era of digitalisation & modernisation, every process is becoming fast and efficient and so does our education system. This demands educational techniques to shift from a face-to-face traditional learning to an online learning. But as the saying goes by "everything comes with a price", online learning too has its copious limitations. There comes a betwixt "Hybrid Learning Model". This model is a cross between traditional face-to-face classroom format and online-only instruction. The verity behind hybrid instruction is that it provides the benefits of personal interaction with the convenience and flexibility of online assignments and discussions. While there has been significant research on how students perceive this form of learning, however, little exists on the impact of hybrid learning model on academic achievement of students. The present study aims to probe into the juxtaposition of traditional and online learning from a student's perspective, impact of hybrid learning model on the academic achievement of undergraduate students, extent to which hybrid learning responds to the needs and expectations of the students and if hybrid learning acts as a cost-effective mode of education from student's perspective. Survey method is used to collect data for the quantitative research to examine the academic achievement and the attitudes undergraduate students possess towards the hybrid learning model.

KEYWORDS

Hybrid Learning Model, Academic Achievement, Cost Effectiveness, Traditional Learning, Online Learning

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270

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ACTIVE LEARNING STRATEGIES AS AN INNOVATIVE TEACHING AND LEARNING STRATEGIES

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ABSTRACT

Education is a process of facilitating learning of knowledge, skill values and habits. Basically teaching must include two major components sending and receiving information. Ultimately a teacher tries his best to impart knowledge as the way he understood it. Teacher as a facilitator in teaching learning process and he try every day something new and innovating in his classroom. His innovative ideas make his teaching different to others. Propose of this paper to promote active learning strategy as an Innovative teaching and learning strategy. The main objective of this paper, to promote innovative and effective methods of teaching in classroom, best practices in teaching with students and accelerate teaching-learning process by way of promoting independent, critical and Creative thinking etc. Researcher thinks critically and analyzes all traditional teaching methods and Innovative teaching methods. After discussion all aspects researcher found that active learning strategy is the best option of Innovative teaching methods. School and college teacher can easily implement in their classroom and get positive result for learning. Conclusion of this paper, active learning strategy is more effective Innovative method during teaching learning process in classroom environment.

Key words: active learning strategy, Innovative Teaching, Teaching and Learning, Learning Strategies

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NEHA NAMDEV

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Coupled fixed point results and application to integral equations

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Abstract: In this research, we have settled some coupled fixed point results with rational contraction in partially ordered b-metric spaces (PObMS). The findings introduced here are generalizations and extensions of some of the established results in the literature. The applications of our result have been discussed in the final section of the paper.

AMS (MOS) Subject Classification Codes: 54M20; 47H10; 54H25

Key Words: coupled fixed point, partially ordered b- metric space, contraction

1. INTRODUCTION AND PRELIMINARIES

The study of fixed point is a well-established theory in mathematics which is applied to solve a wide area of problems. Contraction mappings play a key role for resolving existing problems in a myriad of mathematical disciplines. Wolk [20] and Monjardet [14] investigated the extension of the Banach contraction principle to partially ordered sets (poset) in order to obtain fixed points under certain conditions. In 2004, Ran and Reurings [16] established fixed points in partially ordered metric spaces (POMS) with some applications to matrix equations. Later on, many researchers [1, 2, 4, 5, 6, 8, 9, 10, 11, 12, 13, 15, 18, 19] settled fixed point and coupled fixed point results in POMS.

Definition 1.1. [7] Suppose (V, \leq) is a poset. A mapping $S : V \rightarrow V$ is called strictly increasing if $S(p) < S(\iota)$, for all $p, \iota \in V$ with $p < \iota$, and if $S(p) > S(\iota)$, for all $p, \iota \in V$ with $p < \iota$, is called strictly decreasing.



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AWARENESS AMONG SCHOOL TEACHERS REGARDING THE RIGHT TO EDUCATION ACT, 2009

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Department of Education

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Abstract

Education is a human right and is necessary for the realization of all other human rights. The Children's Rights to Free and Compulsory Education Act of 2009, known as the RTE Act of 2009, was introduced by the 86th Amendment in December 2002 and passed by Congress in July 2009 and came into force on April 1, 2010. An attempt was made to find out the perception of secondary school teachers' right to education through this study. In this study, 50 school teachers were constituted as a sample. A self-made questionnaire consisting of 15 multiple-choice questions was used. In this present study, there is no significant differences were found between teachers in rural and urban schools, and male and female teachers.

Key words - Awareness, Right to Education Act 2009.

INTRODUCTION

Education is the key to unlocking the power of knowledge. Education is a human capital investment. Individual freedom and empowerment are achieved through education, which contributes to societal growth. It provides a solid foundation for society, allowing for economic development, social prosperity, and political stability. To know how to read is to know how to walk; to know how to write is to know how to ascend; the feet, arms, and wings are all given to him by his first and most basic school books, according to Jose Marti, a poet and revolutionary Latin American thinker. These phrases help people grasp the value of education, but the reality is that not every youngster in our country has opportunity to it (Manju, 2015).

The landmark - Right to Education, the Right of Children to Free and Compulsory Education Act, 2009, provides every child in the age group of 6-14 years the right to:-



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मानव अधिकार
नई दिशाएं

महिला तस्करी और मानवाधिकार : समस्याएं एवं समाधान

विश्वास पटेल
तुहिना जौहरी

"लोगों को उनके मानवाधिकारों से वंचित करना उनकी मानवता को चुनौती देना है।"

-नेल्सन मंडेला

'न्यायमूल स्वराज्य स्यात्' अर्थात् 'स्वराज के मूल में न्याय होता है' जब न्याय की चर्चा होती है, तो मानव अधिकार का भाव उसमें पूरी तरह से समाहित रहता है। शोषित, पीड़ित और वंचित जनों की स्वतंत्रता, शांति और उन्हें न्याय सुनिश्चित कराने के लिए यह विशेष रूप से अनिवार्य है।

गरिमा के साथ जीवन यापन करना और अपने अधिकारों की रक्षा करना एक बुनियादी मानव अधिकार है। लेकिन हमारी सामाजिक व्यवस्था में महिलाओं की स्थिति हमेशा दोगम दबे की ही रही है। वे हमेशा आक्रामकता, हिंसा, शोषण, भेदभाव आदि का शिकार होती रही हैं क्योंकि पितृसत्तात्मक समाज ने उन्हें हमेशा अपने अधिकारों से वंचित रखा और उन्हें कठोर और रूढ़िवादी रीतिरिवाजों का पालन करने के लिए मजबूर किया जाता रहा है, और यही कारण है कि महिलाओं के खिलाफ कई तरह के अपराध होते रहे हैं। ऐसे ही गंभीर अपराध का एक ज्वलंत उदाहरण महिलाओं की तस्करी है जो अपने आप में मानवाधिकारों का गंभीर उल्लंघन है। वर्तमान समय में महिलाओं की तस्करी वैश्विक स्तर पर एक गंभीर एवं संवेदनशील समस्या बनकर उभरी है। यह एक ऐसा अपराध है जिसमें महिलाओं और लड़कियों को उनके शोषण के लिये खरीदा और बेचा जाता है। इसमें पीड़ित महिलाओं व लड़कियों से देह व्यापार, घरेलू काम तथा गुलामी इत्यादि के कार्य उनकी इच्छा के विरुद्ध करवाए जाते हैं। महिला तस्करी या अवैध व्यापार का शिकार होना किसी भी त्रासदी से कम नहीं है। इससे मानवता कलंकित होती है और सभ्य समाज को शर्मिन्दा होना पड़ता है। मानव तस्करी मानवता के विरुद्ध ऐसा भयावह कृत्य है, जो मनुष्य के स्वतंत्रता जैसे मूलभूत अधिकार को ही छीन लेता है।

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Disability and Human Rights: An Indian Perspective

Tuhina Johri
Vishwas Patel

[PDF \(USD 30\)](#)

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Keywords: Disability; legislation, notions, numerous social factors, psychological hurdles

Abstract

Disability is an inconvenience rather than a tragedy. According to the United Nations (UN), persons with disabilities (PDWs) are those who are unable to ensure, wholly or partially, the necessities of normal individuals as a result of a deficiency in their physical or mental capacities. To have a disability means that they consistently struggle to complete tasks that other people take for granted. Numerous social factors may influence whether or not people with disabilities participate in different activities, which may have an impact on their growth or self-esteem. Due to restrictions and prejudice, people with disabilities are continually denied the opportunity to participate in society on an equal footing. When a citizen is automatically granted human rights at birth, why is the proclamation of these rights separate for people with disabilities? Persons with disabilities cannot be divided into primary and secondary groups because they are also people. People who are disabled or "differently abled" are entitled to the same human rights as everyone else, including life, liberty, equality, security, and dignity. Disabled people in India, however, continue to be an unseen group due to social indifference, psychological hurdles, a narrow definition of "disability" giving rise to legal protection, and a dearth of accurate statistics. But the disabled are not helpless people. They do not want sympathy and neither to live on others' mercy. This article examines the current legal status of individuals with disabilities in light of current notions and legislation, however, the researcher contends that changing the vision of society is more likely to result in a solution than changing the law. Essentially, it is not an issue; instead, it is a special ability that these so-called "challenged people" have.

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Microchemical Journal



Volume 189, June 2023, 108573



Tumbling vial extraction of 2,4-dinitrophenylhydrazones of carbonyl compounds in bottled water, beer and milk using naphthalene-based magnetic polyimide as sorbent and HPLC-DAD

Nisha Sharma ^{a, b}, Manju Gupta ^c, Archana Jain ^a, Krishna K. Verma ^a  

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Highlights

- Tumbling vial extraction used disc magnets placed inside/outside of vial cap.
- Naphthalene-based polyimide sorbent displayed π - π and hydrophobic interactions.
- The new extraction method is robust, allows water free extract for injection.
- The added magnets increase sorption through supplementary magnetization of sorbent.
- LODs attained for carbonyls were lower than those reported by literature methods.



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Toxicity of Imidacloprid on Peripheral Blood Lymphocytes by MTT Assay and the Ameliorative Effect of Extract of *Tinospora cordifolia* (Giloe) Extract

Research Article

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Abstract

Imidacloprid (IMI) is a widely used insecticide which has a specific affinity for insect neonicotinoid acetylcholine receptors. Like all insecticides which are used in excess it tends to bioaccumulate in the environment. So it was thought worthwhile to study its cytotoxicity to human peripheral blood lymphocytes in concentrations ranging from 1.5mM to 4mM after 2 hours and 18 hours exposure by MTT method. Trypan blue test was also used to determine the percentage of living cells. The ameliorative effect of an extract of the stem in water and ethanolic extract of leaves of *Tinospora cordifolia* (Thunb.) Miess., was also studied. The viability of the lymphocytes showed a fall with increasing concentrations at an exposure of 2 hours. After 18 hours exposure to the IMI only, the viability showed a significant dose dependent drop. Trypan blue test for viability was also conducted. Addition of *Tinospora* extract raised the viability significantly at 2 hours of incubation. In fact this increase was greatest at 3.5mM and 4mM concentration of drug. The ameliorative effect was maximum at 2 hours. Addition of *Tinospora* leaf extract showed a significant increase in cell viability at 18 hours of incubation as compared to values obtained with only the drug. Thus a considerable loss of viability of lymphocytes was seen after exposure to the drug in the selected concentrations but herbal extracts seem to help to make the damage less marked. The cells showed a significant rise in viability when incubated with *Tinospora* leaf extract only, confirming its supportive action in cell proliferation. However, taking into account the evident fall in cell viability caused by exposure to the considerably dilute concentrations tested, caution is needed to prevent over exposure to the pesticide while spraying.

Key Words: Imidacloprid, Lymphocytes, MTT, Toxicity, *Tinospora cordifolia* (Thunb) Miess., Trypan blue.

Introduction

The use of pesticides has been an established agricultural practice to ensure a good crop yield. This is essential to feed our ever-increasing population. The term pesticide can be replaced with plant protective products (PPP) according to European food safety authority.

Pesticides are one of the very common substances that cause deterioration of the environment.

However, indiscriminate use of these pesticides or insecticides leads to pollution of soil and water. Once incorporated in the soil or water they are taken up by the plankton and then gradually reach the higher trophic level and finally man through the food chain (1,2) Thus

study of the toxic effect of pesticides on organisms and cells of the human system is very relevant.

Imidacloprid (IMI) belongs to the neonicotinoid category which includes selective systemic and single mode activity pesticides introduced in the 1990s. It was patented by Bayer and marketed in 1991. It is a compound derived from nicotine and it inactivates insect nicotinoid acetylcholine receptors. It is favoured for use due to its selective toxicity to insects over vertebrates (3). Neonicotinoids are neurotoxic insecticides that act by binding covalently to nicotinic acetylcholine receptors and as a result they obstruct the acetylcholine to bind to its receptor. Thus it inhibits the post synaptic transmission, so the insect is paralysed and it may lead to death of the organism (4). IMI is reported to be toxic to non target insects such as honeybees etc, so it may be disturbing the ecosystem.

IMI also known as N-[1-[(6-chloropyridin-3-yl)methyl]imidazolidin-2-ylidene]nitramide has molecular formula C₉H₁₀ClN₅O₂, with a molecular weight of 255.6 g/mol, its melting point is 136.4 to 143.8 °C (277.5 to 290.8 °F). In appearance, it consists of colourless crystals.

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"भारतीय बीमा क्षेत्र में आईआरडीएआई का योगदान: नियामकता, विकास और उनकी महत्वपूर्ण भूमिका"

डॉ. योगेश आशर

सहा. प्राध्यापक

संत. अल्लोयसिउस महविद्यालय (स्वसाथी) जबलपुर (म.प्र.)

डॉ.हरबकश मूलचंदानी

सहा. प्राध्यापक

संत. अल्लोयसिउस महविद्यालय (स्वसाथी) जबलपुर (म.प्र.)

Abstract:

बीमा क्षेत्र एक राष्ट्र के आर्थिक विकास और स्थिरता में महत्वपूर्ण भूमिका निभाता है। भारत में, भारतीय बीमा नियामक और विकास प्राधिकरण (आईआरडीएआई) बीमा उद्योग के विकास और संचालन की जिम्मेदारी वाला नियामक निकाय है। इस शोध पत्र में आईआरडीएआई की भूमिका का विश्लेषण इसके कार्य और जिम्मेदारियों, नियामक ढांचे, पहल, और इसके प्रभाव को समग्र वृद्धि और बीमा बाजार के विकास पर किया गया है। इस शोध के नतीजे में आईआरडीएआई की महत्वपूर्णता को प्रमुखता देते हुए, बीमा उद्योग को आकार देने और उपभोक्ता संरक्षण, नवाचार, और वित्तीय स्थिरता को प्रोत्साहित करने तथा, भारत में बीमा क्षेत्र के विकास में आईआरडीएआई की भूमिका का विश्लेषण करने का उद्देश्य रखता है।

Keywords: भारतीय बीमा नियामक और विकास प्राधिकरण (आईआरडीएआई), बीमा क्षेत्र, विकास, नियमन, भारत।

परिचय(Introduction):

बीमा क्षेत्र एक राष्ट्र के आर्थिक विकास और स्थिरता में प्रमुख भूमिका निभाता है। भारत में, बीमा क्षेत्र के सुचालन को सुनिश्चित करने और पॉलिसीधारकों के हितों की रक्षा करने के लिए, भारतीय बीमा नियामक और विकास प्राधिकरण (आईआरडीएआई) की स्थापना की गई। भारतीय बीमा नियामक और विकास प्राधिकरण (आईआरडीएआई) बीमा उद्योग के विकास और संचालन हेतु शीर्ष नियामक निकाय है। आईआरडीएआई की स्थापना भारतीय बीमा क्षेत्र के विकास के ऐतिहासिक मील के रूप में महत्वपूर्ण थी, क्योंकि इसने बीमा कंपनियों के संचालन और पॉलिसीधारकों के हितों की संरचित और नियमित तंत्र को स्थापित किया। आईआरडीएआई का प्राथमिक उद्देश्य भारत में एक मजबूत और समावेशी बीमा बाजार के विकास के लिए प्रोत्साहन देना था। जो बीमा क्षेत्र में प्रतिस्पर्धा को बढ़ावा देने, वित्तीय स्थिरता सुनिश्चित करने और पॉलिसीधारकों के अधिकारों की संरक्षा सुनिश्चित करने के बीच संतुलन स्थापित कर सके। भारतीय बीमा नियामक और विकास प्राधिकरण अधिनियम, 1999 के अंतर्गत इसकी शक्तियां और

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IRJMSI

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Effect of Working Capital Management on Profitability of Hero Honda Auto Limited

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ABSTRACT

The present paper studies effect of working capital management on profitability of Hero Honda Auto Limited. Automotive industry in India is one of the key sectors of the economy. Due to its deep forward and backward linkages with various other important segments of the economy, the industry acts as a key driver of the economic growth of a nation. The study is based on secondary data from 2017-18 to 2021-22. Data has been analyzed with the help of descriptive statistics such as mean standard deviation, maximum and minimum values; correlation statistics and multiple regression statistics. Return on assets was taken as dependent variable while current ratio, quick ratio, cash turnover ratio, debtor turnover ratio, inventory turnover ratio current assets to total assets ratio working capital turnover ratio were taken as independent variables An econometric model was established and parameters were estimated based on the panel data for Hero Honda Auto Limited industry for five years. The study found that no variable significantly effect profitability of Hero Honda Auto Limited.

Key Words: Working capital, Multiple Regressions, Profitability.

1. INTRODUCTION

Working Capital Management is a part of financial management of a business organization. Effective working capital management enables improvement in the profitability. Working capital is the excess of current assets over current liabilities. The appropriate structure of current assets and current liabilities result optimum use of working capital It also enables to maintain adequate amount of working capital in a business organization for smooth functioning of business and desired profits.

Automotive industry in India is divided into two main segments viz. Indian automobile industry and Indian auto components industry. Indian automobile industry consists of passenger vehicles segment, commercial vehicles segment, two wheelers segment and three wheelers segment while Indian auto components industry consists of various product segments viz. engine and engine parts, transmission and steering parts, suspension and breaking parts, equipment, electrical parts and other parts like body and chassis, sheet metal parts, fan belts, pressure die castings etc.

2. LITERATURE REVIEW

Nazir and Afza (2009) tested the factors that determine the working capital requirements by taking a sample of one hundred and thirty two manufacturing firms from fourteen industrial groups that were listed on the Karachi Stock Exchange between the periods from 2004 to 2007.



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A STUDY ON THE IMPACT OF THE COVID-19 POST-PANDEMIC PERIOD ON THE HIGHER EDUCATION SYSTEM (WITH REFERENCE TO GOVERNMENT SCHOOLS & COLLEGES)

 **2 Author(s):** DR. DILEEP KUMAR KOSHTA, DR. SUNIL KUMAR TIWARI

Vol - 10, Issue- 2, Page(s) : 27 - 34 (2023) DOI : <https://doi.org/10.32804/IRJMSI>

Abstract

In the month of March, 2020, the Central government across the country began shutting down schools and colleges temporarily as a measure against to spread of the novel coronavirus. February 11, 2020, the World Health Organisation (proposed an official name of the virus as COVID acronym for Coronavirus disease 2019.

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Jyoti Bania and Ishani Banerjee (2020): Impact of Covid-19 Pandemic on Higher Education: A Critical Review.

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भारत को आत्मनिर्भर बनाने में नई शिक्षा नीति 2020 के योगदान का विश्लेषणात्मक अध्ययन

 **2 Author(s):** DR. SUNIL KUMAR TIWARI , DR. DILEEP KUMAR KOSHTA

Vol - 14, Issue- 6 , Page(s) : 15 - 22 (2023) DOI : <https://doi.org/10.32804/BBSSES>

Abstract

आर्थिक और सामाजिक विकास प्राप्त करने के लिए स्कूलों और कॉलेजों में एक स्पष्ट और भविष्योन्मुखी शिक्षा नीति होनी चाहिए। परंपरा और संस्कृति किसी भी देश के लिए शिक्षा प्रणाली को अपनाने में प्रमुख भूमिका निभाते हैं। आत्मनिर्भरता का आदर्श भारत सहित सभी राष्ट्रों का शाश्वत लक्ष्य रहा है।



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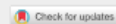
Ursolic acid: a pentacyclic triterpenoid that exhibits anti therapeutic potential by modulating multiple oncogenic targets

Sardul Singh Sandhu , Sharareh Khorami Rouz, Suneel Kumar, Nitin Swamy, Loknath Deshmukh, Arif Hussain, ...show all

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ABSTRACT

The world is currently facing a global challenge against neoplastic diseases. Chemotherapy, hormonal therapy, surgery, and radiation therapy are some approaches used to treat cancer. However, these treatments are frequently causing side effects in patients, such as multidrug resistance, fever, weakness, and allergy, among others side effects. As a result, current research has focused on phytochemical compounds isolated from plants to treat deadly cancers. Plants are excellent resources of bioactive molecules, and many natural molecules have exceptional anticancer properties. They produce diverse anticancer derivatives such as alkaloids, terpenoids, flavonoids, pigments, and tannins, which have powerful anticancer activities against various cancer cell lines and animal models. Because of their safety, eco-friendly, and cost-effective nature, research communities have recently focused on various phytochemical bioactive molecules. Ursolic acid (UA) and its derivative compounds have anti-inflammatory, anticancer, apoptosis induction, anti-carcinogenic, and anti-breast cancer proliferation properties. Ursolic acid (UA) can improve the clinical management of human cancer because it inhibits cancer cell viability and proliferation, preventing tumour angiogenesis and metastatic activity. Therefore, the present article focuses on numerous bioactivities of Ursolic acid (UA), which can inhibit cancer cell production, mechanism of action, and modulation of anticancer properties via regulating various cellular processes.

KEYWORDS: Ursolic acid anti-cancer anti-carcinogenic bioactivities





Myricetin: a potential plant-derived anticancer bioactive compound—an updated overview

Suneel Kumar¹ · Nitin Swamy² · Hardeep Singh Tuli³ · Seema Rani⁴ · Abhijeet Garg² · Deepa Mishra⁵ · Hadi Sajid Abdulabbas⁶ · Sardul Singh Sandhu⁷

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Abstract

The globe is currently confronting a global fight against the deadliest cancer sickness. Chemotherapy, hormonal therapy, surgery, and radiation therapy are among cancer treatment options. Still, these treatments can induce patient side effects, including recurrence, multidrug resistance, fever, and weakness. As a result, the scientific community is always working on natural phytochemical substances. Numerous phytochemical compounds, including taxol analogues, vinca alkaloids such as vincristine and vinblastine, and podophyllotoxin analogues, are currently undergoing testing and have shown promising results against a number of the deadliest diseases, as well as considerable advantages due to their safety and low cost. According to research, secondary plant metabolites such as myricetin, a flavonoid in berries, herbs, and walnuts, have emerged as valuable bio-agents for cancer prevention. Myricetin and its derivatives have antiinflammatory, anticancer, apoptosis-inducing, and anticarcinogenic properties and can prevent cancer cell proliferation. Multiple studies have found that myricetin has anticancer characteristics in various malignancies, including colon, breast, prostate, bladder, and pancreatic cancers. Current knowledge of the anticancer effects of myricetin reveals its promise as a potentially bioactive chemical produced from plants for the prevention and treatment of cancer. This review aimed to study the numerous bioactivities, mode of action, and modification of several cellular processes that myricetin possesses to impede the spread of cancer cells. This review also addresses the challenges and future prospects of using myricetin as an anticancer drug.

Keywords Bio-molecules · Cancer · Angiogenesis · Apoptosis · Proliferation · Antimalignant

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Abbreviations

PAL Phenylalanine ammonia-lyase
4CL 4-Coumaryl-CoA ligase
CHS Chalcone synthase
CHI Chalconeisomerase
F3H Flavanone-3-hydroxylase
F3'H Flavanoid-3'-hydroxylase
FLS Flavonol synthase

Introduction

Since the dawn of civilisation, people have used a variety of natural substances and their derivatives to treat terrible ailments. The use of secondary metabolites derived from plants to treat cancer is becoming more and more popular. Numerous studies have demonstrated the significance of phytochemicals in preventing this condition (Goyal et al. 2022; Khatoon et al. 2020; Shuaib et al. 2021). Therefore, the research community has identified an extensive range of



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Lupus

Impact Factor: 2.6 / 5-Year Impact Factor: 2.9

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Prevalence of migraine in systemic lupus erythematosus: A meta-analysis

[Surjyapratap Sarangi](#), [Suraj K Nahak](#), [Anisha Rupashree](#), [Jogeswar Panigrahi](#), and [Aditya K Panda](#) View all authors and affiliations

[Volume 32, Issue 8](#) | <https://doi.org/10.1177/09612033231182202>

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Abstract

Background

Systemic lupus erythematosus (SLE) is an autoimmune disorder with a wide range of clinical manifestations, including neurological issues in about 25%–75% of cases. Among the neurological involvement cases, most cases show migraine. However, the prevalence of migraine varied worldwide, and in some studies, a higher incidence of migraine in SLE cases was reported compared to healthy controls. In the present study, we adopted a meta-analysis approach to find out the prevalence of migraine in SLE patients worldwide and investigate whether migraine frequency is more prevalent in SLE patients than controls.

Material and methods

Various literature databases such as Scopus, PubMed, Science Direct, and Google Scholar were screened for eligible studies. The last search was performed on January 21, 2023. Publication biases were accessed by Egger's regression analysis and funnel plots. Cochran Q statistics and I^2 values explored the presence or absence of heterogeneity. All statistical analysis of meta-analysis was performed in comprehensive meta-analysis software v3.



A Preliminary Screening And Determination Of Biochemical Properties Of Bacterial Isolates Producing An Anticancerous Enzyme Asparaginase From Some Sewage Water Samples Of Bhopal, M.P. India

pdf

Published: Nov 26, 2022

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<https://doi.org/10.53555/jaz.v43iS1.4520>

Keywords:

L-asparaginase, anticarcinogenic, enzyme production, wastewater

Shreya Tiwari

Rakesh Mehta

Ragini Gothwal

Laxmikant Pandey

Abstract

Microorganisms have had a major impact on the development of medical science since the discovery that they not only cause infections but also produce certain organic compounds that cure infections and help treat a variety of non-infectious diseases. Though, microbes are ubiquitous, but their metabolic capabilities are greatly influenced by the habitat they survive with unique conditions of pH, temperature, pressure, oxygen, light, nutrients and salinity, there is a high efficiency for those to yield metabolites to exhibit special biological activities. The production of enzymes is a pursuit central to the modern biotechnology industry. Asparaginase is one such important enzyme finds their use in the pharmaceutical, biosensor and food industries and has anticarcinogenic potential for the treatment of acute lymphoblastic leukemia, lymphomas and other cancers. Asparaginase are naturally occurring enzymes expressed and produced by animal tissues, bacteria, plants, and in the serum of certain rodents, but not in mankind. *Erwinia carotovora*, *Pseudomonas stutzeri*, *Pseudomonas aeruginosa*, *E. coli* etc has been known to produce L-asparaginase, though its commercial production is restricted to use of *Erwinia chrysanthemi* and *E. coli* as per the latest information. Thus the present work was intended to screen out certain new bacterial isolates with *in vitro* asparaginase producing potential from sewage water sources. The sewage water samples were collected from 5



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"डिजिटल अर्थव्यवस्था में महिला सशक्तिकरण की प्रगति का समीक्षात्मक अध्ययन"

डॉ. सरिता गोयल सहायक (वाणिज्य) संत अलासियस महाविद्यालय जबलपुर (म.प्र.)
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सारांश

भारत में विशेषतः महिला वर्ग को सशक्त करने की दृष्टि से सूचना और संचार प्रौद्योगिकी अर्थात् डिजिटल क्रांति का सूत्र-पात केन्द्र सरकार द्वारा 1 जुलाई को डिजिटल इंडिया के साथ किया गया। डिजिटल इंडिया कार्यक्रम के प्रभाव से ई-कॉमर्स व्यवसायों में न्यूनतम निवेश व अधिकतम लाभ की इस बाजार निति का लाभ उठाने में महिलायें भी अछूती नहीं रही हैं। महिलाओं को विकास की मुख्य धारा से जोड़े बिना किसी देश, राज्य एवं समाज का आर्थिक, सामाजिक और राजनैतिक विकास की कल्पना भी नहीं की जा सकती है। इसलिए केंद्रीय बजट 2023-24 में लैंगिक असमानताओं को दूर करने के मकसद से 2,23,219.75 करोड़ रु का आवंटन किया है। लैंगिक समानता सुनिश्चित करने के लिए जेडर बजट पर आवंटित इस रकम से महिला-केंद्रित योजनाओं पर जोर दिया जाएगा। ये रकम 2022-23 के पुनरीक्षित अनुमान (2 लाख 18 हजार करोड़ रु) की तुलना में 2 प्रतिशत से भी ज्यादा है। पिछले साल के बजट अनुमानों में इस मद में 1,71,006.47 करोड़ रु खर्च होने की बात कही गई थी, ताजा आवंटन इसके मुकाबले 30 प्रतिशत ज्यादा है। डिजिटलकरण के इस दौर में आधुनिक युवा महिलाओं को डिजिटल व वैश्विक नागरिक बना दिया है। प्रस्तुत शोध पत्र में डिजिटल अर्थव्यवस्था में महिला सशक्तिकरण की प्रगति को जानने का प्रयास किया गया है।

कुंजी शब्द – ई-कॉमर्स, महिला सशक्तिकरण, डिजिटल इंडिया, सूचना और संचार

प्रस्तावना-

"जब तक महिलाओं की स्थिति में सुधार नहीं होता तब तक विश्व का कल्याण संभव नहीं है। किसी चिड़िया के लिये एक पंख से उड़ना संभव नहीं है।"

स्वामी विवेकानंद

महिलाओं के आर्थिक सशक्तिकरण के सन्दर्भ में बजट 2023-24 में केन्द्रिय वित्त मंत्री निर्मला सीतारमण जी ने कहा कि "हमारे उज्ज्वल भविष्य की अगुवाई करने में नारी शक्ति के महत्व और अमूल्य काल (2047 में आजादी के 100 साल पूरे होने तक की 25 साल की गिनत) में महिलाओं के नेतृत्व में विकास की अहमियत" को सरकार अच्छी तरह से समझती है। सशक्तिकरण बहु-पक्षीय बहु आयामी और बहु स्तरीय अवधारणा ही नहीं अपितु एक बहु आयामी चुनौती भी है। भारत में विशेषतः महिला वर्ग को सशक्त करने की दृष्टि से सूचना और संचार प्रौद्योगिकी अर्थात् डिजिटल क्रांति का सूत्र-पात केन्द्र सरकार द्वारा 1 जुलाई को डिजिटल इंडिया के साथ किया गया। इस कार्यक्रम को सरकार द्वारा इलेक्ट्रॉनिक और सूचना प्रौद्योगिकी विभाग (डी.ई.आई.टी.वाई.) के समग्र समन्वय के साथ क्रियान्वित किया जा रहा है।

वर्तमान युग प्रौद्योगिकी, कम्प्यूटर, एवं सूचना सम्प्रेषण तकनीक का युग है। आज देश को ज्ञान क्रांति के माध्यम से विश्व में स्थापित करने की मुहिम चलवाई जा रही है। जिससे देश को साधन संपन्न बनाकर बेरोजगारी, निर्धनता, अशिक्षा के जंजाल में फंसी एक सौ पच्चीस करोड़ से अधिक जनसंख्या के जीवन स्तर में सुधार लाया जा सके। इस कार्यक्रम का उद्देश्य डिजिटल ऐक्सेस, डिजिटल समावेशन, एवं डिजिटल सशक्तिकरण सुनिश्चित करने और डिजिटल विभाजन को दूर करने के साथ ही भारत को ज्ञान आधारित अर्थव्यवस्था में बदलना और इसे एक डिजिटल संपन्न समाज बनाना है। सरकार देश के नागरिकों को कम समय में किरायाती व कुशल तरीके से सेवाएं देने के लिये तैयार है।

डिजिटलाइजेशन यह प्रक्रिया है जिसके माध्यम से सामाजिक-आर्थिक जीवन के कई पहलुओं का पुनर्गठन डिजिटल संचार या सूचना प्रौद्योगिकी के द्वारा किया जा रहा है। तकनीकी प्रगति और विकास आधुनिक जीवन शैली की विशिष्ट पहचान है। किसी भी देश की प्रगति वहाँ की तकनीकी आत्मनिर्भरता से आँकी जाती है। भारत में डिजिटलकरण के क्षेत्र में प्रयास सत्तर के दशक के उत्तरार्ध से शुरू हुए। इस प्रयास में भारत में पहली बार रक्षा, नियोजन, चुनाव, जनगणना और कर प्रशासन आदि में अनुप्रयोगों के विकास के साथ ई-गवर्नेंस की शुरुआत हुई।

डिजिटल अवसरवर्षा भारत के शासन और सामाजिक - आर्थिक विकास में एक महत्वपूर्ण सूत्रधार है। इस विकसित तकनीकी का दावा है- प्रत्येक मनुष्य को सशक्त करना है। आज से पहले विज्ञान के गुणों की चर्चा की जाती थी। पर अब उसका स्थान प्रौद्योगिकी ने ले लिया है। डिजिटल प्रौद्योगिकी के कारण संपूर्ण विश्व में एक नई क्रांति की लहर दिखाई देती है। प्रत्येक देश की सामाजिक-आर्थिक स्थिति तेजी से बदल रही है। इसकी सर्वोत्तम उपलब्धि सूचनाओं को सहजता से साझा करना माना जाता है। अब ऑफिस छोटे हो गए और बाजार जेब में आ गया है। हर तरफ जादू है। कहा जाता है कि उच्च तकनीकी के प्रयोग से संपूर्ण जगत में रहने वाले मानव की सामाजिक-आर्थिक स्थिति में बदलाव लाकर विश्व में उसकी एक उच्च गुणवत्ता प्रधान जगह बनाया है।

डिजिटल इंडिया कार्यक्रम के प्रभाव से ई-कॉमर्स व्यवसायों में न्यूनतम निवेश व अधिकतम लाभ की इस बाजार निति का लाभ उठाने में महिलायें भी अछूती नहीं रही हैं। आज हजारों महिलायें विभिन्न श्रेणियों जैसे आभूषण, होम

Page | 1

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Review Article

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Detoxification of Sewage Sludge by Natural Attenuation and its Application as a Fertilizer-A Review

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ABSTRACT

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Sewage sludge generated from the waste-water treatment systems can play an essential role as fertilizers in the agriculture system. Sewage sludges have hazardous toxic materials; therefore, their application is minimal. Proper dumping of sludge produced via waste-water treatment plants (WWTP) has been categorized as severe ecological trouble and a feasible option to be used in farming formerly sewage sludge is affluent in natural substance and nutrients. On the other hand, sewage sludge contains various toxic agents therefore special attention is required for its application in farming to evade any harm to the organisms as well as to the environment. Controlled and well monitored process of natural attenuation (biological, physical, and chemical processes) which is a part of the environment can detoxify the toxic substances present in the sewage sludges. This review will lead the readers towards the assessment of different processes used for the decontaminating sewage sludge naturally.



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- कर्मनाशा की हार : मानव अधिकार व अस्तित्व की जीत 112-115
सुनील यादव, शोध छात्र (नेट-जे.आर.एफ.), महात्मा गांधी काशी विद्यापीठ, वाराणसी
- अविभाजित मध्यप्रदेश के प्रथम महिला सांसद मिनीमाता के शिक्षा एवं बालकल्याण कार्य 116-120
कु. अर्चना, शोधार्थी, शा. दू. व. महिला स्वशसी स्नातकोत्तर महाविद्यालय रायपुर
डॉ. शम्पा चौबे, शोध निर्देशक, शा. दू. व. महिला स्वशसी, स्नातकोत्तर महाविद्यालय रायपुर छत्तीसगढ़
- अच्छे अभिभावक 121-124
राकेश कुमार राजपूत, प्रधानाध्यापक, प्राथमिक विद्यालय महदवा, विकास क्षेत्र अमापुर जनपद-कासगंज
- शारीरिक शिक्षा और खेल के बुनियादी ढांचे का विकास 125-129
त्रिभुवन यादव, Assistant Professor, Upardaha P.G. – College, Upardaha, Allahabad
- आचार्य विनोबा भावे का शिक्षा के माध्यम के रूप में हिन्दी भाषा विषयक दृष्टिकोण 130-134
डॉ. आशाराम वर्मा, असिस्टेंट प्रोफेसर, शिक्षा संकाय, डी.ए.वी.पी. जी. कॉलेज गोरखपुर (उ.प्र.)
- भारत में देवदासी प्रथा : एक विमर्श 135-139
डॉ. मनीषा दीवान, विभागाध्यक्ष, इतिहास विभाग, एस.एन.सेन बा. वि.पी.जी. कॉलेज, कानपुर नगर
- नागार्जुन के काव्य में व्यंग्य की परख 140-145
डॉ. अभिलाषा शुक्ल, हिंदी विभाग, संत अल्लियसियस (स्वशासी) महाविद्यालय, पेटौनाका, जबलपुर (म.प्र.)





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Dr. Abhilasha Shukla

SHODH PRERAK ISSN 2231-413X, Vol. 13, Issue 1, January 2023

CONTENTS

- जे. पी. आंदोलन का राजनीति और समाज पर प्रभाव 1-6
ब्रजमोहन कुमार, शोधार्थी, राजनीति विज्ञान, त. ना. मिथिला विश्वविद्यालय, दरभंगा
डॉ. कमलेश कुमार सुमन, अवकाश प्राप्त सहायक प्राध्यापक, राजनीति विज्ञान विभाग, एम.एल.एस. महाविद्यालय, सरिसव घाटी, मधुबनी
- वर्तमान समय में समावेशी शिक्षा की आवश्यकता एवं आमुख धुनीतिथी 7-13
गोपाल कृष्ण, शोधार्थी (शिक्षा), त. ना. मि. वि.वि., दरभंगा
- डॉ. श्रीकृष्ण सिंह और गढ़पूरा नमक सत्याग्रह आंदोलन 14-20
श्रवण कुमार राम, शोधार्थी (राजनीति विज्ञान), त. ना. मिथिला विश्वविद्यालय, दरभंगा
डॉ. कमलेश कुमार सुमन, अवकाश प्राप्त सहायक प्राध्यापक, राजनीति विज्ञान विभाग, एम.एल.एस. महाविद्यालय, सरिसव घाटी, मधुबनी
- जयप्रकाश नारायण एवं समाजवाद 21-25
विश्व रंजन, शोधार्थी (राजनीति विज्ञान), त. ना. मिथिला विश्वविद्यालय, दरभंगा
प्रो. (डॉ.) मुनेश्वर यादव, विश्वविद्यालय अध्यक्ष, राजनीति विज्ञान विभाग, त. ना. मिथिला विश्वविद्यालय, दरभंगा
- भारत में सूखी-निर्माण एवं आर्थिक विकास की समस्या का एक समीक्षात्मक अध्ययन 26-30
डॉ. ज्योति कुमार पंकज, अति. प्रो., अर्थशास्त्र विभाग, गौडदा कॉलेज, गौडदा
- निम्बान और ब्राह्मणवाद 31-36
डॉ. विश्राम प्रसाद, दर्शन विभाग, अस्तास इकाजत बालेज, विहारशरीक (मालंग)
- रामायण में वर्णित महिलाओं की स्थिति का अध्ययन 37-41
श्रीमती सरोज सिंह, शोधार्थी, इतिहास, संस्कृत एवं पुरातत्व विभाग, डॉ. राममनोहर लोहिया अवध विश्वविद्यालय, अयोध्या (उ.प्र.)
प्रो. (डॉ.) अजय प्रताप सिंह, शोध निर्देशक, विभागध्यक्ष, इतिहास, संस्कृत एवं पुरातत्व विभाग, डॉ. राममनोहर लोहिया अवध विश्वविद्यालय, अयोध्या (उ.प्र.)
- जयशंकर प्रसाद का साहित्य व गायी सौंदर्य 42-44
डॉ. अभिलाषा शुक्ल, छात्री विभाग, संत अनापलिंगम (मन्दासई) महाविद्यालय, पैटीनाका जबलपुर (म.प्र.)