



**Govt. Arts and Science College**  
**Ratlam, M.P.**



**National Conference**  
***SOUVENIR***



**Sustainable Development :**  
**Environment, Agriculture and Life Sciences**

**27 December 2022**

*organized by*

**Departments of Zoology and Botany**



# *National Conference*

*on*

*“Sustainable Development :  
Environment, Agriculture and Life Sciences”.*

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**27 December 2022**

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**NATIONAL CONFERENCE ON "SUSTAINABLE DEVELOPMENT:  
ENVIRONMENT AGRICULTURE AND LIFE SCIENCES"**

Organized by:- Department of Zoology & Botany

**Government Arts and Science College, Ratlam (M.P.)**

Registration Open: - 10.00 to 11.00 AM

High Tea

Program schedule:- 27th of December 2022

Time :-11:00 AM.

Venue of the conference: - Room number 48

11:00-12:00:- Inaugural Session

12:00-01:00:- Key note Speaker Professor Ashok Kumar (Key Note Speaker-1) "Fight Against Cancer"

01:00-02:00 PM: - Lunch Break

**Technical session -Sustainable Development Goals and Challenges**

2:00 - 3:00:- Oral presentation & Abstract presentation Chair by Professor Madhu Kumar (Key Note Speaker-2).

03:00-03:40 Dr. Priyanka Sharma (Key Note Speaker-3) "Ageing"

**Technical session :- Sustainable Development upliftment of human**

3:40 -4:20. Professor Nitesh Kumar (Key Note Speaker-4) "Endangered medicinal plants of Himachal Pradesh sustainable utilization and conservation"

04:20-05:00:- Valedictory and Vote of Thanks

चेतन्य कुमार काश्यप

विधायक-रतलाम शहर  
पूर्व उपाध्यक्ष-राज्य योजना आयोग



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: शुभकामना संदेश :

यह जानकर प्रसन्नता हुई कि शासकीय कला एवं विज्ञान महाविद्यालय के प्राणीशास्त्र एवं वनस्पति विज्ञान विभाग द्वारा 22 दिसम्बर 2022 को "Sustainable Development : Environment, Agriculture and Life Sciences " विषय पर राष्ट्रीय संगोष्ठी का आयोजन किया जा रहा है।

निश्चित रूप से यह संगोष्ठी विद्वानों एवं विद्यार्थियों को विचारों के अदान-प्रदान हेतु एक सार्थक मंच प्रदान करेगी।

महाविद्यालय को इस आयोजन हेतु बधाइ एव शोध संगोष्ठी की सफलता हेतु शुभकामनाएँ।

चेतन्य कुमार काश्यप

विनोद करमचन्दानी  
अध्यक्ष  
जनभागीदारी समिति  
शासकीय कला एवं विज्ञान महाविद्यालय,  
रतलाम (म.प्र.)



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## *JBS President's Message*

This is an occasion of pleasure that our institute is organizing a National Conference on "Sustainable Development: Environment, Agriculture and Life Sciences"

I wish to congratulate the department of Zoology and Botany for their initiative that will surely encourage the participants in the positive direction of learning.

My warm wishes and congratulations for the "Souvenir" of the conference.

Vinod Karmchadani  
(President JBS)  
Govt. Arts and Science College, Ratlam

कार्यालय प्राचार्य, शासकीय कला एवं विज्ञान महाविद्यालय, रतलाम (म.प्र.)

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### *Principal's Message*

It gives me immense pleasure that our institute Govt. Arts and Science college, Ratlam (MP) is organizing one day national Conference on "Sustainable Development : Environment, Agriculture and Life Sciences " 2022, December, 22.

I am sure that this Conference will strive to offer plenty opportunities to meet the research scholars, academicians, students, industry experts to spread Knowledge on scientific research in interdisciplinary areas. This will generate discussion on practical challenges and suggest solutions, thus consolidating the recent innovation.

Organizing such academic events in the institution students, teachers and research scholar will be benefited immensely and widen the horizon of their knowledge, work experience in the field of Zoology & Botany.

I give my best wishes to all delegates, and organizers of this seminar to make this event a grand success.

DR. Y.K. Mishra  
Principal  
Govt. Arts and Science College,  
Ratlam (M.P.)

# Life style and Cancer

Prof. Ashok Kumar (Key Note Speaker-1)

President SLS Jaipur

Ex Vice-chancellor CSJM University, Kanpur, Uttar Pradesh, India

Cancer is not a single disease but a group of complex genetic diseases of aged cells. Chemoprevention of cancer is the attempt to use natural and synthetic compounds to intervene in the early stages of cancer, before invasive disease begins. Consuming a diet rich in plant foods can provide a milieu of phytochemicals and non-nutritive plant substances that possess health-protective effects. Some phytochemicals derived in spices and herbs as well as other plants possess substantial cancer preventive properties. Thus the cancer chemopreventive potential of naturally occurring phytochemicals is of great interest because of their preventive role and as they are not perceived as "medicine". Research has demonstrated that cancer is a largely avoidable disease. It is estimated that more than two-thirds of cancer may be prevented through lifestyle modification. Chemoprevention is the attempt to use natural and synthetic compounds to intervene in the early stages of cancer, before invasive disease begins.

Natural dietary agents including fruits, vegetables, and spices have drawn a great deal of attention from both the scientific community and the general public due to their various health promoting effects including suppression of cancers, many of them have been used as traditional medicines for thousands of years. Some phytochemicals derived in spices and herbs as well as other plants possess substantial cancer preventive properties. Chemopreventive agents can be grouped into two major classes: blocking agents and suppressing agents. Blocking agents prevent carcinogenic compounds from reaching or reacting with critical target sites by preventing the metabolic activation of carcinogens or tumor promoters by enhancing detoxification systems and by trapping reactive carcinogens. Suppressing agents prevent the evolution of the neoplastic process in cells that would otherwise become malignant. There have been two major diet-related prevention strategies that have evolved to combat cancer, i.e., cancer chemoprevention and dietary cancer prevention, with appreciable overlap existing between them. Generally, cancer chemoprevention is recognized as the pharmacologic intervention with synthetic

occurring chemicals to prevent, inhibit or reverse carcinogenesis or prevent the development of invasive cancer. Dietary epidemiologic studies have provided initial leads for the identification of numerous naturally occurring chemopreventive agents and laboratory studies have identified many potential agents that suppress carcinogenesis in animal models. So, dietary prevention is considered as the change in food consumption patterns necessary to decrease cancer development. A diet rich in plant foods may provide protection against several chronic diseases including cancers. Differences among individuals, including inherited genetic susceptibility, could also contribute to inconsistent epidemiologic associations between dietary factors and specific cancers.



# IMMUNITY IN RELATION TO ENVIRONMENT & SUSTAINABLE DEVELOPMENT

**PROF. MADHU KUMAR** (Key Note Speaker-2)

FORMER EMERITUS PROFESSOR UNIVERSITY OF RAJASTHAN, JAIPUR

## EXPOSURE TO ENVIRONMENTAL FACTORS

WHO defines environment as it relates to health "All the physical Radiation, Ultra Violet Rays, chemical: Millions of Chemicals and Biological factors Mainly Bacteria and Virus external to a person and all the related behaviour". In recent years we have altered our life style and Environment. As a result today we live in a world foreign to our ancestors. Under normal circumstances, there is a fine tuned balance between the environmental factors. Microbes and host immune responses, however when this balance is compromised, result in bad consequences. Numerous environmental factors showing deleterious effects on our health and modulate immunity.

## CLIMATE CHANGE AND HEALTH

- Global burden of diseases, Compromise hygiene and health, Increased incidence of Trachoma Diarrhoea (1.8 million people die/year), Increased water born diseases (Cholera, Typhoid fever, Hepatitis-A and food poisoning), its bacteria thrives well in warm water; Flood water due to high rain fall and high sea level prepare breeding grounds for disease vectors like mosquitoes, Mosquitoes are sensitive to temperature change, rate of reproduction and number of bites increase, Malaria and Yellow fever incidences are quite common, To 2% increase in temperature leads to 3-5% increase in malaria (means several 100 millions cases in the world).

### High Temperature dampens adaptive immunity

- High heat exposure induces autophagy in the lung which in turn inhibits IL-1 $\beta$  secretion (viral infection), High temperature down regulate the immune system (inflammasome, caspase-1, pulmonary dendrite cells), Stress - (immune system becomes weak). Stress hormones corticosterone can suppress the effectiveness by lowering the number of lymphocytes, Fear- Weakens immune system and can cause cardiovascular damage, GIT problems.

### Conclusion : Why sustainable development

The first is that for many aspects of development, using sustainable methods and materials is expensive. While the long-term cost of sustainability does prove to be less expensive than traditional development, the creation of a sustainable project may be far more expensive in the first phase.

The second major issue is that there is not a generally accepted need for sustainable development. This is an education issue that may take many years to resolve.

# **“Endangered medicinal plants of Himachal Pradesh sustainable utilization and conservation”**

**Dr. Nitesh Kumar**

(Key Note Speaker-4)

Assistant Professor, Department of Botany

Himachal Pradesh University, Shimla, (H.P.)

Medicinal plants and traditional medicine play an important role in the health care system of most developing countries. The traditional health care practice is mainly dependent on medicinal plants collected from the wild. In spite of this, the medicinal plant biodiversity is being depleted due to man-made and natural calamities. The World Health Organisation (WHO) estimated that 80% of the population of developing countries rely on traditional medicines, mostly plant drugs, for their primary health care need. The demand for Medicinal plants is said to be increasing year after year. This necessitate the conservation of Biodiversity. In India, out of 17000-18000 species of flowering plants about 6000-7000 are medicinal plants having medicinal usage in folk and documented systems of medicine, like Ayurveda, Siddha, Unani and Homoeopathy that accounts to nearly 35-40%. Despite existence of various sets of recommendations for the conservation and sustainable use of medicinal plants, only a small portion of these have achieved adequate protection of medicinal plant resources through conventional conservation in natural reserves or botanic gardens. Our effort should be towards for the collection/Propagation of the diverse medicinal plants including underground medicinal plants. Among the introduced Medicinal plants some are endangered need for urgent protection and conservation. Not only in India also all over in the World. Medicinal Plants are useful for treatment of various disorders and are prime sources of traditional medicine.

# Studies of Antimalarial Potential of Some Plants from Solah Singhi Dhar of lower foothills of Himachal Pradesh: A Review.

Sourav, Nitesh Kumar & Rita Pathania

1,2-Department of Biosciences, HPU Shimla

Department of Botany, CT University Ludhiana, Punjab.

## Abstract

Plant based herbal remedies are still used by the rural communities all over the world for their benefits in the treatments of various ailments and diseases. Plants parts and their products are used to treat different diseases due to their different photochemical constituents and these constituents are used in various pharmaceutical companies are used for the manufacture of many pharmaceutical drugs and these drugs are based on traditional wisdom about herbal potentials of local plants. Solah Singhi Dhar of lower foothills of Himachal Pradesh is a abound of herbal medicinal plant wealth. The plant of this region are utilised by rural communities to fulfil their basic and daily requirements such as food, shelter, fuel, fibre, clothes, for religious rights and for treatment of health problems including Malaria. Malaria is a parasitic disease which is caused by bite of the infected mosquito (Anopheles mosquito), Malaria disease is characterised by the symptoms such as Chills, headache, vomiting, diarrhoea, abdominal pain, nausea, etc. Some plants such as Bark of *Cassia fistula*, whole plant material of *Duranta repens*, seed of *Lepidium sativum*, root and leaves of *Ricinus communis* and root of *Rouwolfia serpentina*, etc having anti-malarial potential and used in the form of herbal folk remedies for the treatment of malaria. This paper documents 25 plants from herbal medicinal wealth of Solah Singhi Dhar for the treatment of parasitic disease malaria on the basis of traditional wisdom of indigenous communities and traditional healers of this area. Thus the traditional knowledge of herbal potential of medicinal plants by different rural/tribal communities of Himachal Pradesh form the basis of development of new pharmaceutical drugs. So it is necessary to document the traditional knowledge about the medicinal plant wealth of that area for the benefits of future generation.

Key Words- Anti-malarial, Herbal potential, Pharmaceutical, Traditional wisdom, H.P.



# जनजाति समुदायों द्वारा जैव विविधता का संरक्षण

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सारांश-

हमारा देश सामाजिक, सांस्कृतिक दृष्टि के साथ जैव विविधता का धनी रहा है, किंतु ज्ञान और बुद्धि के विकास के साथ कौशल विकास तकनीकी ने नयापन दिया है जिससे त्वरित लाभ से भविष्य में हानि है। देश के मूलनिवासी जनजाति समुदाय प्रकृति पूजक होने से प्राकृतिक आवास के लाकों में और उसके आसपास जैव विविधता का संरक्षण किया है। प्रत्येक वृक्ष और जंतुओं कीपारस्परिक संबंध में विस्तृत ज्ञान रखते हुए भारतीय संस्कृति में विभिन्न समाज के रीति और नीतियों व स्कृतिक परिवेश से परिपूर्ण कर पर्यावरण संरक्षण में महत्वपूर्ण योगदान रखा है। वर्तमान में प्रकृति के बदलाव और तकनीकी की देन से औद्योगिक करण हुआ है जिससे पर्यावरणको भारी नुकसान हुआ है कृषि प्रधान देश होने के नाते विभिन्न प्रकार के लोग विभिन्न प्रकार के फसल की पैदावार लेने के लिए होड़ मची है। जड़ों, कंदों, प्रकंदों, बीजों, फलों और कृषि और बागवानी पौधों के रूप में जंगली खाद्य भोजन के स्रोत के रूप में काम करते हैं। इन जातीय लोगों द्वारा संरक्षित कुछ देशी किस्मों का उपयोग कृषि किस्मों के सुधार कार्यक्रमों उत्पादकता बढ़ाने और विभिन्न कीटों और रोगों के खिलाफ प्रतिरोधक क्षमता ने के लिए लक्षणों को शामिल करने के लिए किया जाता है। जीव-जंतु का विनाश का कारण बनी है, क्योंकि जनसंख्या वृद्धि के साथ-साथ रासायनिक पदार्थों का उपयोग दिन प्रतिदिन बढ़ने से जीवोप्राकृतिक संसाधनों पर उसका प्रभाव पड़ा है। शब्दावली - पर्यावरण, जनजाति समुदाय, सांस्कृतिक, जैव विविधता, संरक्षण, प्रकृतिपूजा आदि।

# **Malaria prevention measures: a review**

**Dr. Vineet Kumar**

Assistant Professor, Department of Zoology,

**Dr. Yashwant Singh Parmar**

Govt. P.G. College Nahan, Distt. Sirmour (H. P.) India, 173001

## **Abstract**

Since its discovery, malaria has remained a major global cause of death. The malaria parasite expresses a wide range of proteins at various stages of its intricate, multi-stage life cycle. Frequently, these proteins also undergo constant change. Because of this, a natural infection with the malaria parasite results in only a partial and transient immunity that cannot shield the person from a subsequent infection. Infectious diseases like malaria continue to pose one of the biggest global health challenges even though we live in a time of advanced technology and innovation. In 2022, 627 000 fatalities and 241 million cases of malaria were reported worldwide. There is an urgent need for numerous management techniques targeting either the Plasmodium parasite or the Anopheles vector because of the vast scale of illness, mortality, and socioeconomic losses.

The emergence of insecticide- and drug-resistant parasites, as well as a number of adverse health, environmental, and ecological impacts of numerous chemical agents, have brought attention to the need to create alternative tools that can either supplement or replace conventional malaria control methods.

**Keywords:** Malaria, Plasmodium, pandemic, anopheles, diagnosis

Sustainable uses of plants for human health.

## **Sustainable uses of Plants for human health**

**Dr. Dinisha Malviya**

Assistant professor of Botany

Govt. P.G. College, Sehore

### **Abstract**

“Healthy body has a healthy mind” it is a famous proverb plant and men are closely associated with each other, since the time immemorial. In this blue planet we can't imagine our life without plants. plants play a vital role in human health. This present paper deal role of plants on human health.

**Key words:-** Plant, Human, disease

# INTRASPECIFIC HETEROGENEITY IN THE PHOTOSYNTHETIC EFFICIENCY OF SOYBEAN (GLYCINE MAX L.) CULTIVARS AFTER SOLAR UV EXCLUSION

S. S. Baroniya, Mamta Bhoj Baroniya

1 Swa. Tukojirao Pawar Shaskiya Vigyan Mahavidyalaya, Dewas (M.P.), India.

## Abstract

The considerable rise in ultraviolet (UV-B and UV-A) radiation has appeared to be primarily caused by the loss of stratospheric ozone. Increased UV-B exposure has negative impacts on plant growth, including decreased leaf area, chlorosis, necrosis, reduced photosynthesis, and a decrease in biomass accumulation, all of which lower seed output. To evaluate the impact of excluding solar UV radiation on photosynthetic efficiency and test potential variety-dependent sensitivity to ambient UV (280-400 nm) radiations, we employed the soybean varieties Pusa-24 and Kalitur in the current study. The amount of chlorophyll a and b increased by omitting UV-B and UV-A/B radiation. According to the OJIP test setting, plants that were not exposed to UV had greater chlorophyll fluorescence yields, and solar UV had a significant influence on the components of PSII. When compared to control plants grown under UV exclusion filters displayed greater quantum efficiencies of PSII ( $TR_0/ABS$ ,  $ET_0/ABS$ , and  $ET_0/TR$ ). On the predicted specific fluxes per active PSII RC, UV exclusion had an impact. Solar UV components were eliminated, greatly enhancing  $PI(ABS)$ . A phenomenological leaf model revealed that plants exposed to UV light had more active response centres per unit leaf area. The net rate of photosynthesis significantly increased in the leaves of UV-exposed plants. This was associated with a rise in stomatal conductance, a fall in  $CO_2$  concentration intracellularly, and a decrease in stomatal resistance. It appears that ambient UV exclusions increase photosynthetic efficiency in soybean varieties and channel the extra carbon fixation into increased biomass accumulation which results in improved crop yield of soybean. The removal of UV-B and UV-A increased seed weight per plant in all four soybean varieties as compared to control. The study found that different types responded to UV-B and UV-A/B differently. According to statistics on total biomass accumulation, total chlorophyll,  $PI(ABS)$ , rate of photosynthesis and seed production, Pusa-24 is more vulnerable to ambient UV radiations than Kalitur while the latter is resistant to ambient UV radiations.

Keywords: Chlorophyll fluorescence; Photosynthesis; PSII efficiency; OJIP; Soybean; UV Exclusion.

# Stimulatory effect of Bio enzyme on Biochemical and Oxidative stress parameter of Mung

Shanti Patidar, Angurbala Bafna

Department of Biochemistry,

Govt. (Model, Autonomous) Holkar Science College,

Indore (M.P.)

## Abstract

Organic farming nowadays is a major area of interest for research. It is the best way to restore disturbed ecological balance due to excessive use of chemicals in agriculture like fertilizers, pesticides, insecticides, etc. The present study was designed to evaluate the potential of eco- friendly product bioenzyme on biochemical and oxidative stress parameters of mung (*Vignaradiata*). A field experiment was conducted at Loharpipliya village, district Dewas (M.P.) during March-May 2022. Various dilutions of Bioenzyme were sprayed at the interval of 15 days after the two leaves stage of the plant. Four treatments were designed – Control (without any treatment), T1 (1ml bioenzyme/L water), T2 (2ml bioenzyme/L water), and T3 (3 mlbioenzyme/L water). Photosynthetic pigments were significantly increased in all the treatments involving bioenzyme collated to control. A highly significant increment in carbohydrate and protein content in leaves of mung was reported with T2 treatment. Oxidative stress assessed in terms of MDA and proline was observed to decrease significantly with all treatments. Among all the three concentrations of bioenzyme used in the present study, the best results were obtained with the spraying of 2ml bioenzyme/ L water (T2). Bioenzyme can be a good alternative for farmers to improve the quality of mung without the use of harmful chemicals to avoid adverse effects on soil and crop quality. Though further research is required for use of bioenzyme with other crops too.

Keywords: Carbohydrate, MDA, Proline, Protein, *Vigna radiata*.

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# Effect of Kitchen by-products extract on growth of leafy vegetables

Swati Mali, Tasneem Rangwala

Department of Biochemistry,

Govt. (Model, Autonomous) Holkar Science College, Indore (M.P.)

## Abstract

The use of pesticides and herbicides has become quite popular over the past decade. Farmers use excessive amounts of these substances in order to protect their crops and maximize profits. Kitchen by-products like raw material, fruit peels, fruit pulp, vegetable peels, stale raw vegetables and fruits, which are rich in macro and micronutrients promote plant growth and development. So we can use these organic fertilizers in the kitchen gardening. The present study aim was to observe the effect of such organic fertilizer on the growth parameters and photosynthetic pigment of the leafy vegetables. For the kitchen gardening we have grown *Coriandrum sativum* (Dhaniya) by supplying diluted homogeneous preparation of fruit and vegetables peels and pulps. All the parameters were estimated using 14 days old seedling of *Coriandrum sativum* (Dhaniya). Significant difference was observed in the germination percentage with vegetable peels and fruit pulp as compared to control but insignificant with the fruit peels. Maximum increase in root length (18.65%), shoot length (12.5%), fresh weight (19.2%) was observed with vegetable peels and fruit pulp. Photosynthetic pigments showed highest increment with extract obtained from fruit pulp. The study concluded that kitchen by product extract from vegetable and fruit peels as well as pulp could be a good alternative to promote growth of *Coriandrum sativum*.

Key word: Growth parameters, Fruit peel, Fruit pulp, Photosynthetic pigments, Vegetable peel, vegetable pulp.

# **Aquatic Macro invertebrates as indicators of water quality in Shahid Chandra Shekhar Azad,Sagar, Jobat, (M.P.) India**

**Dr. Bhavna Dawar**

Department of Zoology

Govt Arts and Science College Ratlam (M.P.)

## **Abstract**

It has been acknowledged that bio-monitoring based on the ecology of flora and fauna is an effective technique for determining the extent of water pollution. As indicators of aquatic contamination, macroinvertebrates in free-flowing water are crucial. In Madhya Pradesh, Shahid Chandra Shekhar Azad Sagar was chosen to evaluate the water suitability for drinking. The current study involved simplifying the identification of macroinvertebrates, computing the percentage of families from different taxonomic groups that were present, and performing physicochemical analyses on water samples from chosen stations. It was discovered that there were a total of 31 species of benthic macro invertebrates. 09 species of Phylum Annelida Class- Oligochaeta, 16 species of Phylum- Mollusca; 8 species Class- Gastropoda, 8 species of Class- Pelecypoda and 6 species of Phylum Arthropods, 4 species Class- Baetidae, 2 species Class- Chironomidi. These species of benthic macroinvertebrates can be utilised to develop biological standards for categorising the freshwater ecosystem as healthy or polluted.

# Morphological and Ethnobotanical aspects of some lichens of Tehri Garhwal (Uttarakhand)

Stuti Rawat<sup>1</sup>, Nitesh Kumar<sup>2</sup> and Rajeev Bhorla<sup>3</sup>

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<sup>3</sup> SCVB Govt. Degree College, Palampur, Himachal Pradesh

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## Abstract

Lichens are used in cuisines, medicines, and perfumeries across different parts of India. They have a great role in indigenous culture as medicines by tribal people. This paper documents the use of 6 such lichens found in the Tehri Garhwal region of Uttarakhand, India. The documentation has been done by gathering information from local people in the area. Traditionally used 6 lichen species viz. *Heterodermia diademata*, *Parmotrema austrosinense*, *Parmotrema hababianum*, *Pannotrema reticulata*, *Parmotrema tinctorum*, *Parmelinella wallichiana* have been described in this research paper. This study aims to provide valid data about the use of lichens in indigenous communities which may be helpful for further research in this field and provide solutions to different health problems.

# Algal diversity and Morphological description of some algal strains from Gallan Nala of Summer Hill in Shimla district of Himachal Pradesh

Pratibha\* and Dr. Nitesh Kumar

Department of Biosciences Himachal Pradesh University Shimla

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## Abstract

A survey is conducted on algal diversity of Shimla district of Himachal Pradesh at Gallan nala. Algae are among the most diverse groups of living things that are primarily found in Himachal Pradesh. As algae lack roots, stems, or leaves, they are thought of as primitive aquatic plants. Algae are frequently microscopic organisms. Algae are emerald-coloured, autotrophic plants that have chlorophyll and generate oxygen. Simple plants account for 90% of all green plants' oxygen production in the biosphere. They are organisms that release oxygen after fixing carbon. The aquatic ecology depends on algae, which also serve as the foundation of the food chain or food web. Algae also have simple reproduction mechanisms. Algae are another superior indicator of water quality since they are abundant and frequently reflect the chemical characteristics of water, such as pH and nutrient levels. Presence of green algae was abundant in district Shimla. Occurrence of *Spirogyra*, *Ulothrix*, *Zygnema*, *Volvox*, *Polysiphonia*, *Rivularia*, *Oedogonium* and *Cladophora* were found in district Shimla. As a result, efforts are made to investigate the variety of algae in various environments and ecosystems. There are incredibly few records on Shimla in particular and on the north-eastern part of India in general.

**Key words:** Diversity, Microscopic organism, Nutrient levels.

# Isolation of gram negative multidrug resistant bacteria and characterization of ESBL (extended spectrum beta-lactamase) positive strain from river kshripra.

Jitendra Hinore

## Abstract

The study was designed in such a way to identify the coliform that were present in river Kshipra. The samples taken from different ghats of river. Naturally coliforms in turns causes diseases like typhoid and cholera etc. For the identification of Enterobacteriaceae member firstly we were measured the pH value and temperature. The pH value of different samples of water were measured as 7. While the temperature range of water differ from one season to another season that were 21°C,19°C,23°C,26°C,25°C,31°C,33°C. For the estimation of microbial population, MPN method were performed. In MPN method 93 per 100 ml of bacteria were estimated in sample 1, 210 per 100 ml were estimated in sample 3 and 2400 per 100 ml were estimated in sample 4,5,6,7,8. On selective media different bacterial strains were identified such as Pseudomonas, Enterobacter, Salmonella, Citrobacter, Shiegella, Kliebsella, E.coli. Total 22 bacterial strains of gram-negative bacteria were identified by Antibiotic susceptibility test. Out of this 9 strains were analysed as sensitive and 9 strains were analysed as non-conclusive and Finally 4 strains were found as ESBL positive.

# **Effect of Mercuric chloride on Behaviour and External structure of fish**

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## **Abstract**

Non-lethal dose of mercuric chloride treated to *L. reticulatus* display normal behaviour like movement, swimming, feeding, mating, aggression, by both sexes. When fish exposed to sub-lethal dose of mercuric chloride show abnormal behaviour. Reaction were initiated within 1-2 minutes after addition of toxicant fish show restlessness, loss their sensitivity stage and get hyper sensitivity and high agitated and lose their balance, jerky movement, rate of respiration increase and loss of equilibrium observed. Gradually fish adjusted itself in toxic water and show remarkable change in behaviour. Anatomical change were observed the body colour of fish found to be high brownish than natural control experimental group. Fish was full of thin due to secretion of mucous and a white film of mercuric chloride precipitation cover the gill and skin.

**Key words: lethal, restlessness, equilibrium**

# Nutraceutical and Medicinal Values of Some Wild Edible Plants Consumed by Rural Communities in Solah Singhi Dhar of Lower Foot Hills of Himachal Pradesh: A Review

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## Abstract

Wild edible plants (WEPs) are used as a source of food by local people where they still rely on natural resources to meet their daily needs. Edible parts of various wild plants like flowers, fruits, seeds, stem and bark have been used traditionally to prepare range of medicine by rural communities. Nutraceutical analysis of these part has revealed their richness in nutrients and phytochemicals. Some wild edible plants of Solah Singhi Dhar are listed here by reviewing the literature which are viz. *Aegle marmelos*, *Amaranthus spinosus*, *Artocarpus lakoocha*, *Berberis lycium* etc. These wild edible plants have played a significant role in supplying food and nutraceutical requirements and increase the health status of poor communities.

Key Words: Medicinal plants, Nutraceutical, Phytochemicals, Edible, Himachal Pradesh

# Herbal Potential of some plants from Riparian vegetation Of Beas River of Himachal Pradesh

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## Abstract

An ethnobotanical survey of the Beas River basin was carried out, with frequent field trips and data collection in all plant groups. Riparian vegetation is the place between aquatic and terrestrial systems. The riparian vegetation is known as a keystone ecosystem because it supports a number of special habitats that are heavily reliant on water. In the current survey, 20 plant species are identified, belonging to 16 families. According to habitual analysis, 6 species are herbs, followed by 12 species of shrubs, and trees and climbers, each with 1 species. The most dominant family is Fabaceae which have 3 species, followed by Malvaceae and Asteraceae, each which have 2 species, and Acanthaceae, Papaveraceae, Berberidaceae, Cannabaceae, Lamiaceae, Cactaceae, Plumbaginaceae, Solanaceae, Apocynaceae, Verbenaceae, Rhamnaceae, Lythraceae and Rutaceae, all of which have 1 species present in the study area. The major species present on the river bank are *Adhatoda vasica*, *Opuntia dillenii* and *Parthenium hysterophorus*. To stop additional degradation and biodiversity loss in the uncontrolled regions along the river, the nation must implement a long-term policy to safeguard and conserve riparian buffers.

Keywords: Riparian Vegetation, Beas River, Ethnobotanical, Shrubs, Asteraceae



# **Folk Use of Some Important Medicinal Plants of Dharamshala, District Kangra, Himachal Pradesh, India**

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## **ABSTRACT**

Plants have been used as a source of medicine practically in all cultures. About 70 percent of the rural population relies on the conventional therapeutic system of medicine in India which include mainly those plants that serve as the main source of healthcare. The universal use of healthcare preparations and phytomedicines is particularized in the Bible and the Vedas. From the ancient time, medicinal plants have been used to conserve and flavour food, to treat diseases and to prevent health disorders. The knowledge about the usage of the medicinal plants is the result of struggles of many years due to which man determined to trail drugs in fruit bodies, barks, seeds and in varied parts of the plant. Almost each part of the plant has its distinctive effect and own medicinal properties. In recent years, because of the costs as well as serious side-effects of a number of modern drugs, attention has turned back to medicinal plants as a source for discovery of newer drugs with less cost and side-effects. The importance of medicinal plants in traditional healthcare practices, providing clues to new areas of research and in biodiversity conservation is now well recognized. However, information on the uses of plants for medicine is lacking from many interior areas of Himalaya. Keeping this in view the present study was initiated. Himachal Pradesh is located in Western Himalaya, is a rich repository of medicinal plants. Plants are used to treat different diseases with magico-religious beliefs in all civilizations. Dharamshala is located in the lap of snowcapped Dhauladhar range in district Kangra of Himachal Pradesh. Most of the local and indigenous communities lives in villages. Rural communities in the region depend on plant resources mainly for herbal medicines, forage, food, construction of dwellings, making household implements, sleeping mats, and for fire and shade. The study aimed to look into the diversity of plant resources that are used by local people for curing various ailments.

# CLIMATE CHANGE AND PRESENT CHALLENGES

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## ABSTRACT

One of the major issues in the global context is the increasing serious threat from environmental pollution which has created a new crisis of existence in front of the whole world. With the increase in the industries operated by multinational companies, the rapid expansion of private vehicles and various means of transport started. There was so much emission of carbon in the atmosphere that the balance of human condition was in danger. Today, where concern is being raised on various international forums about the issue of environmental risk. The same countries are busy blaming each other for this new risk. In general terms, environmental risk is that condition which starts affecting the life of human beings and other living beings adversely due to imbalance in natural conditions. We call this condition as ecological degradation. The increase in global warming is related to the condition in which the average temperature of the earth atmosphere and ocean starts increasing continuously. In the present era, many conditions are responsible for environmental risk, but all these conditions are in one way or the other the result of the blind race for development arising out of globalization. On the one hand, while globalization encouraged industrial development by going beyond its basic infrastructure to various countries, it did not resort to such a policy to face the environmental risk, which could prevent environmental degradation.

# SUSTAINABLE DEVELOPMENT: IN THE SCENARIO OF MOUNTAIN ECOSYSTEM

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## ABSTRACT

Mountains are major source of water, energy and biological diversity as well as resources such as minerals, forest products and agricultural products on the earth. About 10 percent of the world population depends on mountain resources. Mountains include major portion of resources, including and especially water. They supply half of the global population with fresh water for domestic use, irrigational use and global food security and thus play an important role in the hydropower production. Mountains conserve biological diversity and endangered species therefore mountain environments are very essential for the survival of the global ecosystem but mountain ecosystems are, however, changing drastically. They are susceptible to accelerated soil erosion, landslides and rapid loss of habitat and genetic diversity. On the human side, there is widespread poverty among mountain inhabitants and lack of indigenous knowledge. As a result, most global mountain areas are experiencing environmental degradation, highest poverty rates and greatest affect to climatic conditions and socio-economic changes and related risks. Hence, there should be urge of proper management of mountain resources and socio-economic development of the people and requires immediate actions to be taken.

Keywords- Mountain ecosystem, endangered species, socio-economic.

# Angiospermic plant diversity in Sendhwa block of Barwani district of Madhya Pradesh, India

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## Abstract

An extensive plant survey of Sendhwa block of Barwani region was carried out in the year 2021-2022. Sendhwa is surrounded by Satpura hill ranges in south and Vindhyanal hill ranges in north. Goi River is the main river flowing in this area which is tributary of Narmada River. Sendhwa forest ranges are an important corridor between forest areas of Maharashtra and Madhya Pradesh. The forests and a hill of this region is a treasure house of medicinal plants. Biodiversity of Sendhwa is representing the richness of varied life form ranging from climber, shrubs and trees, which are annual to perennials. Present study records a total of 185 Plants species which are distributed in 139 genera and 47 Families. Different life forms diversity is Herbs (111), Shrubs (21), Trees (29) and climbers (24). Jacard's Generic coefficient is 75.13. The impoverished state of the existing forest flora is mainly due to overexploitation of its phyto-resources and acute soil erosion.

Key words: Phytodiversity, Sendhwa, life form and flora, Jacquard's generic coefficient

# Wild fragrant flowers of Sendhwa Dist. Barwani (M.P.)

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## Abstract

Sendhwa is smallest tribal city. The triumphing test becomes aimed to determining the biodiversity of wild fragrant vegetation species of Sendhwa. It has bestowed with specific variety of ethnic tradition and topographical abilities. These data becomes acquired through sizeable surveys from 2020-2021. These regions are consultant of climax plants and show off the variety of species such as trees, climbers and herbs. The records from the primary and secondary resources resulted within the documentation of 22 species belonging to 17 genera beneath 11 households. Arboreal species richness recorded until date inside the observe area money owed for 0.18% of that of the whole Sendhwa town. There are 22 wild and naturalized species inside the 18 square kilometer. Lamiaceae and Asteraceae were the dominant families.

Key words: Sendhwa, fragrant plant, vegetation, biodiversity.

# Biodiversity and its conservation

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## Abstract

Biodiversity means Biological diversification of unlike forms of life existence on earth, which include the different Microbes, Fungi, Algae, Bryophytes, Pteridophytes, Gymnosperms, Angiosperms, Animals and the Alleles they contain and the ecosystem they form. It can be studied on many levels like genetic variation, ecosystem variation, species variation within a droplet of water to planet level. Recent studies estimate the total number of species between three and ten million. Many species are not very accessible for study, including unicellular organisms and bacteria. The marine biodiversity is still in large part unknown because about 95 % of oceans remain unexplored, Other benefits of biodiversity are even more fundamental without plants, there would be no oxygen. Without bees, many of our crops would vanish. The hardwood trees in the rainforests that are our most effective above-ground carbon sinks are also the product of the relationship between seeds and the fruit-eating animals that eat them. Trees are up to 500x more likely to germinate when the seeds have first passed through the digestion system of a bat, monkey, or elephant. Microscopic biodiversity in our soils creates the chemical conditions necessary for healthy, abundant, and sustainable crops. Many new medicines are found in nature, including cancer fighting fungi and pain killing tree resins. In an era of Noosphere, global environmental changes, habitat loss and species extinction, oceans acidification and in many other ways degradation of biodiversity is at peak. Biodiversity hotspots, inspite of some reproval, have become an apparatus for setting conservation concern and play a vital role in commitment for cost-effective strategies to preserve biodiversity in various ecosystems. However, Nowadays, it is widely acknowledged that biodiversity is much more than just the number of species in a region and a conservation strategy cannot be based merely on the number of taxa present in an ecosystem. Therefore, the idea that strongly emerges is the need to reconsider conservation priorities and to go toward an interdisciplinary approach through the creation of science-policy partnerships.

Key Words- Taxa, Species, Extinction, Marine



# “ Role of rural people in Sustainability of medicinal plants”

**Mr. Mukesh Evane**

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## Abstract

60% of the world's population depends on medicinal herbs in India which are primarily used for basic Healthcare. However herbal medicines are only made from medicinal plants in countries like India where there are significant natural resources for medicinal plants of more than 8000 kinds. While collections of medicinal plants are used to treat a range of medical conditions. The state of Madhya Pradesh is rich in medicinal and aromatic plants which play important role in generating economic value for particularly small and marginal farmers who collect and trade these plants *aloe vera* *Tulsi*, *Costus*, *Caesalpinia bonduc*, *Aegle marmelos* such as decide from this important contribution to social development .

Key words:-Medicinal Plants, *Angle marmelos*, *Aloevera*,

# **ROLE OF INDIGENOUS PEOPLE IN ENVIRONMENT CONSERVATION**

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Abstract

Numerous vegetation management techniques that have been established over thousands of years by local people and are still used now in various regions of India. People also adhere to moral principles that frequently assist them in controlling their relationships with the natural world. These systems frequently work in conjunction with conventional rainwater harvesting, which encourages the variability of the environment by fostering the growth of trees and other flora, which in turn supports a wide range of animals. These systems exist in India and include sacred forests, monastic woods, temple forests, groves of sacred trees, and sacred groves that serve as cultural and social sites. The present paper deals with role of indigenous people in environment conservation in Western part of Rajasthan through maintaining the sacred groves.



# **Sustainable development: National interest vs International interest**

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## **Abstract**

Sustainable development is a process by which we can sustain or maintain the development done by us for our generation and for the next generations too. There are two factors in the process of sustainable development which are supposed to be opposite to each other - national interest and International interest.

### **National Perspective :-**

Development is a concept which is based on 'national interest'. National interest is the main deciding factor of each and every policy or activity of a nation. For the fulfillment of national interest it is the duty of a government to reach the basic needs of their people. It is their duty to give "good life" and for this purpose every act and activity is a part of the process of development in their National interest. In this process we need the quantity of production which is 'sufficient' or 'more than sufficient' for our people. We need to establish Hospitals for good health, education centres, electricity, good roads for connectivity, Pure water, vehicles, means of transportation, means of communication and many more. As Mahatma Gandhi said - 'There is sufficient in nature to fulfill our need but not our greed.' So in result we get many natural problems, calamities and pandemic.

### **International Perspective :-**

Every country of the world on this earth is progressing on the same line of development. All the countries are at different stages. Countries which are on a higher stage are called the developed countries and they are the role model for the other countries. Some countries are comparatively at lower levels or stages; they are called underdeveloped or developing countries. As every action has a reaction in the same manner every effect has a side effect also for example even a life saving drug has a side effect. The process of development has such side effects like pollution, global warming, damage of ozone layer, polluted rivers, deforestation, endangered wildlife, floods, Submergence of coastal areas, earthquakes

tsunamis etc. We can make boundaries for our countries but these Side Effects are not bound to any country. Nature balances itself beyond the boundaries.

sustainable development:-

Sustainable development is a concept that defines the process of development for the present and future. As we earn and work hard not only for ourselves but for the future generations also. In the same manner a Nation should use their natural resources in the way that they can be used by their future generations also. The term sustainable development gained international attention after the report on "Our Common Future" also known as the Brundtland report in 1987. After this report many measures have been taken to save our earth and its environment.

Here are many ways to do this -

Awareness among people worldwide.

proper strict laws within the country.

proper international Covenants.

promotion of research to increase balance development and preservation of resources.

In short, sustaining nature, development, Earth is the only way to sustain

humanity and human life.

# Ocimum (Tulsi): A review on its various therapeutic uses

Patel M.K.

## Abstract

Tulsi is a common name of Ocimum. Its three species are well known. First one is *Ocimum sanctum* (Rama Tulsi), second one is *O. Tenuiflorum* (Krishna Tulsi) and third one is *O. basilicum* (Vana Tulsi) are abundantly found in Indian sub-continent.

These three species are having different therapeutic uses. These uses are reviewed here along with their chemicals isolated from the leaf extract or essential oil extracted from dry stem and from the seeds commonly called Sabja seeds. Number of volatile chemicals like Linalool, Flavonoids,  $\Omega$  - 3 fatty acids,  $\alpha$  - linolenic acid, Ethnolic acid, Eugenol, Estragole, Rosmarinic acid, Ursolic acid etc. of medical importance are extracted out and their medical applications are explored in this study. Its anti-inflammatory, anti cancerous, anti oxidative property, antiseptic nature etc compels to number of people to keep it in their homes. Chewing of its leaves keeps away the bad smell of mouth. Even in the automobile it is kept as it generates Oxygen 24 X 7 due to its Crassulalian Acid Metabolism characteristic. A scientific approach is developed here to solve the riddle why it was domesticated from the very ancient time in the Indian Society.

Key words: Linalool, Ethnolic acid, Flavonoids, Estragole, Sabja seeds, Tulsi, Ocimum, Antioxidant, Anticancerous.

# **Identification and isolation of rhizospheric microorganisms from medicinal plant and its importance.**

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Rhizospheric microorganisms have been studied for their beneficial effects on plant growth promoting activities. Many members of rhizospheric microbiome are beneficial to plant growth and also some are pathogenic. To enhance the growth it is necessary to know which microorganism is present in the microbiome of rhizosphere and what is its impact on health. Rhizospheric microorganisms are considered as bioindicator of soil quality. Rhizospheric microorganisms perform plant growth promoting activities and phosphate solubilization activities which is important to mycorrhizal fungi for translocation of nutrients and minerals from soil to the plant. Importance of rhizosphere microbiome in the functioning of plant ecosystem has been recognized.

# Conceptual Framework for Sustainable Development

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## Abstract

A essential assessment of the multidisciplinary literature on sustainable improvement well-known shows a loss of a complete theoretical framework for know-how sustainable improvement and its complexities. A essential assessment indicates that the definitions of sustainable improvement are vague; there may be a loss of operative definitions and confrontation over what must be sustained; the idea is uncertain in phrases of emotional commitment; and it "stays a pressured topic", "fraught with contradictions". This article targets to theoretically synthesize the interdisciplinary literature on sustainable improvement, after which discover the consequences via way of means of large classes. Therefore, this newsletter makes use of conceptual analysis, which opinions multidisciplinary literature on sustainable improvement, which acknowledges styles and similarities inside the literature, then it synthesizes the styles to one-of-a-kind classes and impartial principles, wherein every idea has specific meanings and represents near thoughts on sustainability. The analytical technique elaborates seven principles that collectively collect the theoretical framework of 'sustainable improvement' and every idea represents specific meanings of the theoretical framework.

# **Sustainable Development - A Possible Approach**

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## **Abstract**

The sustainable improvement of society refers to 3 foremost additives of human existence: in your price range, ecological and human. The first issue is essential, withinside the experience that the purpose of social and in your price range pastime is to fulfill human wishes or desires, ensuing for the 3 dimensions of human existence: biological (gift within side the interactions with the physica, herbal surroundings), social/collective/collective (as a member of a few social groups), rational/psychological/spiritual (precipitated with the aid of using inner traits, precise to 1 human being). The relation among in your price range increase and the safety of the surroundings is an vital trouble in the imminent sustainable improvement due to the fact the method of in your price range increase now no longer best with the aid of using GDP, with out attempting a quantification of medium and long time advantages, as a result of environmental safety is best a primary form, unacceptable in sustainable improvement analysis. The human issue in sustainable improvement has a prime role, due to the fact the idea of fairness contain numerous kinds of manifestation with reference of sustainable evolution of human society.

## **Keywords**

Sustainable improvement, human, in your price range, ecological.

# **Innovation for sustainable development: Departure to a sustainable future**

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## **Abstract**

The view that innovation is a key enabler of sustainability is widely accepted by academics, industry experts and government officials. This is because sustainable development is an urgent issue, requiring immediate action and change by governments, industry and society at large. This article reviews the literature on innovations that can transform individuals, organizations, their chains of supply, and communities towards a sustainable future. Although many of the articles reviewed in this review report address pressing environmental and social issues that exist, their findings, recommendations, and recommendations should be considered as we move toward a sustainable society through innovation and change, and contributions are encouraging. This article reviews the diversity of sustainable development innovations in the literature, proposes typologies of such phenomena, and reviews key articles based on key themes. identifies a set of recommendations for future development in this area.

# Sustainable development and Living Approach

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## Abstract

Sustainable living is the practise of reducing your demand for natural resources by replacing what you use as much as possible. Sometimes that means choosing not to consume a product made using practises that do not promote sustainability, and other times it means changing how you do things so that you become a more active part of the life cycle. Simple measures such as taking public transportation more frequently, reducing energy consumption, and becoming more eco-friendly can go a long way toward reducing your environmental impact and making the world a cleaner and safer place. Sustainable living advocates strive to live their lives in ways that are consistent with sustainability, in natural balance, and respectful of humanity symbiotic relationship with the Earth natural ecology and cycles. The practise and philosophy of ecological living are inextricably linked to the overall principles of sustainable development.

Keywords: Sustainable living, energy consumption, Sustainable development.



# मानव श्रम और पर्यावरण : दशा एवं दिशा

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शोध सारांश -

प्रस्तुत शोध-पत्र में श्रम और पर्यावरण के सम्बन्ध को जानने का प्रयास किया गया है। श्रम और पर्यावरण दो अलग-अलग अवधारणाएं हैं जिन्हें एक ही रूप में जोड़ा जा सकता है। श्रम एक ऐसा कार्य है जो आर्थिक प्रतिफल के लिए किया जाता है। पर्यावरण को वायु, जल, खनिज, जीव, एवं पारिस्थितिकी रूप में देखा जाता है। लॉगिंग, खनन और पर्यटन के क्षेत्रों में मानव श्रम लगा हुआ है और इसके परिणामस्वरूप उभरती हुई हरित अर्थव्यवस्था में मानव ने जिस प्रकार के काम में भाग लिया है उसने जलवायु परिवर्तन सहित पर्यावरण के कई पहलुओं पर नकारात्मक प्रभाव डाला है पर्यावरण पर मानव कार्य का प्रभाव और मानव कार्य पर पर्यावरण के प्रभाव को इस शोध-पत्र में समझने का प्रयास किया गया है।

शब्द कुंजी- मानव श्रम, पर्यावरण, हरित अर्थव्यवस्था

# Phytochemical investigation on *Blumea membranacea* DC.

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## Abstract

Various traditional systems of medicine have enlightened the importance of the leaf of *Blumea membranacea* DC (Local name Almish); belong to highly aromatic annual herbs. It grows in rainy season naturally waste places. Tribal communities of Madhya Pradesh in Ratlam (Ratlam) region to cure the medicinal plants *Blumea*. It is widely used in medicine. The present study was aimed at preliminary phytochemical evaluations of the crude drug. The leaves were collected from the Kedareshwar mount in Sailana. The dried leaf powder was collected to successively steam extraction. The used to extracts for Phytochemical screening. The extracts were analyzed by GC/MS. About eight Phytochemical are obtained from the leaf extract. Some chemical such as glycosides, reducing sugar, alkaloids, sterols, protein, lipid, saponin and flavinoid.

Key words- *Blumea membranacea*, steam extraction, Phytochemical screening.

# Phyto-Diversity in Dhar Dist. (M. P), India with special reference to Wild Aromatic plants

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## Abstract

An extensive plant survey of Dhar district of Madhya Pradesh was carried out in the year 2020-2021. In ancient period Dhar is known as 'Dharanagri'. Dhar district lies between the latitude of 22° 00' to 23°10' North and longitude of 74° 28' to 75° 42' East. The total area of district is 8153 sq. km. of which forest occupies 1370 sq. km. Narmada flow along the district from southern boundary with west Nimar for about 107 Km. major part of the district is covered by the Deccan trap locally called Malwa trap. The landforms diversity and climate play main role to make vegetation. It has bestowed with unique diversity of ethnic culture, natural resources. The data was obtained by intensive surveys. Biodiversity of Dhar is representing the richness of varied life form. The data from the primary and secondary sources resulted in the documentation of 22 species belonging to 17 genera under 11 families. Lamiaceae and Asteraceae were the dominant families.

Keyword: Dhar, biodiversity, Narmada, Dry deciduous forest.

## EXOTIC PLANTS : A THREAT TO LOCAL PLANT

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### ABSTRACT

The unusual floral abundance of Madhya Pradesh Ratlam district was the subject of a research. We are trying to collect alien plant species that can split among genera and families. The exotic floristic makeup of the Ratlam district is dominated by flora of American provenance. The botanical makeup of a location is referred to as its flora, and species names are taken into consideration. The two main categories of flora are native flora and exotic flora. Exotic flora are those that are of foreign origin, whilst native flora are those that have existed in the country since prehistoric times. Within the previous five centuries, exotic plant species have integrated themselves into the flora of the majority of the world's regions.

Key Words :- exotic, flora, local, ratlam.

# Effect of Industrial Development on Carbon Foot Print

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## ABSTRACT

The main reason for climatic change and global warming is the increase in carbon emission which has been considerably higher in India in the last few years. Indore is one of the developing Cosmopolitan cities of India and contributes more to economic growth and also increases carbon in the environment. It is also known as mini Mumbai because of high rise buildings that expand the city where the outside area of city I.T. division, automobile division, and industrial estates are available. In the five-day international conference, there will be Start up Arena in the industrial exhibition / International Arena, the information of textile, automobile, pharma, food processing, chemical and IT sector will be displayed through various mediums in the Sectoral Arena. There will be special events for buyer-seller meet and vendor development. In the buyer-seller meet, there will be direct interaction between approximately 400 buyers from 68 countries and more than 500 manufacturers from Madhya Pradesh and building a growth in GDP but residential or industrial buildings which are constructed by conventional methods leads the world to global warming.

**KEYWORDS:-** Cosmopolitan, Sectoral ,

# Ethnomedicinal Plants of India

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Medicinal plant belong to the earliest known health care products that have been used by the mankind. In India, the earliest reference to the medicinal value of plants appears in Rigveda, in which a brief reference to the healing property of plant has been made. However, it is in the Ayurveda that definite properties and uses of drugs and drug yielding plant have been discussed. In fact, Ayurvedic medicine had its origin from the works of Ayurveda.

The later works of charak and susruta, namely Charak-Samhita and Susruta Samhita added invaluable knowledge to the science of medicinal plants. Most of the drug plants are found in the tropics growing in wild condition and are mainly used by herb doctors and ayurvedic vaidyas, who refer to them as jari-butis . In the modern age with the fast emergence of Western modern medicine and synthetic drugs, the importance of plants and herbs started declining as more and more attention was paid to the development of synthetic drugs. However, with these synthetic drugs came the problem of side effects and other clinical complications; the reason in the increasing awareness about the limitation of the synthetic drugs. Because of natural herbal drugs are safe and effective; now herbal medicine and natural products are in big demand all over the World.

**Key words - Ayurveda, synthetic drugs, jari butis, Rigveda.**

# The impact of environment on ageing? A multidisciplinary investigation.

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## Abstract

Ageing is studied to be an inevitable and irreversible cellular process because of slow and continuous loss of physiological integration and functions. It is also a major risk factor for greater frequencies of chronic illnesses like immunosenescence, metabolic, neurodegenerative and cardiovascular diseases. Ageing emerges from the programmed cellular processes at both the level of genetics and epigenetics that are activated by stress causing programmed cell death. It is crucial that development of novel preventative and therapeutic strategies should be introduced to inhibit ageing and lessen the occurrence of age-related diseases. Age-related diseases arise as the accumulation of toxic damaged constituents of cell takes place, which can be cleared by the autophagic process. There are several autophagy inducers, and polyamines, particularly spermidine, are one such potential inducer. Although ageing is unavoidable, could be altered through cellular and genetic interventions, medications, preferred lifestyle and environmental conditions. It has been demonstrated that spermidine is crucial for extending survival times, and aberrant alterations in spermidine levels are linked to both ageing and the onset of disease. In *D. discoideum* strict regulation of polyamine levels homeostasis can prolong longevity. Various genes are identified by the bioinformatics approach in *D. discoideum* which are involved in the homeostasis of polyamines and have established a mechanism of polyamine

homeostasis in various developmental stages of *D.discoideum*. Therefore, further studies are wanting to understand that how modulation of spermidine effects aging and to unravel its potential therapeutic applications in age related diseases.

Keywords: Ageing, *D.discoideum*, autophagy, polyamine, spermidine





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