INDIA INTERNATIONAL SCIENCE FESTIVAL 2019

IISF 2019 Kolkata

Young Scientists' Conference

Abstract Book

ORGANISERS

Ministry of Science & Technology
Ministry of Earth Sciences
Ministry of Health Family Welfare
Government of INDIA

IISF KOLKATA, 2019

Preface

The Young Scientists Conference (YSC) of the India International Science festival (IISF-2019) was held in the Biswa Bangla Convention Center (BBCC) in Kolkata during November 5-7, 2019. The grand event was inaugurated in the august presence of Prof. Ashutosh Sharma, Secretary, DST, Dr. Sekhar C. Mande, Director General, CSIR, Prof. Vijay Bhatkar, Chancellor, Nalanda University and President, VIBHA and Shri. U. Rajababu, Project Director, Mission Shakti, DRDO at the Main Hall of Biswa Bangla Convention Centre.

The conference brought near about 1500 researchers including experts from different subjects. Around 1400 young scientists/researchers/PhD scholars/post-doctoral fellows/entrepreneurs from various universities, post graduate colleges, engineering colleges, R&D organizations, national laboratories, IITs, NITs, IISERs, Industries and NGOs under the age of 45 participated YSC to discuss their research findings and exchange innovative ideas on the identified research themes such as - **Make in India, Bio Diversity, Frontier Areas of Sciences, Swachh Bharat, Swasth Bharat, Digital India, Water Crisis and Conservation**.

The conference activities were spread over three days with plenary, oral and poster sessions. There were interactive panel discussions on entrepreneurship, various aspects related to career progression, overseas education and opportunities for the young scientists. The dignitary representatives of embassies highlighted various educational programs of various countries. Near about 1000 delegates presented their scientific research through poster presentations.

This book of abstracts showcases the research findings of the brilliant minds of the country. Even a cursory look at the themes of the book of abstracts tells the huge potential and progress being made by our researchers in India.

YSC organizing committee thanks all the participants for making this event a grand success.

"Do not be led by others, awaken your own mind, amass your own experience, and decide for yourself your own path." ~ Atharva Veda

Coordinators, YSC

Jajati K. Nayak
Ayan Datta

Mr SAURABH MITRA

Image	Delegate ID	Theme	Details
	YSC 10877	Swastha Bharat	**Category :** Others **Organisation :** Dr. C. V. RAMAN UNIVERSITY **Designation :** ASSISTANT PROFESSOR

NON-INVASIVE MEDICAL TOOL TO ESTIMATE ANEMIA BASED ON THE CONCEPT OF DIGITAL DATA THROUGH REAL TIME ANALYSIS

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ABSTRACT Medical practice for deciding hemoglobin (Hb) fixation, which is significant for iron deficient patients needing blood transfusion, requires a blood test. In this paper, we propose a non-intrusive way to deal with Hb estimation dependent on the picture investigation of a particular conjunctival area. We will likely build up a gadget that isn't costly and easy to use for evaluating the iron deficient condition; this gadget could be utilized by the doctor to choose whether to take a blood test or even by a patient at home to choose whether to educate a doctor; along these lines, we can abstain from having the patient go every now and again to the research center to take a blood test. This gadget additionally enables us to quickly screen for Anemia in countless people. Here, we detail the model of our gadget and the system for removing key data from the shading estimations of the gained picture. Tests directed on iron deficient and sound people demonstrate a solid connection between the genuine Hb worth gotten through blood examining and the worth evaluated by our gadget. A k-closest neighbor arrangement calculation for evaluating the (non)anemic condition yielded great outcomes and enables specialists to keep away from a critical number of blood tests.

File TERMS Anemia, hemoglobin, conjunctiva, non-intrusive, picture investigation.

References:? Dimauro, Giovanni,Caivano Danilo,Girardi Francesco 2018. "A New Method and a Non-Invasive Device to Estimate Anemia Based on Digital Images of the Conjunctiva." IEEE Access 6 46968-46975.

Mr Abbas Alam Choudhury

Image	Delegate ID	Theme	Details
	YSC 10626	Swastha Bharat	**Category :** Biology **Organisation :** Thiruvalluvar University, Vellore **Designation :** Ph.D Research Scholar

Abbas Alam Choudhury1, Ramya Gunasekaran1, J. Hemapriya2, S. Vijayanand3
1Ph.D Research Scholar, Dept. of Biotechnology, Thiruvalluvar University, Vellore
2Assistant Professor, DKM College for Women, Vellore
3Assistant Professor, Bioresource Technology Lab, Thiruvalluvar University, Vellore

Abstract
Background: Medicinal plants are the Nature's gift to human beings. Our source plant Capsicum annuum belonging to the family Solanaceae and genus Capsicum, used as ethnomedicine for treatment of various human ailments in North-East India. Hyperlipidemia disease has afflicted humankind since antiquity. Thus, applying the concept of ethnobotany, our aim of the in vivo study was to scientifically evaluate the credible bioefficacy of Capsicum annuum fruits extract (CAFE) against hyperlipidemia on induced hyperlipidemic Sprague-Dawley rats.
Methods: The animal experimental protocol was approved by Institutional Animal Ethics Committee (IAEC), Govt. of India. As per the OECD-423 guidelines, female nulliparous and non-pregnant rats were used to evaluate the acute toxicity study. Blood samples were collected for the estimation of lipid profile and other haematological analysis. Ex-vivo antioxidants effect and in vivo histopathological analysis of liver and adipose tissue were also effectuated.
Results: No mortality or any major signs of morbidity was recorded for acute toxicity of CAFE up to 2000 mg/kg which is equal to human dose. CAFE showed significant antihyperlipidemic effect by improving lipid parameters of Total Cholesterol (TC), Triglycerides (TG) and Low Density Lipoproteins (LDL) were decreased. Moreover, increment of High-Density Lipoproteins (HDL) cholesterol were significant. Furthermore, an improved enzymatic antioxidants potential and non-enzymatic antioxidants activity were also evident. These haematological estimations were further supported by histopathological analysis of liver and adipose tissue.
Conclusion: The results of the present study evident that oral administration of CAFE did not produce any severe acute toxic effect. Conclusively, these consequences insinuate that CAFE has potential prophylactic and therapeutic bioefficacy against hyperlipidemia.
Keywords: Capsicum annuum, Cholesterol, Hyperlipidemia, Liver, Sprague-Dawley rats.

Ms Ishita Goyal

Image	Delegate ID	Theme	Details
	YSC 11294	Swastha Bharat	**Category :** Others **Organisation :** CSIR-NISTADS **Designation :** Senior Research Fellow (Ph.D.)

Duchene Muscular Dystrophy (DMD), a neuromuscular disorder that may cause muscle degeneration, inability to walk & eventually death, raises the question whether in India the information of DMD disease to a fetus should be conveyed to the expecting parents during prenatal testing or not. According to Indian laws the answer to this is 'Partially yes', Pre-conception & Pre-natal Diagnostic Techniques Act (PC-PNDT Act) allows conveying the disease condition to the expecting parents, but it has not considered the plight of manifesting carriers of the disease. The PC-PNDT Act forbids disclosing the gender of the fetus except in certain cases, further Medical Termination of Pregnancy Act (MTP Act) permits termination of pregnancy with certain diseases/abnormalities which doesn't include the carrier status of a disease. DMD is an X-linked disease that causes disease in males and females are mostly carriers of the disease. The belief that DMD carriers always remain unaffected by the disease is a misapprehension, in fact, they may have symptoms in a manner similar to affected males and so they are called 'manifesting carriers'. Using a case-study approach I would like to highlight the issue of sufferings faced by DMD manifesting carriers and suggest that suitable modifications may be made to PC-PNDT and MTP acts for conveying the information of fetus's carrier status in spite the fact that it may disclose the gender of the fetus. Additionally, I would like to assert that I do not support discrimination against any person due to disability. I'm only pointing out that the law permits the parents to know about the disease of their child and give them the right to medically terminate the pregnancy. This permission should be extended to the fetus with carrier status of conditions such as DMD to reduce the pain and suffering of an individual.

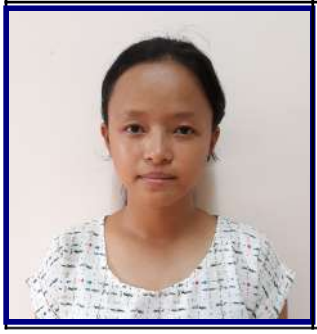
Dr Karthikeyan Bagavathy Shanmugam

Image	Delegate ID	Theme	Details
	YSC 11430	Swastha Bharat	**Category :** Biology **Organisation :** The Institute of Mathematical Sciences (IMSc) **Designation :** Research Associate (Toxicology)

Humans are exposed to a myriad of harmful chemicals through their daily environment which can affect our well-being. One such group is endocrine disrupting chemicals (EDCs) that can perturb the hormonal homeostasis leading to adverse health effects related to reproduction, development, metabolism, immune and nervous system. We have built an open-access digital knowledgebase, Database of Endocrine Disrupting Chemicals and their Toxicity profiles (DEDuCT), which compiles the list of 686 potential EDCs with endocrine-specific adverse effects along with the dosage information from supporting evidence of endocrine disruption in published experiments in humans or rodents. Notably, we have developed a detailed workflow to manually evaluate more than 16,000 published research articles and identify potential EDCs with published evidence in humans or rodents. Subsequently, the potential EDCs were classified based on the type of supporting evidence, their environmental source, and their chemical properties. Additionally compiled information for potential EDCs include their chemical structure, physicochemical properties, predicted ADMET properties and target genes. After building this comprehensive resource, we have performed a network-centric analysis of the chemical space and the associated biological space of target genes of EDCs. Specifically, we have constructed two networks of EDCs using our resource based on the similarity of chemical structures or target genes. Ensuing analysis revealed a lack of correlation between chemical structure and target genes of EDCs. DEDuCT is accessible at: https://cb.imsc.res.in/deduct/.
This work has been covered in the news media such as India Science Wire, American Chemical Society Chemistry and Engineering News (c & en), Hindustan Times, Chemical Watch and European Trade Union Institute.

Reference: Bagavathy Shanmugam Karthikeyan, Janani Ravichandran, Karthikeyan Mohanraj, R.P. Vivek-Ananth, Areejit Samal, A curated knowledgebase on endocrine disrupting chemicals and their biological systems-level perturbations, Science of the Total Environment, 692 (2019), pp. 281-296.

Ms PRIYANKA RAI

Image	Delegate ID	Theme	Details
	YSC 11434	Swastha Bharat	**Category :** Biology **Organisation :** University of North Bengal **Designation :** Research Scholar

Knockdown resistance in Culex quinquefasciatus - a vector of lymphatic filariasis

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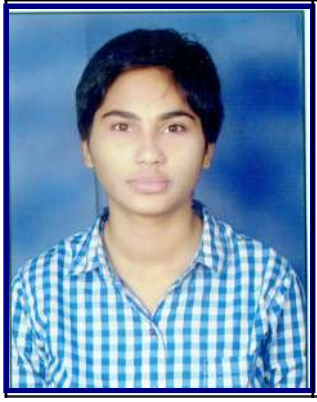
Lymphatic filariasisis is one of the most important Neglected Tropical Diseases (NTDs) leading to lifelong morbidity and disability in the affected individuals.The disease is caused by a nematode worm Wuchereria bancrofti and mainly transmitted by a mosquito vector Culex quinquefasciatus. Though there are mass drug administration campaigns for the elimination of lymphatic filariasis, use of insecticides to control the mosquito vector has always been an easy to go strategy. However, unrestrained application of the insecticides have gradually led to the development of resistance in the vectors thereby increasing the challenge of vector management and disease control. The major mechanisms of resistance development in mosquitoes are metabolic detoxification by enzymes and mutation in the insecticide target site. In order to study the presence, frequency and distribution of mutations in the voltage-gated sodium channel gene – a target site of synthetic pyrethroids and DDT, populations of Culex quinquefasciatus were collected from Northern districts of West Bengal and their resistance/susceptible level to insecticides were assayed. The mosquito populations were exposed to synthetic pyrethroids and DDT for an hour. After 24 hours, mortality was counted and resistant mosquitoes were assayed for the presence of L1014F mutation in the voltage-gated sodium channel gene through Allele-specific PCR. Genotyping of L1014F kdr mutation showed the presence of all three genotypes i.e., wild type susceptible homozygote (L/L), heterozygote mutant (F/L) and homozygote resistant mutant (F/F).Moreover, heterozygote individuals were found in highest proportion in all the studied areas. This study provides a first report on the occurance and mapping of target site resistance development in Culex quinquefasciatus from West Bengal and may be used for an efficient vector control programme targeting this mosquito vector.

Dr Poonam Dash

Image	Delegate ID	Theme	Details
	YSC 11511	Swastha Bharat	**Category :** Biology **Organisation :** Hi-tech Medical college and Hospital, Bhubaneswar **Designation :** Doctor

INTRODUCTION : As per WHO, 10 out of 20 most polluted cities of world are in India, it concerned me being a health professional.

A Randomised Controlled trial was carried out under ICMR-STS, to find out if the masks in vogue, are really helpful or allowing much finer particles(PM
AIMS and OBJECTIVES :
1) To ascertain If micro-fine masks have any effect on vital capacity of lungs?
2) To test the efficacy and acceptability of these masks in reducing respiratory disorders.

ETHICAL CONSIDERATION :
Approval from Institutional Ethics Committe was undertaken.
Permission from Commisionerate of Police (Traffic) was granted.

MATERIALS and METHODS :
1)Experimental study of Randomised Controlled trial with crossed-over design.
2) Study population included Traffic Police personnel of a Smart city of India on duty. Beacause they suffer the highest trauma of air borne pollutants at larger scale on a daily basis.
3) Sample size of 60 eligible, consenting participants as per criteria set up.

RESULT :
1) PM 2.5 masks are helpful in decreasing pollution induced changes in lungs of subjects.
2) Increased awareness and acceptability of participants to masks.

This Study was carried out under ICMR-STS, also presented in OBPC-National seminar at NISER, Bhubaneswar and won the Research paper presentation at WISSEN 2019, AIIMS- Bhubaneswar.

Mr RAJ KISHOR KUSTWAR

Image	Delegate ID	Theme	Details
	YSC 11564	Swastha Bharat	**Category :** Others **Organisation :** CSIR-NISTADS, New Delhi **Designation :** CSIR-SRF & PhD Scholar at AcSIR

Opinion of Stakeholders and Functionality Status of Telemedicine Centres in India

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Abstract
Telemedicine promises to provide quality and affordable healthcare to 70% underserved remote and rural Indian population. However, very little research exists on outcomes of telemedicine. Also, functionality of telemedicine centres have been a major concern as revealed by previous studies. Present semi-structured questionnaire based survey study was focussed on the challenges of telemedicine and functionality status of telemedicine centres in the current scenario. In addition, a survey on the opinion of stakeholders was also conducted. The findings showed that telemedicine is cost-effective, time-saving and provides specialist consultation to distant patients. However, major hindrances include-unavailability of telemedicine centres in many underserved areas, insufficient infrastructure, ethical and medicolegal issues, unawareness, reluctance of doctors, improper diagnosis, less-publicity and lack of enough promotional programs. Findings revealed that telemedicine is underutilized. Its unavailability will have moderate to severe effect on healthcare delivery to underserved areas. No formal training was provided to majority of telemedicine service providers. Formal training, skill development, capacity building, increasing outreach and creating awareness will enhance telemedicine utilization. In view of respondents telemedicine is double-edged sword and hence, it should be used in proper standardized manner. Although telemedicine centres were functional at the time of visit and being utilized for continuing medical education, yet, utility in terms of number of teleconsultations was miserable. Therefore, a telemedicine oriented health policy is required for maximum utilization of telemedicine. More in-depth studies are warranted in future.

Key-Words
Telemedicine, Functionality, Underutilized, Capacity-Building, Health-Policy

Dr Soma Giri

Image	Delegate ID	Theme	Details
	YSC 11570	Swastha Bharat	**Category :** Others **Organisation :** CSIR- Central Institute of Mining and Fuel Research **Designation :** DST-Women Scientist (WOS-A)

The study was intended to investigate the metal contamination in the drinking water and locally grown food items in the vicinity of mining areas of Singhbhum Copper Belt. The water samples were collected on seasonal basis. For the food sampling, locally grown cereals, pulses, fruits and vegetables was collected. Animal produce like milk, eggs, chicken and fish were collected from the local rearing animals. The concentrations of metals were determined using inductively coupled plasma-mass spectrometry for risk assessment studies. Risk of metals on human health was evaluated using USEPA methodology calculating Hazard Quotients (HQ).

The results demonstrated that concentrations of metals in water showed significant spatial and temporal variation and most variables exhibited higher levels in the pre-monsoon season and in the locations under the influence of copper mining and allied activities. When compared to Indian drinking water guidelines, much greater attention should be paid to Al, Cu, Fe, Mn, Ni, Se and Zn though the concentrations were below the critical values in the monsoon and post monsoon seasons for some metals. The concentrations of metals in the food also exceeded the limits of Indian standards for food for Pb, Cu, Ni and Zn in some samples. Risk assessment studies indicated that the largest contributors to chronic risks were Mn, Co and As. Considering the seasons, the highest risk was calculated for pre monsoon season while taking into account the population groups; child populations were at the highest risk. The concentrations of metals in food samples exceeded the recommended levels in food for Cu, Ni, Pb and Zn in some of the samples suggesting them to be unfit for human consumption. The calculated daily intakes of metals through consumption of food were within the tolerable limits suggested by the Joint FAO/WHO Expert Committee on Food Additives except for Ni in fish. The mean THQ values for all the metals were below 1 for all the food items except for As, Co and Cu in the leafy vegetables. The total THQ value (Hazard Index) calculated was more than 1 for all the food items except eggs, chicken and milk which signifies potential health risk to highly exposed consumers. The highest risk was indicated for leafy vegetables followed by rice and fish. The study concluded that high values of metals in the drinking water and dietary components at some locations are alarming and pose an appreciable hazard risk on human health.

Dr Amita Verma

Image	Delegate ID	Theme	Details
	YSC 11581	Swastha Bharat	**Category :** Chemistry **Organisation :** Sam Higginbottom University of Agriculture Technology and Sciences **Designation :** Professor

Chemical waste management practices in Laboratories:
Contribution in Swasth India

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Abstract:
Chemicals are widely used in industry and academia field for teaching and research purposes. There are two terms toxicity and hazard in health effects of chemicals. Highly toxic chemicals can be used safely with proper handling. Conversely, less toxic chemicals can be extremely hazardous if handled improperly.
There is worldwide need of Comprehensive training in chemical waste management. Many universities in all over world are motivated to network to educate their students about best practices in chemical safety and lab waste management. It is the part of curriculum, but in India, as we studied, very few institutes are following the guidelines for this management. In Uttar Pradesh also there is a need of responsiveness about the management of chemicals. Here all the chemicals are directly thrown in sink and get contaminate drinking water, then further causes health hazards.

In this regard, we have started organizing various awareness programs to encourage ethical laboratory practices and adopt internationally recognized standards for chemical safety and security at various universities, colleges, schools etc. These programs bring chemists together to network, to bring novel ideas to share with faculty, students and laboratory staff at various universities in India.

Result of these events are that the participants took keen interest in learning more about the safe use of chemicals management. They also learned to implement chemical safety into their curriculum and further interested in participating in additional sessions and working to organize similar events at their institutes.

References:
1. Contis, E.T.; Ashiq, U.; Massey, S.; Shahid, S.; Verma, A. ACS Symposium Series 2018, 11, 157–170.

Dr Mukesh Kumar Mahato

Image	Delegate ID	Theme	Details
	YSC 11591	Swastha Bharat	**Category :** Others **Organisation :** CSIR-Central Institute of Mining & Fuel Research **Designation :** CSIR-Senior Research Associate

Road dust plays an important role in the fate and transport of air pollutants. It contains toxic heavy metals which can pollute both terrestrial and aquatic environments since the pollutants get mobilized during storm run-off. A detailed study was intended to investigate the toxic metals in the road dust from India's richest mining and industrial belt in East Singhbhum for the spatial distribution, source apportionment and risk assessment studies. The concentrations of the metals in the road dust were determined by inductively coupled plasma-mass spectrometer (ICP-MS) after acid digestion in a microwave digestion system. The status of the metal pollution were assessed by calculation of enrichment factor (EF), geo-accumulation index (Igeo), contamination factors (CF), pollution load index (PLI) and Nemerow index (NI).The human health risk assessment was done using the USEPA methodology calculating Hazard Quotient (HQ) and Hazard Index (HI) for the ingestion, dermal and inhalation pathways.

The metal concentrations in the road dust samples exceeded the average shale values for almost all the metals. The EF and Igeo values signified very high contamination with respect to Cu followed by As and Zn in the road dusts. The overall effect of the studied metals as depicted by PLI and Nemerow index, revealed high pollution with respect to metals at almost 50% of the locations. The pollution levels increased with the proximity to the copper mining and processing units. Source apportionment was done by Principal Component Analysis which resulted in extraction of three factors explaining 77.3% of variance in the data and indicated anthropogenic contribution of Cu, Ni, Co, Cr, Mn and Pb in the road dust. Health risks for adults and children were calculated using hazard quotients and hazard index. The HQs for all the metals for all pathways were below 1 except for As and Fe. This suggested that non-carcinogenic risks due to metal exposure through dust were generally within the safe limit for most of the metals. However, considering all the metals and pathways, the HI for adults and children were calculated to be 1.01 and 7.46 respectively, suggesting appreciable risk to the local residents particularly pedestrians. Considering the pathways; oral ingestion appeared to be the primary pathway followed by dermal and inhalation. The results advocate the necessity of periodic monitoring of the road dust of the area and development of proper management strategies to reduce the metal pollution and subsequently the risk to the human health.

Dr Neha Bunkar

Image	Delegate ID	Theme	Details
	YSC 11626	Swastha Bharat	**Category :** Nano Engineering **Organisation :** ICMR-National Institute for Research in Environmental Health **Designation :** Post Doctoral Fellow

“NP.SB” : A novel nano-engineered flavonoid isolated from Selaginella bryopteris (sanjeevani) offers cancer protection through mito-epigenetic modulation

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Abstract:Novel bioactive plant secondary metabolites, including flavonoids, offer a spectrum of chemo-protective responses including anti-oxidant, anti-inflammatory, anti-proliferative, and anti-senescence against a range of human tumour models. However, the clinical translation of these promising anti-cancer agents have been hindered largely by their poor solubility, rapid metabolism, or a combination of both, ultimately resulting in poor bioavailability upon oral administration. To circumvent these challenges for effective integration into clinical setting, nano-engineering is one of the emerging pragmatic strategies which has promise to deliver therapeutic concentrations of these entities upon oral administration. Here, we report the synthesis and pre-clinical validation of a flavonoid-rich fraction isolated from a traditional Indian herb Selaginella bryopteris (Sanjeevani) that could be engineered using solid-lipid nanoparticles (NP.SB). The cyto-protective activity of NP.SB revealed a dose-dependent effect when tested in GC-1 spg (mouse spermatogonial epithelial) and B/CMBA.Ov (mouse ovarian epithelial) cells exposed to N-succinimidyl N-methylcarbamate (NSNM). Smaller size, rapid internalization, faster mobility and site specific delivery conferred significant chemo-protection against NSNM-induced germ-line genomic instability in cultured spermatogonial and ovarian epithelial cells. Our results showed that NP.SB not only protects mitochondria, but also maintains the balance of mitochondrial-nuclear cross talk. Notably, this encapsulated flavonoid supplementation prevented emergence of neoplastic daughter clones from senescent mother phenotypes in NSNM treated cells by selective abrogation of mitochondrial oxidative stress-induced aberrant epigenetic modifications. Of these, NP.SB regulates posttranslational histone modifications that include H3K9me, H4K20me3, phosphorylation of H3, ubiquitination of H2A and hypoacetylation of H4; and deregulation of microRNAs, let-7a and let-7b, which may alter the expression of different proteins important for regulation of cellular integrity. In-vivo studies using a diethylnitrosamine and 2-acetylaminofluorene mouse model demonstrated that NP.SB has a significant inhibitory effect on tumor growth which clearly substantiated our in-vitro findings. Conclusively, anti-tumor property in conjunction with low toxicity of NP.SB underscores the translational significance of dietary flavonoids as cancer-protective agents for preferential application in clinical settings.

References:

Bunkar N, et al. Front Biosci (Landmark Ed). 2019;24:1097-1157.
Bhargava A, et al. Anticancer Agents Med Chem. 2018;18(13):1860-1874.

Dr Arpit Bhargava

Image	Delegate ID	Theme	Details
	YSC 11629	Swastha Bharat	**Category :** Nano Engineering **Organisation :** ICMR-NATIONAL INSTITUTE FOR RESEARCH IN ENVIRONMENTAL HEALTH **Designation :** RESEARCH ASSOCIATE

Environmental factors profoundly influences human health, and are considered as one of the major causes for the increasing cancer incidences. According to the World Health Organization approximately 18 million new cancer cases and 9.6 million deaths occurred in 2018. Among these the cancer of lungs, which accounts for approximately 30% of all cancer deaths, is one of the leading causes of cancer associated mortality. The global surge in lung cancer can be attributed to the tumor re-initiating cells (TRICs), which survive conventional treatment, reside at certain imprecise places and facilitate tumor re-growth on cessation of the therapy. This re-growth of tumors is also accompanied by metastasis and therapeutic resistance that further worsens the disease outcome [1]. In addition, the substantial toxicity induced by traditional therapeutic regimens, assist TRICs to escape from immunological surveillance [2]. Therefore, it is now essential to re-design the existing treatment options and focus on the alternate targeted strategies which can re-program immune system for better disease management. Recently, dendritic cell (DC) based vaccines are being explored as a promising therapeutic strategy but their success is limited by immune suppressive microenvironment and tolerance inducing ability of tumors [3]. In this regard, using nanotechnology-based systems for the sustained delivery of tumor antigens (Ags) to DCs might be helpful in overcoming the immune tolerance [4, 5]. The present study is an attempt to improve the efficiency of DC based vaccines to targets TRICs by ex-vivo loading solid lipid nanoparticle (SLNP) encapsulated tumor Ag. Because, tumor associated Ags are not well characterized, we used a whole tumor cell Ag approach i.e. cell lysates for nanoparticle encapsulation as it possess a spectra of different identified and unidentified Ags. The results of our in-vitro study indicated that the prepared nano-formulations are of optimum size, shape and charge. In addition, the formulations possess excellent entrapment efficiency and percent yield. Upon co-incubation with allogeneic DCs, an efficient up take of these nano-formulations was observed without any significant toxicity. We also observed that SLNP encapsulated Ags possess a strong ability to activate DCs and orchestrate specific immune responses for targeting TRICs. Our observations suggest that the mannosylated-SLNPs are the most suitable molecular vector for engineering DCs which may be utilized to develop an adjuvant therapy for specific targeting of TRICs to benefit patients from tumor recurrence.

Dr Manju Tiwari

Image	Delegate ID	Theme	Details
	YSC 11653	Swastha Bharat	**Category :** Biology **Organisation :** Barkatullah University **Designation :** Research Scholar post doc

“The mismanagement of antibiotics and their resistance in Escherichia Coli during Urinary tract infection: A current scenario in India”

ABSTRACT:-The antibiotics resistance has become a major health problem, not only in India but It is one of the major concerns for the whole world. The mismanagement of antibiotics and the failure of control measures to prevent the spread of resistant bacteria are the major cause of microbial resistance. There are several ways in which bacteria cave develop antibiotic-resistant ability. The main cause is selective pressure, It happens when not all the bacteria are susceptible to the antibiotic used to treat the infection, and the surviving bacteria can continue to multiply. In the present investigation, we have used secondary data from different studies, which were based on different antimicrobial resistance in Escherichia Coli during UTI infection in various states (Karnataka, Mizoram, Gujarat, Rajasthan, Odisha, Kerala, and Rajasthan) of India. We have been analyzed following antibiotic resistance ability of the aforementioned bacteria areAmpicillin, Cefuroxime, Ceftriaxone, Ciprofloxacin, Cefepime, Imipenem, Nitrfurantion, Amikacin, Piperacillin-tazobactam, Gentamicin, AzetreonamNorfloxacin.The comparative data showed resistant against ampicillin (37.5%-92.3%) is highest followed by cefuroxime (18.18% - 72.41%) all remaining antibiotics showed moderate resistance during UTI infection. Hence, the present study concluded the worst condition of antibiotic resistance in the whole of India, there is great need to take care of this issue by making a strict guideline for the use of antibiotics. We also involve molecular techniques to control overdose of antibiotics for the overcome of resistance problems.

KEYWORDS: -Antimicrobial resistance, Antibiotics, Urinary tract infection

Dr PANKAJ PATHAK

Image	Delegate ID	Theme	Details
	YSC 11749	Swastha Bharat	**Category :** Others **Organisation :** All India Institute of Ayurveda, New Delhi **Designation :** Associate Professor

Purpose: In this era of modernization and civilization the society is conscious enough about "What to eat?" The awareness about the food items, their quantity, quality and nutritional values etc. is increasing gradually, then also the popularity of fast food is greater due to the fast life. According to Ayurveda this can be classified as "Prajnaparadha' (Knowingly doing mistakes). Due to the demand of time, most of the people are bound to do such things, which adversely affect the health. The people who are health conscious mostly know about "WHAT TO EAT?" but least about "HOW TO EAT?" The dietetic code or the rules for diet intake are preserved by our traditions up to some extent, but there is a big question about their awareness in today's society. People basically know very little about them and they who know are little bothered to obey such rules, even they do not have trust enough to consider the code of diet as an important health matter. The proper method of eating is wrongly being interpreted as mere traditional affair. Though all the people can not always follow all the rules due to the bindings of fast and forward life, the awareness is needed regarding the subject.
Methods: The main aim of this thesis was to draw precisely the concept of Ahara Vidhi Vidhana. But, Ayurveda being a practical oriented science, the utility of any concept in Chikitsa must be assessed. Also, the practical can either support the concepts or may provide new ground for the comprehension of the concepts. As a part of the practical assessment for the confirmation of the concept, the clinical study was proposed. By this type of clinical study, motto was mainly to highlight the efficacy of Ahara Vidhi Vidhana in the curative as well as preventive aspects.
Results: It was observed that following the Dietary Rules, the health status of the individual improved. The study also showed the physical and mental well-being of the individual.
Conclusion: Properly convincing the people about the importance of Ahara Vidhi Vidhana is the demand of time. The faith and obedience of people towards these rules is equally important aspect to gain the classical results.
Keywords: Ahara Vidhi Vidhana, Dietary rules
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Dr SUMAN PATHAK

Image	Delegate ID	Theme	Details
	YSC 11756	Swastha Bharat	**Category :** Others **Organisation :** GOVERNEMENT AYURVEDA MEDICAL COLLEEGE, MYSORE **Designation :** Associate Professor

Purpose: The ancient system of Ayurveda (science of life) offers a holistic approach to mental health that integrates the mind, body and soul. Sushruta, the ancient exponent of Ayurveda, defines health as Swasthya-a state of total biological equilibrium, where the sensory, mental, emotional and spiritual elements are harmoniously balanced. Ayurvedic theory of health is based on Tridosha (primary life forces or biological humours). The five elements (Panchabhuta) combine in pairs to constitute the three Doshas-Vata (ether and air), Pitta (water and fire) and Kapha (water and earth). The combination of these doshas inherited at birth indicates an individual's unique constitution. The dynamic balance of Tridoshas creates health. Ayurveda defines mental health as a state of mental, intellectual and spiritual well-being. The three gunas (Sattva, Rajas, and Tamas) are connected to Tridosha in Ayurveda. According to S. K. Ramachandra Rao, Ayurveda Academy, Bangalore, "The three gunas together are responsible for the existential, experiential, evaluative and transactional dimensions, each of which may serve as a motivational source of stress." Materials: Research papers, Ayurvedic lexicons were used for the study
Results: According to Upanishads, Om is the name or symbol of God. It is the combination of three letters, namely, A, U, and M and it is the syllable of the past, the present, and the future. Om is the force behind all thoughts and chanting or thinking about Om will cause quiet mental state. Arati Amin et al Beneficial effects of OM chanting on depression, anxiety, stress and cognition in elderly women with hypertension. The undertaken to assess the effectiveness of Om chanting on depression, anxiety, stress and cognition in elderly women with hypertension. However, following by six months of Om chanting, systolic and diastolic pressure, pulse rate, depression, anxiety, stress decreased significantly. Balaji Deekshitulu et al in his research work “Role of Mantras in Mental Health” briefed each mantra induces specific vibrations in the mind, which is why people use different mantras depending upon their intentions. However, mantras don’t have particular meanings?they are simply vibrations of consciousness.
Conclusion: The author suggests that the Maha mantra has potential for utilization in clinical areas similar to those where other interventions of Eastern origin have been successful, such as treatment of stress, depression, and addictions.
Keywords: Ayurveda, Tridosha, mantra

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Dr Pradipta Jana

Image	Delegate ID	Theme	Details
	YSC 11928	Swastha Bharat	**Category :** Biology **Organisation :** Bengal Institute of Pharmaceutical Sciiences **Designation :** Assistant Professor

In acute ischemic heart disease (AIHD) a condition of inflammatory response occurs as the level of cytokines increase. It was found that dermcidin isoform-2 (DCN-2), a stress induced protein elevated in AIHD. The role of DCN-2 induced cytokines like TNF-? and IL-6 expression demonstrates the inflammation during heart attack. As also as, a high level of this cytokine was determined in AIHD patient. Estriol, a kind of female steroid hormone estrogen, at sub-nanomolar range can decreased the elevated cytokine level in DCN-2 treated normal neutrophils. The expression of DCN-2 induced TNF-? synthesis in neutrophils was further determined by immunoblot technique. The band intensity of TNF-? was thickened in DCN-2 induced neutrophil solution. The production of nitric oxide (NO) was also regulated with the estriol treatment. The subsequent reduction of TNF-? level due to estriol treatment had shown the corresponding increase in NO level. From here, it can be concluded that production of DCN-2 due to stress in AIHD after heart attack propagate the inflammatory response. Steroid molecule like estriol play a protective role by reducing DCN-2 through the NO synthesis.

Mr JOYDEEP CHATTERJEE

Image	Delegate ID	Theme	Details
	YSC 12072	Swastha Bharat	**Category :** Applied Engineering **Organisation :** UNIVERSITY OF CALCUTTA **Designation :** Ph.D. STUDENT

Analysis of smeared blood samples or other cell samples for understanding physical condition leading to disease detection is of utmost importance. Apart from biological applications, many industrial samples are also routinely observed under microscope. Typical analysis process involves a conventional microscope capable of both brightfield and darkfield configuration. The sample appears dark in a bright background for brightfield whereas it is opposite in the case of darkfield and both these modes are used for different types of samples. In case of presently available microscopes, arrangements of observation and illumination need to be physically altered moving between these two modes making the proper investigation a tedious and costly affair. Therefore, an immense need for one compact microscope facilitating different operations is felt and acted as our motivation.

In this abstract, a Spatial Light Modulator (SLM) based semi-automated microscope is presented which can perform both brightfield and darkfield operations. A SLM is a device that nearly instantaneously modulates the amplitude and/or phase of incident light beam depending upon the patterns are generated in an attached computer. In this case, SLM is used to modify the incident illumination alternatively between circular patch to annular ring pattern needed for brightfield and darkfield, respectively. This is achieved through polarisation characterization of SLM where different modes of axicon phase or other structured beams can be obtained by simple rotation of a polarizer. Later, the modulated light out of SLM is made to incident on the sample and diffracted light through the sample is captured using an objective for microscope imaging. These images can be viewed and stored using CCD and the next logical step would be to employ image processing techniques for cell count and statistical trend analysis for disease detection.

Dr Pratima Debnath

Image	Delegate ID	Theme	Details
	YSC 12076	Swastha Bharat	**Category :** Biology **Organisation :** Intelli Advance IT Solutions **Designation :** Director

Title: Study on Aamra(Mango) as low cost boon for expecting parents (Vedic period to Modern Sciences range of 3500 years)

Purpose: To establish “Aamra” as low cost helpful enhancer of fertility and boon for conceiving with its highly potent composition of proximates for would be parents eager to conceive.

Methods: Research includes studying existing materials from vedic text and modern data science to establish standard constituents of established proximates, ingredients and other essentials in average mango(as a whole). As per food and drug administration tested and compiled proximate of average Mango as a whole is considered here to related and map to various health related scenarios, conditions, requirements, precautions, know effects of deficiencies in Human (both male and female).

Results: All ingredients found as per our study from vast researches on aamra further are categorised in various sub proximate groups(above 70 ingredients), which have been profoundly found to be helpful from (many studies referenced) and creating a favourable condition for would be parents to conceive in given normal conditions. It has been proved that aamra contains combination of such proximates that overall increases normal reproductive functions like increases sperm count, sperm health, sperm mobility, tissue repair, healthy fetus growth, increase stamina, tissue/muscle performance, regulates blood sugar, harmone levels, overall female fertility, process of ovulation, fetus growth, tissue building, protein, carbohydrate, fatty acid, fertility enhancing amino acid supplements, and many other essentials. The results are parameterized using modern data science and factors by category of Male, Female and both are presented with various effects from constituents of Amra.

Conclusion: Based on above study of modern findings of Amra proximate to ancient scriptures, ayurvedic scriptures, vedic practices by Hindus and detailed study of most the ingredients it could be concluded that Amra is helpful in conceiving, increasing male fertility, female fertility, fetus growth along with many other contributing supplementary factor needed during course of pregnancy and successful child birth or “santiti”

Dr Swati Dubey

Image	Delegate ID	Theme	Details
	YSC 12094	Swastha Bharat	**Category :** Chemistry **Organisation :** AcSIR, CSIR-AMPRI Bhopal **Designation :** Ph.D. Research Scholar

Abstract:
Chronic ingestion of naturally occurring hazardous inorganic contaminants (fluoride, arsenic & chromium) in groundwater is severely deteriorating the quality of water. Long term consumption of water containing excessive fluoride (> 1.5 ppm) and chromium (> 0.05 ppm) causes serious health problems like dental, skeletal and non-skeletal fluorosis which ultimately results in the crippling of bones, bronchitis, bronchogenic carcinoma and ulcer formation. Similarly, the presence of high concentration of arsenic (> 0.01 ppm) in drinking water leads to black foot disease and arsenicosis which results in the growth of cancerous cells in the body and causes lungs, kidney and skin cancer. As per estimation, more than 100 million people are suffering from different forms of fluorosis and arsenicosis and bronchogenic carcinoma problems in different parts of India [1]. Since drinking water is the main source of these toxic inorganic contaminations, several removal materials/methods have been developed but none of them found suitable particularly providing safe drinking water.
After realizing the severity of problem, we tried to synthesize low-cost nanoparticles of gamma-alumina through the precipitation process. Firstly, we synthesized nano-alumina that exhibited an excellent fluoride, arsenic and chromium removal capacity of 15-20 mg/g (fluoride), 20-25 mg/g (arsenic) and 6 mg/g (chromium) at neutral pH. Since adsorbent or nano-alumina is porous in nature (pore size 3-4 nm) it has the potential to filter water at the nanoscale level. The fluoride, arsenic and chromium bearing water which passed through the nanoadsorbent they get adsorbed at the adsorbent surfaces without adsorption of essential mineral of water. The treated water is free from any secondary contamination and retain all essential minerals (as per BIS 10500) and provide safe drinking water as per Indian Standards. The synthesized nanoadsorbent found to have a high regeneration capacity after three cycles. Due to the high regeneration capacity of synthesized nanoadsorbent ultimately reduce the treatment cost substantially. This nanoadsorbent can become a boon to the people where drinking water containing a high amount of toxic inorganic contaminants mainly in the rural areas. This developed nanoadsorbent with a high removal efficiency of fluoride, arsenic, and chromium can save millions of people across the country and will contribute to the Swasth Bharat program by providing safe drinking water. All these results will be presented at the conference.
Keywords: Fluorosis, arsenicosis, bronchitis, nanoadsorbent, defluoridation, Swastha Bharat.

Dr ABHISHEK JHA

Image	Delegate ID	Theme	Details
	YSC 12173	Swastha Bharat	**Category :** Biology **Organisation :** AIIMS,NEW DELHI **Designation :** POST DOC FELLOW

Animals and humans interact with their environment on a daily basis and as such are exposed to broad spectrum of chemicals and heavy metals present in the environment through food, air and water. Mercury is released into environment through natural geological processes such as dissolution and volatilization from rocks, volcanic eruptions, soil and sediments. Increased usage of mercury in preservatives, amalgam in tooth, mining and various cosmetic products has also increased the chances of its likelihood exposure. Toxicity of mercury can result from vapor inhalation, ingestion of absorption through the skin. Nervous systems are most commonly affected biological system in mercury exposure while children and pregnant women are more vulnerable to mercury exposure. This study examined the effects of mercuric chloride on the total lipids and histopathological changes and also evaluated the ameliorating effects of N-Acetylcysteine (NAC) and Aloe vera in the rat brain. Male rats were exposed mercury chloride (HgCl2) (0.25mg/kgday), NAC (30mg/kgday), Aloe vera (400mg/kgday) for 21 days orally. A significant decrease in total lipids, cholesterol, triglycerides, phospholipids, glycolipids activities were observed in mercuric chloride-treated groups. A significant decline (pphospholipids, glycolipids was observed in brains of experimental groups. The level was significantly restored when NAC (p
of animals. In Histoarchitectural image there was no sign of perivascular and pericellular edema or any neuron degeneration in the control group, it shows healthy neurons. Very mild perivascular and pericellular edema was seen in mercury treated group along with degeneration of astrocytes including ischemic neuronal injury. Histoarchitectural structure remains unaffected in the NAC and Aloe Vera treated group Photomicrographs from NAC and Aloe Vera treatment in mercury treated rats shows normalization indicating the reparative effect of NAC and Aloe Vera. Conclusively, NAC and Aloe vera significantly reduce mercuric chloride induced neurotoxicity in rats when it was given with mercury chloride.

Dr Abdul Aziz khan

Image	Delegate ID	Theme	Details
	YSC 12361	Swastha Bharat	**Category :** Others **Organisation :** Faculty of Unani Medicine, Aligarh Muslim University, Aligarh **Designation :** Assistant Professor (Stage II)

Background & problem: Diabetes mellitus is a condition in which the normal mechanism of the body for controlling the level of glucose (sugar) in the blood stream gets affected. Insulin is the hormone that is required to convert sugar into energy needed for daily life. If the body becomes deficient in insulin, cells find it difficult to absorb glucose, which then increases in level, first in blood and then in urine. Due to glucose loss, body cells begin to exploit other valuable sources of fat and proteins as alternate energy sources. Diabetes mellitus can lead to further complications like nerve damage, blindness and even kidney failure. It is also one of the major causes of strokes and heart attacks.1

India leads the world with largest number of diabetic subjects earning the dubious distinction of being termed the “diabetes capital of the world”. Diabetes is fast gaining the status of a potential epidemic in India with more than 62 million diabetic individuals currently diagnosed with the disease and majority still remaining undetected.1

Avicenna (980-1037 AD) has described three fundamentals of Health Preservation viz. Exercise, Diet and Sleep in his masterpiece “Canon of Medicine (Alqnoon fit tib)”2. Keeping in view the above time tested statement a case of Diabetes Mellitus was chosen for study who was willing to be treated with holistic approach and yet not taken any allopathic medicine for diabetes.

Material and Methods: It was a controlled case study. Different Diet and Exercise Regimens and Certain Unani Pharmacopeial Drugs were used in different schedule and dosage form for a varied period of time. The base line and follow-up Blood Glucose levels were monitored with the help of Accu-Check Glucometer. The findings were recorded on daily and diurnal basis as and when required. For each regimen finding were recorded separately as per schedule advised.

Observation & Results: It was observed that the results were much promising. The baseline Fasting Blood Glucose level was 220 mg/dl. After each regimen (for 30 days) Fasting Glucose was reduced by 50-70 mg/dl. The best regimen was Diet, Exercise and Unani Pharmacopeial Drugs which reduced fasting glucose level to 130 mg/dl.

Conclusion: It can be concluded that it is the high time for practicing Ancient Wisdom of Medical Science when each Allopathic drug has certain side effect.

References:

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2. Shah MZ. The Canon of Medicine by Avicenna (English Translation); 2007: 300

Ms sangh jyoti singh

Image	Delegate ID	Theme	Details
	YSC 12362	Swastha Bharat	**Category :** Biology **Organisation :** CSIR-Indian Institute of Toxicology Research **Designation :** PhD student

The xenoestrogen BPA extensively used in plastic products deleteriously affects human health. In our study, we have examined effect(s) of BPA on neurogenesis and protein homeostasis in rat brain hippocampus. For experimental studies Wistar rats were orally administered BPA (40 µg/kg body weight) during gestation and postnatal periods. Gene expressions and protein levels were analysed by qRT-PCR and western blotting, respectively. In order to investigate proteins localization, immunohistochemical and ultrastructural studies were performed by immunofluorescence and transmission electron microscopy in-vitro and in-vivo. Results suggested that BPA exposure in culture of neural stem cells (NSCs) derived from rat brain hippocampus showed reduced proliferation and differention potential. Moreover, we have found that exposure of BPA leads to generation of autophagic flux as a protective response in neuronal cells. Electron microscopy analysis manifested that exposure of BPA induced generation of autophagosomes and autolysosomes. BPA exposure down-regulates the protein levels of proteasome system while gene expression analysis have shown altered pattern. Hence, these finding suggests that BPA exposure not only reduces NSCs proliferation and neuronal differentiation, but also increases neurodegeneration and autophagy in-vitro and in-vivo. Consequently, altered protein homeostasis might be responsible for BPA induced defects in cognitive function in the rat brain.

Dr KRUSHNA CHANDRA GOUDA

Image	Delegate ID	Theme	Details
	YSC 12413	Swastha Bharat	**Category :** Others **Organisation :** CSIR FOURTH PARADIGM INSTITUTE **Designation :** Principal Scientist

Malaria disease is more endemic in the North East (NE) regions of India and the epidemiology of Malaria is quite unique in the NE states. To understand the epidemiological picture of malaria in the NE India region, in this study long term multi-source climate parameters like rainfall, temperature, humidity, soil moisture etc. are analyzed and the relation of these parameters and malaria incidence and prevalence are quantified at district and state scale using the available epidemiology data. Transmission of Malaria is also quantified as function of the rainfall and temperature spread. Also, a dynamical modelling framework is also presented for the advanced prediction of Malaria spread in the region which can be used in future for Malaria prediction and in turn can help in enabling environment to end malaria transmission.

Ms Poonam Bhatt

Image	Delegate ID	Theme	Details
	YSC 11354	Swastha Bharat	**Category :** Biology **Organisation :** Amity international school **Designation :** TGT - Biology

Development of Herbal Antimicrobial and Biodegradable Sanitary Napkin

Poonam Bhatt
poonam.pb@gmail.com

ABSTRACT

The present paper explores the major issues of menstruation in females and their solution.In rural areas , in low and middle income families accesses to sanitary pads is limited and they use unhygienic material like ashes, mattress stuffing, which may cause infection.In urban areas female used plastic based chemically treated pad, which encourages fungal and bacterial growth ,can leads to cervical cancer, and are non- biodegradable in nature. Considering these issues,we have taken up this study to provide cost effective ,ecofriendly ,pad with antimicrobial properties. To reduce the product cost the top and bottom sheet was developed by cotton non woven fabric "cotton Fusing "to keep the top sheet dry, highly absorbent and very low in cost. Next is green protective sheet of cotton fusing treated with natural herbal extract of Cassia Fistula and Cymbopogon nardus,which has antimicrobial and efficacy against E.coli and Candida albicans ,a leading cause of infections and diseases,avoid odor problem of pad, with balanced pH.The core layer is a naturally available absorbent cotton ,treated with herb extract. Biodegradable polythene was used as barrier layers. Comfort related features of product were assessed through grading done by students, females, showed satisfactory result .The performance of sanitary napkin was assessed by antimicrobial property, highly absorbent, biodegradable, low cost,balance pH and no odor. Such an innovation would lead to the development of best menstrual hygiene performance.

Key Words

Sanitary napkin, Cotton Fusing sheet, Antimicrobial , Herbal, Cassia Fistula , Cymbopogon nards, ,Bio polythene.

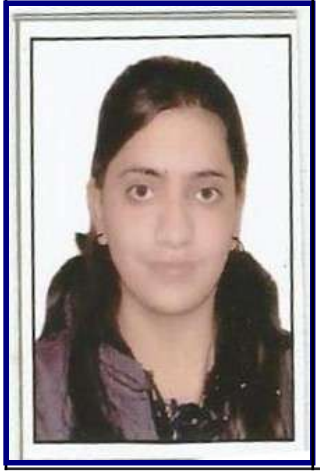
References:

Anuradha.B issue 1 june2017 Development of Eco friendly herbal finished sanitary Napkin.

Chavan R.T ISSN0975-5071 HPTLC fingerprint analysis and antimicrobial activity of leaf extracts of Cassia fistula

THIS IDEA IS REGISTERED FOR PATENT AND PUBLISHED IN GOVERNMENT SITE
APPLICATION NO- 201711046970

Ms RASHMI CHOUBEY

Image	Delegate ID	Theme	Details
	YSC 11590	Swastha Bharat	**Category :** Chemistry **Organisation :** Science College **Designation :** Research Scholar

Advancement in the field of bone tissue engineering, now require materials with good mechanical properties along with biocompatible nature. As per the requirement the fabrication of silver hydroxyapatite (AgHAP) incorporated polystyrene and poly(methyl methacrylate) (PS-PMMA) polymer nanocomposite have been prepared, which also offer good resistivity towards bacterial infection due the presence of silver ions (Ag). Here PMMA was used because of its vast application in the biomedical field, but due to its poor mechanical strength and less ability of bonding, it may be used along with other synthetic or natural polymers. Thus, to enhance the mechanical strength and also to develop biocompatible and non-toxic nature of PMMA, polystyrene was used along with it.

In the present work solvent casting technique was involved for the synthesis of AgHAP loaded PS-PMMA polymer (PS/PMMA/AgHAP) nanocomposite. For this purpose high grade polystyrene and poly(methyl methacrylate) polymers and prepared AgHAP nanoparticles were used. The prepared nanocomposite were investigated by various characterization techniques like Fourier transform infrared spectroscopy, X-ray diffraction spectroscopy, Thermogravimetric (TGA) analysis, atomic force microscopy, Raman analysis, Field Emission Scanning Electron microscopy (FE-SEM), BSA protein adsorption, %haemolysis, antibacterial study and its mechanical study have been done through a Vicker’s hardness tester. The chemical structure of nanocomposite was confirmed by FT-IR, Raman and XRD analysis. Effect of temperature was investigated through TGA analysis. Porosity and morphology of nanocomposite were studied by FE-SEM and AFM analysis. Antibacterial beahviour of nanocomposites clearly indicates that the prepared samples are free from bacterial infection. BSA protein adsorption and %haemolysis test reveals biocompatible behaviour of nanocomposites. Microhardness study of the PS/PMMA/AgHAP nanocomposite shows that the synthesized materials also have good mechanical strength. The prepared antibacterial polymer nanocomposite could be an excellent alternative to orthopaedic implants having wide applications in bone transplantation (autograft or allograft), dental surgery, etc.

Ms Tuba Parveen

Image	Delegate ID	Theme	Details
	YSC 11606	Swastha Bharat	**Category :** Biology **Organisation :** CSIR-Indian Institute of Toxicology Research **Designation :** SRF

Pesticides detected in various environmental matrices are known to cause adverse effects in non-target organisms. Understanding the long term effects of low concentration pesticide exposure is crucial to determine the adverse effects on ecologically important organisms and ecosystem health. The standard protocol involves determining the organism's response, on exposure to different concentrations of pesticides. However, parental exposure to pesticides and its implications for future generations are comparatively less studied especially, because they are time-consuming and expensive. Thus, there is a need to standardize protocol and develop a high throughput screening model for determining the multigenerational toxicity of pesticide. For this, we have employed a free-living and an established eco-toxicity model, the soil nematode Caenorhabditis elegans. The three-day life-cycle of C. elegans allows for rapid assessment of developmental and multi-generation effects which are crucial for large scale screening of toxicants.

In this context, we carried out experiments to determine the multigenerational toxicity of parental exposure to a low concentration of four commonly and extensively used pesticides namely, chlorpyrifos, ethion, cypermethrin and carbendazim. The impact of parental exposure to low concentrations of pesticides on survival, growth, and reproduction were determined in C. elegans over five generations (G0?G5). Chronic low dose pesticide exposure does not affect the survivability of worms, but reproduction was significantly affected in worms exposed to chlorpyrifos and carbendazim by 10% and 14% respectively, while 33% reduction in growth was observed in worms exposed to carbendazim. Trans-generational effects of carbendazim on reproduction were noticed across three generations in C. elegans (G1-G3). Reproduction was significantly reduced by 16%, 15% and 9% in G1, G2 and G3 generations respectively. Therefore, C. elegans is a useful model to determine the multigenerational impact and long term environmental risks of pesticide exposure.

Ms Moumita Das

Image	Delegate ID	Theme	Details
	YSC 11851	Swastha Bharat	**Category :** Others **Organisation :** Vidyasagar University, Midnapore **Designation :** PhD Scholar

Abstract: The term “Swasth” or “well-being” signifies ‘feeling good’ or improvement in quality of life. The concept of ‘well-being’ is not restricted to physical well-being, which is largely sponsored by advanced medical interventions but is associated with the perceived satisfaction of well-being derived from social support networks that measure one’s quality of life. Nevertheless, this perceived satisfaction for the elderly remains barely attainable in contemporary society with the decline in traditional care model and social support structure. The existing literature document a positive relationship between social network structures with that of the well-being of the aged. This study goes further to explore the prominent variables within social support network model that trigger their well-being. The study based in a peri-urban district of Bengal i.e. West Medinipur district. A randomized sample size of 390 elderly of age-group of 60 years and above are chosen from different strata of residential units segregated by multi-stage cluster sampling. The study reveals significant correlation between psychological and physical well-being with that of the existence of satisfied social networks (P

Mr Arunraj K (AIISH, POCD)

Image	Delegate ID	Theme	Details
	YSC 12040	Swastha Bharat	**Category :** Others **Organisation :** AIISH **Designation :** Clinical Assistant (Audiologist)

A communication disorder is any disorder that affects an individual's ability to comprehend, detect, or apply language and speech to engage in discourse effectively with others. Communication disorders occurs due to many conditions such as intellectual disability, hearing impairment, cerebral palsy and/or with no comorbid conditions. These disorders are often undergo unnoticed and untreated causing lifelong disabling conditions in terms of their social, emotional and academic life. Such disorders include speech, language and hearing disorders which can be treated or the complication of the problem can be reduced through early identification and initiation of rehabilitation at the right time. The All India Institute of Speech and Hearing shortly called as AIISH, Mysuru provides extensive service to those with communication disorders with its four major objectives i.e. human resource development, research, clinical services and public education in the field of communication disorders. Health care of the persons with communication disorders has witnessed a paradigm shift, ushering in an era of “client-centric” practices covering the gamut of preventive aspects: primary, secondary and tertiary interventions as well as the diagnostics and therapy services. The innovations continually keep improving by the day, based on the emerging trends and by leveraging the advancements in technology. In keeping with the National Health Mission and towards its motto of “Reaching the unreached”, the AIISH, Mysuru, Karnataka, an autonomous body under the Ministry of Health and Family Welfare, Government of India, reaches out to the distant and remotest localities and settings in the various parts of the country. The star initiatives of the institute include: Establishing of Outreach Service Centres in Primary/Community Health Centres in the villages and sub-divisional taluk level hospitals, Community based services like conducting infant screening programs in hospitals, industrial and school screening, camps for early detection and prevention of communication disorders, making available home training materials in various Indian languages, providing short term training and orientation programs for allied professionals, ASHA and Anganwadi workers and conducting door to door survey. Besides, public lectures in local languages, radio talks, street plays, walkathons, rallies, e-discussion forums and tele-video conferencing are also taken up to promote awareness regarding communication disorders. Free hearing aids, certification of disability to avail government welfare and cochlear implant certification are being provided. Thus, AIISH being a world-class institution meeting the standards to serve the people with communication disorders.

Key words: AIISH, Communication disorders, Community based, Outreach service centres

Ms Nayana PV

Image	Delegate ID	Theme	Details
	YSC 12107	Swastha Bharat	**Category :** Others **Organisation :** All India Insttte of Speech and Heraing **Designation :** Audiologist

Background: Hearing loss is one of the major disabling conditions in the world. New-born hearing screening (NBS) program is a strategy used worldwide to ameliorate disabling hearing loss.
Problem: In India, government has initiated NBS program nationwide through NPPCD and RBSK to emphasize on early identification and rehabilitation. However, such program requires a high follow-up return rate to ensure that no child with suspected hearing loss is left unidentified.
Aim: The aim of this study was to estimate the loss of follow up rate of at-risk newborns in a newborn hearing screening program.
Method: A total of 44761 newborns were screened for hearing loss through newborn hearing program initiated in 30 hospitals across India. Single stage newborn screening protocol was followed where all the newborns had undergone hearing screening using the High risk register, Behavioral Observation Audiometry and Oto-acoustic emission. The babies who were identified as at-risk for hearing loss were referred for detailed diagnostic evaluation within a 01 month for identification of hearing loss. Phone follow up were carried out to those babies who had only high risk factors.
Results: A retrospective analysis was performed to estimate the number of newborns missed at various levels of screening program. Out of 44761 newborns screened, 4715 (10.53%) were found to be at-risk of having hearing loss and were referred for diagnostic evaluation. Among those, only 1137 (24.11%) had undergone diagnostics evaluation in which 327 babies (28.76%) were identified with hearing loss. However, only 154 babies (47.09%) were fitted with listening devices followed by Speech-Language therapy. In phone follow up, a total 1500 babies were called for assessing the developmental milestones in which only 916 (61.07%) had attended the call. Hence, the miss out of babies at each stage were: without screening - 19.3%, follow up for detailed evaluation -75.89%, and at the stage of rehabilitation - 52.91%.
Conclusion: Despite the government emphasize on mandatory hearing screening for all babies to identify and rehabilitate at the earliest, there exist a greater fall in follow up. The results clearly indicated less miss out rate of hearing screening when compared to the huge miss out babies for follow up for detailed examination. The present study emphasize on creating greater awareness and promotion on NBS program to the public and it is the peoples decision which can actually recue the occurrence of disordered through early identification.
Key word: Hearing screening, At-risk babies, Speech-Language therapy, Awareness

Mr Mrinal .

Image	Delegate ID	Theme	Details
	YSC 12184	Swastha Bharat	**Category :** Biology **Organisation :** Central University of Haryana **Designation :** Ph.D Research Scholar

Abstract:
Irrespective of significant advances in nutritional sciences and food fortification initiatives, still India's northern states are mineral malnutrition affected states of our country. India's has the uppermost number of stunted children in the world (46.6 million), about 38.4%, which represents one-third of underdeveloped children under the age of five. Nutritional anemia is the main population health concern in India and it is principally due to the deficiency of iron in diet. Preparation of traditional fermented foods through selective/improved microbial fermentation under controlled conditions, enhances the bioavailability of minerals along with significant reduction of anti-nutritional components of the food. Thus, fermented food based interventions could be an effective way to combat malnutrition in India.

Mr A Sai Rajesh

Image	Delegate ID	Theme	Details
	YSC 12390	Swastha Bharat	**Category :** Biology **Organisation :** Department of Biosciences and Biotechnology, Fakir Mohan University **Designation :** Doctoral Research Scholar

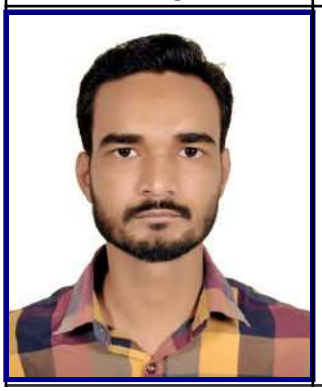
Abnormal haemoglobin related health problems (Hemoglobinopathies) such as Thalassemia and Sickle cell disorders are inherited diseases wide spread throughout the World. According to World Health Organization (WHO) survey, 7% of the Global population carries an abnormal hemoglobin gene. The main types of thalassemia are the alpha and beta thalassemia and among them b thalassemia is the most important and widely spread. Sickle Cell Disease is a common hemoglobinopathy and one of the most prevalent human hereditary disorder with prominent morbidity and mortality. While most of the Western and Southern Districts of Odisha are affected by the sickle cell mutations, the population in the coastal and adjoining districts carry the Thalassemia mutations. The sickle cell disorders in Odisha include the patients with homozygous as well as the heterozygous (trait/carriers) of SS, SD, SE and SH conditions. The Thalassemia condition include a majority of ?-Thalassemia cases, along with ?- Thalassemia. Tribal communities constitute an important segment of the society in India. They are highly vulnerable to hereditary diseases and have a high degree of morbidity and mortality affecting their general health in Odisha. There is a high prevalence of the sickle cell, beta thalassemia and G-6-PD deficiency among different major tribes of Odisha. A lot of information regarding the occurrence of different abnormal hemoglobin disorders, their clinical and hematological impact in Odisha state has been known, but the molecular, biochemical and physiological impact of such health problems among the population of the southern state has not been assessed yet. It is highly necessary to study these aspects so as to plan and execute the prevention and control strategy for such disorder in Odisha

Prof Priyanka Shinde

Image	Delegate ID	Theme	Details
	YSC 10033	Swastha Bharat	**Category :** Software Engineering **Organisation :** Government College Of Engineering, Karad **Designation :** Assistant Professor

In early age, exchange of information, thoughts, data, facts and figures was very much difficult and sluggish. But people in the modern age are lucky to have internet because of which information can be exchanged through various social networking media process to find out useful statistics, formulas, facts, patterns which will be processed for the benefit of human being. Though various fields can be benefited because of social media information exchange, medical domain has vital and wide benefits of this process. Moreover, heart disease has most advantages in medical area. Swasth Bharat is nothing but Self-caring and healthy people in India. Swasth Bharat boost future of India similarly swasth heart boost the human life. WHO recorded that one death in every 34 seconds owed by heart disease hence it is the most import and critical area where research can be performed using social media facts and figures. Facebook is one of the most popular social networking site these days from which collected bulky amount of data and processed with machine learning algorithms like Convolution Neural Network (CNN), Keyword Extraction Algorithm, Natural Language Processing (NLP) which helps to extract useful patterns. By receiving patterns, heart disease patient can be suggested with public policies in the form of diet, precautions, health awareness etc. The research revolves around processing heart disease related data available on social media, it definitely helps people by suggesting valuable precautions and it is said that precaution is always better than cure. Towards the era of Digital Health, outcome and associated suggestions can be publicize through SMS, Email, mobile apps etc. as attentive for heart care.
Swasth Heart Made Swasth Citizen, and Swath Citizen Made Swasth Bharat

Mr Faizan Abul Qais

Image	Delegate ID	Theme	Details
	YSC 10142	Swastha Bharat	**Category :** Biology **Organisation :** Aligarh Muslim University **Designation :** Research Scholar

Plumbago zeylanica is a traditionally used Ayurvedic medicinal plant for a number of ailments including infectious diseases. Considering global threat by AMR (anti-microbial resistance), new approaches to combat MDR (multi-drug resistance) problem is urgently needed. The aim of this study was to assess its biofilm and quorum sensing (QS) inhibitory activities in vitro. Methanolic extracts and its fractions obtained from rhizome and its active compound, plumbagin were evaluated for their anti-QS activities against Chromobacterium violaceum, Pseudomonas aeruginosa, and Serratia marcescens using specific bioassays. The antibiofilm potential was also assessed in microtitre plate assay and on glass coverslip. Biofilms inhibition was further characterized by light microscopy, SEM (scanning electron microscopy), and CLSM (confocal laser scanning microscopy). Further, possible mode of action was determined with the help of in silico molecular modelling approach. QS-mediated violacein production in C. violaceum was reduced by >80% in presence of most active fraction of P. zeylanica (PZHF) (200 µg/ml) and plumbagin (10 µg/ml). PZHF and plumbagin further inhibited QS controlled virulence factors of P. aeruginosa such as pyocyanin, pyoverdin, rhamnolipid production, motility etc, significantly at sub-MICs. Similarly, PZHF and plumbagin showed 59-76% inhibition of biofilm formation in above all test pathogens. Molecular modelling studies of plumbagin with biofilm associated proteins (PilT and PilY1), QS related proteins such as AHL synthases (LasI and EsaI), transcriptional regulatory proteins (LasR and RhlR) etc. showed a remarkable interaction. The findings revealed that active fraction as well as plumbagin showed multiple target to interfere QS-regulated functions in Gram -ve pathogenic bacteria. The active extract and plumbagin proved to attenuate bacterial pathogens for effective control of infections caused by MDR problem. Further investigation on the role of other phytocompounds present in active fraction is under investigation.

Ms Tabassum Zafar

Image	Delegate ID	Theme	Details
	YSC 10152	Swastha Bharat	**Category :** Biology **Organisation :** Barkatullah University **Designation :** M.P. Young Scientist Awardee

Monosodium glutamate induced metabolic and neuroendocrine alterations of female fertility

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Background: Female metabolism is highly responding to diet-associated changes. Monosodium glutamate is a popular flavor enhancer, which is widely used to develop umami taste. Young female generation nowadays deals with more issues related to metabolism and fertility. The present study is an effort to monitor the effect of monosodium glutamate oral consumption on female mice health and obesity.
Method: Adult female Swiss albino mice Mus musculus were divided into two groups named control and treatment. The treated group received 4 g/kg body weight/day dose of monosodium glutamate dissolved in double distilled water by oral gavage. Control group received only double distilled water. After the completion of the experiment, the lee index was calculated to determine the induced level of obesity.
Results: The present study states that monosodium glutamate treated mice were significantly obese than control mice. Obesity is the main cause of the metabolic syndrome, which comes with many associated feminine health issues and ultimately it affects the hormone milieu and fertility outcomes.
Conclusion: Our findings strongly discourage prolonged consumption of high doses of monosodium glutamate to avoid obese young female population.

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Dr ANAND S B

Image	Delegate ID	Theme	Details
	YSC 10169	Swastha Bharat	**Category :** Biology **Organisation :** Madurai Kamaraj University **Designation :** Assistant Professor

Lymphatic filariasis is a parasitic disease caused by nematodes Brugia malayi and Wuchereria bancrofti. These parasites dwell in lymphatic vessels and ultimately lead to chronic lymphedema and elephantiasis. Also in secondary lymphedema, the natural ability of lymphatic vessels to form new lymphatic channels is yet to be studied. Our present study aimed at evaluating the anti-bacterial property of Withania somnifera (ashwagandha), a highly revered ayurvedic plant in India, against Bacillus cereus and Staphylococcus epidermis associated with lymphedema. Our studies also examined the lymphangiogenic potential of ashwagandha in response to adult Brugia worm homogenates in human dermal lymphatic endothelial cells (HDLECs). The purified powder of ashwagandha is well characterized analytically. Ashwagandha shows a clear zone of inhibition in both paper disc and agar diffusion methods, indicating significant anti-bacterial activity against the two bacterial strains. In-vitro lymphangiogenic activity of ashwagandha was evaluated by 2D matrigel using HDLECs in response to whole Brugia worm homogenates (50ng/ml). These studies showed that adult worm homogenate attenuated the tubular network formation. Interestingly addition of ashwagandha restored the endothelial tube formation in a dose dependent manner. To further dissect out the process of bacterial killing and internalization by host cells, we employed HDLEC culture and chemical inhibition approach by blocking the cellular uptake system. Bacterial Infection Assay and Viable cell count analysis were carried out to evaluate the internalization of bacteria into the host cells and the viability of host cells after infection respectively. We will be further performing RT-PCR analysis to confirm the infection-induced gene expression and Confocal Imaging to check the infection-induced morphological changes and cytotoxicity in host cells. Taken together, our results shows ashwagandha efficiently kills bacteria, augments lymphangiogenesis and may supports reduction of swelling in lymphedema . Thus ashwagandha shown to be a novel therapeutic agent in the treatment of filarial induced secondary lymphedema.

Dr Qulsoom Naz

Image	Delegate ID	Theme	Details
	YSC 10191	Swastha Bharat	**Category :** Biology **Organisation :** KGMU **Designation :** Postdoc

Qulsoom Naz1*, N.S.Verma2, Kausar Usman3, A.A.Mehdi4
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2. Prof. Department of Physiology, KGMU, Lucknow.
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4. Prof. & Head Department of Biochemistry, KGMU Lucknow.

EMail ID- qulsoomn9@gmai

Background: Chronically disrupting Circadian rhythm by eating late meals could be a recipe for Hypertension, Diabetes and metabolic trouble.

Objective: The aim of this study is to investigate whether there was a relationship between morningness (70n) intermediate (70n) & eveningness chronotype (35n) in T2DM.
Methods: A total of 175 subjects mixed aged 18 to 60 years were recruited in Clinical OPD of General Medicine, KGMU. We have tested FBG & PP level, lipid profile HbA1c, Insulin, Leptin and Cortisol level, 48 hours ABPM in terms of Hyperbaric & Hypobaric index were also studied.
Result: When we compared these 2 groups, Significant Different parameters found in FBG (P = 0.01) Postprandial (P = 0.03) HbA1c (P = 0.001) TG (P = 0.001), Total Cholesterol (P = 0.01) & VLDL (P = 0.005). It also shows the complete inversion of the cortisol level (171.55 + 77.70). Insulin, IL-1 beta & IL-6 also show significant change in late night eating T2DM Patients. Systolic / Diastolic readings of ABPM shows significant change between morning (124.42 + 19.99 / 76.28 +16.24) and mixed type (147.42 + 21.38 / 86.42 + 17.38) but not from evening type (147.49 + 22.35 / 85.35 + 17.59). And for reliability of sleep by actigraphy shows morning (6:15 + 1:35) & evening type (8:18 + 1:23) take complete sleep but mixed chronotypes total sleep hours (5:10 + 1:05) are very less.
Conclusion: Eveningness & Mixed Chronotype more likely to have Circadian disorders as well as Blood Pressure Variability & poor sleep quality.

Dr Saheem Ahmad

Image	Delegate ID	Theme	Details
	YSC 10206	Swastha Bharat	**Category :** Biology **Organisation :** Integral University **Designation :** Jr. Associate Professor

The interaction between sugar and protein inside the human body is the prime reason to hasten the process of glycation reaction, which is responsible to cause physiological alterations. Over the period of time, the reaction transforms the biological macromolecules into a heterogeneous set of compounds identified as Advanced Glycation End Products (AGEs). Therefore the current study was planned to investigate D-ribose induced damage to the fibrinogen protein in in-vitro system. Fibrinogen was glycated with altered concentrations of D-ribose for varying time periods. The modification of fibrinogen was further confirmed by various physico-chemical techniques, including NBT, HMF assay and carbonyl content. Furthermore, the level of free lysine and free arginine were also detected and molecular docking technique was additionally applied to detect the interacting amino acids residues to D-ribose.

Our result indicates that glycative and oxidative stress were found to be increased in D-ribose induced fibrinogen glycation as compared to native conformer. The amount of ketoamine, carbonyl and HMF content were found to be augmented with increasing concentration of D-ribose. The protein aggregation also enhanced but the free lysine and free arginine contents were found to be decreased in glycated analogue of fibrinogen.

Dr Sangeeta Singh

Image	Delegate ID	Theme	Details
	YSC 10220	Swastha Bharat	**Category :** Biology **Organisation :** King George's Medical University, Lucknow **Designation :** UGC-Women PDF

Sangeeta Singh*, Satyendra Kumar Sonkar#, Gyanendra Kumar Sonkar*, Abbas Ali Mahdi*
*Department of Biochemistry, King George's Medical University, Lucknow
#Department of Medicine, King George's Medical University, Lucknow

Abstract:
Diabetes is a systemic disorder; over the course of time it affects almost every vital organ and ranked among the leading causes of mortality. Approximately 20% - 30% of diabetic individuals develop complications in kidney.
Objective: The aim of study is to evaluate DNA methylation status of promoter region in CpG island of TGF?-1 gene and its association with circulatory TGF?-1.
Methods: A total of 98 subjects including 37 T2DM, 22 DN and 39 healthy controls were recruited in study. Circulatory TGF?-1 levels were measured by ELISA and DNA methylation study was performed using methylation specific PCR.
Results: About 32.43% patients with T2DM and 27 .27% patients with DN had tobacco chewing habit. Systolic pressure was found significantly increased in both diseased groups as compared to control (p = 0.006 and 0.001 respectively) while diastolic pressure was significantly increased only in DN group (0.002). HbA1c was significantly decreased in T2DM and DN group while serum creatinine was significantly raised in DN group. Circulatory levels of TGF?-1 were significantly higher with mean value 256.07±62.72 ng/ml in T2DM (p=0.006) and 349.81±76.12 ng/ml in DN (Conclusion: Therefore, methylation status of TGF?-1 gene promoter can be better predictor for progression of nephropathy.

Dr Pavan Pagare

Image	Delegate ID	Theme	Details
	YSC 10264	Swastha Bharat	**Category :** Physics **Organisation :** Yashavantrao Chavan Institute of Science, Satara **Designation :** Research Scholar and lecturer

Abstract:
The Cu2O films were successfully prepared using simple electrodeposition method. The electrodeposition is easily available and cost effective chemical method for the synthesis of thin films. The X-ray diffraction (XRD) properties show polycrystalline nature of electrodeposited Cu2O films. The morphological properties were studied via scanning electron microscopy system. The variation in various parameters during electrodeposition display differences in absorption spectra of Cu2O material. The absorption spectra fluctuate the band gap of Cu2O films. For biosensing properties, glucose display more superior results than other electrolytes. For the glucose sensing properties cyclic voltammetry from scan rates 10 mV/s to 90 mV/s were studied. The current time response display stability of current for constant applied potential within glucose electrolyte. The variation in glucose concentration and current time response within electrolyte of Cu2O electrode show it is promising material for glucose sensing.

Mr Anubhab Laha

Image	Delegate ID	Theme	Details
	YSC 10331	Swastha Bharat	**Category :** Biology **Organisation :** Chandernagore College **Designation :** Assistant Professor

Allergy is an IgE mediated Type-I hypersensitivity reactions against allergens. Allergens are the foreign protein or glycoprotein chemicals that can elicit an allergic response in atopic patients. Depending on the cause of the allergy, the symptoms can vary among different individuals like asthma, rhinitis, red and watery eyes, etc.

The high incidence of allergy in this era has necessitated the development of effective drugs at a fast rate. Cross-reactivity is reported among allergens, that can be utilized to design effective drugs. The homologous structures of the allergens have led to the formation of similar epitopes, leading to the cross-reactivity. Thus, there is a need for the creation of a particular drug that can act against several allergic diseases.

6 pollen allergens, 4 fungal allergens, 5 bacterial allergens, and 13 food allergens were identified from the Allergome database and published literature from PubMed-NCBI. Their sequences were retrieved from Uniprot and EMBOSS Needle was used to estimate the percentage of identity and similarity among the different allergen sequences. The structural similarity between the protein clusters of allergens was calculated from the RMSD value of Open-Source PyMOL v0.99. At last, this RMSD value matrix was considered as the distance matrix and the UPGMA tree was constructed from it using DendroUPGMA.

The structural deviation analysis has revealed close inter-structural relationships among 6 pollen allergens, 4 fungal allergens, 5 bacterial allergens, and 13 food allergens. Though these allergens were reported from different sources, it was interesting to find the sequence and structural similarities among them.

Even though the source of allergens is different, they can share a lot of structural similarity among themselves thereby eliciting cross-reactivity during allergic responses. This information can be utilized in the creation of a single drug that can have the same relieving effect in the majority of the atopic patients.

Dr Namrata Dwivedi

Image	Delegate ID	Theme	Details
	YSC 10447	Swastha Bharat	**Category :** Biology **Organisation :** MGCGV CHITRAKOOT SATNA MADHYA PRADESH **Designation :** Reasearch Scholar

Diabetes mellitus is a known serious problem to the global population due to the alarming diabetic complications it leads to. The current therapeutic options available can be improved for better efficiency and maximum benefits. Combination therapy has been commonly used to improve the efficacy and to minimize the side effects of drugs in current clinical use. The present study aims to assess the interaction between a natural molecule beta-sitosterol with the commercially available oral hypoglycemic drugs metformin in diabetic SBGS cell line. In this study, Firstly we did phytochemical test than we quantify the level of phytochemicals than we measured Antioxidant assay (DPPH, ABTS) and ROS analysis followed by Antidiabetic assay alpha-glucosidase and alpha-amylase assay further on the bases of its good activity we performed. The in vitro studies on SBGS cells suggest a positive interaction of beta sitosterol with metformin at specific concentrations as evidenced by glucose uptake. The intestine and pancreatic enzymes, alpha-glucosidase and alpha-amylase expression confirmed the results of the in vitro studies. Both the combinations of metformin with plant extract exhibited potent anti-diabetic effect. The combination of a plant extract with metformin was insulin-dependent (Akt pathway). The overall results suggest that the combination of metformin with plant extract reduce blood glucose level. This combination therapy can be translated for its clinical use as a diabetes management

Ms NEHA SONKER

Image	Delegate ID	Theme	Details
	YSC 10496	Swastha Bharat	**Category :** Chemistry **Organisation :** Govt Model Sciences College **Designation :** Research Scholar

Abstract-In the present study a soya protein iron oxide nanoparticle was prepared (SPIO) core-shell nanoparticles, ability for releasing 5-FU drug in a controllable fashion by regulating the extent of swelling of the nanoparticles. These nanoparticles can be exploited in a variety of biomedical applications such as magnetic resonance imaging contrast enhancement, tissue repair, hyperthermia, drug delivery and in cell separation. For preparing core-shell nanoparticles of iron oxide-soya protein a co-precipitation technique was followed. In brief, an aqueous solution of egg albumin was prepared by dissolving 8.0 g soya protein isolate in 100 mL mixture of N/50 NaOH and paraffin oil (1:1 v/v) with constant stirring for 1h to produce a stable emulsion. Now to this emulsion, a definite amount of iron oxide nanoparticles was added followed by addition of 31.7 mM of glutaraldehyde as a crosslinker. The reaction mixture was gently stirred for 6 h so that the egg albumin macromolecules get coated on the iron oxide (SPCIO) surfaces and are subsequently crosslinked with glutaraldehyde. The FT-IR spectral analysis confirms the crosslinking of glutaraldehyde with SPIO and loading of the drug on to nanoparticles. The TEM analysis shows the regular shape and nano dimension (about 200nm) of the prepared nanoparticles. The negative surface potential gets reduced upon loading of 5-Florouracil drug as evident from the surface charge measurements. The SPIO nanoparticles show biocompatibility which is confirmed by performing in vitro cytotoxicity conducted on L-929 fibroblast cells following the extract method. The synthesis of SPIO nanoparticles by co-precipitation crosslinking method is the main aspect of this study, as the prepared nanoparticles can function as a swelling controlled drug delivery system. The drug 5-Florouracil can be successfully loaded onto nanoparticles and its magnetic and swelling controlled release can be studied.

Mr Akshay Swami

Image	Delegate ID	Theme	Details
	YSC 10608	Swastha Bharat	**Category :** Others **Organisation :** Bengal Homoeopathic Medical Cllege & Hospital, Ismile, Asansol **Designation :** Internee, Junior Doctor

Homoeopathy has the revolutionary capacity to bring a great upliftment in the health indicators of the country. It is an evolutionary medical science of the present and the future. It advocates that a physician is preserver of health and he knows the things that derange health and cause disease and how to remove them from persons in health. According to WHO, Homoeopathy is the world's 2nd largest system of medicine in the world. Mother India is blessed with millions of medicinal plants, herbs and shrubs which makes it a great center for world homoeopathy. Make in India is the revolutionary concept for making India developed in all fields of science, technology, medicine and art. Homoeopathy believes in the concept of dynamic health that means health is an ever changing phenomenon just like the universe which expands every year. It has philosophy of its own and is based on true experiments on healthy human beings so that the true effect of medicine may be known. It asserts that the pathogenetic power of the medicine is also the disease curing power. It cures the sickness of the patient in the rapid, gentle and permanent way as it has action on the root cause of the disease. The medicines are given in minimum doses to prevent unnecessary medicinal aggravation so that the person gets relieved of the signs and symptoms. The doctrine of drug dynamisation is based on scientific calculations. Homoeopathy has a great sphere as preventive and social medicine. The medicines are employed after reaching to the root cause of the disease through case taking and individualizing the patient as there is no surrogacy in homoeopathy.
Therefore, this is the right time for all of us to make India developed in medical field for overall development of the Mother India.

Dr Babita Singh

Image	Delegate ID	Theme	Details
	YSC 10653	Swastha Bharat	**Category :** Biology **Organisation :** Department of Biochemistry, KGMU, Lucknow **Designation :** Postdoc fellow

Effect of Bacopa monnieri (Bramhi) on movement disorder: in-vivo study

Babita Singh1, Shivani Pandey1, Mohd. Rumman1, Rajesh Verma2, Abbas Ali Mahdi1
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Corrosponding Author: Dr. Shivani Pandey, Department of Biochemistry, KGMU, Lucknow-226003.

Background:
Parkinson's disease (PD) is a most common movement disorder, with selective death of dopaminergic neurons in brain. Currently available treatments for PD are aimed at symptom management. The disease has no absolute cure yet; so now treatment requires to slow down disease progression or improving quality of life in PD. In Indian Ayurvedic herbal therapies, Bacopa monnieri (Brahmi) was, and still is, a premier herb to support mental health. The objective of our study was to investigate the protective effects of the Bramhi on dopaminergic neurons against neurodegeneration.
Materials and Methods:
Experimental mice were given 40mg/kg bodyweight BME treatment orally for one month with prior use of 15mg/kg b.w of MPTP for two weeks. After that, behavioral study was performed and assessment of Neuroprotective effect was studied via biochemical analysis, Immunohistochemical parameters & m-RNA expression of neurogenic genes/neuronal transcription factors in the substantia nigra region of brain.
Results:
A significant recovery of spontaneous loco-motor activity and antioxidant activity was found in Brahmi treated group. In MPTP treated mice, number of caspase-3 positive neurons was significantly high as compared to others. MPTP+BME group exhibited a significant decrease in apoptotic neurons when compared to control group (p Conclusion:
Our result exposed the role of Brahmi in dropping the oxidative stress, neurodegeneration and promoting neurogenesis thereby proving its neuroprotective potential. This may be an Ayurvedic Herb in treatment of PD.

Mr Akshay Swami

Image	Delegate ID	Theme	Details
	YSC 10668	Swastha Bharat	**Category :** Others **Organisation :** Bengal Homoeopathic Medical Cllege & Hospital, Ismile, Asansol **Designation :** Internee, Junior Doctor

Homoeopathy has the revolutionary capacity to bring a great upliftment in the health indicators of the country. It is an evolutionary medical science of the present and the future. It advocates that a physician is preserver of health and he knows the things that derange health and cause disease and how to remove them from persons in health. According to WHO, Homoeopathy is the world's 2nd largest system of medicine in the world. Mother India is blessed with millions of medicinal plants, herbs and shrubs which makes it a great center for world homoeopathy. Make in India is the revolutionary concept for making India developed in all fields of science, technology, medicine and art. Homoeopathy believes in the concept of dynamic health that means health is an ever changing phenomenon just like the universe which expands every second. It has philosophy of its own and is based on true experiments on healthy human beings so that the true effect of medicine may be known. It asserts that the pathogenetic power of the medicine is also the disease curing power. It cures the sickness of the patient in the rapid, gentle and permanent way as it has action on the root cause of the disease. The medicines are given in minimum doses to prevent unnecessary medicinal aggravation so that the person gets relieved of the signs and symptoms. The doctrine of drug dynamisation is based on scientific calculations. Homoeopathy has a great sphere as preventive and social medicine. The medicines are employed after reaching to the root cause of the disease through case taking and individualizing the patient as there is no surrogacy in homoeopathy. Therefore, this is the right time for all of us to make India developed in medical field through homoeopathy for overall development of the Mother India.

Prof NEHA KAPOOR

Image	Delegate ID	Theme	Details
	YSC 10732	Swastha Bharat	**Category :** Chemistry **Organisation :** HINDU COLLEGE **Designation :** ASST PROF

The use of diatom biosilica is recommended as protected, stable and cost-effective transporter for water-insoluble medications applied in oral drug delivery system due to its high porosity, large surface area, modifiable surface, and biocompatibility. In the present study, we have envisaged the naturally occurring diatoms Thalassiosira weissflogii and its potential capacity in in vitro drug loading and release profile as Thalassiosira weissflogii is a marine driven diatom with homogenous pore size distribution which can serve as a potential functional drug carrier. Curcumin was utilized as the model drug for the counteractive action and treatment of different ailment since it doesn't cause any harmful effect and is viewed as safe even at high concentration. The experimental results were further characterized using dynamic light scattering, scanning electron microscopy, energy dispersive X-ray spectrometry, zeta potential, and FT-IR. The cell viability assay was carried out using the HeLa cell line and normal cell lines.This work exhibits that the live marine diatoms can be a promising stage for drug delivery application owing to its stability, biocompatibility, cellular uptake, and drug release profiles.

Keyword: Diatoms, Drug Delivery, Thalassiosira, Curcumin, Biocompatible

References: Terracciano M, De Stefano L, Rea I Pharmaceutics. 2018, 10(4), 242

Mr ANAND PRAKASH MAKHANWAL

Image	Delegate ID	Theme	Details
	YSC 10760	Swastha Bharat	**Category :** Energy Engineering **Organisation :** UTTARAKHAND GOV.EDUCTION **Designation :** ASSTT. TEACHER

THIS automatic urinal and save water

Ms SUCHARITA SENGUPTA

Image	Delegate ID	Theme	Details
	YSC 10786	Swastha Bharat	**Category :** Others **Organisation :** INDIAN INSTITUTE OF ENGINEERING SCIENCE AND TECHNOLOGY, SHIBPUR **Designation :** RESEARCH SCHOLAR

Malnutrition is a complex issue for India. About a third of Indians are believed to be malnourished and over forty percent of children receive less food than they should. With over one sixth of the global population residing in India, one third of about two billion people suffering from vitamin and micro-nutrient deficiency are in India. This study is based on the objective of preparing ready to eat protein rich food products from defatted oil-seed flours through extrusion technique, emphasizing on the analysis of certain vital minerals present in them. The resulting products have been successfully produced with high protein, moderate carbohydrate, very low fat and rich in various micro-nutrients. Sensory evaluation and physical assessment in terms of moisture percentage, oil holding capacity, water absorption index, water solubility index, stability determination was examined. Special emphasis was given to the spectrophotometric analysis of iron (Fe), selenium (Se) and copper (Cu). The productivity of the whole process was found to be good. The mineral safety level was well maintained in the samples. The developed extruded food products were rich in sufficient minerals apart from their high protein value, a reason for which they can be consumed by all age groups.

Dr AMITABH SHAD

Image	Delegate ID	Theme	Details
	YSC 10869	Swastha Bharat	**Category :** Biology **Organisation :** EWING CHRISTIAN COLLEGE, Prayagraj, Uttar Pradesh **Designation :** Ass. Professor

A study on the insecticidal activity of the leaf extracts of Tagetus minuta, Callistemon citrinus and Jatropha curcas plants over the Japanese Encephalitis vector, Culex quinquefasciatus.

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Japanese Encephalitis is endemic to large part of Asia and the pacific regions. According to WHO reports, about 3 billion people are at the risk of Japanese encephalitis virus which is rapidly spreading all over the world. About 378 million people have been reported from India of which Uttar Pradesh is highly endemic contributing 52.40 % of the total deaths due to JE. The mosquito, Culex quinquefasciatus Say is responsible for Japanese encephalitis, Filariasis, Chickungunya and other mosquito borne diseases. Cx. quinquefasciatus is strongly anthropophillic, found breeding within the polluted surface water collections in both urban and rural areas. The indiscriminate use of chemical insecticides in mosquito control has led to the contamination of waterbodies and food sources, poisoning of non-target organisms including humans.

Several groups of phytochemicals such as alkaloids, steroids and terpenoids have been reported for their insecticidal activities. In the present investigation, ethanolic leaf extracts of Tagetus minuta, Callistemon citrinus and Jatropha curcas plants were prepared using soxhlet apparatus. Different concentrations of each plant extracts were tested over the larvae of mosquito, Cx. quinquefasciatus. The LC50 values of T. minuta ,C. citrinus, and J. curcas plant extracts were recorded as 0.14, 0.63 and 0.80 respectively. The results of the study revealed that these tested extracts have potential biomolecules of insecticidal property. Hence, these plant extracts may be recommended as highly effective, biodegradable, economical and eco-friendly insecticides in mosquito control.

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2. Mohankumar, T.K.; Shivanna, K.S.; Achuttan, V. J. Arth. Borne. Dis. 2016,10,305-316

Mr SAURABH MITRA

Image	Delegate ID	Theme	Details
	YSC 10877	Swastha Bharat	**Category :** Others **Organisation :** Dr. C. V. RAMAN UNIVERSITY **Designation :** ASSISTANT PROFESSOR

NON-INVASIVE MEDICAL TOOL TO ESTIMATE ANEMIA BASED ON THE CONCEPT OF DIGITAL DATA THROUGH REAL TIME ANALYSIS

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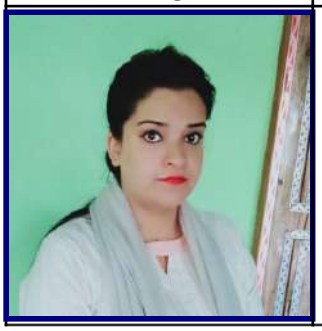
ABSTRACT Medical practice for deciding hemoglobin (Hb) fixation, which is significant for iron deficient patients needing blood transfusion, requires a blood test. In this paper, we propose a non-intrusive way to deal with Hb estimation dependent on the picture investigation of a particular conjunctival area. We will likely build up a gadget that isn't costly and easy to use for evaluating the iron deficient condition; this gadget could be utilized by the doctor to choose whether to take a blood test or even by a patient at home to choose whether to educate a doctor; along these lines, we can abstain from having the patient go every now and again to the research center to take a blood test. This gadget additionally enables us to quickly screen for Anemia in countless people. Here, we detail the model of our gadget and the system for removing key data from the shading estimations of the gained picture. Tests directed on iron deficient and sound people demonstrate a solid connection between the genuine Hb worth gotten through blood examining and the worth evaluated by our gadget. A k-closest neighbor arrangement calculation for evaluating the (non)anemic condition yielded great outcomes and enables specialists to keep away from a critical number of blood tests.

File TERMS Anemia, hemoglobin, conjunctiva, non-intrusive, picture investigation.

References:? Dimauro, Giovanni,Caivano Danilo,Girardi Francesco 2018. "A New Method and a Non-Invasive Device to Estimate Anemia Based on Digital Images of the Conjunctiva." IEEE Access 6 46968-46975.

Ms Gazala Bashir

Image	Delegate ID	Theme	Details
	YSC 10897	Swastha Bharat	**Category :** Biology **Organisation :** Barkatullah University **Designation :** Research Scholar

With the rapid increase in world population, the environmental pollution and toxicity by chemicals has become a challenging concern. Rapid urbanization and industrialization processes led to the incorporation of pollutants such as pesticides, acids and heavy metals in the natural resources like soil, water which affects both on plant and animal kingdom. Heavy metals such as lead, nickel, cadmium, copper, cobalt, chromium and mercury are important environmental pollutants that cause toxic effects to plants; thus, decreasing agricultural productivity and posing dangerous threats to the agro-ecosystems. They act as stress to plants and affect the plant physiology. Nickel (Ni) is reported to be toxic to most plant species affecting amylase, protease and ribonuclease enzyme activity thus retarding seed germination and growth of many crops. In the present study, we have examined the effect of nickel on seed development of soybean (Glycine max). Nickel markedly reduces plant biomass and production of seeds. The highest amount of nickel was noticed in axis and testa. However, nickel amount was lower in seeds for all growth stages. Furthermore, number of seeds per pod was found declined in a response to the exposure to heavy metal nickel. Meanwhile nickel does not show any significant effect on seed mass and there was no apparent effect on its storage.

Ms Archana Chaudhary

Image	Delegate ID	Theme	Details
	YSC 10974	Swastha Bharat	**Category :** Biology **Organisation :** Central University of South Bihar **Designation :** Master in Biotechnology

Telomerase regulation in response of arsenic in liver cancer

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Hepatocellular cancer (HCC) is the fifth most common cancer in the world with only 5-year survival rate of less than 5%, despite of large number of treatment option available all around the world. The incidence of HCC is at least one million new patients per year (Bruix J. et al., 2004). A hallmark of advanced malignancies is the ability for continuous cell divisions that almost universally correlates with the stabilization of telomere length by the reactivation of telomerase. The repression of telomerase and shorter telomeres in humans may have evolved, as an anticancer protection mechanism. Although the understanding about the regulation of telomerase is limited. Arsenic exposure has been associated with various deleterious endpoints including cancers. Although a number of mechanisms has been thought to contribute to arsenic-induced carcinogenesis, but neither of the mechanisms has been clearly understood. The main goal of this project is to analyze the effect of different doses of arsenic alone or in combination with selected natural compounds on cellular cytotoxicity as well as telomerase expression at different time interval. We found that, arsenic treatment resulted in cell death with its increase dosses(i.e 10µM) but at its lower dose (i.e 4µM) along with natural counterpart showing a good anti-cancerous effect with least harm on normal liver cells, confirmed by microscopic examination as well as by cytotoxicity assay. Our study depicts that arsenic might exert its effect by modulating Telomerase expression in certain types of cancer. The proposed research may be useful in determining the therapeutic potential of arsenic alone and in combination with natural compounds.

Mr Ratish Chandra Mishra

Image	Delegate ID	Theme	Details
	YSC 11008	Swastha Bharat	**Category :** Biology **Organisation :** Maharishi Dayanand University **Designation :** Research scholar

Abstract: Hair falls increase now a day's among the human population even in the younger age group. Uncontrolled hair fall has been lead to alopecia or baldness. Various hair care product available in the market they make a billion dollars business. Beside they treat the disease they cause harmful side effects like hair dryness, eye irritation, skin inflation and increase resistivity among pathogenic microbial strain. In the present study, we selected fifteen volunteers of the younger age group to check the effect of shirshashan (headstand) against uncontrolled hair fall using the standard method and all necessary precautions were taken. We got amazing results twelve out of fifteen volunteers showed a significant reduction of hair fall within ten-day headstand practices while the rest three volunteers showed a positive result after practice fifteen days. Because of a sedentary lifestyle, a person does not get the required level of oxygen as well as necessary nutrition for functioning brain cells. Headstand provides a proper blood circulation around the brain this may be region behind the controlling hair fall. From the result, we suggest that headstand is an easy, cost-effective, eco-friendly, healthy and natural process to cure hair fall disease.

Ms lopamudra nayak

Image	Delegate ID	Theme	Details
	YSC 11012	Swastha Bharat	**Category :** Biology **Organisation :** National Rice research Institute **Designation :** research scholar

Low Phytic acid content can improve iron and zinc bioavailability in rice grain.

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Rice is staple food for millions of people, especially the Asians. Iron (Fe) and Zinc (Zn) are essential micronutrients required for human growth and development, but the rice grain is deficient in Fe and has only moderate amounts of Zn. The bioavailability of these minerals are further impaired by Phytic acid (PA) which chelates and bind cationic minerals in both ruminants and non-ruminants. The present study was aimed at finding the impact of PA on bioavailability of Fe and Zn. Screening of rice genotypes with low PA and high minerals bioavailability may be suitable for people suffering from micronutrient malnutrition. Six rice cultivars with contrasting PA were evaluated for total phosphorus (P), PA, Fe and Zn in brown and processed rice. A significant correlation of PA of brown rice with PA of milled rice (r= .69) was observed. PA and Zn content were negatively correlated (r= .55) in brown rice while no significant correlation was found between PA and Zn in milled rice. The rice cultivar Bindli, with lowest PA (0.82 g/100 g) was found to exhibit higher Zn bioavailability while PB267, with highest PA (2.62 g/100 g) showed low Zn and Fe bioavailability. Screening of rice genotypes with low PA and high minerals bioavailability may be suitable for people suffering from micronutrient malnutrition.

Keywords:
Phytic acid, anti-nutritional factor, minerals bioavailability, Iron, Zinc, Rice.

References:

Raboy,V. (2001). Seeds for a better future: ‘low phytate’ grains help to overcome malnutrition and reduce pollution. Trends in Plant Science,6, 458–462.

Mr Prabhat Jatav

Image	Delegate ID	Theme	Details
	YSC 11173	Swastha Bharat	**Category :** Biology **Organisation :** barkatullah university **Designation :** research scholar

Abstract- The Trigonella foenum-graecum (Fenugreek) plant, besides having natural therapeutic values against various diseases and also provides high quality of food for livelihood. It is an ancient plant has been used throughout the world as medicine, food and spice. The present study was carried out with the extraction of dried seed of fenugreek using 70% methanol by Soxhlet apparatus. The phytochemical screening was performed to identify the phyto constituents and revealed the presence of alkaloids, tannins, flavonoid and protein. It is working in different medicinal purposes in traditional systems. Fenugreek seeds contain phenolic compounds, which have antioxidant and antibacterial properties. The in vitro antibacterial activity was performed by well diffusion method. Extract of fenugreek seed revealed an elevated antimicrobial activity against Escherichia coli and Pseudomonas at ideal concentration of the crude extract. Present study suggests that the methanol extract of fenugreek an important scope to develop a novel broad spectrum of antimicrobial herbal formation.

Dr Koushik Biswas

Image	Delegate ID	Theme	Details
	YSC 11227	Swastha Bharat	**Category :** Biology **Organisation :** Visva-Bharati **Designation :** Post Doctoral Fellow

Assessment of heavy metal tolerance (Cu/Zn/Cd) in selected crop species of Vigna for combating stress in crop plants

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Abstract
Effect of heavy metals on physiology and biochemistry of legumes has been well investigated, however, there are only a handful of studies devoted to thoroughly asses the biological potentiality of some well-known Vigna species for combating heavy metal stress. Superiors seed germplasms of Vigna unguiculata (10 accessions), Vigna mungo (11accessions) and Vigna radiata (11accessions) have been selected and collected from three national institutes for growing them under controlled conditions. Morphological screening on total weight, shoot and root length variation observed before and after stress treatment was performed. After getting a correlation between morphological variation and enzymatic activity (Catalase and Superoxide Dismutase activity) of the experimental samples, single genotype of each crop species was considered to be the best potential genotype. Initially, three genotypes of blackgram, one of greengram and three of cowpea were exhibited a satisfactory tolerance level to zinc with > 75 % survival rate. Three proportionate doses range for each heavy metal were finally optimized where the highest value (52.2 µM for Zn, 600 µM for Cu and 100 µM for Cd) can be considered as threshold level. This dose optimization could help the agricultural commodities to set the compatibility level of Vigna genotypes to heavy metal in accordance with the area to be cultivated. Based on the overall result, blackgram genotype (T-9) and cowpea genotype (EC-390204) was considered as the most potent tolerant genotype against Zn, Cu and Cd stresses. This experimental information could help the farmers commodities to cultivate such varieties/ genotypes suitable to such agroclimatic zones where such heavy metal toxicity in soil is a real problem.

Ms Neha Jaiswal

Image	Delegate ID	Theme	Details
	YSC 11180	Swastha Bharat	**Category :** Biology **Organisation :** Pt. JNM Medical College, Raipur (C.G.) **Designation :** M.Sc. (final year)

The comparative analysis of the nutritional values in cooked rice and Chhattisgarh's traditional food Baasi, and to isolate the probiotic microorganism from the Baasi.

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Abstract: The Baasi is overnight fermented cooked rice, very common among Chhattisgarh people. It was observed that the people who use this food on regular way have good digestion system and promotes good health. In our study we found that the Baasi contains high nutritional values as compare to freshly cooked rice. The purpose of our study is to identify the microorganisms which are mainly responsible for the enhancement of nutritional values of this food and to isolate the probiotic microorganism from this traditional food and also to identify the impact of this food on blood sugar, blood pressure and other related effects on people of Chhattisgarhi Baasi food.

Keywords: Baasi, probiotic microorganism, nutritional value.