स्थापना वर्ष 1957

Govt. Digvijay Autonomous

Postgraduate College Rajnandgaon (C.G.)

Department of Biotechnology

This report includes publications, activities, program organized by the department in the year 2023-24. Se detail inside…….

Yearly Academic Report of Biotechnology Department 2023-24

Submitted to – IQAC Cell, Govt. Digvijay Autonomous PG College Rajnandgaon (C.G.)

Introduction

Department of Biotechnology is one of the young departments of the college. Started its undergraduates (UG) in 2002-23, Postgraduate (PG) in 2013-14, Ph.D. from 2021-22 and FYUG based on National Education policy from 2022-23. The sanctioned seat for FYUG is 60; PG 40 and Ph.D. based on Ordinance 45 of Hemchandyadav Vishwavidyalay Durg (HYV) (C.G.). The department is a Research Centre for doing of Ph.D. in Biotechnology affiliated with HYV. The student enrolled in the department is listed in the table 1 and the faculty profile of department is listed in the table 2. The department has a facility of 03 classrooms, 02 laboratories, Library, Journal display, computer and printer, LCD projector and smart board, portable mini amplifier and various experiment related equipment. The laboratories are also equipped with chemicals and glassware. Departmental activities along with publications are listed below.

Table 1: Enrolment of Students

S. No.	Courses Offered in the Department	Course Type	Affiliation	Enrolled Students
1	FYUG SEM I/II	NEP Semester	Hemchand Yadav VV Durg	60
2	FYUG SEM III/IV	NEP Semester	Hemchand Yadav VV Durg	44
3	B.Sc. III	Yearly	Hemchand Yadav VV Durg	32
4	M.Sc. Sem I/II	Semester Credit Based	Hemchand Yadav VV Durg	27
5	M.Sc. Sem III/IV	Semester Credit Based	Hemchand Yadav VV Durg	27
6	Ph.D.	UGC Norms	Hemchand Yadav VV Durg	02

Table 2. Faculty Profile of Department of Biotechnology

Name	Qualification	Post	Year of Experience
Teaching Faculties			
Dr. Pramod Kumar Mahish	M. Phil., Ph.D.	Assistant Professor	11
Revti Patel	M.Sc., SET	Assistant Professor (Adhoc)	05
Yogeshwari Tiwari	M.Sc.	Assistant Professor (SF)	02
Heena Verma	M.Sc.	Assistant Professor (SF)	02
Non-Teaching Faculty			
Nirmal Banjare	MA	Lab Technician	05

Publications

1. Book(s)

Title of Book	Author/s Editor/s	Publisher	Year	ISBN
Heavy Metals in the Environment: Management Strategies for Global Pollution	Dakeshwar Kumar Verma, Chandrabhan Verma, **Pramod Kumar Mahish**	American Chemical Society (**ACS**)	2023	9780841297050
Biosorbents: Diversity, Bioprocessing, and Applications	**Pramod Kumar Mahish**, Dakeshwar Kumar Verma, Shailesh Kumar Jadhav	CRC Press**, Taylor & Francis Group**, LLC	2023	9781032399744
Phytochemicals in Medicinal Plants: Biodiversity, Bioactivity and Drug Discovery	Charu Arora, Dakeshwar Kumar Verma, Jeenat Aslam, **Pramod Kumar Mahish**	**Walter de Gruyter** GmbH, Genthiner Str. 13, 10785 Berlin, Germany	2023	9783110791761

[**Attachment 1**: Detail about the Book]

2. Research Papers and Book Chapter(s)

Research Papers

1. Garima Madhariya, Shweta Singh Chauhan, Pramod Kumar Mahish, Shriram Kunjam. 2023. INHABITANTS OF ENDOPHYTIC PHOMA SPP. International Journal of Futuristic Innovation in Engineering, Science and Technology (IJFIEST) 2,(2), PP 243-272. ISSN 2583-6234.
2. Kiran Jain, Samiksha Jain, Yogeshwari Tiwari, Shweta Singh and Pramod Kumar Mahish. 2003. Toxigenic Fungal contamination of some Indian Main Spices, Indian Journal of Aerobiology, 36 (2): pp 13-19. ISSN 0971-1546.

Book Chapters

1. Shushil Kumar Rai, Roseline Xalxo, Tarun Kumar Patle, Astha Verma, Ravishankar Chauhan, and Pramod Kumar Mahish, Chapter 10 Analyzing Contamination of Heavy Metals - AAS and Fluorescence Spectroscopy. In Heavy Metals in the Environment: Management Strategies for Global Pollution, Eds Dakeshwar Kumar Verma, Chandrabhan Verma, Pramod Kumar Mahish. Pages 167-204, American Chemical Society, USA ISBN 978-0-84-129705-0.
2. Elyor Berdimurodov, Khasan Berdimuradov, Kholmurodov Bahodir, Abduvali Kholikov, Khamdam Akbarov, Omar Dagdag, Mohamed Rbaa, Brahim El Ibrahimi, Dakeshwar Kumar Verma, Rajesh Haldhar, Pramod Kumar Mahish, Chapter 1 Recent trends and developments in carbon dots. In Carbon Dots in Biology: Synthesis, Properties, Biological and Pharmaceutical Applications. Eds Berdimurodov Elyor Tukhliyivich and Dakeshwar Kumar Verma. PP 1-14, 2023, ISBN 9783110799927.
3. Tarun Kumar Patle, Pramod Kumar Mahish and Ravishankar Chauhan. Chapter 4: Plants Alkaloids & Flavonoids: Biosynthesis, Classification, and Medicinal Uses. In Phytochemicals in Medicinal Plants Biodiversity, Bioactivity and Drug Discovery. Eds Charu Arora, Dakeshwar Kumar Verma, Jeenat Aslamand Pramod Kumar Mahish, 2023. DeGruyter ISBN 978-3-11-079176-1.
4. Shweta Singh, Ravishankar Chauhan, Nagendra Kumar Chandrawanshi and Pramod Kumar Mahish. Chapter 14: Bioactivity of Nanoparticles Synthesized from Medicinal Plants. In Phytochemicals in Medicinal Plants Biodiversity, Bioactivity and Drug Discovery. 2023. DeGruyter ISBN 978-3-11-079176-1.
5. Varsha Meshram, Khemraj Sahu, Anjali Kosre, Deepali Koreti, Pramod Kumar Mahish and Nagendra Kumar Chandrawanshi. Chapter 3: Mushroom Biosorbent. In Biosorbents: Diversity, Bioprocessing and Applications. 2023. Taylor & Francis Group, LLC, USA ISBN 978-1-03-239974-4

6. Pramod Kumar Mahish, Shailesh Kumar Jadhav. Chapter 9: Pretreatment of Aspergillus Mycelium for the Enhancement of Lead Biosorption. In Biosorbents: Diversity, Bioprocessing and Applications. 2023. Taylor & Francis Group, LLC, USA ISBN 978-1-03-239974-4
7. Anjali Kosre, Khemraj Sahu, Varsha Meshram, Deepali Koreti, Pramod Kumar Mahish and Nagendra Kumar Chandrawanshi. Chapter 10: Pretreatment of Spent mushroom substrate for the enhancement of Biosorption capacity. In Biosorbents: Diversity, Bioprocessing and Applications. 2023. Taylor & Francis Group, LLC, USA ISBN 978-1-03-239974-4
8. Tarun Kumar Patle, Ravishankar Chauhan, Alka Patle, Pramod Kumar Mahish. Chapter 12: Aqueous Removal of Heavy Metals using Biosorbents. In In Biosorbents: Diversity, Bioprocessing and Applications. 2023. Taylor & Francis Group, LLC, USA ISBN 978-1-03-239974-4

[**Attachment 2**: Detail about the Research Papers and Book Chapter]

Activities Related to environmental deeds

1. ***Plantation***

   Plantation program was organized at ***Srijan Samwad Garden*** in which Moringa, Papaya, Kaner, Ashoka etc. plants have been planted on 24th July 2023. Postgraduate students along with teachers have been participated in it.

   [**Attachment 3**: Detail about the Program]

2. ***Celebration of world elephant Day***

   World elephant day (12th August) is organized at the department. In this program Dr. Pramod Kumar Mahish has been delivered a lecture on diversity, challenges and significant role of elephants to the nature is explained. A web note is also released in this day.

   [**Attachment 4**: Detail about the Program]

Activity related to health deeds

1. Awareness regarding Eye Flu

During the monsoon eye flu was spread over the population with very diverse age group. Therefore, an awareness activity was conducted among the students of college. General information about the disease, its causes, symptoms and possible precautions have been explained. A 5x3'' flex was also stacked in the college campus.

[**Attachment 5**: Detail about the Program]

Invited Lecture

1. Dr. Ishwari Prasad Chelak

Dr. Ishwari Prasad Chelak, Assistant Professor of Botany, Govt. MV PG College Mahasamund has been delivered a lecture on Celebration of International Millet Year among the UG and PG students of Biotechnology. This program was organized on 16th September 2023.

[**Attachment 6**: Detail about the Program]

Activity under MOUs

1. Deliver lecture in Bhilai Mahila Mahavidyalaya

Under MoU between college Dr. Pramod Kumar Mahish of Govt. Digvijay Autonomous College Rajnandgaon delivered a lecture among the students of Biotechnology, Bhilai Mahila Mahavidyalaya on 08th December 2023.

[**Attachment 7**: Detail about the Program]

2. Group Discussion with Dr. Anubhuti Jha, St. Thomas College Bhilai

A group discussion followed by lecture was organized in the theme of Bioinformatics among B.Sc. III year students of Biotechnology. The group discussion and lecture were delivered by Dr. Anubhuti Jha, Asst. Professor of Biotechnology, St. Thomas PG College Bhilai on 15th December 2023.

[**Attachment 8**: Detail about the Program]

Extension activity

1. *Agrani Digvijay*

An extension activity regarding awareness of National Education Policy 2020 among the school students is organized under Agrani Digvijay camp. The teachers and students of Biotechnology department organized this extension program at Maharani Laxmibai School Rajnandgaon. NEP 2020 was explained among the students and teachers of school with the aid of PPT presentation and flayer and poster.

[**Attachment 9**: Detail about the Program]

Bio-entrepreneurship Program

1. *Production of Oyster mushroom*

One day bio-entrepreneurship program was organized at Krishi Vigyan Kendra, Surgi, Rajnandgaon on 22nd September 2023 with the aim to skilled the students for oyster mushroom production. Shri Jitendra Meshram has been given a full day training, in which types of mushrooms, substrate for growth, growth condition, method of production, health benefits and economical values was explained.

[**Attachment 10**: Detail about the Program]

Training Programs

1. *Plant tissue culture workshop*

One day workshop on Plant tissue culture is organized in the laboratory of Biotechnology for faculties, scholar, technicians and students of life science. In this workshop principle, method, requirement and application of PTC in various field is explained. This workshop is organised on 27-01-2024.

2. *Water analysis equipment training*

One day training on water testing equipment is organized on 15-02-2024 in the department lab. This training is organized for the students of MSc Sem II and IV. Mr. Bhagwano Kumar, Engineer of Hanna Instrument Mumbai was the subject expert of this training camp.

3. Gel filtration chromatography training

This training is organized on 20-03-2024 for the students of biotechnology UG and PG. Principle, working method, application, precautions of Gel filtration chromatography was explained and a hands on training was given.

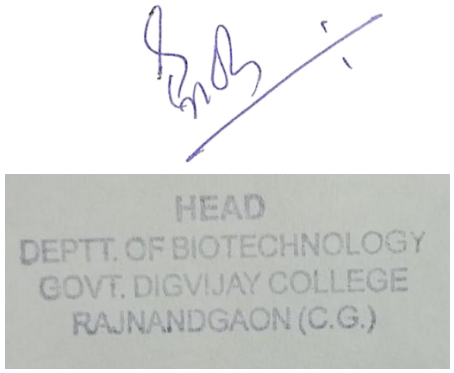
[**Attachment 11**: Detail about the Training Programs]

Awards

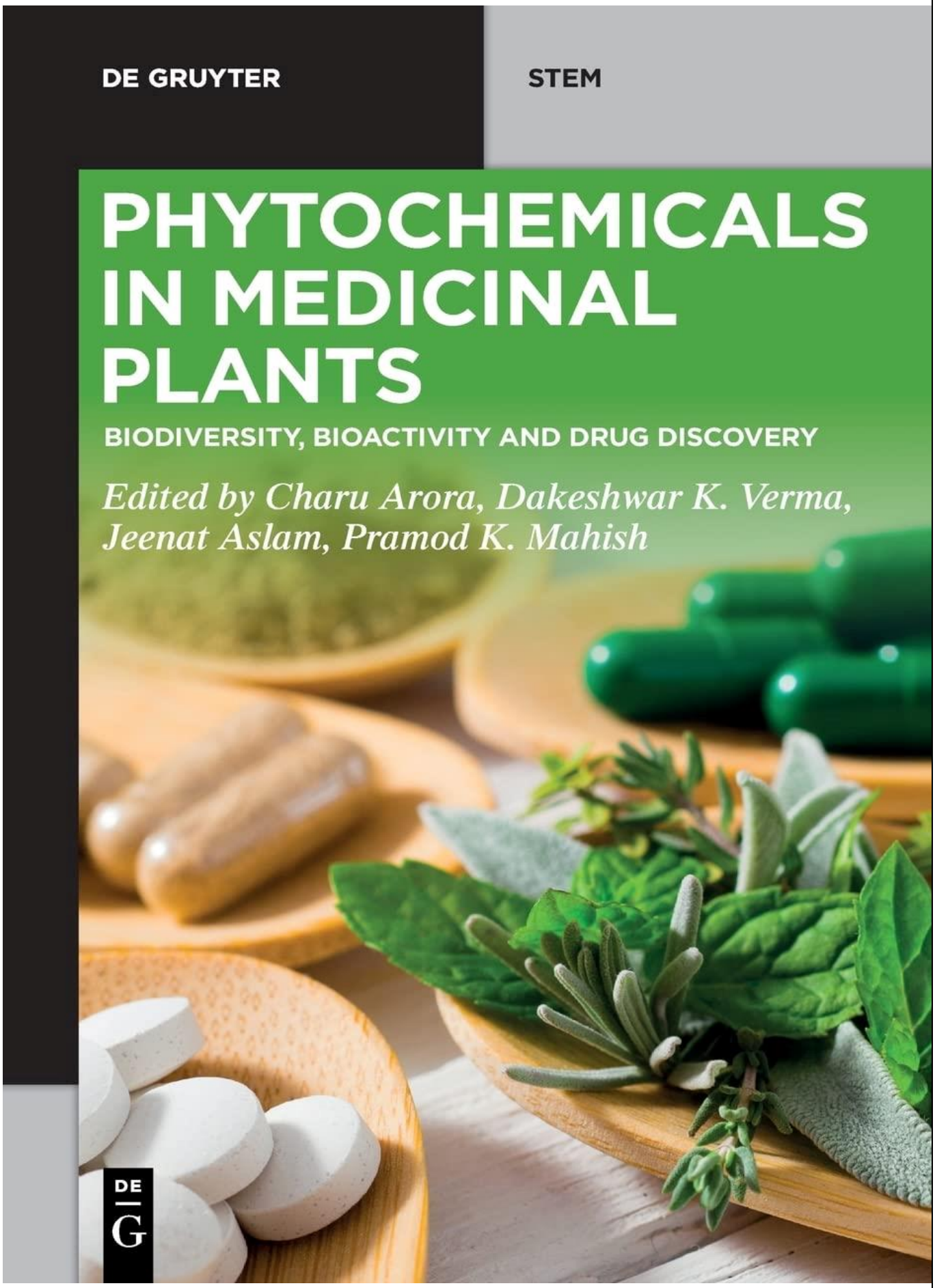
Best Student National Award

Kumari Chestha Rani Yadav of Undergraduate level and Mr. NJK Abdul Zaheen Khan of Postgraduate level have been with best students by Microbiologists Society of India.

[**Attachment 12**: Detail about the Award]



Attachment 1: Books


DE GRUYTER
STEM
PHYTOCHEMICALS IN MEDICINAL PLANTS
BIODIVERSITY, BIOACTIVITY AND DRUG DISCOVERY
Edited by Charu Arora, Dakeshwar K. Verma, Jeenat Aslam, Pramod K. Mahish
DE G

Benefitting from phytochemicals in medicinal plants has lately gained increasingly more global relevance. The medicinal bioactivity might range from wound healing activity to anti-inflammatory and anti-viral effects. This work describes the challenging scientific process of systematic identification and taxonomy through molecular profiling and nanoparticle production from plant extracts until a final use for e.g. cancer or HIV treatment.

- Broad overview on medicinal plants research.
- Covering the steps from taxonomy to molecules profiling and nanoparticle productions.
- Valuable for scientists and students.

Prof. Charu Arora, Ph.D.
Professor of Physical Chemistry Guru Ghasidas (Central) University Bilaspur, 495009 INDIA

Dakeshwar Kumar Verma, Ph.D.
Assistant Professor of Chemistry Govt. Digvijay Autonomous PG College, Rajnandgaon, 491441, INDIA

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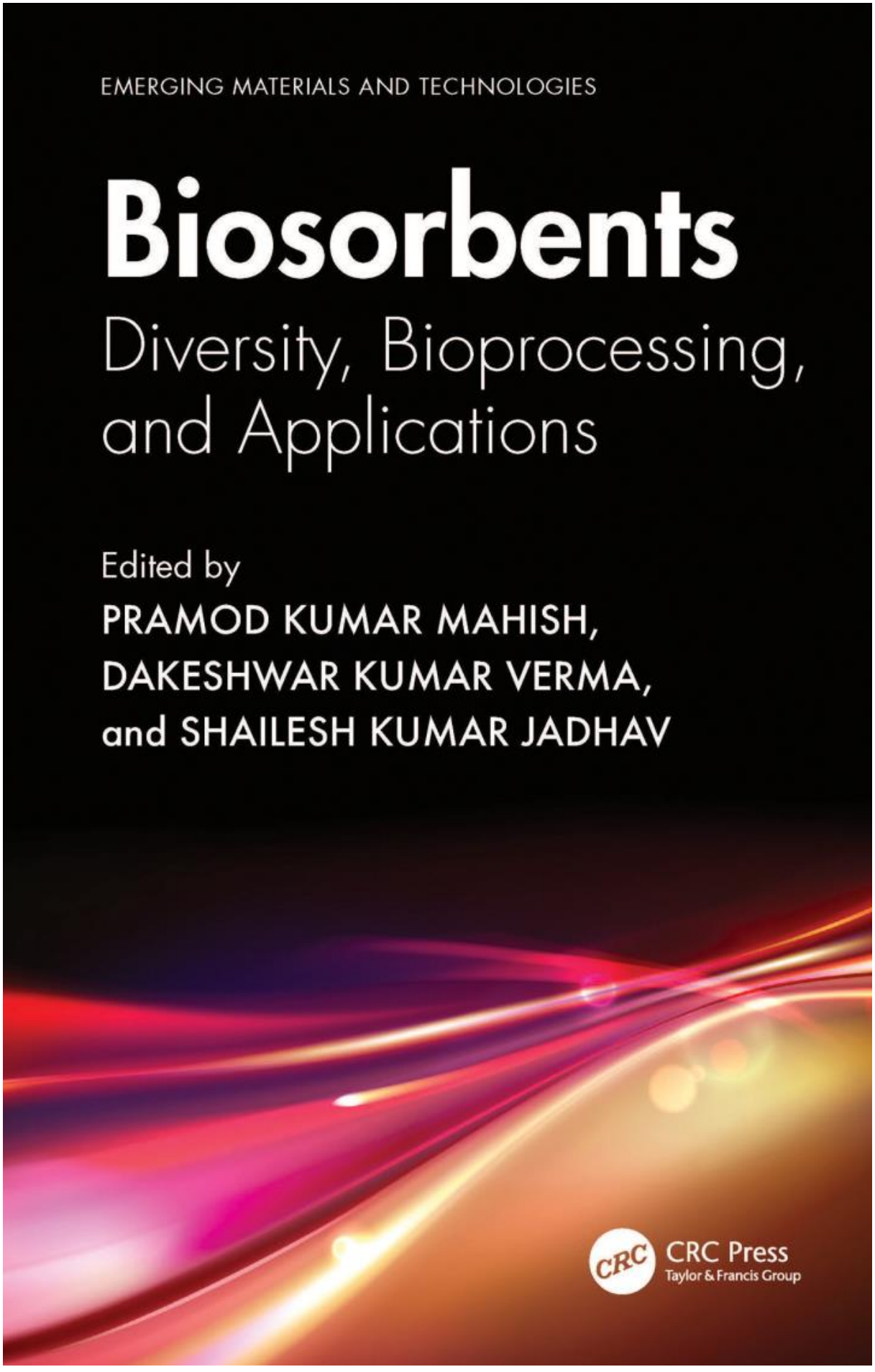
EMERGING MATERIALS AND TECHNOLOGIES
Biosorbents
Diversity, Bioprocessing, and Applications
Edited by
PRAMOD KUMAR MAHISH,
DAKESHWAR KUMAR VERMA,
and SHAILESH KUMAR JADHAV
CRC
CRC Press
Taylor & Francis Group

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ENVIRONMENT

ACS SYMPOSIUM SERIES

HEAVY METALS IN THE ENVIRONMENT

MANAGEMENT STRATEGIES FOR GLOBAL POLLUTION

D. K. VERMA, C. VERMA & P. K. MAHISH

ACS Publications

Attachment 2: Research Papers and Book Chapters

Volume 2, Issue 2, June – 2023 PP 243-272 International Journal of Futuristic Innovation in Engineering, Science and Technology (IJFIEST)

INHABITANTS OF ENDOPHYTIC *PHOMA*SPP.

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ABSTRACT

The fungal genus *Phoma* has been documented as exhibiting phytopathogenic properties, as well as functioning as saprophytes in soil. Additionally, this genus has been observed in various environments, including aquatic and aerial settings, marine environments, and as entomopathogens.The taxonomic classification *Phoma* pertains to pycnidia that bear single-celled, transparent conidia and are found on herbaceous stems. *Phoma* spp. had been classified with the class Coelomycetes because they have certain defining physical characteristics. Economically significant crop plants are frequently infected by fungi of the genus *Phoma*. Some *Phoma* species are host specific like *Phoma caloplacae* in *Triticumaestivum* and *Phoma multiristrata* have been found in weed plants *T. procumbens*. Some *Phoma* spp. found in more than plants like *Phomaherbarum, Phoma glomarata, Phoma enpyrena*habitats in evergreen tree, mangrove tree, perennial trees, Herbaceous and shrubs also. *Phoma* spp. have the potential to act as opportunistic pathogens for humans, animals, and plants Many unique and natural products with diverse biological activity have been traced back to *Phoma*, which has gained many prominences. *Phoma* spp. has been found to produce a variety of novel secondary metabolites that exhibit antimicrobial, anti-inflammatory, bio-herbicidal, antiangiogenic, cytotoxic, and anti-HIVactivity.

Keywords: Coelomycetes; Inhabitant**;** *Phoma* spp.; Pycnidia of *Phoma* spp.; Secondary metabolites.

INTRODUCTION

Ind. J. Aerobiol., Vol. 36, No. (2), pp 13-19 [2023] ISSN No. 0971-1546

Research Article

TOXIGENIC FUNGAL CONTAMINATION OF SOME INDIAN MAIN SPICES

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Spices are used in the pharmaceutical industry as well as in our diets as flavouring agents, counter irritants, stimulants and other medicinal uses. Spices gave good therapeutic effects during COVID-19 pandemic condition by showing anti-viral, anti-microbial and immunity booster agents, but spices were used by ancient people as an Ayurveda formulation with the right ratio and quantity. The objective behind this research study was to identify the fungal contamination in cumin, black pepper and coriander. The spice extract was cultured and fungal growth was noticed on media plates. The results showed higher frequency of *Aspergillus flavus*, *A. niger* and *Penicillium* in the culture and the literature survey confirms their mycotoxins production. Malt salt media was found to be the better growth medium for the isolation of toxigenic fungi. The study has concluded that commonly used Indian kitchen spices contain significant amounts of fungi. The isolated fungi are found to be toxigenic in nature.

Key Words: Toxigenic, Fungal contaminants, major spices, India

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INTRODUCTION

Spices are exotic plant substances, which add aroma, taste and colour to the food. Since Vedic times, herbs and plant substances have been known to produce therapeutic effects. The written evidence of spices and their medicinal uses was mentioned in Rigveda (4500-1600 BCE). Spices not only improve the quality of food, but they are also beneficial for human health, as they have antimicrobial, anti-inflammatory and medicinal property. It increases the self-life of food and can be used as a preservative[1]. Spices have essential oils which give aroma, odour and medicinal properties to them and are used world-wide.

In the pharmaceutical industry, some of the spices are used as counter irritants due to the presence of volatile oils which are used as stimulants in the formulation of lotions and balms[2]. These are used as a flavouring agent to active agent in cough syrups and cosmetic products. Some of the essential spices are used as an ingredient in tooth paste and mouthwashe[3]. The pandemic storm demands low cost, fewer side effects, drugs which do not cause inflammation and boost immunity in a very short duration of time, Searching for newer drug molecules is more difficult than exploring traditional Kadha and herbal remedies made of spices[4] and studying proved, lower per capita spice intake nation have more mortality rate of covid-19 cases per millions people[5]. The bio-active components of spices balance immune function by balancing vata, pitta and cough, which aid in managing corona infection and its severity.

In India, 38,1700 tonnes of spices were produced in 2004-05, while 3,20,530 tonnes were exported in 2005-06. That means more than 80% is consumed by Indian people, which indicates the history of having a strong domestic market for species. Coriander (*Coriander sativum*) belongs to Umbelliferae (Apiaceae), and its biological sources are fruits and leaves. Coriander have quercetin, coriandrol and iso-querecitrin and rutic as its bio-active compounds. The therapeutic uses are GIT diseases, respiratory ailments for various deficiencies, anxiety, insomnia and also antihyperglycemic anti-bacterial and cholesterol lowering activities[6]. Black pepper (*Piper nigrum* L.) belongs to Piperaceae family and its bio-active components are piperine, pinene, terpinene, limonene, mercene, alpha-terpineol, alpha-pinene and piperolnol are extracted from its fruits. Black

Tarun Kumar Patle, Pramod Kumar Mahish
and Ravishankar Chauhan*

Chapter 4
Plants alkaloids and flavonoids: biosynthesis, classification, and medicinal uses

Abstract: Alkaloids and flavonoids are vital natural pharmacological active secondary metabolites that have long been concern because of their significant health benefits for the human being and treating many ailments. This chapter summarizes the types, biosynthesis, sources, and health benefits of alkaloids and flavonoids as fascinating substitute sources for medicinal and pharmaceutical applications. Biosynthesis pathways and classification of secondary metabolites, particularly alkaloids and flavonoids have been demonstrated briefly here with their molecular structures. The presence of these phytoconstituents in different medicinally important plants and their applications in medical and pharmaceutical aspects, particularly for health-promoting, e.g., free radical inhibitors, antiviral, antitumor, antibacterial, anti-inflammatory, antidiabetic, and so forth are highlighted. Conclusively, an effort was made to précis the plant-derived alkaloids and flavonoids with useful biological activities to increase an understanding of their effects on the health of the human being.

4.1 Introduction

Plants synthesize a vast diversity of naturally occurring chemical compounds known as phytochemicals/plant metabolites. These organic chemical compounds have low molecular weight with various therapeutic benefits as well as attributed nutritional benefits [1]. Phytochemicals are categorized into two major parts, primary metabolites and secondary metabolites. Primary metabolites are responsible for the growth and development of plants, whereas secondary metabolites are specialized metabolites or natural products having several health benefits such as antioxidant, antiviral, antimicrobial, anticancer, enzyme detoxification regulation, immune system modulation, anti-arthritis, reduced platelet aggregation, antidiabetic, and hormone metabolism property [2–5]. Primary metabolites include carbohydrates, proteins, vitamins, and

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https://doi.org/10.1515/9783110791891-004

Shweta Singh Chauhan, Ravishankar Chauhan*,
Nagendra Kumar Chandrawanshi and Pramod Kumar Mahish*

Chapter 14
Bioactivity of nanoparticles synthesized from medicinal plants

Abstract: Progress in science is making life easy; nanoparticles are one of the modern achievements approaching social benefits in biomedical, agriculture, energy, industrial etc. Nano-drugs, nano-fertilizer, green synthesized nano-particles of antimicrobials, antioxidants and anticancerous agents are some examples. Conventionally, these are produced by chemicals; therefore, the products may be costly, limited, and nonenvironmentally friendly. Among the various alternatives nano particle-based molecules play an important role to overcome these problems. The natural content of the medicinal plants can be transferred as medicine by various methods like allopathic, Ayurvedic, homeopathic, and food. By the synthesis of nanoparticle natural content of medicinal plant combines with the metal ions of nanosize. The present chapter is focused on the bioactivity of nanoparticles synthesized from medicinal plants. The present chapter is definitely helpful in enriching the depth of knowledge among academician sand lay persons too.

14.1 Introduction

Nanoparticles belong to the small molecules of 1–100 nm but the term is also used for larger particles up to 1000 nm [1]. The nanoparticles may differ on the basis of optical characteristics, size, surface area, and some other chemical/physical properties. Obtaining high quality of nanoparticles with their renowned properties generally depends on the synthetic methods and reducing agents used during the preparation of the particles

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Chapter 10

Analyzing Contamination of Heavy Metals - AAS and Fluorescence Spectroscopy

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Determination of heavy metals in soil, water, food, pharmaceuticals and environment samples has received great attention due to their serious threat to the ecology and human health. Indeed, technological advancements led to the rapid and real time detection and quantification of heavy metals in various samples. In this chapter, we focused on instrumentation, sample preparation, methodology and analysis of different heavy metals by atomic absorption spectrometry (AAS) and Atomic fluorescence spectroscopy (AFS). The main advantages of AAS and AFS are their high sensitivity, anti-interference ability, lower limit of detection (LOD) and wide range of analysis. AAS consist of following main parts; light source, atomizer, monochromator, detector, and a display device. Analytical samples were first prepared by acid digestion in organic acids such as $HClO_4$, HCl, HNO_3, and aqua regia before injection in AAS. A standard calibration curve is used to determine the unknown concentration of a sample. AAS is further classified as flame atomic absorption spectrometry (FAAS), graphite furnace atomic absorption spectrometry (GF-AAS), and hydride generation atomic absorption spectrometry (HG-AAS) which are exclusively used for the detection of various metal ions. Similarly, AFS consists of a light source, sample holder and detector. The sensitivity of AFS is mainly due fluorescent probes, quantum dots (QD) as probes are very specific with high degree of sensitivity and multiplexing property. The QDs made of graphene, carbon and semiconductors are mainly

Verma et al.; Heavy Metals in the Environment: Management Strategies for Global Pollution
ACS Symposium Series; American Chemical Society: Washington, DC, 2023.

3 Mushroom Biosorbent

Varsha Meshram, Khemraj Sahu, Anjali Kosre, Deepali Koreti, Pramod Kumar Mahish, and Nagendra Kumar Chandrawanshi

DOI: 10.1201/9781003366058-3

3.1 INTRODUCTION

Numerous sectors produce many dangerous pollutants each year, including dyes and toxic metals. Heavy metal pollution is currently one of the most severe environmental issues due to the rapid development of industries (Liu et al., 2018). It employs numerous dyes in different processing phases in various sectors, including paper, plastic, chemical refineries, textiles, and leather (Ismail et al., 2013). About 10–15% of such dyes that cause organic and inorganic pollution are mixed into industrial sectors, which are held accountable for the passage of pollutants with toxic, carcinogenic, and genotoxicity effects to humans and microorganisms (Balakrishnan et al., 2016; Chequer et al., 2015). Environmental pollution control legislation has been introduced in numerous nations. It is essential to remove heavy metals from industrial effluent discharge effectively. Industrial waste treatment techniques vary and are based on different factors. Some techniques for treating heavy metals include chemical methods, membrane separation, electrochemistry, reduction, oxidation, and flotation (Alalwan et al., 2020). However, there are several drawbacks to the current heavy metals treatment methods, including high operating and maintenance costs, complex procedures, high chemical intake, and high levels of toxic waste production (Rizzuti et al., 2021) and Volesky (2007). Biosorption is an alternative process for treating heavy metals. A physio-chemical passive metabolite-independent method employs biosorbents derived from non-living biological materials. Biosorption is a suggested heavy metal treatment process because it is an environmentally friendly, economical, efficient, and simple technique (Javanbakht et al., 2014) for treating dyes. According to Eman et al. (2017), mechanisms for heavy metal tolerance in fungi include extracellular (chelation and cell wall binding) and intracellular (binding to substances like proteins) sequestration of heavy metals. Over the past several decades, the idea of "biosorption" has developed in various ways. A physicochemical process known as sorption allows each compound to bind to the other. A compound attaches to another through the physico-chemical process of sorption. Biological treatment techniques are used to oxidize a variety of dye solutions, but they call for a particular enzyme that catalyzes oxidation reactions (Al Prol, 2019). *Escherichia coli* and *Clostridium* sp. are examples of anaerobes that are used for the removal of dye. For dye pollutants removal, fungi and algae are also investigated, including *Aspergillus* sp., *Candida* sp., *Phanerochaete* sp., *Trametes* sp., and many more (Fu & Viraraghavan, 2001). Biosorbents from mushrooms can be prepared from mycelium or fruit bodies (live or dead) and spent mushroom substrate (SMS).

The biosorption process is affected by various factors such as the presence of a microbial population, the accessibility of pollutants to these organisms, metal ion concentration, and environmental variables such as temperature, pH, and the presence of nutrients (Prakash, 2017). High accumulation potential and a shorter life span are some of the advantages of using mushrooms as biosorbents. This chapter discusses the state of mushrooms and biosorbents made from mushrooms that have been used in research to successfully remove pollutants including heavy metals and natural colors. Also describes the kinetic and isotherm models to eliminate contaminants from the environment by mushrooms based bioadsorbents.

9 Pretreatment of *Aspergillus* Mycelium for the Enhancement of Lead Biosorption

Pramod Kumar Mahish and Shailesh Kumar Jadhav

DOI: 10.1201/9781003366058-9

9.1 INTRODUCTION

Nowadays, it has become a challenge to solve the problem of water pollution by toxic heavy metals resulting from anthropogenic activities. In this series, biosorption can be a part of such a solution. The biosorption uses biologically derived materials as a biosorbent for the removal of heavy metal ions from wastewater (Ramírez et al., 2020). Seaweed, molds, yeasts, mushrooms, algae, bacteria, actinomycetes, crab shells, and plants are important biosorbents used for the removal of pollutants (Yaashikaa et al., 2021). These biomasses can be obtained from natural and industrial wastes (Sheth et al., 2021). Biosorption of heavy metals and other pollutants using fungal biomass has little advantage over other biosorbents because of its cell wall characteristics, easy growing, manipulation, natural availability, and eco-friendly biosorbent (Ayele et al., 2021). The fungal cell wall contains chitin, glucans, mannans, some polysaccharides, and proteins. Chitin from fungal cell walls is a good biosorbent for heavy metals and pollutants; apart from these, fungal cell walls also contain some functional groups which help to absorb pollutants (Sarode et al., 2019).

The fungi are very useful in the sorption of metal due to their cell wall characteristics, especially the chitin and chitosan compositions. The mycelial structure provides another advantage to fungi. Various functional groups take part in the adherence of metal in the cell wall like the phosphate group, amino group, carboxyl group, polysaccharides, hydroxyl group, etc. (Gahlout et al., 2021). The metal uptake capacity of biological material becomes quite useful after the physical and chemical pretreatment in comparison to the non-treated biomass because more metal-binding site is exposed after pretreatment (Chauhan et al., 2020). The pretreatment may add some functional groups to the cell wall that enhances sorption or remove some unwanted groups from the cell wall that restricts the binding of metal ions to the surface.

Aspergillus is the most common filamentous fungi ubiquitously distributed in the environment. The genus consists of about 340 officially recognized species (Osman, 2021). Decomposing organic substances; causing plant, animal, and human disease; produce toxins are the major significance of *Aspergillus* fungi (Jing and Lu, 2022; Taniwaki et al., 2018). In the most recent, the bio-removal of heavy metals by *Aspergillus* was studied due to their ability toward metal resistance and sorption (Acosta-Rodríguez et al., 2018). So, the present work aims to find out the biosorption ability of *Aspergillus niger* and *Aspergillus flavus* with live and pretreated biomasses and to compare their ability with different parameters.

10 Pretreatment of Spent Mushroom Substrate for the Enhancement of Biosorption capacity

Anjali Kosre, Khemraj Sahu, Varsha Meshram, Deepali Koreti, Pramod Kumar Mahish, and Nagendra Kumar Chandrawanshi

DOI: 10.1201/9781003366058-10

10.1 INTRODUCTION

Bioadsorption is a physicochemical process that passively concentrates and binds metal ions onto specific biomass. Heavy metal contamination of industrial, mining, and agricultural land or water has increased. Heavy metals are highly toxic and, since they accumulate in tissues, irreversibly affect each link of the food chains they enter [1]. The mobility of these metals in soil occurs via the soil water, which is absorbed by fungi and plants or leached into groundwater with the subsequent heavy metals spread. Different techniques are available to minimize the effects of heavy metal pollution. However, some of them are often very costly or produce high environmental impact [2], and others are more environmental-friendly such as phytoextraction, which has been widely studied and has important limitations since it is commonly exceedingly challenging to find native hyper-accumulating plants that generate large amounts of biomass [3]. Because of these limitations, searching for new sorbents to immobilize soil contaminants or remove the contamination from water becomes necessary. Agricultural wastes are cheap materials, readily available, renewable, and show a high affinity for heavy metals [4, 5]. Agricultural wastes such as wood chips, sugar cane, and peel have been employed in lead ions biosorption. The use of agricultural wastes as biosorbents is gaining importance in the bioremediation of heavy metal-polluted water and soils due to their effectiveness and low cost. Spent mushroom substrate (SMS) is an abundant agricultural waste generated after mushroom harvest. During the growth of edible fungi, crude fibers of cellulose, hemicellulose, and lignin are converted into small molecules favorable for metallic ions biosorption [6]. It has been used to efficiently remove Cu, Zn, and Cr [7].

10.2 MECHANISM OF ADSORPTION

Generally, the binding of metals, pollutants, and dyes to the mushrooms and SMS depends on the four mechanisms: adsorption, ion exchange, complexation, and precipitation. Physical adsorption is based on the electrostatic forces and van der Waals forces. Occasionally, the cation transport system transports the metal ions bearing the same charge and ionic radius along with the other required ions for metabolism [8]. It has been reported that mushroom biomass develops mechanisms to resist heavy metals through the secretion of chelating substances that can bind with metal ions. Further, metal ions accumulation is reduced due to the alterations in the metal transport system. Another mechanism to develop resistance includes binding metal ions to an intracellular molecule such as metallothionein or accumulating in intracellular organelles like vacuoles or mitochondria [9].

12 Aqueous Removal of Heavy Metals Using Biosorbents

Tarun Kumar Patle, Ravishankar Chauhan, Alka Patle, and Pramod Kumar Mahish

DOI: 10.1201/9781003366058-12

12.1 INTRODUCTION

Environmental pollution such as soil, water, air, etc. have an immense consequence on all living beings. Among, the environmental issues, water pollution from toxic heavy metals such as Hg, Cr, Pb, Zn, Cu, Ni, Cd, As, Co, Sn, etc. is a major issue [1,2,3]. Among these, Pb, Hg, Cd, and Cr(VI) are the most toxic heavy metals; these have a major impact on the environment and human health [3]. The major sources of heavy metal contamination are industrial influents coming from mining, paints, fertilizers, pesticides, leather, iron, steel, electroplating, photography, aerospace, atomic energy, etc. [4]. Contamination of heavy metal is non-degradable; many heavy metals such as Hg, Cr, Pb, Cd, As, etc. are frequently quantified in industrial wastewaters [5]. These heavy metals are very toxic for humans in ppb levels; for example, Pb can damage our body by attachment with specific cell components, compartmentalization, breakdown of cellular process, oxidative damage, and transport [6, 7]. Further, industrial wastewater has been drained in the rivers that further affects the other sources of drinking water too. So, the treatment of wastewater from industries is necessary for the removal of heavy metals to protect the environment as well as human health.

Several methodologies such as physical, chemical, and biological are employed in the removal of heavy metals from aqueous media [8,9 and 10]. Some conventional techniques were frequently used for the removal of heavy metals with certain drawbacks including less effective, generation of a large amount of waste, time taking, high energy demand, high cost, etc. [11, 12]. Recently, biosorbents have gained more attention for developing cost-effective and eco-friendly removal and control of heavy metal pollution in aqueous media [13, 14]. Biosorbents are natural biological materials such as plants, bacteria, fungi, algae, etc. have a tremendous property to accumulate heavy metals from aqueous media [14]. These biosorbents have advantages over conventional methods in terms of low cost, higher efficiency, nominal waste, recovery, etc. [15].

Biosorption is a physico-chemical phenomenon occurring biologically in plants, and microbes, in which absorption or adsorption of targeted heavy metals or other contamination in aqueous media takes place [16]. There are two types of phases usually present in biosorption; the first one is a solid phase which is also known as sorbent containing plants, fungi, algae, bacteria, etc. and the second one is an aqueous phase containing heavy metal contamination which is also known as sorbate [17]. The affinity of sorbents to the sorbate is higher involving different mechanisms and the process continues till the equilibrium stabilizes between biosorbent-bound heavy metal and the amount of heavy metal reaming in aqueous media [17]. The mechanism involved in biosorption of contamination of heavy metal from aqueous media via few processes such as physical absorption, precipitation, complexation, ion exchange, oxidation-reduction, etc. [18].

The cell wall is a major part of the biosorption process, which contains a variety of functional groups such as hydroxyl (–OH), carboxyl (–COOH), esters (–COOR), amino ($–NH_2$), carbonyl (–C=O), phosphate group, etc. which contributed in biosorption process [19]. These functional groups are directly involved in the removal of heavy metals through the biosorption process which can later examine the efficiency of removal of heavy metals by different analytical techniques such as infrared

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Chapter 1 Recent trends and developments in carbon dots

From the book Carbon Dots in Biology

Elyor Berdimurodov, Khasan Berdimuradov, Kholmurodov Bahodir, Abduvali Kholikov, Khamdam Akbarov, Omar Dagdag, Mohamed Rbaa, Brahim El Ibrahimi, Dakeshwar Kumar Verma, Rajesh Haldhar and Pramod Kumar Mahish

https://doi.org/10.1515/9783110799958-001

Abstract

The carbon dots are new materials in modern chemistry. The modern development ways for carbon dots were discussed in this chapter. Currently, the carbon dots are synthesized by the top-down and bottom-up methods. The electrochemical methods, ultrasonic treatment, laser ablation method, and arc discharge method were mostly used in the top-down methods. The bottom-up methods have some advantages such as convenient methodology, precise control, easy instrumentation, cost-effectiveness, involvement of non-toxic precursor molecules, practical applicability, and green materials. The carbon dots are synthesized from green sources such as carbohydrates, biomass, and bio-waste. The carbon dots are modified with the supramolecular

Attachment 3&4: Activities Related to environmental deeds

वृक्षारोपण कार्यक्रम का आयोजन

आज दिनांक 24/07/2023 दिन सोमवार को महाविद्यालय के बायोटेक्नोलॉजी विभाग द्वारा स्नातक व स्नातकोत्तर के छात्र-छात्राओं के साथ महाविद्यालय परिसर सृजन वैली गार्डन क्षेत्र में वृक्षारोपण का कार्यक्रम का आयोजन किया गया। जिसमे छात्र-छात्राओं ने तथा विभाग के स्टाफ द्वारा मुंगा, पपीता, कनेर, आंवला वृक्ष का वृक्षारोपण किया। इसके पश्चात विभाग के विभागाध्यक्ष ने छात्र-छात्राओं को वृक्षारोपण के फायदे तथा जीवन में महत्व के बारे में बताया।

इस कार्यक्रम में निम्न शिक्षक व छात्र-छात्राएं उपस्थित थे :-

1. डॉ प्रमोद कुमार मंडोरा (विभागाध्यक्ष) हस्ता.
2. कैलाश कुमार साहू

छात्र-छात्राएं :-

1. Gitanjali Sahu
2. Md Abdul Zahar Khan
3. Abhishek Majhi
4. Harsh kumar Verma
5. Human Sahu
6. Preeti
7. Chitra
8. Khushbu

9) Namrata
10) Divya Dewangan
11) Khadlata
12) Vaishali Sinha


GPS Map Camera
Rajnandgaon, Chhattisgarh, India
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बायोटेकनालॉजी विभाग एवं शोध केन्द्र
शासकीय दिग्विजय स्वशासी स्नातकोत्तर महाविद्यालय
राजनांदगांव (छ.ग.)
स्नातक एवं स्नातकोत्तर परिषद
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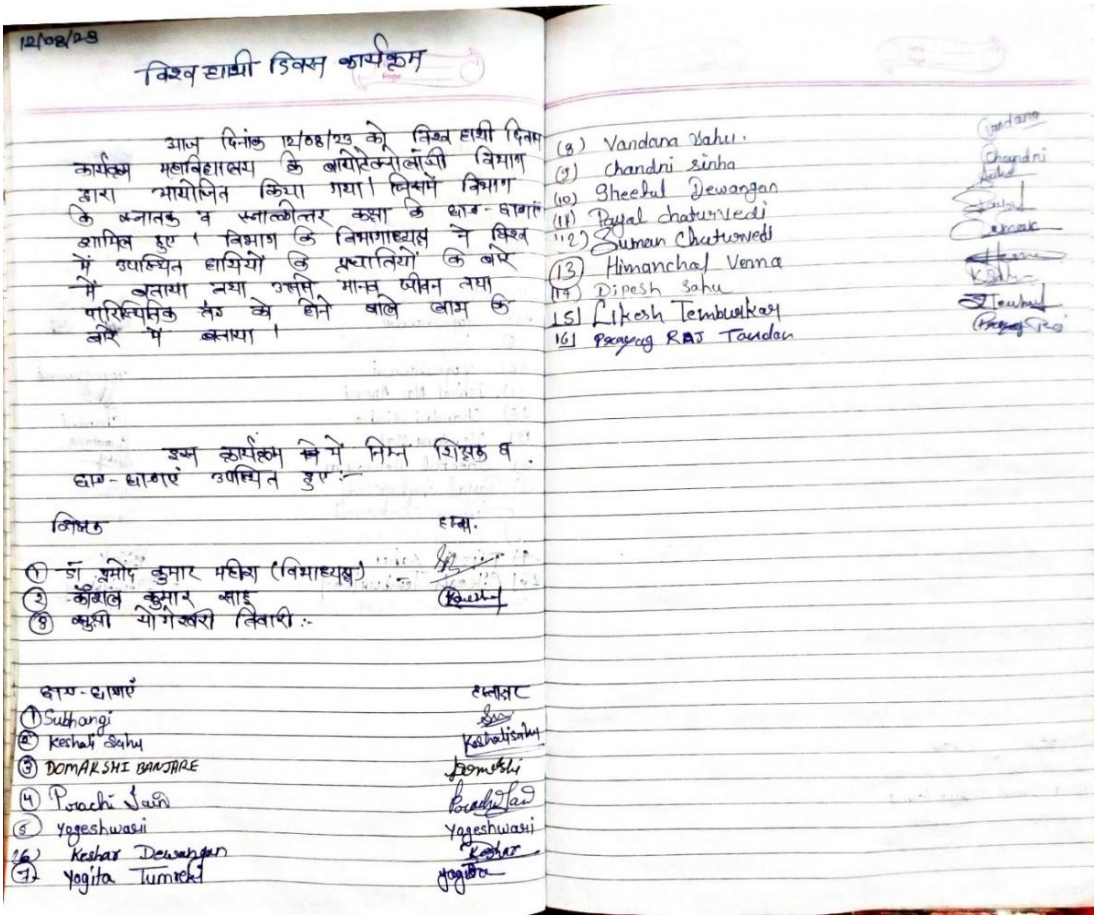


12/08/23

विश्व हाथी दिवस कार्यक्रम

आज दिनांक 12/08/23 को विश्व हाथी दिवस कार्यक्रम महाविद्यालय के बायोटेक्नालॉजी विभाग द्वारा आयोजित किया गया। जिसमें विभाग के स्नातक व स्नातकोत्तर कक्षा के छात्र-छात्राएं सम्मिलित हुए। विभाग के विभागाध्यक्ष ने विश्व में उपस्थित हाथियों के प्रजातियों के बारे में बताया तथा उससे मानव जीवन तथा पारिस्थितिक तंत्र को होने वाले लाभ के बारे में बताया।

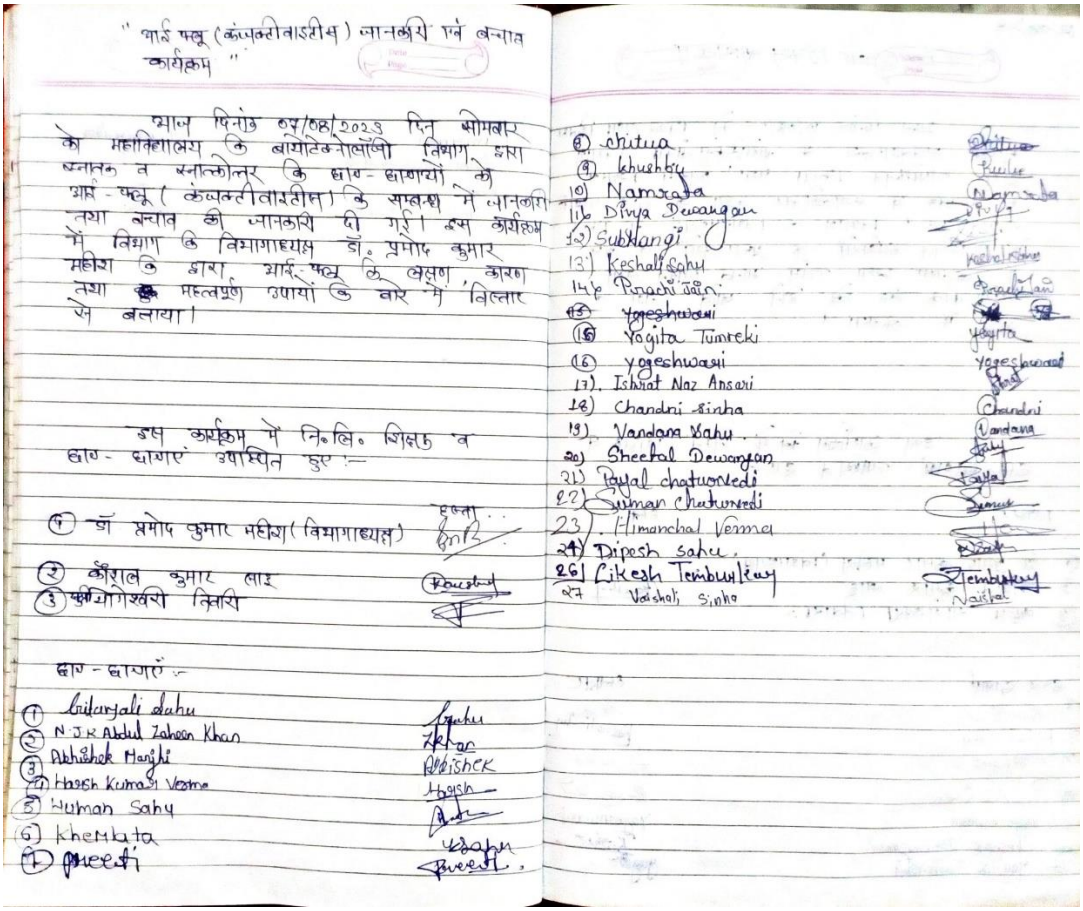
इस कार्यक्रम में निम्न शिक्षक व छात्र-छात्राएं उपस्थित हुए :-

शिक्षक	हस्ता.
(1) डॉ. प्रमोद कुमार महिया (विभाध्यक्ष)	
(2) कैलाश कुमार साहू	
(3) श्रीमती योगेश्वरी तिवारी	

छात्र-छात्राएं	हस्ताक्षर
(1) Sukhangi	
(2) Keshav Sahu	
(3) DOMARSHI BANJARE	
(4) Prachi Jain	
(5) Yogeshwari	
(6) Keshar Deewangan	
(7) Yogita Tumrekar	
(8) Vandana Yadu	
(9) Chandni Sinha	
(10) Sheetal Dewangan	
(11) Payal chaturvedi	
(12) Suman Chaturvedi	
(13) Himanchal Verma	
(14) Dipesh Sahu	
(15) Likesh Tembhurkar	
(16) Prayag RAJ Tandan	

Attachment 5: Activity related to health deeds

Awareness Program on Eye Flu



" आई फ्लू (कंजक्टीवाइटीस) जानकारी एवं बचाव कार्यक्रम "

आज दिनांक 07/08/2023 दिन सोमवार को महाविद्यालय के बायोटेक्नोलॉजी विभाग द्वारा स्नातक व स्नात्कोत्तर के छात्र-छात्राओं को आई-फ्लू (कंजक्टीवाइटीस) के संक्रमण से जानकारी तथा बचाव की जानकारी दी गई। इस कार्यक्रम में विभाग के विभागाध्यक्ष डॉ. प्रमोद कुमार महीश के द्वारा आई फ्लू के लक्षण कारण तथा महत्वपूर्ण उपायों के बारे में विस्तार से बताया।

इस कार्यक्रम में निम्नलि. शिक्षक व छात्र-छात्राएं उपस्थित हुए :-

1. डॉ प्रमोद कुमार महीश (विभागाध्यक्ष)
2. कौशल कुमार साहू
3. योगेश्वरी तिवारी

छात्र-छात्राएं :-

1. Gitanjali Sahu
2. N.J.R Abdul Zaheen Khan
3. Abhishek Manjhi
4. Hasth Kumar Verma
5. Suman Sahu
6. Khemlata
7. Preeti

1. Chitwa
2. Khushboo
3. Namrata
4. Divya Dewangan
5. Subhangi
6. Keshal Sahu
7. Pranchi Jain
8. Yogeshwari
9. Yogita Tumreki
10. Yogeshwari
11. Ishrat Naz Ansari
12. Chandni Sinha
13. Vandana Sahu
14. Sheetal Dewangan
15. Payal chaturvedi
16. Suman Chaturvedi
17. Himanchal Verma
18. Dipesh Sahu
19. Likesh Tembhurkar
20. Vaishali Sinha

शा. दिग्विजय स्वशासी स्नातकोत्तर महाविद्यालय राजनंदगांव (छ.ग.)

बायोटेक्नोलॉजी विभाग

आई फ्लू (Cunjuctivities) जानकारी एवं बचाव

आई फ्लू एक वायरल, बैक्टीरियल इन्फेक्शन है, जो आँखों को प्रभावित करता है, इसकी वजह से आँखों कि कंजक्टिवा कि छोटी छोटी रक्त नलिकाएं सूज जाती है , जिससे हमारी आँखे लाल हो जाती है।

लक्षण

- आँखों का लाल हो जाना।
- आँखों में सुखा सुखा महसूस होना।
- खुजली होना।
- आँखों में दर्द होना।
- बार बार आंसू का आना।
- आँखों के आसपास सफेद कीचड़ का आना।

कारण

- वायरल इन्फेक्शन के कारण।
- बैक्टीरियल इन्फेक्शन के कारण।
- एल्र्जी के कारण।
- आँखों पर चोट लगने से होने वाले सुजन के कारण।

बचाव या उपाय

- आँखों को छूने से पहले अपनी हाथों को अच्छे से साबुन या सैनिटाइजर से साफ कर लें।
- कांटेक्ट लेंस का प्रयोग न करें, यदि आवश्यक हो तो स्वच्छ लेंस का प्रयोग करें।
- अपने घरों में रहे , बाहर भीड़ - भाड़ वाली जगहों में जाने से बचे।
- जैसे ही ऊपर दिए लक्षण दिखाई दे, तुरंत अपने नजदीकी स्वास्थ्य केंद्र से परामर्श ले।
- बिना डॉक्टर के परामर्श के किसी भी प्रकार कि दवाई अथवा ड्राप का इस्तेमाल न करें।
- आई फ्लू के रोगी से दुरी बना के रखे।
- आई फ्लू होने पर काले चश्मे का प्रयोग करे।
- अत्यधिक रौशनी अथवा धुप में जाने से बचे।
- मोबाइल का कम से कम इस्तेमाल करे।

Attachment 6: Invited Lecture

Guest Lecture on International Year of Millets

Celebration of International year of millets 2023 — 16-09-23

A guest lecture on celebration of International year of millets is orgaized in which Dr. Ishwari Prasad chelak of Gat. MV PG college Mahasamund delivered the lecture among UG & PG students of Biotechnology. In his Lecture Dr. Chelak described the types of millets, Nutritional values, climatic condition for the grown and its processing. He highlited the role of millets in combating with malnutrition and life style diseases in Morden era. He told that mellets does not contains gluten so that they could not add unwanted things in our body. The crop change by cultivating millets by formers also helps to frmer and millet cultivation do not need irrigation therefore its growing is simple and beneficial.

डॉ ईश्वरी प्रसाद चेलक (विषय विशेषज्ञ) — हस्ताक्षर

डॉ. प्रमोद कुमार महीश (विभागाध्यक्ष) — (हस्ताक्षर)

Name	Signature	Name	Signature	Name	Signature
Mehvish	Mehvish	Harsh Kumar Verma	Harsh		
Vidya markam	Vidya markam	Abhishek	Abhishek		
Jiya Verma	Jiya Verma	Pramod	Pramod		
Priyanka	Priyanka				
Abdul Zaheen Khan	Khan.				
Ekta Sahu	Ekta				
Priya Pagdilear	[illegible]				


बायोटेकनालॉजी विभाग एवं शोध केन्द्र
स्नातक एवं स्नातकोत्तर परिषद
GPS Map Camera
Rajnandgaon, Chhattisgarh, India
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Long 81.031471°
16/09/23 12:29 PM GMT +05:30
Google


बायोटेकनालॉजी विभाग एवं शोध केन्द्र
स्नातक एवं स्नातकोत्तर परिषद
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Lat 21.091682°
Long 81.031471°
16/09/23 12:29 PM GMT +05:30
Google

Attachment 7& 8: Activities under MOUs

Attachment 7

BHILAI MAHILA MAHAVIDYALAYA

HOSPITAL SECTOR, BHILAI NAGAR (C.G.) 490 009
(Managed by Bhilai Education Trust)
(Affiliated to Hemchand Yadav Vishwavidyalaya, Durg)
Recognized Under Section 2(f) and 12(B) of the UGC Act 1956
NAAC Accredited with B Grade

Ph : 0788-2242699
0788-2242078
Website : www.bmmbhilai.com
Email : bmahila@rediffmail.com

No. BMM / 2023/444-9 Date : 06/12/23

To,

Dr. Pramod Mahish,
HOD, Dept. of Biotechnology,
Govt. Digvijay College Rajnandgaon,

Subject: Invitation for Guest Lecture on "International Millets Year" under MOU activity.

Respected Sir,

It is our immense pleasure to invite you for conducting Guest Lecture under MOU activity organized by Pioneer's Association of Department of Biotechnology and Microbiology on 8th December 2023 at 2:30 PM on the topic of "International Millets Year".

We will grateful if you accept this invitation & confirm your gracious presence.

Thanking You

08/12/23
Dr. Sandhya Madan Mohan
for - Principal
Bhilai Mahila Mahavidyalaya, Bhilai

कार्यालय-प्राचार्य, शासकीय दिग्विजय स्वशासी स्नातकोत्तर महाविद्यालय, राजनांदगांव (छ.ग.)

Web site: www.digvijaycollege.com E-mail: principal@digvijaycollege.com Phon & Fax 07744-225036

क्रमांक 2523 / स्था. / GDCR / 2023 राजनांदगांव, दिनांक 07 / 12 / 2023

प्रति,

डॉ. प्रमोद कुमार महीश,
सहायक प्राध्यापक बायोटेक्नोलॉजी
शासकीय दिग्विजय महाविद्यालय,
राजनांदगांव छ.ग.

विषय :– अतिथी व्याख्यान एवं बाह्य परीक्षक के रूप में दिनांक 08.012.2023 को कर्तव्य अवकाश पर जाने की अनुमति।

संदर्भ :– आपका पत्र दिनांक 06.12.2023

विषयान्तर्गत आपसे प्राप्त आवेदन दिनांक 06.12.2023 के आधार पर MOU के अंतर्गत अतिथि व्याख्यान एवं बाह्य परीक्षक के रूप मे एम.एस.सी तृतीय सेमेस्टर बायोटेक्नोलॉजी की प्रायोगिक परीक्षा सम्पन्न कराने हेतु दिनांक 08.12.2023 को भिलाई महिला महाविद्यालय, भिलाई नगर जाने की अनुमति दी जाती है तथा उक्त तिथि हेतु आपको कार्यमुक्त किया जाता है।

(डॉ. के. एल. टाण्डेकर)
प्राचार्य
शासकीय दिग्विजय महाविद्यालय
राजनांदगाव छ.ग

पृ. क्रमांक 2524 / स्था. / GDCR / 2023 राजनांदगांव, दिनांक 07 / 12 / 2023

प्रतिलिपि :–

1. प्राचार्य, भिलाई महिला महाविद्यालय, भिलाई नगर को सूचनार्थ।
2. स्थापना शाखा, शासकीय दिग्विजय महाविद्यालय, राजनांदगांव।

(डॉ. के. एल. टाण्डेकर)
प्राचार्य
शासकीय दिग्विजय महाविद्यालय
राजनांदगाव छ.ग.

BHILAI MAHILA MAHAVIDYALAYA, BHILAI

Run by Bhilai Education Trust, Bhilai

Department of Biotechnology & Microbiology

CERTIFICATE OF HONOUR

This is to certify that

Dr. Pramod Kumar Mahish from **Govt. Digvijay Autonomous P.G. College, Rajnandgaon,** ***has delivered lecture on*** **the topic** ***"International Millets Year" under MOU activity*** **as a guest speaker on 08/12/2023**

Dr. Sandhya Madan Mohan
Principal

Dr. Bhawana Pandey
HOD


Cultivation and
Production"
Association
omes You
Mahavidyalaya, Bhilai
Education Trust
GPS Map Camera
Bhilai, Chhattisgarh, India
Mahila Mahaviyalaya Bus Stand, Hospital Sector, Bhilai, Chhattisgarh 490009, India
Lat 21.192666°
Long 81.316203°
08/12/23 04:03 PM GMT +05:30
Google


GPS Map Camera
Bhilai, Chhattisgarh, India
58R8+X9F, Hospital Sector, Bhilai, Chhattisgarh 490009, India
Lat 21.192606°
Long 81.3161°
08/12/23 04:03 PM GMT +05:30
Google


Organised
Production"
comes You
Mahavidyalaya, Bhilai

Attachment 8

Office of The Principal Govt Digvijay Autonomous P.G. College
Rajnandgaon (C.G.)
Web site: www.gdcr.ac.in Email: principal@digvijaycollege.com & Fax: 07744-296331

25/3/2

Rajnandgaon dated : 06 / 12 / 2023

To,

Dr. Anubhuti Jha
St. Thomas Postgraduate College
Bhilai (C.G.)

Subject – Invitation for Group Discussion among Biotechnology Students under MoU between the institution.

Madam,

As per the memorandum of understanding (MoU) between the Govt. Digvijay Autonomous College Rajnandgaon and St. Thomas College Bhilai our college is inviting you to participate in a Group Discussion among the students of Biotechnology in trending topic of the field.

I hope your kind cooperation and support.

Head of Department

Dr. K. L. Tandekar
Principal
प्राचार्य
शासकीय दिग्विजय स्वशासी महाविद्यालय
राजनांदगांव (छ.ग.)

Copy to – Principal, St. Thomas College Bhilai (C.G.)

GOVT. DIGVIJAY AUTONOMOUS P.G. COLLEGE

RAJNANDGAON (C.G.)

Phone / Fax
Ph. 07744-225036 (O)
E-mail : principal@digvijaycollege.com
info@digvijaycollege.com
Website- www.digvijaycollege.com

Sr. No. 2599

Date 14.12.2023

CERTIFICATE

This is to certify that **Dr. Anubhuti Jha**, Dept. of Biotechnology, St. Thomas College Bhilai (Chhattisgarh) has been participated in a **Group discussion** among FYUG (Semester III) students of Biotechnology department on 15th December 2023. This activity has been conducted under the active **MoU** between Govt. Digvijay Autonomous Postgraduate College Rajnandgaon and St. Thomas College Bhilai (Chhattisgarh).

We are grateful to her and looking forward for the cooperation in future as well.

Dr. K. L. Tandekar
Principal

MOU Activity 15/12/23

Group Discussion In Bioinformatics

A group disussion is conducted for the studats of FYUG sem III Biotechnology students under the mou between Govt. Digvijay PG college Raimandgaon & St. Thomas college Bhilai. In this disussion aspects and very basics about bioiformatics is disussed betw among the studats and subject expert form St. Thomas college Dr Anubhuti Jha.

Follawings are present in the program -

Dr. Anubhuti Jha (subject Expat) 15/12/23
Dr. Pramod Kmalish (Head) 15/12/23
Miss Rewti Patel (GL)
Miss Yogeshwari Tiwari (SF)

Studats of FY UG sem III Biotechnology

	Name	Signature
①	Levis Hirwani	
②	Vimal Kumar Sahu	
③	Vedkumar Verma	
④	Pushpendra Sahu	
⑤	Mohit Kumar Dewangal	
⑥	Digesh Kumar	
⑦	Vivek Kuman	
⑧	Praveen Sahu	
⑨	Gwshan.	
⑩	Dharmendra Dey	
⑪	Manojdhwaj Sahu	
⑫		

Name	Signature
(13) Akshay Sahu	Akshay
(14) Dev Kumar Sahu	Dsahu
(15) Akant Binjhale	Akant
(16) Divyansh shandil	Divyansh
(17) Chetanjali Sahu	Csahu
(18) Hema Tandekar	Hemey
(19) Urvashi Sahu	Usahu
(20) Sakshi Hariharmo	Shariharmo
(21) Aishwarya Ninave	Ninave
(22) GIARIMA SAHU	GSahu
(23) Aarifa Quraishi	Aarifa
(24) Yachana yadav	Yachana
(25) Hema Ahir	Hema Ahir
(26) Shivani Sahu	Shivani Sahu
(27) Bhargvee Deshlahre	Bhargvee
(28) Kanakpriya Sahu	Kanakpriya
(29) Khushboo Sahre	Khu
(30) Sekulata sahu	Sekulata
(31) Vandana	Vandana
(32) Rity Patle	Rity
(33) punita	Punita
(34) Renuka	Renuka
(35) Granita	Granita


बायोटेकनालॉजी विभाग एवं शोध केन्द्र
शासकीय दिग्विजय स्वशासी स्नातकोत्तर महाविद्यालय
राजनांदगांव (छ.ग.)
स्नातक एवं स्नातकोत्तर परिषद
Welcomes you
GPS Map Camera
Rajnandgaon, Chhattisgarh, India
1, Digvijay College Rd, Rajnandgaon, Chhattisgarh 491441, India
Lat 21.091682°
Long 81.031471°
15/12/23 12:36 PM GMT +05:30
Google


GPS Map Camera
Rajnandgaon, Chhattisgarh, India
32RJ+G2Q, Rajnandgaon, Chhattisgarh 491441, India
Lat 21.091258°
Long 81.02997°
15/12/23 12:38 PM GMT +05:30
Google


THANK YOU
बायोटेकनालॉजी विभाग एवं शोध केन्द्र
शासकीय दिग्विजय स्वशासी स्नातकोत्तर महाविद्यालय
राजनांदगांव (छ.ग.)
GPS Map Camera
Rajnandgaon, Chhattisgarh, India
32RH+HQV, Rajnandgaon, Chhattisgarh 491441, India
Lat 21.091243°
Long 81.029882°
15/12/23 01:04 PM GMT +05:30
Google

Attachment 9: Extension activity

Attachment 9

स्थापना वर्ष 1957

Govt. Digvijay Autonomous

Postgraduate College Rajnandgaon (C.G.)

Department of Biotechnology

Extension activity of Department of Biotechnology was organized at Maharani Laxmi Bai School Rajnandgaon to aware the students about New Education Policy 2020 on 15th December 2023. Se detail inside.....

Extension Activity

Agrani Digvijay – New Education Policy 2020

Organized by : Department of Biotechnology and Research Centre
Venue : Maharani Laxmi Bai Girls School Rajnandgaon
Date : 15th December 2023

Office of The Principal Govt Digvijay Autonomous P.G. College Rajnandgaon (C.G.)

Web site: www.gdcr.ac.in Email: principal@digvijaycollege.com ■ & Fax: 07744-296331

क्र. 2587 Rajnandgaon dated : 13/12/2023

प्रति,

प्राचार्य,
महारानी लक्ष्मी बाई
शा. कन्या उच्चतर माध्यमिक शाला
राजनंदगांव (छग)

विषय : अग्रणी दिग्विजय: राष्ट्रीय शिक्षा नीति के अंतर्गत कार्यक्रम आयेजन बाबत.

विषय अंतर्गत लेख है कि भारत सरकार द्वारा राष्ट्रीय शिक्षा नीति 2020 समूचे देश में लागू किया जा रहा है. शा. दिग्विजय महाविद्यालय ने इस नीति को वर्ष 2021-22 से अंगीकृत कर लिया है. यह महाविद्यालय जिले का अग्रणी एवं अध्ययनरत विद्यार्थियों के आधार पर सबसे बड़ा है जिसमे जिले के विभिन्न विद्यालयों से विद्यार्थी उच्च शिक्षा के लिए प्रवेश लेते है.

चूँकि राष्ट्रीय शिक्षा नीति 2020 नयी है, अतः महाविद्यालय के बायोटेक्नोलॉजी विभाग के प्राध्यापक आपके विद्यालय में आकर विद्यार्थियों (11 एवं 12 वीं) के मध्य इसकी जानकारी प्रदान करना चाहते है ताकि उन्हें भविष्य में राष्ट्रीय शिक्षा नीति 2020 के बारे में कोई संदेह न रहे और भविष्य में महाविद्यालय में प्रवेश, विषय चयन और पढाई में दिक्कत न हो.

विभागाध्यक्ष बायोटेक्नोलॉजी

डॉ. के. एल. टांडेकर
प्राचार्य

प्रतिलिपि,

1. जिला शिक्षा अधिकारी, राजनंदगांव


GPS Map Camera
Rajnandgaon, Chhattisgarh, India
32XM+VVJ, Railway, Station Rd, Tanka Para, Rajnandgaon, Chhattisgarh 491441, India
Lat 21.099511°
Long 81.034398°
15/12/23 04:06 PM GMT +05:30
Google


GPS Map Camera
Rajnandgaon, Chhattisgarh, India
32XM+VVJ, Railway, Station Rd, Tanka Para, Rajnandgaon, Chhattisgarh 491441, India
Lat 21.099483°
Long 81.03434°
15/12/23 04:07 PM GMT +05:30
Google


NEP 2020 पाठ्यक्रम
Rajnandgaon, C.G.
GPS Map Camera
Rajnandgaon, Chhattisgarh, India
32XM+VVJ, Railway, Station Rd, Tanka Para, Rajnandgaon, Chhattisgarh 491441, India
Lat 21.099526°
Long 81.034358°
15/12/23 04:19 PM GMT +05:30
Google


NEP 2020 पाठ्यक्रम
Rajnandgaon, C.G.
विस्तार गतिविधि
"अग्रणी दिग्विजयः राष्ट्रीय शिक्षा नीति 2020"
"AGRANI DIGVIJAY-NEP 2020"
GPS Map Camera
Rajnandgaon, Chhattisgarh, India
32XM+VVJ, Railway, Station Rd, Tanka Para, Rajnandgaon, Chhattisgarh 491441, India
Lat 21.09951°
Long 81.034336°
15/12/23 04:19 PM GMT +05:30
Google

विस्तार गतिविधि 15-12-23

अग्रणी डिजिटल - नवीन शिक्षा नीति 2020

कार्यक्रम स्थल - महारानी लक्ष्मीबाई स्कूल राजनांदगाँव

आज दिनांक 15-12-2023 को बायोटेक्नालजी विभाग द्वारा विस्तार गतिविधि के अंतर्गत अग्रणी डिजिटल - नवीन शिक्षा नीति 2020 कार्यक्रम महारानी लक्ष्मीबाई स्कूल राजनांदगाँव में आयोजित किया गया। इस कार्यक्रम में नवीन शिक्षा नीति 2020 पर आधारित पावरपाईट का प्रदर्शन करते हुए विषय का चयन, क्रेडिट सिस्टम, परीक्षा, आनलाईन कोर्स, ABC, आदि को समझाया गया। इस संबंध में विद्यार्थियों के लिये क्लैस का भी प्रदर्शन किया गया। इस कार्यक्रम में विद्यालय के 11वीं एवं 12 के विद्यार्थी शामिल हुए।

प्राचार्य, महारानी लक्ष्मीबाई स्कूल राज.	15/12/23
विषय विशेषज्ञ - डॉ प्रमोद कु. महीश	15/12/23
श्रीमति पूर्णिमा शुक्ला	15/12/2023
डॉ श्रीमति एम वर्गिस	
विद्यार्थी का नाम	हस्ताक्षर

①	भावना पाँदने	भावना पाँदने
②	नुपुर देवांगन	नुपुर देवांगन
③	भावना कानिगा	
④	प्रीति वंसोड़	प्रीति वंसोड़
⑤	वनिता भुआर्य	वनिता भुआर्य
⑥	गरिमा कवलिया	गरिमा कवलिया
⑦	साक्षी गोटे	साक्षी गोटे
⑧	अदिति सिन्हा	अदिति सिन्हा
⑨	खुशी साहू	खुशी साहू
⑩	तैभवी निषाद	तैभवी निषाद
⑪	स्नेहा निषाद	स्नेहा निषाद
⑫	ममता साहू	
⑬	ऐश्वर्या निषाद	ऐश्वर्या निषाद

14	भावना यादव	Byadav
15	नीता साहू	Neeta Sahu
16	अनिता साहू	A
17	डोमिन साहू	D
18	लक्ष्मी साहू	Ls
19	दिव्या नानोटकर	दिव्या नानोटकर
20	गायत्री सिन्हा	गायत्री सिन्हा
21	पिंकी साहू	पिंकी साहू
22	कुसुम यादव	कुसुम यादव
23	काजल यादव	काजल यादव
24	सुमेधा यादव	सुमेधा यादव
25	दीपा मोंगरे	दीपा मोंगरे
26	कोमल साहू	KS
27	हिबस्त कौशर	Hibvat
28	ईशा पाठक	Isha Pathak
29	कुशाली खुमरी	Rushali
30	चारु पटेल	Charupatel
31	प्राची भिमटे	Prachi Bhimte
32	मीरा यादव	Meera Yadav
33		
34	चंचल चौहान	Chanchal
35	पल्लवी मौर्य	Pallavi
36	पूजा	Pooja
37	सानिया परवीन (12th C)	Sh
38	तनु बंसोड़ (12th C)	Tanu
39	सपना देवांगन 12th 'B'	Sapna
40	साधना लंजारे 12th 'B'	Sadhna
41	त्रिवेणी मारकण्डे 12th 'B'	त्रिवेणी मारकण्डे
42		
43		
44		
45		

GOVT. DIGVIJAY AUTONOMOUS POSTGRADUATE COLLEGE, RAJNANDGAON

शासकीय दिग्विजय स्वशासी स्नातकोत्तर महाविद्यालय, राजनांदगाँव (छ.ग.)

Affilated to Hemchand Yadav Vishwavidyalaya , Durg (C.G.)

(Erstwhile- Durg Vishwavidyalaya, Durg)

" विद्या सर्वस्व भूषणम "

स्थापना वर्ष 1957

B++ NAAC

AGRANI DIGVIJAY: NEP 2020
CERTIFICATE OF APPRECIATION

We feel privileged to present this certificate of appreciation to. Maharani Laxmi Bai Girls School Rajnandgaon *for their support and cooperation in the campaigning of National Education Policy 2020 among the students through the initiative of our institution run under "*AGRANI DIGVIJAY: NEP 2020*".*

IQAC Coordinator

Principal

Certificate of Appreciation

This is to certify that the professors and students of department of .....Biotechnology..... Govt. Digvijay Autonomous PG College Rajnandgaon provided guidance to the students of class XI and XII on "New Education Policy 2020", "Career Guidance" and the subject ..... under "AGRANI DIGVIJAY: NEP 2020".

15/12/2023

Principal

Principal,
M. L. B. Govt. M. H. S. School
RAJNANDGAON (C.G.)

न्यूज डायरी

राष्ट्रीय शिक्षा नीति का जोर है कौशल विकास व रोजगारपरक कोर्स पर, दिग्विजय की विस्तार गतिविधि हुई आयोजित

राजनांदगांव. भारत सरकार द्वारा राष्ट्रीय शिक्षा नीति 2020 समूचे देश में लागू किया जा रहा है. शा. दिग्विजय महाविद्यालय ने इस नीति को वर्ष 2021-22 से अंगीकृत कर लिया है. यह महाविद्यालय जिले का अग्रणी एवं अध्ययनरत विद्यार्थियों के आधार पर सबसे बड़ा है जिसमे जिले के विभिन्न विद्यालयों से विद्यार्थी उच्च शिक्षा के लिए प्रवेश लेते है. चूँकि राष्ट्रीय शिक्षा नीति 2020 नयी है, अतः महाविद्यालय के प्राध्यापक विभिन्न स्कूलों में जाकर इसकी पूरी जानकारी प्रदान कर रहे है. ताकि उन्हें राष्ट्रीय शिक्षा नीति 2020 के बारे में कोई संदेह न रहे और भविष्य में महाविद्यालय में प्रवेश, विषय चयन और पढाई में दिक्कत न हो. इसी कड़ी में बायोटेक्नोलॉजी विभाग के प्राध्यापक महारानी लक्ष्मी बाई कन्या विद्यालय के विद्यार्थियों (11 एवं 12 वीं) के मध्य राष्ट्रीय शिक्षा नीति 2020 की जानकारी प्रदान किये. कार्यक्रम के अंतर्गत बायोटेक्नोलॉजी विभाग के विभागाध्यक्ष डा प्रमोद कुमार महीश ने विद्यार्थियों को प्रवेश के समय ऑनलाइन आवेदन भरने, विषयों के चयन, क्रेडिट संरचना, अकादमिक बैंक ऑफ़ क्रेडिट, ऑनलाइन कोर्स – मूक्स, स्वयं, दिग्विजय महाविद्यालय के सब्जेक्ट पूल एवं उपलब्ध सुविधाओं को पॉवर पॉइंट के माध्यम से विस्तार से समझाया. स्कूली विद्यार्थियों को यह नीति भली भांति समझ आये इसके लिए फ्लेक्स का भी प्रदर्शन किया गया. राष्ट्रीय शिक्षा नीति 2020 नयी होने के कारण विद्यार्थियों के साथ-साथ स्कूल के शिक्षकों के मन में भी कई प्रकार की संदेह थी जिसे डा महीश ने दूर किया. कार्यक्रम में महारानी लक्ष्मी बाई कन्या विद्यालय के प्राचार्य एवं शिक्षक डा एम वर्गिस और पूर्णिमा शुक्ला के साथ भारी संख्या में विद्यार्थी उपस्थित थे. कार्यक्रम के आयोजन में महाविद्यालय के प्राचार्य डॉ. टांडेकर का मार्गदर्शन रहा. कार्यक्रम के अंत में महारानी लक्ष्मी बाई कन्या विद्यालय के सहयोग हेतु प्रशस्ति पत्र एवं स्मृति चिन्ह भेंट किया गया.

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शाला का नाम - महारानी लक्ष्मी बा. मा० कन्या उ. मा. शाला राजनांदगाँव

विद्यार्थी का नाम - पूजा कुमारी पिता का नाम - श्री सोमनाथ

कक्षा - 12वी विषय- जीवविज्ञान मोबाइल नंबर (WHATSAPP) .....

1. आपकी रूचि किस विषय में सर्वाधिक हैं ? जीवविज्ञान
2. भविष्य में आप क्या बनना चाहते हैं ? डॉक्टर
3. नवीन राष्ट्रीय शिक्षा नीति 2020 पर आधारित दिया गया व्याख्यान आपके लिए कितना उपयोगी रहा ? (न्यूनतम 1 अंक, अधिकतम 10 अंक)

   (1) (2) (3) (4) (5) (6) (7) (8) (9) (10)
4. आपको उपलब्ध करायी गई विषय सम्बंधित जानकारी आपके लिए कितनी उपयोगी रही ? (न्यूनतम 1 अंक, अधिकतम 10 अंक)

   (1) (2) (3) (4) (5) (6) (7) (8) (9) (10)
5. आपको उपलब्ध करायी गई करियर गाईडेंस से सम्बंधित जानकारी आपके लिए कितनी उपयोगी रही ? (न्यूनतम 1 अंक, अधिकतम 10 अंक)

   (1) (2) (3) (4) (5) (6) (7) (8) (9) (10)
6. यदि आप अन्य किसी विषय पर जानकारी या मार्गदर्शन चाहते हैं तो जानकारी दें

   .....
7. उच्च शिक्षा के लिए क्या आप दिग्विजय महाविद्यालय में प्रवेश लेना चाहते हैं ?

   (हाँ) (नहीं)
8. हाँ या नहीं का कारण स्पष्ट करें -

   पढ़ाई अच्छा है।
9. अन्य कोई सुझाव -

   .....

दिनांक - 15/12/23

Pooja

विद्यार्थी के हस्ताक्षर

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शाला का नाम - [illegible]

विद्यार्थी का नाम - [illegible] पिता का नाम - [illegible]

कक्षा - 12 वी विषय- [illegible] मोबाइल नंबर (WHATSAPP) .....

1. आपकी रूचि किस विषय में सर्वाधिक हैं ? [illegible]
2. भविष्य में आप क्या बनना चाहते हैं ? [illegible]
3. नवीन राष्ट्रीय शिक्षा नीति 2020 पर आधारित दिया गया व्याख्यान आपके लिए कितना उपयोगी रहा ? (न्यूनतम 1 अंक, अधिकतम 10 अंक)

   (1) (2) (3) (4) (5) (6) (7) (8) (9) ~~(10)~~
4. आपको उपलब्ध करायी गई विषय सम्बंधित जानकारी आपके लिए कितनी उपयोगी रही ? (न्यूनतम 1 अंक, अधिकतम 10 अंक)

   (1) (2) (3) (4) (5) (6) (7) (8) (9) ~~(10)~~
5. आपको उपलब्ध करायी गई करियर गाईडेंस से सम्बंधित जानकारी आपके लिए कितनी उपयोगी रही ? (न्यूनतम 1 अंक, अधिकतम 10 अंक)

   (1) (2) (3) (4) (5) (6) (7) (8) (9) ~~(10)~~
6. यदि आप अन्य किसी विषय पर जानकारी या मार्गदर्शन चाहते हैं तो जानकारी दें

   .....
7. उच्च शिक्षा के लिए क्या आप दिग्विजय महाविद्यालय में प्रवेश लेना चाहते हैं ?

   (हाँ) (नहीं)
8. हाँ या नहीं का कारण स्पष्ट करें -

   [illegible]
9. अन्य कोई सुझाव -

   .....

दिनांक - 15/12/23

विद्यार्थी के हस्ताक्षर

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शाला का नाम - म.ल.वा.बालस.आ.फ.उच्च.माध्य.शाला

विद्यार्थी का नाम - प्रिती बंसोड़ पिता का नाम - पु.श्री.शि.बंसोड़

कक्षा - बारहवीं विषय- बायो मोबाइल नंबर (WHATSAPP) .....

1. आपकी रूचि किस विषय में सर्वाधिक हैं ? Chemistry
2. भविष्य में आप क्या बनना चाहते हैं ? MBBS Doctor
3. नवीन राष्ट्रीय शिक्षा नीति 2020 पर आधारित दिया गया व्याख्यान आपके लिए कितना उपयोगी रहा ? (न्यूनतम 1 अंक, अधिकतम 10 अंक)

   (1) (2) (3) (4) (5) (6) (7) (8) (9) (10)
4. आपको उपलब्ध करायी गई विषय सम्बंधित जानकारी आपके लिए कितनी उपयोगी रही ? (न्यूनतम 1 अंक, अधिकतम 10 अंक)

   (1) (2) (3) (4) (5) (6) (7) (8) (9) (10)
5. आपको उपलब्ध करायी गई करियर गाईडेंस से सम्बंधित जानकारी आपके लिए कितनी उपयोगी रही ? (न्यूनतम 1 अंक, अधिकतम 10 अंक)

   (1) (2) (3) (4) (5) (6) (7) (8) (9) (10)
6. यदि आप अन्य किसी विषय पर जानकारी या मार्गदर्शन चाहते हैं तो जानकारी दें

   केमिस्ट्री
7. उच्च शिक्षा के लिए क्या आप दिग्विजय महाविद्यालय में प्रवेश लेना चाहते हैं ?

   (हाँ) (नहीं)
8. हाँ या नहीं का कारण स्पष्ट करें -

   .....
9. अन्य कोई सुझाव -

   .....

दिनांक - 15/12/23

प्रीति बंसोड़

विद्यार्थी के हस्ताक्षर

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शाला का नाम - म० ल० वा० आ० क० उच्च मा० वि० राजनांदगाँव (छ०ग०)

विद्यार्थी का नाम - Aditi Sinha पिता का नाम - Mr. Laxmilal Sinha

कक्षा - 12 वीं विषय- (Biology) मोबाइल नंबर (WHATSAPP) 6263253121

1. आपकी रूचि किस विषय में सर्वाधिक हैं ? Biology
2. भविष्य में आप क्या बनना चाहते हैं ? MBBS Doctor
3. नवीन राष्ट्रीय शिक्षा नीति 2020 पर आधारित दिया गया व्याख्यान आपके लिए कितना उपयोगी रहा ? (न्यूनतम 1 अंक, अधिकतम 10 अंक)

   (1) (2) (3) (4) (5) (6) (7) (8) (9)✓ (10)
4. आपको उपलब्ध करायी गई विषय सम्बंधित जानकारी आपके लिए कितनी उपयोगी रही ? (न्यूनतम 1 अंक, अधिकतम 10 अंक)

   (1) (2) (3) (4) (5) (6) (7) (8) (9) (10)✓
5. आपको उपलब्ध करायी गई करियर गाईडेंस से सम्बंधित जानकारी आपके लिए कितनी उपयोगी रही ? (न्यूनतम 1 अंक, अधिकतम 10 अंक)

   (1) (2) (3) (4) (5) (6) (7) (8) (9) (10)✓
6. यदि आप अन्य किसी विषय पर जानकारी या मार्गदर्शन चाहते हैं तो जानकारी दें

   No
7. उच्च शिक्षा के लिए क्या आप दिग्विजय महाविद्यालय में प्रवेश लेना चाहते हैं ?

   (हाँ) (नहीं)✓
8. हाँ या नहीं का कारण स्पष्ट करें -

   क्योंकि मैं MBBS Doctor बनना चाहती हूँ।
9. अन्य कोई सुझाव -

   .....

दिनांक - 15/12/2023

Aditi Sinha

विद्यार्थी के हस्ताक्षर

अधिक जानकारी के लिए महाविद्यालय की वेबसाइट www.gdcr.ac.in का अवलोकन करें।

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विद्यार्थी का नाम - प्राची मिमरे पिता का नाम - श्री विजय मिमरे

कक्षा - 12th विषय- कामर्स मोबाइल नंबर (WHATSAPP) .....

1. आपकी रूचि किस विषय में सर्वाधिक हैं ? जीवविज्ञान
2. भविष्य में आप क्या बनना चाहते हैं ? CA
3. नवीन राष्ट्रीय शिक्षा नीति 2020 पर आधारित दिया गया व्याख्यान आपके लिए कितना उपयोगी रहा ? (न्यूनतम 1 अंक, अधिकतम 10 अंक)

   (1) (2) (3) (4) (5) ~~(6)~~ (7) (8) (9) (10)
4. आपको उपलब्ध करायी गई विषय सम्बंधित जानकारी आपके लिए कितनी उपयोगी रही ? (न्यूनतम 1 अंक, अधिकतम 10 अंक)

   (1) (2) (3) (4) (5) (6) (7) (8) (9) ~~(10)~~
5. आपको उपलब्ध करायी गई करियर गाईडेंस से सम्बंधित जानकारी आपके लिए कितनी उपयोगी रही ? (न्यूनतम 1 अंक, अधिकतम 10 अंक)

   (1) (2) (3) (4) (5) (6) (7) (8) (9) ~~(10)~~
6. यदि आप अन्य किसी विषय पर जानकारी या मार्गदर्शन चाहते हैं तो जानकारी दें

   नहीं
7. उच्च शिक्षा के लिए क्या आप दिग्विजय महाविद्यालय में प्रवेश लेना चाहते हैं ?

   ~~(हाँ)~~ (नहीं)
8. हाँ या नहीं का कारण स्पष्ट करें -

   ना
9. अन्य कोई सुझाव -

   नहीं

दिनांक - 15/12/2023

Prachi Bhimte

विद्यार्थी के हस्ताक्षर

अधिक जानकारी के लिए महाविद्यालय की वेबसाइट www.gdcr.ac.in का अवलोकन करें ।

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शासकीय दिग्विजय स्वशासी स्नातकोत्तर महाविद्यालय, राजनांदगाँव (छ.ग.)

Affiliated to Hemchand Yadav Vishwavidyalaya, Durg (C.G.)

(Erstwhile- Durg Vishwavidyalaya, Durg (C.G.)

"विद्या सर्वस्व भूषणम"

B++ NAAC

Web site- www.gdcr.ac.in Email: principal@digvijaycollege.com ☎& Fax 07744-225036

FEED BACK FORM

"AGRANI DIGVIJAY"

शाला का नाम - महारानी लक्ष्मी बाई कन्या शाला

विद्यार्थी का नाम - मीरा यादव पिता का नाम - उमेश यादव

कक्षा - 12 'बी' विषय- विज्ञान मोबाइल नंबर (WHATSAPP) 9602787090

1. आपकी रूचि किस विषय में सर्वाधिक हैं ? जीव विज्ञान
2. भविष्य में आप क्या बनना चाहते हैं ? टीचर
3. नवीन राष्ट्रीय शिक्षा नीति 2020 पर आधारित दिया गया व्याख्यान आपके लिए कितना उपयोगी रहा ? (न्यूनतम 1 अंक, अधिकतम 10 अंक)

   (1) (2) (3) (4) (5) (6) (7) (8) (9) (10)
4. आपको उपलब्ध करायी गई विषय सम्बंधित जानकारी आपके लिए कितनी उपयोगी रही ? (न्यूनतम 1 अंक, अधिकतम 10 अंक)

   (1) (2) (3) (4) (5) (6) (7) (8) (9) (10)
5. आपको उपलब्ध करायी गई करियर गाईडेंस से सम्बंधित जानकारी आपके लिए कितनी उपयोगी रही ? (न्यूनतम 1 अंक, अधिकतम 10 अंक)

   (1) (2) (3) (4) (5) (6) (7) (8) (9) (10)
6. यदि आप अन्य किसी विषय पर जानकारी या मार्गदर्शन चाहते हैं तो जानकारी दें

   .....
7. उच्च शिक्षा के लिए क्या आप दिग्विजय महाविद्यालय में प्रवेश लेना चाहते हैं ?

   (हाँ) (नहीं)
8. हाँ या नहीं का कारण स्पष्ट करें -

   पढाई अच्छी होती है।
9. अन्य कोई सुझाव -

   .....

दिनांक - 15/12/2023

Meera Yadav

विद्यार्थी के हस्ताक्षर

GOVT. DIGVIJAY AUTONOMOUS POSTGRADUATE COLLEGE, RAJNANDGAON

शासकीय दिग्विजय स्वशासी स्नातकोत्तर महाविद्यालय, राजनांदगाँव (छ.ग.)

Affiliated to Hemchand Yadav Vishwavidyalaya, Durg (C.G.)

(Erstwhile- Durg Vishwavidyalaya, Durg (C.G.)

"विद्या सर्वस्व भूषणम"

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शाला का नाम - महारानी लक्ष्मी बाई शा. क. उ. मा. शाला

विद्यार्थी का नाम - ऐश्वर्या निषाद पिता का नाम - कृष्णा निषाद

कक्षा - ग्यारहवीं विषय- कामर्स मोबाइल नंबर (WHATSAPP) .....

1. आपकी रूचि किस विषय में सर्वाधिक हैं ? ~~पुलिस~~ लेखाशास्त्र
2. भविष्य में आप क्या बनना चाहते हैं ? IPS पुलिस
3. नवीन राष्ट्रीय शिक्षा नीति 2020 पर आधारित दिया गया व्याख्यान आपके लिए कितना उपयोगी रहा ? (न्यूनतम 1 अंक, अधिकतम 10 अंक)

   (1) (2) (3) (4) (5) (6) (7) (8) (9) ~~(10)~~
4. आपको उपलब्ध करायी गई विषय सम्बंधित जानकारी आपके लिए कितनी उपयोगी रही ? (न्यूनतम 1 अंक, अधिकतम 10 अंक)

   (1) (2) (3) (4) (5) (6) (7) (8) (9) ~~(10)~~
5. आपको उपलब्ध करायी गई करियर गाईडेंस से सम्बंधित जानकारी आपके लिए कितनी उपयोगी रही ? (न्यूनतम 1 अंक, अधिकतम 10 अंक)

   (1) (2) (3) (4) (5) (6) (7) (8) (9) ~~(10)~~
6. यदि आप अन्य किसी विषय पर जानकारी या मार्गदर्शन चाहते हैं तो जानकारी दें

   व्यवसाय
7. उच्च शिक्षा के लिए क्या आप दिग्विजय महाविद्यालय में प्रवेश लेना चाहते हैं ?

   (हाँ) (नहीं)
8. हाँ या नहीं का कारण स्पष्ट करें -

   यहाँ अच्छी पढाई होता है
9. अन्य कोई सुझाव -

   .....

दिनांक - 15-12-23

ऐश्वर्या निषाद

विद्यार्थी के हस्ताक्षर

Attachment 10: Bio-entrepreneurship Program

Attachment 10 : Bio-entrepreneurship training on Mushroom Production

Office of The Principal Govt Digvijay Autonomous P.G. College
Rajnandgaon (C.G.)
Web site: www.gdcr.ac.in Email: principal@digvijaycollege.com ☎ & Fax: 07744-296331

क्र. 2043 Rajnandgaon dated 21 / 9 / 2023

प्रति,

वरिष्ठ वैज्ञानिक एवं प्रमुख
कृषि विज्ञान केंद्र, सुरगी
राजनंदगांव (छ.ग.)

विषय - विद्यार्थियों को मशरुम उत्पादन प्रशिक्षण प्रदान करने बाबत.

विभागाध्यक्ष बायोटेक्नोलॉजी, शा. दिग्विजय महाविद्यालय से प्राप्त आवेदन अनुसार एम एस सी तृतीय सेमेस्टर बायोटेक्नोलॉजी के पाठ्यक्रम में जैव-उधमिता (Bio-entrepreneurship) शामिल है. जिसमे विद्यार्थी बायोलॉजी विषय से सम्बंधित उधमिता एवं छोटे उद्योगों के बारे में जानेगे. अतः आपसे अनुरोध है की विद्यार्थियों के लिए एक दिवसीय मशरुम उत्पादन प्रशिक्षण प्रदान करने का कष्ट करें जिससे विद्यार्थियों में कौशल वृधि हो और उधमी बनने के लिए प्रेरित हों.

डॉ. के. एल. टांडेकर
प्राचार्य

प्रतिलिप,
विभागाध्यक्ष, बायोटेक्नोलॉजी विभाग

डॉ. के. एल. टांडेकर
प्राचार्य

जैव-उद्यमिता प्रशिक्षण कार्यक्रम

आज दिनांक 22-09-23 को एमएससी तृतीय सेमेस्टर के विद्यार्थियों हेतु मशरूम उत्पादन संबंधित जैव-उद्यमिता प्रशिक्षण कार्यक्रम कृषि विज्ञान केन्द्र सुरगी राजनांदगाँव में आयोजित किया गया। इस कार्यक्रम मशरूम के प्रकारों, उत्पादन की विधियाँ, मशरूम खाने के फायदों सहित उत्पादन लाभ के बारे में कृषि विज्ञान केन्द्र के वैज्ञानिक जितेन्द्र रामटेके ने विस्तार से बताया। प्रशिक्षण कार्यक्रम के दौरान विद्यार्थियों ने स्वयं स्पॉन तैयार करने, मशरूम बैग तैयार करने जैसे उत्पादन के महत्त्वपूर्ण चरणों को अपने हाथों से किया। इसके साथ मशरूम उत्पादन में काम आने वाले विभिन्न उपकरणों को सीखा।

उक्त कार्यक्रम में निम्न उपस्थित थे -

श्री जितेन्द्र रामटेके (प्रशिक्षण प्रदानकर्ता) [signature]

डॉ. प्रमोद कुमार महीश (विभागाध्यक्ष बायोटेक) [signature]

प्रशिक्षण प्राप्तकर्ता विद्यार्थी

नाम	हस्ताक्षर
NJK Abdul Zaheen Khan	Zkhan
Ekta Sahu	Ekta
Priya Pagdikar	[signature]
Harsh Kumar verma	Harsh
Abhishek manjhi	Abhishek
Pramod Kumar	[signature]

दैनिक भास्कर
राजनांदगांव 24-09-2023

छात्राओं ने ऑयस्टर मशरूम उत्पादन का लिया प्रशिक्षण

राजनांदगांव. प्रशिक्षण प्राप्त करने पहुंचे महाविद्यालय के छात्र।

राजनांदगांव| शासकीय दिग्विजय महाविद्यालय के बायोटेक्नोलॉजी विभाग के एमएससी तृतीय सेमेस्टर की छात्राओं ने मशरूम उत्पादन के बारे में जाना। बायोटेक्नोलॉजी विभाग के सहायक प्राध्यापक डॉ. प्रमोद कुमार महिश के मार्गदर्शन में कृषि विज्ञान केंद्र, राजनांदगांव का भ्रमण व ऑयस्टर मशरूम उत्पादन तकनीक का प्रायोगिक प्रशिक्षण प्राप्त किया। इसमें कृषि विज्ञान केंद्र के कार्यक्रम सहायक जितेंद्र मेश्राम ने ऑयस्टर मशरूम के बीज उत्पादन स्पॉन बनाने व बैग तैयार करने की क्रमवार प्रायोगकि तकनीकी का प्रशिक्षण प्रदान किया। कृषि विज्ञान केन्द्र के विभिन्न गतिविधियां बीज प्रसंस्करण इकाई, मौसम वेद्यशाला, मछली, कुक्कुट एवं पशुपालन इकाई का भ्रमण किया।


मशरुम बीज (स्पॉन) एवं मशरुम उत्पादन इकाई
कृषि विज्ञान केन्द्र-सुरगी, राजनांदगांव (छ.ग.)


Latitude: 21.027868
Longitude: 81.102499
Elevation: 296.93±226 m
Accuracy: 23.4 m
Time: 22-09-2023 13:46
Note: Agriculture Centre, Surgi , Rajnandgaon
Powered by NoteCam

Attachment 11: Training Programs

पाइप उत्तक संवर्धन कार्यशाला

आज दिनाँक 27-01-24 को बायोटेक्नालजी विभाग में पाइप उत्तक संवर्धन कार्यशाला आयोजित की गयी। इस कार्यशाला में विभाग के आदरणीय डॉ. प्रमोद कुमार मटीहा ने पाइप उत्तक संवर्धन के सिद्धांत, प्रक्रियां तथा उपयोग को विस्तार से समझाया। जिसके बाद विभाग की शिक्षक रेवती पटेल एवं वैशाखी ने विद्यार्थियों को प्रायोगिक कार्य पाइप उत्तक संवर्धन प्रयोगशाला में करके बताया। इस कार्यशाला में नमूने का संग्रह, कीटाणुकरण, प्रक्रिया, मीडिया का निर्माण, ट्रांस्फर, ग्रीन हाउस तथा जमीनी स्तर एक प्रर्यवरण को समझाया गया। कार्यशाला में विज्ञान संकाय के विद्यार्थियों के साथ शिक्षक एवं प्रयोगशाला तकनीशियन एवं परिचारक उपस्थित थे।

उपस्थितों की सूची निम्नलिखित है -

नाम	पद / कक्षा	विभाग	हस्ताक्षर
डॉ. प्रमोद मटीहा	सहा. प्राध्यापक	बायोटेक्नालजी	
Pragati Nonhare	Self fin.	Microbiology	
Shweta verma	Self fin.	Microbiology	
Suman Netam	Student	microbiology	
Shivani Kola	Student	Microbiology	
Dinesam Netam	student	microbiology	
Meetesh Kumar	Student	microbiology	
Tinkal pisda	student	Botany IVth	
Preeti Ambade	student	Botany IVth	
Mitali pal	Student	Botany II sem	
Chandani verma	student	Botany II sem.	
Sulekha Sahu	Student	Botany II sem.	
Pooja Sahu	Student	Botany II sem	
Nandini bamne	Student	Botany II Sem	

Lokeshwor Kumar	Student	Botany - II sem	
Reena Sahu	Student	Botany - II sem	
Janvi	Student	Botany II sem	Janvi
Daneshwari	Student	Botany II sem.	
Niharika Oti	Student	Botany II sem.	
Khileshwari	Student	Botany II sem	
Kiran Nishad	student	Botany II sem	Kiran
Yogita Mupendi	〃	〃	
Atul Borkar	〃	〃	
Deepshikha	〃	〃	
Prabibha Yadav	〃	〃	
Yukti Preman	〃	〃	
Leena Dewangan	〃	〃	
Neha Verma	〃	〃	
Niharika	〃	〃	
Khushant	〃	〃	
Mrinal Banjare	Lab. Tech.	Biotech.	
USHA SAHU	Student	Botany IV Sem	
Khushal Chand Sahu	Student	〃	
Jamuna Chandrawanshi	〃	〃	
Seema Chandrawanshi	〃	〃	
Marisha	〃	〃	
Digeshwari	〃	〃	
Nem Kumar	〃	〃	
Ekta Sahu	Student	Biotech. IV sem	
Priya Pagdikar	Student	Biotech. IV sem	
khushbu	〃	〃	
Pramod Kumar	〃	Biotech. IV Sem	
Divya Dewangan	Student	Biotech IV sem	

जल परीक्षण उपकरण कार्यशाला

दिनाँक 15-02-24

आज दिनाँक 15-02-2024 को जल परीक्षण से संबंधित उपयोग में आने वाले उपकरणों की एक दिवसीय कार्यशाला विभाग के प्रयोगशाला में आयोजित की गयी। इस कार्यशाला में विभाग के स्नातकोत्तर msc sem II एवं IV के विद्यार्थियों के साथ शिक्षकों ने अपनी सहभागिता दी। इस कार्यशाला में विषय विशेषज्ञ के रूप में "हाना उपकरण मुंबई" के इंजीनीयर भगवानो कुमार ने पी एच मीटर, पोर्टेबल वाटर टेस्ट मशीन, COD मीटर, पोर्टेबल फोटोमीटर, मल्टीमीटर आदि के बारे में बताया विद्यार्थियों ने एडवांस पी एच मीटर से रीडिंग लेना एवं स्टैण्डर्ड पीएच बोलेंस करना सीखा।

प्रशिक्षण प्रदानकर्ता — भगवानो कुमार

विभागाध्यक्ष — डॉ. प्रमोद कुमार महोरा

शिक्षक — रेवती पटेल

विद्यार्थी नाम	कक्षा	हस्ताक्षर
कु. केशर देवांगन	MSC II sem Biotech.	Keshar
Prachi Jain	-11-	Prachi Jain
Tumeshwari	— 11 —	Rely
Priya Kannoje	M. Sc - IV sem	Priya
Chitra	MSC IV Sem	Chitra
Pramod Kumar	— 11 —	Pramod
Parul Dumbhare	MSC IV Sem	Parul
MJK Abdul Zaheen Khan	Msc IV Sem	Khan
Arifanjali Sahu	Msc IV sem	Sahu
Harish Kumar verma	MSC IV sem	Harish

जेल फिल्ट्रेशन क्रोमेटोग्राफी प्रशिक्षण

दिनांक 20/03/2024

आज दिनांक 20/3/2024 को विभाग के प्रयोगशाला में उन्नत तकनीक जेल फिल्ट्रेशन क्रोमेटोग्राफी प्रशिक्षण आयोजित किया गया। इस प्रशिक्षण में क्रोमेटोग्राफी के अलोड़ित सिद्धांत, प्रकारों एवं उपयोग का वर्णन किया गया फिर इस किट आधारित प्रयोग में उपलब्ध सामग्रियों एवं उसके उपयोग, रखरखाव के बारे में बताया गया। क्रोमेटोग्राफी करने के लिये कॉलम खड़ा रखने के लिये स्टैंड को व्यवस्था की गयी फिर विधि अनुसार क्रोमेटोग्राफी किया गया। यह प्रशिक्षण विभाग के अध्यक्ष डॉ. प्रमोद कुमार मेश्राम ने स्नातकोत्तर MSC सेमेस्टर II एवं IV के विद्यार्थियों को दिया।

प्रशिक्षण प्रदान कर्ता एवं विभागाध्यक्ष — डॉ. प्रमोद मेश्राम — 20/3/24

शिक्षक — सीमा वर्मा

प्रशिक्षण प्राप्तकर्ता विद्यार्थी

नाम	कक्षा	हस्ताक्षर
कु० केशर देवांगन	MSC II Sem Biotech..	Keshar
Prachi Jain	—II—	Prachi Jain
Tumeshwari	—II—	Tumeshwari
Priya Kanoje	M.Sc IV Sem	Priya
chitra	—II—	chitra
Pramod Kumar	—II—	Pramod
Parul Dumbhare	—II—	Parul
Abhishek Manjhi	—II—	Abhishek
Abdul Zaheen Khan		Zaheen

Harish kumar verma	MSc IV sem	
Gitanjali Sahu.	MSc IV sem	
Leena Sinha	MSc IV sem	
Khushbu Deshmukh	MSc IV sem.	
pareeti	MSc IV sem	
Namrata	MSc IV sem.	
Ekta Sahu	M.Sc IV Sem	
KHUSHBU	M.Sc. IV Sem	
Payal chaturvedi	MSc. II Sem	
Domakshi Bajpai	MSc II sem	
Suman Chaturvedi	MSc II sem	
Subhangi	M.Sc II nd sem	
Keshali Sahu	MSc II nd sem	
Hima Sinha	MSc II nd Sem	
Dipesh Sahu	MSc II nd Sem	
Khushi Patel	MSc II nd Sem	
Nidhi Sonkar	MSc -11-	

Attachment 12: Awards

उत्कृष्ट विद्यार्थी सम्मान कार्यक्रम

आज दिनाँक 20/04/24 को माइक्रोबायोलॉजिस्ट सोसाइटी इंडिया (ऑफिस - महाराष्ट्र) द्वारा चयनित उत्कृष्ट विद्यार्थी स्नातकोत्तर स्तर के लिये - एम जे के अब्दुल जहीन खान एवं स्नातक स्तर के लिये कु. चेष्टा रानी याडव को प्राचार्य डॉ. के. एल. यंडेकर के द्वारा सर्टिफिकेट प्रदान कर सम्मान प्रदान किया गया। यह सर्टिफिकेट विद्यार्थियों को उनके सत्र 2022-23 में उत्कृष्ट प्रदर्शन के लिये चयनित किया गया था। इस कार्यक्रम निम्नलिखित उपस्थित थे -

(1) सम्मान प्राप्तकर्ता - एम जे के अब्दुल जहीन खान

(2) सम्मान प्राप्तकर्ता - कु. चेष्टा रानी याडव

(3) सम्मान प्रदान कर्ता - डॉ. के. एल. यंडेकर (प्राचार्य)

(4) शिक्षक - डॉ. प्रमोद कु. महीश (सहायक प्राध्यापक माइक्रो)

(5) शिक्षक - डॉ. सोनल मिश्रा (सहायक प्राध्यापक वनस्पतिशास्त्र)

(6) शिक्षक - डॉ. दिलीप देव (सह. प्राध्यापक, वनस्पति शास्त्र)

(7) शिक्षक - श्वेता वर्मा (सह. प्राध्यापक, माइक्रोबायोलॉजी)

(8) सम्मानप्राप्तकर्ता - विजय कुमार वर्मा

MICROBIOLOGISTS SOCIETY INDIA

(Reg. No. MAH/4814/SAT)

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Certificate of Recognition

We Appreciate

NJK Abdul Zaheer Khan

on being selected as

Best Student

of

Microbiology / Biotechnology Department

M.Sc. Biotechnology, Govt. Digvijay College, Rajnandgaon

during the academic session 2022-23

All the best for his / her future endeavors

Dr. A. M. Deshmukh

Dr. Vrushali Wagh
Project Co-ordinator

Dr. Pragya Kulkarni
State President
Microbiologists Society, India