International Web Conference on

COVID-19 Second Wave: Challenges for Sustainable Development (CCSD 2021)

September 13th, 14th & 15th, 2021

Abstracts Booklet

Jointly organized by

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Asian Biological Research Foundation (ABRF), Prayagraj (U.P.), India
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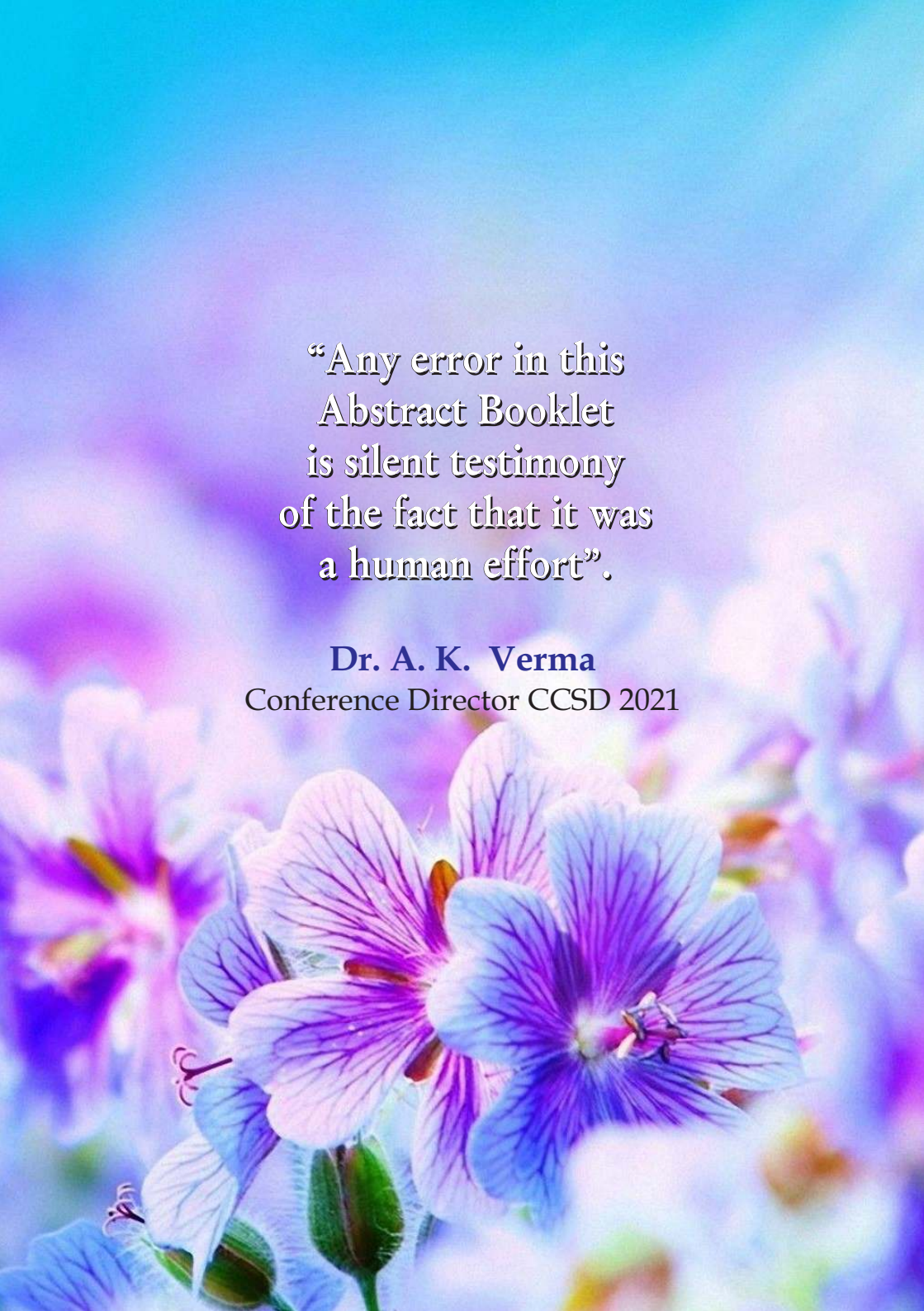

"Any error in this
Abstract Booklet
is silent testimony
of the fact that it was
a human effort".

Dr. A. K. Verma
Conference Director CCSD 2021

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Asian Biological Research Foundation (ABRF), Prayagraj (Uttar Pradesh)

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The ABRF Prayagraj, India is a self-supporting, academic and research associated body. It is basically non-profit and Non-Government Organization:

(1) to provide a common platform for scientists associated with biological sciences to interact with one another for mutual benefit and to enhance the innovative knowledge on the subjects

(2) to encourage, facilitate and perform the activities related to conservation of water, nature and biodiversity

(3) to promote the new scientific knowledge that has emerged from recent advances and to felicitate the persons and organizations internationally for their outstanding services rendered in basic, applied and modern biological sciences including all branches of Botany, Zoology, Agriculture, Veterinary Science, Environmental Science, Molecular Biology, Biotechnology, Biochemistry, Bioinformatics, Microbiology, and so on. The ABRF confers following categories of awards and honours through search and nominations:

1. ABRF Lifetime Achievement Award (above 57 years of age)
2. Hon. Fellowship/Fellowship (FABRF)
3. ABRF Excellence Award for Environmental/Agricultural/Botanical/ Zoological Research
4. ABRF Global Recognition Award
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6. Best Teacher Award for Agricultural/Botanical/Environmental/Zoological Innovations
7. Eminent Ichthyologist/ Environmentalist/ Ecologist/ Entomologist/ Geneticist/ Parasitologist/ Cytologist/ Taxonomist/ Plant Pathologist/ Physiologist/ Biotechnologist/ Anthropologist Award
8. Senior Botanist/ Zoologist/ Biochemist/ Scientist/ Environmentalist Award (above 45 years of age)
9. Innovative Botanist/Zoologist/Scientist/Environmentalist/Agriculture Scientist/ Biotechnologist/ Extension Professional Award
10. Innovative Biologist Award for Wild Life/ Biodiversity Conservation
11. Vigyan Ratna Puraskar (No age bar)
12. Paryavaran Shri Samman (No age bar)

13. Young Botanist/Zoologist/Scientist Award (below 30 years of age; mainly for research scholar)

Note: Only ABRF Life Members are eligible for applying these awards. Each award will consist of a multicoloured award certificate and a high quality memento. ABRF Award selection is strictly based on API and biodata both. For detailed guidelines, please log on to website: http://www.abrf.org.in [email id: secretary.abrf@gmail.com]

Samrat Prithviraj Chauhan Government College, Ajmer (Rajasthan)

SPCGCA was found in year 1836 by the Directors of the East India Company as a school to educate the children of the English officials & aristocratic families. This college was earlier affiliated to Allahabad University but later got changed to University of Agra in 1927. The affiliation again got changed to Maharshi Dayanand Saraswati University after it came to existence in 1987. The college lies over an area of 24.409 acres. SPCGCA is given A grade by NAAC. SPCGCA is located on Beawar Road Ajmer. Kishnangarh airport is nearest airport from institute which is 26 km away. The nearest Railway Station is 1.8 km away. NSS is Youth Programme established under the Ministry of Youth Affairs & Sports, Govt. of India. Students conduct International Yoga Day, Leprosy campaign, mass cleaning , mass tree plantation, Swach Bharat, Literacy campaign, Road traffic awareness, polio vaccine, disaster management & PFMS training. Ajmer is famous for International Pushkar Fair Pushkar & Dargah of Khwaja Mouinuddin Chishti.

Govt. KRG Post Graduate (Autonomous) College Gwalior (M.P.)

To provide value education for academic enhancement of girls for sustainable society, Kamla Raja Girls College was established in 1937. It was elevated to PG level in 1970 and autonomous status was conferred on it in 1995. Standing with majestic grace in the heart of the city, the college is housed in one of the palaces of the erstwhile Scindia dynasty. It has an impressive historic main building alternated by lush green lawns, tall trees and blocks of various faculties constructed lately. It is a unique college of old and new architecture as well as picturesque natural beauty.

The college provides a great diversity in programme options. The UG and PG classes run in 26 and 23 subjects respectively in Arts, Science, Commerce and Home Science faculties. The college makes a continuous internal assessment of its students through

written tests, seminars and symposia under the Autonomous Examination Scheme, followed by the final examination. The College has a rich library with 1.10 lacks books in the Central and Departmental libraries.

Govt. Degree College Doda (J.& K.)

Estd. 1989

Govt. Degree College Doda is situated at Nagri area of District headquarter Doda at a height of 3500 feet from the sea level. Situated on the right side of the mighty river Chinab at a distance of 181 Km. from Jammu (the winter capital of J&K state), at a distance of 222 Km from Srinagar (the summer capital of J&K state) and at a distance of 65 Km from Batote, a town on Jammu – Srinagar National Highway. Degree College Doda has a total Campus area of 56 kanals 05 marlas and 7.5 Sarsaies in its ownership and possession. This area includes the area of road leading to it from the Doda – Ghat road.

Chronologically being third institution of higher learning in Doda District, Degree College Doda was established on 30.03.1989 vide Govt. Order No. 74-HE of 1989 dated: 17.03.1989. The College rendered its services to the students and the society from the building of Govt. Higher Secondary School (Boys) Doda, right from its establishment till 2001-02, when it got shifted to its own present campus.

This College started disseminating the education encompassing the moral values to the society through a total of 97 students enrolled in the1st batch of 1989-90 session in B.A. Part-I only. Right from the Ist session of 1989-90 to the session 2001-02, this College imparted education at undergraduate level in the Arts stream only. The said Arts stream comprised of the subjects viz., English, Political Science, Education, History, English Literature, Economics, Urdu, Hindi, Persian and Mathematics.

During the session 2001-02 the Science stream was also introduced in this college vide Govt. order No. 201-HE of 2001 dated 16.07.2001. The Science stream consists of four subjects namely Physics, Chemistry, Zoology and Botany. Another subject on classical language namely Arabic has been introduced from the session 2005-06. Sociology was introduced from the session 2008-09 and now BCA have also been introduced from session 2012-13. From this session computer application as its one subject is also being introduced.

Digambarrao Bindu ASC College, Bhokar Dist. Nanded (Maharashtra)

Late Digambarrao Bindu Smarak Samiti's Digambarrao Bindu ACS College, Bhokar was established in 1989 by our visionary founding father freedom fighter and social worker honourable late Bhujangrao Patil Kinhalkar. He named it by the name of his ideal and colleague senior freedom fighter late Digambarrao Bindu. Since then the college is operating with high ideals and imparting quality education. The college has played a key role in spreading education in the rural and backward surroundings. Under the leadership of our present president honorable Dr. Madhavrao Patil Kinhalkar (former Minister of the state of Maharashtra) the college has progressed considerably in both infrastructure related and academic aspects. His experience as an administrator and his developmental vision has been the source of inspiration for us. Our vision is to provide value based education and generate human resources equipped with advanced skills. Our mission is to make the students aware about the career opportunities available through the programs offered, to refine personalities of students with positive approach, to reach to students in the area who are eligible but deprived of Higher Education, to create environmental and social awareness by giving exposure to students with various activities. The goal is to provide quality education by offering skill based courses.

In 2013-14 we added science faculty to the previous arts and commerce faculties. Now we also run P. G. department in commerce.We also have Buddha Study Centre, Nehru Study Centre, Gandhi Study Centre. We have run several vocational courses under various UGC schemes from time to time. Besides the curricular activities, the college has always participated actively in various co-curricular, extra-curricular, and sports activities. We have a well equipped sports department with indoor and outdoor games facilities. The SRTM University, Nanded has awarded best magazine prizes to the annual magazine of the college 'Vedan' every year since 2009. The government of Maharashtra has awarded a cash prize of Two Lakh rupees to the college for contribution of our NSS department in BEST practices for women empowerment under the Maharashtra government campaign 'Jagar Janivancha' in 2013-14. The college was re-accredited with 'B' grade by NAAC in 2016. We have been honoured by the Best Principal Award by the SRTM University in the year 2017-18. IN 2018-19 the prestigious Best College Award was given to the college by the SRTM University.

The college has always encouraged research and quality enhancement of the faculties and students. Most of our faculties have research experience, We have successfully organized several University level online workshops, UGC sponsored online national, international level seminars, conferences, faculty development program and several webinars successfully during this Covid situation.

Darsh College of Education, Gohana, Sonepat (Haryana)

Darsh College of Education initially known as Darsh Institute Gohana is run by Darsh Education and Welfare Society Rohtak, Haryana. The Society moved an application to The Department of Higher Education, Chandigarh Haryana and has been received permission/ NOC for setting up Darsh College of Education at Village Kailana Tehsil Gohana, Sonepat, Haryana, dated 23-12-2005 to provide different courses of teacher education from the session 2006-07. At present college is running B.Ed, M.Ed and D.El.Ed.

The college has well equipped library which has access of internet, more than ten thousand books, journals, magazines and newspapers. The college has Psychology, Computer, Mathematics, Social Science, Language and Art and Craft Laboratories and the college has also sports facilities with sufficient play-ground.

Glocal Environment & Social Association (GESA), New Delhi

In order to serve a bit the Nature and Society for better future, the Glocal Environment & Social Association (GESA) is constituted. Its headquarter is located in New Delhi. Its main aim is to develop and promote 'global thought and local action' ideology to save the nature. It organizes the seminars; workshops etc. to aware and educate the people on blazing environmental and social issues. The GESA felicitates the persons and organizations for their outstanding services rendered in various fields of agriculture, arts, biodiversity conservation, commerce, culture, education, environment, healthcare, humanities, literature, mass communication, music, patriotism, peace and harmony, science, sports, technological innovations and other social services. The GESA confers following categories of awards and honours to its members:

1. Lifetime Achievement Award (Above 55 years of age)
2. Hon. Fellowship/ Fellowship (FGESA)

3. Dr. APJ Abdul Kalam Green Environment Promotion Award
4. Dr. Sarvepalli Radhakrishnan Education Promotion Award
5. Chaudhary Charan Singh Award for Agricultural Innovations
6. Sardar Patel Glocal Award for Social Awareness
7. Lal Bahadur Shastri Glocal Award for Biodiversity
8. Senior Scientist Award (Above 40 years of age)
9. Best Faculty Award for Teaching/Research Innovations
10. Distinguished Service Award / Distinguished Teacher Award (Crop, Plant Protection, Horticulture, Fisheries, Home Science, Social Science, Animal Science, Life Science etc.)
11. Innovative Educationist Award/ Agriculture Extensionist Award
12. Teacher of the Year / Extension Professional of the Year / Doctor of the Year Award
13. Technological Innovations Award
14. Paryavaran Ratna Puraskar
15. Vigyan Bhushan Puraskar
16. Sahitya Shri Samman
17. Young Scientist/Young Researcher Award (Below 35 years of age)

Note: Life Membership of GESA is mandatory for above awards. Each awardee receives an angavastram, a potted plant, a multicoloured & delightful award certificate and a high quality entrancing memento during its annual session or conference. GESA Award selection is mainly based on applicant's biodata. For detailed guidelines, please log on to website: http://www.gesa.org.in [Email id: president.gesa@gmail.com]

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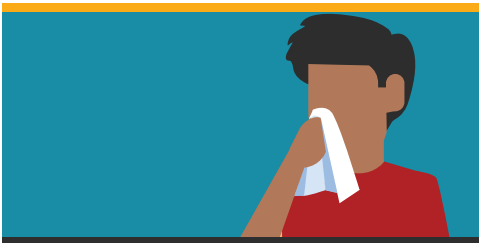
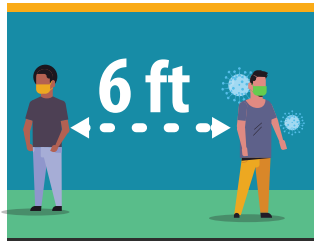
STOP THE SPREAD OF GERMS | COVID-19 |

Get a COVID-19 vaccine.

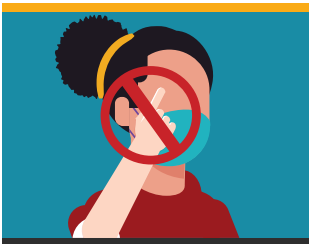


Cover your cough or sneeze with a tissue, then throw the tissue in the trash and wash your hands.



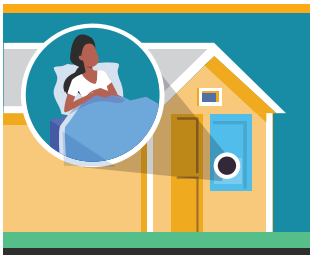
Stay at least 6 feet (about 2 arm lengths) from other people.

When in public, wear a mask over your nose and mouth.



Do not touch your eyes, nose, and mouth.

Clean and disinfect frequently touched objects and surfaces.



Stay home when you are sick, except to get medical care.

Wash your hands often with soap and water for at least 20 seconds.

ABSTRACTS

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Abstract No. 1

COVID-19 SECOND WAVE: CHALLENGES FOR SUSTAINABLE DEVELOPMENT

Ashok Kumar Verma

Department of Zoology
Government Post Graduate College Saidabad, Prayagraj (U.P.)

ABSTRACT

The COVID-19 outbreak is a global multidimensional crisis. Social, economic, education and public health have shown a steep drop during its first wave that become more severe during its second wave and is predicted to continue the same considerably in the near future to a great extent on a long-term basis. COVID-19 tells us that scientific cooperation is a key when dealing with global public health and socio-economic issues. A continued education must be ensured when so many children today cannot go to school. Education is one of the biggest casualties in fight against the pandemic all over the world especially in developing countries. The immediate and long term consequences of school closures will inevitably further exacerbate inequalities and disparities in the education sector across the globe.An inadequate availability of testing kits and other Personal Protective Equipment (PPE), improper training of healthcare workers, lack of appropriate facilities for the treatment of COVID-19 infected patients, are all factors that we are facing. The scientists, researchers, academicians and policy makers, all are doing well in order to cope and minimize the effect of pandemicsecond wave. We have to prepare for its third wave. The COVID-19 second wave has many challenges almost in each and every sector including tourism, aviation, transport, education, health, economy, employment, industries, environment, and societyand so on. All these are challenges before us and humanity for sustainable development during COVID-19 pandemic second wave.

Abstract No. 2

EVALUATION OF DEFATTED BLACK SOLDIER FLY (HERMETIA ILLUCENS) LARVAE (BSFL) MEAL ON GROWTH, DIGESTIVE ENZYME, AND IMMUNE RELATED GENE EXPRESSION OF RAINBOW TROUT (ONCORHYNCHUS MYKISS)

Shyam Narayan Labh

Department of Zoology
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ABSTRACT

A 90-days feeding trial was carried out to estimate the effects of fish meal replacement by defatted black soldier fly larvae meal (BSFL) on growth performance, digestive enzyme activities, and immune related gene expression of juveniles' rainbow trout (Oncorhynchus mykiss) (initial mean body weight, 34.78 g). Five isonitrogenous. (32% crude protein) diets were formulated by replacing D1 (0%), D2 (25%), D3 (50%), D4 (75%) and D5 (100%) fish meal (FM) protein with graded BSFL meal. Each diet was randomly assigned to triplicate groups of 20 fish per aquarium. Fish were fed three times daily to apparent satiation. The results showed that the growth performance in five groups were different ($P > 0.05$) significantly. The D3 diet showed the highest weight gain and SGR with a mean and standard deviation of 1552.41 ± 81.67 % and 1.73 ± 0.03 %, respectively. With increasing dietary BSFL level, the activity of the SOD and CAT significantly increased. No significant differences in the activity of intestinal protease and lipase were obser ved among dietary groups ($P > 0.05$). Subsequently, real-time PCR was employed to determine the mRNA levels of IL-8, IL-10 and TNF-α in the head kidney and significantly highest ($p < 0.05$) in the D3 diet. In conclusion the study demonstrates that 50% of dietary FM protein replaced with BSFLM is suitable for better fish growth.

Abstract No. 3

IMPACT OF COVID-19 SECOND WAVE ON INDIGENOUS AND TRIBAL PEOPLES OF BANGLADESH

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ABSTRACT

There are over fifty indigenous communities living in different parts of Bangladesh. They spread in the delta region of the country as well as in the south-eastern part of the country known as Chittagong Hill Tracts. These diverse communities have their distinct language, culture and heritage and only constitute approximately 1-2 percent of the total population of the country. Several socio-economic indicators such as health, education, household-level income, food consumption, participation and women's empowerment remain below the national average for indigenous people. The property rate among indigenous people is much higher than the national average of 20.50 percent. The property rate among the indigenous peoples in the plains is nearly 80 percent whereas, in the Chittagong Hill Tract, it is around 65 percent. Soon after the government declared a country-wide lock down to prevent the spread of second webCOVID 19, the immediate socio-economic impacts of the pandemic hit the indigenous communities. The impact of the pandemic on indigenous communities, thousand of ready-mate garments worker and beauty parlour workers have lost their jobs, agricultural production has been hampered, small enterprises are struggling to survive, regular health services and education facilities have been disrupted, violation of indigenous people's human rights has been on the rise and most alarmingly, indigenous communities are faced with a severe food insecurity. The Hajong families of Durgapur, Netrokona reported having to cut down on the number of meals eaten per day to only one. Many indigenous migrant workers who have returned home are now staying at their village without any income and are in desperate need of employment opportunities for their survival. The government take measures to raise awareness regarding the COVID19 pandemic has been successful but the crises regarding food shortage, healthcare preparedness and overall social protection of the vulnerable indigenous communities has been inadequate.

Abstract No. 4

AVOIDANCE AND MANAGEMENT OF FISH DISEASES BY USING FLOWERS AS THE SUPPLEMENT MEDICINE IN AQUACULTURE

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ABSTRACT

The intensive use of synthetic drugs presents numerous disadvantages, for both the environment and health. Intensive use of antibiotics has resulted in accumulation in muscle of commercialized animals and the development of resistant bacteria strains. Also, the use of antiparasitic drugs like trichlorfon or praziquantel in bath treatments is hazardous for animals and the environment and can also result in the development of resistance. Vaccines, considered to be the most effective method to prevent disease outbreaks in aquaculture, are too expensive for widespread use by fish producers and since it is extremely difficult to develop multiple strain vaccines, most vaccines are only effective against one type of pathogen. Figure Conceptual design to think of fish health

For several centuries, medical practitioners have long acknowledged the therapeutic properties of certain flowers. More than just spanning time, this knowledge also spans many cultures around the world. One of the greatest advantages is that flowers and plants offer completely natural medicinal properties, often without the scary side effects that modern pills and medications bring on. Furthermore, remedies made from flowers can be much cheaper than drugs marketed by pharmaceutical companies. Medicinal plants can therefore provide a cheaper and more sustainable alternative to chemotherapy in aquaculture, since they have been reported to display numerous bioactivity such as antistress, immunostimulant and antiparasitic. Thus, alternative solutions should maximize fish immunity and fitness as a strategy to face pathogen infections.

Abstract No. 5

MONOCLONAL ANTIBODIES LIMIT SARS-COV-2 REPLICATION AND ASSOCIATED INFLUX OF CD4 T CELL EFFECTORS INTO CEREBROSPINAL FLUID

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ABSTRACT

Anti-viral monoclonal antibody (mAb) treatments are an important tool for providing immediate but short-term immunity from COVID-19 in high-risk populations such as aged and diabetic individuals, however, data on their efficacy in these populations is limited. We demonstrate that prophylactic mAb treatment prevented viral replication specifically in the upper respiratory tract in aged, type 2 diabetic rhesus macaques. While activation of innate inflammatory pathways was observed, mAb infusion dramatically curtailed SARS-CoV-2-mediated stimulation of interferon-induced chemokines and T cell activation reducing effector T cell differentiation within the draining mediastinal lymph nodes resulting in significantly reduced effector T cells in the spleen and blood. mAb infusion significantly dampened the greater than three-fold increase in SARS-CoV-2 induced effector CD4 T cell influx into the cerebrospinal fluid. Our data indicate that neutralizing mAbs administered preventatively to high-risk populations may mitigate the adverse inflammatory consequences of SARS-CoV-2 exposure.

Abstract No. 6

MANAGEMENT OF POST-ACUTE COVID-19 SYNDROME AMONG SYMPTOMATIC COVID-19 PATIENTS IN PRIMARY CARE

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ABSTRACT

The outbreak of corona virus has disrupted the normal life all over the world. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) responsible for the coronavirus disease 2019 (COVID-19) pandemic has resulted in global healthcare crises and strained health resources. Clinical reports suggest that there are increasing cases of patients with persistent and prolonged effects af ter acute COVID-19. Post-acute covid-19 is recognized as a multisystem disease with persistent symptoms and long-term complications. Therefore, it is high time to understand the healthcare issues surrounding the population of patients recovering from COVID-19. Additionally it is important to contribute to the recognition of post-acute COVID-19 symptoms and management of those patients who have a delayed recovery from an episode of COVID-19.Broadly, such patients can be divided into two categories, those who may have serious sequelae (such as thromboembolic complications) and those with a non-specific clinical picture, often dominated by fatigue and breathlessness.The present work provides a comprehensive review of the current literature from different peer-reviewed journals from all over the world on post-acute COVID-19 syndrome, its pathophysiology and its organ-specific sequelae.Moreover, the multidisciplinary care of COVID-19 survivors by specialized rehabilitation is discussed here and a framework is proposed for the identification of those at high risk for post-acute COVID-19 and their coordinated management through dedicated COVID-19 clinics.

Abstract No. 7

CHALLENGES IN EDUCATION SECTOR DURING PANDEMIC PERIOD

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ABSTRACT

We have come across one of the most daunting problems of the modern times, which is, educational crisis. Due to COVID-19 pandemic, more than 2 billion children and youth are out of educational institutes in the world. One of the many challenges faced by the students due to COVID-19 is loss of learning. Distance learning has been a failure throughout this period, due to the fact that the the educators are unsupported and they lack the practical experience of teaching online through technology. On the other hand, not all students have the technology infrastructure at home to support their ongoing learning. Many of them are economically backward and find it difficult to suppor t their education without inter net or a learning tablet. We try to solve the aforementioned challenges in this paper.

Abstract No. 8

IMPACTS OF THE COVID-19 PANDEMIC ON BIODIVERSITY CONSERVATION

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ABSTRACT

The COVID-19 pandemic is impacting all parts of human society. Like everyone else, conservation biologists are concerned first with how the pandemic will affect their families, friends, and people around the world. But we also have a duty to think about how it will impact the world's biodiversity and our ability to protect it, as well as how it might affect the training and careers of conservation researchers and practitioners. Globally, the Covid-19 pandemic affected the environment, placing a strain on the economy and all parts of human society. The effects of Covid-19 are inevitable, as there is a reduction in human pressures on the natural ecosystem because of the lockdown of social and economic activities. At present, essential conservation work (protected area/national park staff still patrol and guard vulnerable species and landscapes) is still ongoing across the globe with the accruing positive effects of the pandemic—reduced air/water pollution, short-term disruption in wildlife trafficking and ecosystem restoration. Despite this, prevailing problems such as indiscriminate exploitation of wildlife resources, tourism revenue loss, staff absenteeism/poor performance, increased human dependence on natural resources, disruptions of field/research work, and species monitoring would persist. The Covid-19 pandemic will affect conservation program funding in most countries. Our world is changing, and the conservation community must be ready to respond appropriately.

Abstract No. 9

IMPACT OF COVID – 19 ON ENVIRONMENT

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ABSTRACT

The COVID – 19 pandemic affected many people in its both first and second wave. Now a days, human civilization is passing through the most critical juncture of this millennium .Its existence is being challenged by the emergence of COVID -19. Its second wave was more hazardous in which many people lost their lives. COVID -19 presents an unprecedented challenge to public health, food systems, economic and social disruption and also environment in diverse ways. The COVID -19 pandemic and resulting restrictions, imposed to fight the spread of disease, have provided some short term positive but long term negative impacts on environment. The positive impact includes reduced air, water and noise pollution, better growth of vegetation, etc. The negative impacts are difficult waste management, increased organic and non-recyclable waste. The drastically increasing amount of domestic and medical waste is one of the key negative outcomes of COVID – 19. Increased biomedical waste generation is a major threat to public health and environment. Used masks, gloves, PPE kits, face shields and tissues when discarded untreated, pose a serious negative effect on environment. Increased online shopping for home delivery, ultimately increase the amount of household waste from shipped package materials. Huge amount of disinfectants applied on roads, commercial and residential areas affects the quality of environment. We don't know, when we will get rid from COVID -19, so this is the right time to make collective efforts and strategies for environmental sustainability. To achieve this, sustainable industrialization, proper waste management, waste water treatment, biomedical waste management and promoting sustainable livelihood is must.

Abstract No. 10

COVID 19 PANDEMIC: NEW CHALLENGES FOR SUSTAINABLE DEVELOPMENT IN DEVELOPING COUNTRIES

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ABSTRACT

WHO released a pneumonia outbreak of unknown cause on January 5, 2020 (WHO,2020 a). On February 11, 2020 WHO named the disease COVID-19 (formerly known as the "2019Novel Coronavirus"), which is caused by a coronavirus. Coronaviridae Study Group (CSG) of the International Committee on Taxonomy of Viruses (ICTV) named it SARSCoV-2 on February 11, 2020 and recognized this virus as a sister clade to Severe acute respiratory syndrome coronaviruses (SARS-CoVs). COVID-19 disease has spread over 219 countries and territories, infected more than 126,852,304 people, and caused at least 2,782,183 deaths as of March 27, 2021.The pathway to sustainable development is governed by six major transformations: the digital revolution; human capacity and demography; consumption and production; decarbonization and energy; food, biosphere and water; and smart cities. The global COVID-19 pandemic is a setback for sustainable development and compromise the world commitment to the 2030 Agenda for Sustainable Development. The pandemic has impacted in both positive and negative ways to all the four dimensions of sustainable development: economic, social, education and environmental. Countries which have successfully navigated the crisis have generally implemented policies which will accelerate these transformations in the direction of sustainability, while countries which have failed to rise to the challenge have reinforced patterns which will make sustainable development harder to achieve in the future. The highest priority of every government must remain the suppression of the pandemic, through non-pharmaceutical interventions and global access to vaccines. There can be no sustainable development and economic recovery while the pandemic is raging.Thus, the major problem in all the countries especially in developing country how to achieve their Sustainable Development Goals (SDGs) in the present pandemic situation.

Abstract No. 11

THE PANDEMIC COVID-19 AND ITS IMPACT ON EDUCATION

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ABSTRACT

The World Health Organization declared COVID-19 a Pandemic and this deadly virus disrupted our public life across the whole world. In the middle of March 2021, the second wave started and on April 09 the highest numbers of cases have been identified in India. During this time several countries globally enforced the temporary closure or lockdown of all non-essential shops and services besides supermarket and pharmacies. In most of the countries the workers with a high risk of infection are asked to work from home as most of the places were under lockdown. The COVID-19 has resulted in school/college shut all across the globe and as schools/colleges are closed children are out of the classroom. To keep the children learning many countries has implemented remote education programme and many are exploring alternative ways to provide continues education using technologies such as Internet, T.V and Radio. The Ministry of Human Resource Development (HRD) on March 21,2020, shared various free Digital e-Learning platforms for students to capitalize on to continue their learning during this COVID-19 based school/college closures. Education sector is fighting to survive the crises due to pandemic. This paper highlights few positive and negative impact of COVID-19 on Education and gives some fruitful suggestions for Educational activities during the pandemic situation.

Abstract No. 12

ZINC DEFICIENCY AND COVID 19 SEVERITIES

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ABSTRACT

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is a novel strain of RNA virus that has emerged as a deadly virus resulting in a Global pandemic i. e. COVID- 19. Symptoms of COVID-19 are fever, non-productive cough, myalgia, and fatigue. It can have a variety of outcomes, from asymptomatic to mild symptoms and severe disease pathologies such as pneumonia and fatal acute respiratory distress disease (ARDS). SARS-CoV-2 virus binds to ACE2 receptors of human alveolar epithelial cells and activate the host immune systems. Hygiene,social distancing and wearing masks are the best preventive approaches to reduce the CoV-2 infection, as no cure for COVID 19 are approved so far. Since the surge of COVID-19, several reports have highlighted the importance of micronutrient supplementation such as zinc in COVID-19 treatment. In present study, authors have summarized the gist of published articles and tried to evaluate the role of zinc in prevention and treatment of COVID- 19.Zinc is a trace element with potent immunoregulatory function, antiviral properties, and plays essential roles in maintaining several biological processes. Zinc levels affect both innate and adaptive immunity. The recommended daily intake of zinc ranges between 3 mg and 16 mg. Its deficiency may be either due to low zinc intake of or due to malabsorbtion. Zinc deficiency increases the risk of infections and secondary complications and delayed recovery. Zinc is a cofactor in at least 200 immunomodulatory and antioxidant reactions. Its supplementation in COVID-19 patients limits the disease. Zinc has anti-inflammatory activity and it inhibits NF-KB signaling and regulates T cell function to limit the cytokine storm. However, its deficiency associated with increased levels of proinflammatory molecules (IL6), higher levels of reactive oxygen species (ROS). Critical COVID-19 patients have high level of interleukin (IL)-6, which is a critical proinflammatory mediator involved in respiratory failure, shock and multi-organ dysfunction, and elevated levels of IL-6 and is associated with higher mortality. Zinc supplementation in COVID-19 reduces viral replication, preserves antiviral immunity, improves the mucociliary clearance, strengthens the integrity of the epithelium, decrease the risk of hyper-inflammation, supports anti-oxidative effects and thus reduces lung damage and minimized secondary infections. Supplementation of zinc has a beneficial effect, potentially reducing SARS-CoV-2 viral load and length of hospitalization.

Abstract No. 13

IMPORTANCE OF SMALL SCALE FAMILY FARMING FOR SUSTAINING NUTRITIONAL SECURITY UNDER PANDEMIC SITUATION

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ABSTRACT

Family farms are the small scale farms that are managed and operated by a family and predominantly reliant on family labour. In recent years, family farms, have been gaining importance for securing nutrition for a large section of global population through small scale sustainable agricultural production. For achieving the Sustainable Development Goals (2015-2030) as envisaged and adopted by United Nations (UN), the promotion of small scale family farming has been regarded as an important move. Small and marginal farmers are the backbone of Indian Agriculture. According to the 10th Agriculture Census 2015-16, small and marginal farmers in India, accounts for around 86.2% of total farm holding and owns only 47.3% of total crop area of the country. Assam, the second largest and most populous state of NE Region of India, has this unique distinction of having traditionally managed family farms, in almost all rural homesteads. Locally known as *Bari*, this age old family farming system typically includes a combination of different fruit plants, vegetables, plantation crops and livestock and birds like cattle, goat, pig, poultry, duck etc. in addition to a fish crop grown in small pond in the homestead. While the diversified cropping system helps utilization of available land resources while providing required nutrition to farm family, a pond in the homestead acts as the water reserve for the family, harvesting rain water for domestic use, irrigation for crops and raising livestock as well as producing a fish crop. The economy of the state largely depends on agriculture and allied activities. Majority of the farming community are marginal farmers (operational land holdings below 1 ha) and small farmers (operational land holding 1.0-2.0 ha). It has been observed that the traditional homestead family farming played an important role in providing sustenance to the farm family during pandemic lockdown. This indicates the importance of upgrading the small scale family farming as a means of eradication of hunger in the country where around 25% of world's total hungry population lives and where around 40% of children below the age of 5 years are reportedly suffering from malnutrition. Through responsible planning and intervention of science led technologies for efficient utilization of available resources, the traditionally managed family farming system of Assam can be upgraded as a source for securing balanced nutrition for the family during pandemic like situation and promoted as a model for small scale family farming in the country with suitable location specific modifications for sustainable eradication of hunger and poverty specifically under pandemic situation.

Abstract No. 14

COVID-19 AND ITS EFFECTS

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ABSTRACT

The coronavirus (COVID-19) came to light when on December 31, 2019, Chinese government informed the World Health Organization (WHO) of a cluster of cases of a unknown virus in Wuhan city in Hubei province. On January 9, 2020, the WHO issued a statement saying Chinese researchers have made "preliminary determination" of the virus as a novel coronavirus. Since then, more than 43.1Lac deaths have been reported due to coronavirus across the world. There are about 20.4Cr cases have been reported across the world. Coronavirus spread about more than 85 countries, including India. The virus has acquired the ability to spread among humans not in other animals, with cases of human-to-human transmissions being reported first in Vietnam and Germany. Coronaviruses are a large family of viruses, including some that cause the common cold to some that cause major diseases such as the Severe Acute Respiratory Syndrome (SARS) and the Middle East Respiratory Syndrome (MERS).Lockdown due to COVID-19 reduced transport activities which results in less energy consumption and lower oil demand. These changes in transport activities and oil demand exert a significant impact on the environmental quality. NASA (National Aeronautics and Space Administration) and ESA (European Space Agency) released fresh evidence which suggests that environmental quality improved and the emission of NO2 reduced up to 30%. NASA collect the data using OMI (Ozone Monitoring Instruments) on its AURA satellite. While, ESA collect the data through Sentinel-5P satellite using TROPOMI (TROPO spheric Monitoring Instrument). NASA and ESA release satellite images of various countries before and after lockdown.

Abstract No. 15

ANALYSIS OF THE IMPACT OF COVID-19 ON EDUCATION IN INDIA

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ABSTRACT

Covid-19 impact was everywhere, which resulted in the closure of educational institutions globally. Outbreak of COVID-19 has taught human that the change is inevitable. Along with social & economic crisis education is no exception. The lockdowns in response to COVID-19 have interrupted conventional learning. Government has recommended moving to online learning as a stop-gap arrangement to evade any disruptions in academic calendars. While the educational community have made concerted efforts to maintain learning continuity during this period, students have had to rely more on their own resources to continue learning remotely through the Internet, television or radio. In particular, learners in the most marginalized groups, who don't have access to digital learning resources or lack the resilience and engagement to learn on their own, are at risk of falling behind. While the benefits of online learning are manifold, there are still many roadblocks in the way ahead towards making education an entirely digital (online) phenomenon. It is the fact that rural population is not completely equipped with utilities like fast internet, uninterrupted power supply and electronic devices. There have been improvements regarding basic infrastructural facilities but many rural areas in India are still grappling with these challenges to make education completely digital or online. It is imperative to consider the availability of the right devices to every student for accessing digital content. Not a lot of people in rural India have access to personal laptops or computers, and phone screens are not conducive to long learning hours. Also, data packs and their costs can be a big deterrent for learners, especially for live classes. Many students either don't have personal laptops/smartphones or they are available for a limited time. Hence, the learning remains restricted with the limited availability of technological devices. This paper aims to analyze the Impact of COVID-19 on Indian Education System, focusing on education during online teaching and assessment of students getting online classes in this pandemic especially in rural areas.

Abstract No. 16

AN ANALYSIS OF POSSIBLE SOLUTIONS TO THE WASTE DUMPS CREATED BY COVID MASKS AND PPE KITS

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ABSTRACT

Global pandemic has caused a devastation. Lives are lost and even the environment is been polluted at high rates. The PPE (Personal protective Equipment) kits as face masks, gloves, goggles, gowns, and aprons are essential items to help protect individuals from exposure to pathogens and contaminants and for that reason it is been used by everyone, extensively by frontline health and sanitation communities to reduce the chances of contracting the disease. The used PPE kits are highly infectious and becomes a threat to human health, as well as terrestrial, and marine ecosystems, if they are not scientifically handled and disposed. Proper disposal of PPE kits is important to promote environmentally sound management of waste. The present methods available for its disposal are landfill and Incineration. These methods may help but it is not in line with sustainability. On a long run they have depleting effect on the environment. There is a need for the world to move towards sustainable development and achieve sustainability. There are many scientist and environmental enthusiasts who are looking into innovative methods of disposal of these wastes created by the pandemic. This paper aims to analyze possible solutions to the waste dumps created by Covid masks and PPE kits and to make aware to public and the regulatory authority to delineate action steps for safe disposal of PPE kits.

Abstract No. 17

A REVIEW ON ANTIVIRAL HERBAL IMMUNE BOOSTERS TO COMBAT COVID- 19

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ABSTRACT

The outbreak of pandemic led to catastrophic events, as there was little specific treatment known to date for coronavirus. So there is a global need to search for the agents that can act against virus as a precautionary measure which boost immunity during COVID-19. Natural components may also afford protection against COVID-19. They are generally readily available and safer than synthetic agents. The immune system is a complex web of cells, tissues, and organs that provides resistance to infection and toxins. It has been recognized that vitamins, minerals, and other phytonutrients are key players in stimulating the immune system. To combat with this virus Indians used herbs and spices regularly. Survey reveal that, most people are taking Kashaya using ginger, clove, cinnamon, black pepper, tulsi and turmeric as main ingredients which play vital role against SARS-CoV-2. In the current pandemic scenario, precautions and boosting immunity are one of the best choices to get away from COVID-19 infection. As per the survey, we conclude that the uses of spices and herbs played a significant role against viral infections. It is evident that the rate of viral infections decreased significantly due to the use of herbs as a home remedy. This paper summarizes the scientific studies on the antiviral activities of herbs and prospects for future studies along with the survey based analysis.

Abstract No. 18

COVID-19: MITIGATION STRATEGIES AND THEIR IMPLICATIONS FOR THE GLOBAL ENVIRONMENT

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ABSTRACT

The outbreak of COVID-19 has become the most significant global public health emergency to human society in the 21st century. Until now, there has been a lack of effective antiviral medication and vaccines against COVID-19. Various mitigation strategies have been taken to slow down the rapid spread of COVID-19, such as complete or partial lockdown, travel bans, mass gathering restrictions, home quarantines within communities, social distancing measures, personal protective actions, and other non-pharmaceutical interventions (NPIs). These intervention and prevention measures have not only sharply reduced global economic activity, but also have greatly changed patterns of human behavior. Thus, the environmental response to the COVID-19 pandemic can help us to better understand the interplay between human and nature, and has drawn great attention from the academic community and from policy makers. Moreover, a thorough understanding on the environmental consequences of mitigation strategies in communities would assist in preventing and controlling an emerging public health emergency in the future. The COVID-19 pandemic has posed unprecedented challenges for public health, the economy, the environment, and human society. Mitigation measures against COVID-19 have resulted in contaminated aquatic environments owing to the sewage carrying coronaviruses, disinfectants, and antiviral medicines. The sharp increase in the amount of medical and hazardous waste such as masks also threatens local ecosystems during the pandemic. On the other hand, environmental pollution across the world has been greatly mitigated after the outbreak of COVID-19 due to the implementation of lockdown, travel bans, and stay-at-home advice, which has had a positive impact on the global environment despite the economic and social disruptions caused. Based on current knowledge on COVID-19, a second wave of the disease could be highly possible, especially when our society is gradually getting back to normal after the primary attempt to gain control of COVID-19. Nonetheless, the consequence of the long-term battle against COVID has barely been elaborated.

Abstract No. 19

BUTTERFLIES THE PERFECT INDICATORS OF ENVIRONMENTAL HEALTH

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ABSTRACT

Butterflies are the potential umbrella group for biodiversity conservation. They are good subjects for dispersal studies and have enormous ecological importance. After bees, butterflies are the second category of insects which are very specific to their food plants. Some plants are shared by a number of butterflies as food. Use of butterflies as "indicators" is possible because they need three types of vegetation populations for their survival and distribution. This distribution is highly related with the phenological stages of the plants, the three types of plant population categories are larval food plants, nectar plants, and shade plants. Butterflies are the wild indicators of the ecosystem; these insects tell us everything about the healthier ecosystem. These are effective pollinators, butterflies visit the flower to eat nectar and this is mutually beneficial relationship. Some species of butterflies migrate over long distance; carry pollen to be shared across plants which are far apart from one another. These insects also provide food for other organisms, for example; birds, reptiles amphibians and also acts as biological pest control. But the population of these insects decline rapidly due to human activities, habitat destruction, uses of pesticides and unawareness of people about the importance of flying flowers.

Abstract No. 20

THE ENVIRONMENTAL IMPACTS OF THE CORONAVIRUS

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ABSTRACT

In recent months, Covid-19 has caused significant global social and economic distress. Governments and health officials around the world have introduced mandator y preventive measures to combat Covid-19, i.e., hand sanitizers, gloves, and masks, which have contributed to large quantities of medical wastes. Social distancing and mandatory lockdown have also been put in place to protect people from Covid-19. This epidemic has caused severe demographic changes and unemployment, and economic activities have been shut down to save human lives. Transportation and travel industries are most severely hit as global tourism has fallen to almost zero in recent months; as a solution, economic institutes have introduced stimulus packages worth more than $6 trillion. However, restricted economic activities have also contributed towards a cleaner environment. However, environmental changes are not permanent, and the pollution level may rise again in the future. As a result, cur rent research suggests that policymakers must introduce stringent environmental policies to promote clean energy.

Abstract No. 21

HERBAL MEDICINE AND CANCER: SAFETY AND BENEFITS

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ABSTRACT

Cancer can develop anywhere in the body. It starts when cells grow out of control and crowd out normal cells. This makes it hard for your body to work the way it should. Globally cancer is a disease which severely effects the human population. Cancer is a general term applied to abnormal growth of cells that starts to grow and propagate through uncontrolled cell division and gradually expand throughout body and finally lead to death by invading and destroying normal cells. It is a major public health burden worldwide. Plant derived agents are being used for the treatment of cancer. Common treatments such as radiotherapy and chemotherapy can cause some complications. Worldwide effects are ongoing to identif y new anticancer compounds from plants. In recent years owing to the fear of side effects people prefer more and more use of natural plant products for cancer. Medicinal plants are potent natural sources of drugs to treat different human inflammations since ancient time. It will provide a new way to explore the therapeutic value of plants and characterization of biologically active compounds from them that may lead towards developing anticancer drugs and proper treatment of cancer. According to results of this study, herbal extracts have antioxidant compounds that can induce apoptosis and inhibit cell proliferation by the investigated mechanisms. It will be helpful to explore the medicinal value of the plants and for the new drug discovery from them for the researchers and scientists around the globe.

Abstract No. 22

MEDICINAL PLANTS OF INDIA WITH ANTI-DIABETIC POTENTIAL

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ABSTRACT

It is the fact that diabetes can't be cured and it has never been reported that someone had recovered totally from diabetes. WHO has pointed out this prevention of diabetes and its complications is not only a major challenge for the future, but essential if health for all is to attain. Since ancient times, plants have been an exemplary source of medicine. Ayurveda and other Indian literature mention the use of plants in treatment of various human ailments. India has about 45000 plant species and among them, several thousands have been claimed to possess medicinal properties. Research conducted in last few decades on plants mentioned in ancient literature or used traditionally for diabetes have shown anti-diabetic property. Indian plants which are most effective and the most commonly studied in relation to diabetes and their complications are- Allium cepa, Allium sativum, Aloe vera, Cajanuscajan, Cocciniaindica, Caesalpiniabonducella, Ficusbengalenesis, Gymnemasylvestre, Momordicacharantia, Ocimum sanctum, Pterocarpusmarsupium, Swertiachirayita, Syzigiumcumini, Tinosporacordifolia and Trigonellafoenumgraecum. Further, it emphasizes strongly in this regard the optional and rational uses of traditional and natural indigenous medicines.

Abstract No. 23

POISONOUS PLANTS AND THEIR MEDICINAL VALUES

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ABSTRACT

In India use of the different parts of several medicinal plants to cure specific ailments has been in vogue from ancient times. The indigenous system of medicine, namely, Ayurvedic, Siddha, and Unani, have been in existence for several centuries. Some drugs from Ayurveda approaching modern diseases, have already reached the market place. Poisonous medicinal plants are used for various ailments such as Antidiabetic, Anticancer, Antibacterial, Antifungal, and Cytogenetic effect. The review reveals that wide numbers of phytochemical constituents have been isolated from the various medicinal plants which possess activities like diuretic, purgative, laxative, anti-allergic and various other important medicinal properties. There are several species which are poisonous or injurious to human body and can be found in the garden or planted by the forest department as a roadside tree with or without the knowledge about their effects on human body system. Poisoning can be by contact causing skin irritation, ingestion causing internal poisoning, absorption(by the skin) and inhalation (in the respiratory system). Some plants which are considered as harmless are actually not so. Many plants are used in some way or the other in medicines especially in homeopathic pharmacology.

Abstract No. 24

CHALLENGES FACED BY CHRONIC KIDNEY PATIENTS UNDER MAINTENANCE HAEMODYLIASIS DURING COVID PANDEMIC SECOND WAVE

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ABSTRACT

Kidneys that function properly are critical for maintaining good health.CKD (Chronic Kidney Disease) is a condition in which the kidneys are damaged and cannot filter blood as well as they should. Because of this, excess fluid and waste from blood remain in the body and may cause other health problems, such as heart disease and stroke. Dialysis is a treatment for kidney failure that rids your body of unwanted toxins, waste products and excess fluids by filtering your blood. CKD patients undergo 4 hours of Dialysis twice or thrice a week on average for which they need to visit near hospital or medical center.As per the current worldwide scenario Covid 19 Second wave hit hard and its impact is huge on CKD patients as well. As they are already suffering a morbid disease, lower immune response and psychological distress getting in contact with Covid 19 while undergoing dialysis is a huge challenge. This study is aimed to assess challenges faced by patients undergoing maintenance haemodyliasis that are psychological in nature by using General Mental Health Questionnaire and survey related to psychological problems faced by them during Covid 19 second wave.

Abstract No. 25

ASSESSMENT OF CADMIUM BIOACCUMULATION IN EDIBLE FISH FROM THE GOMTI RIVER, INDIA

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ABSTRACT

Among the heavy metals Cadmium (Cd) is considered as one of the most common ubiquitous pollutants in the aquatic environment. Being one of the commonly used metals Cd and its particulates enter the aquatic medium through effluents discharged from various anthropogenic activities, use of chemical fertilizers and different industries like electroplating workshops and batteries manufacturing. Present study deals the assessment of *bioaccumulation* of Cd in edible fish species *(Heteropnuestesfossilisand Channapunctatus*) and water from the Gomti River at Lucknow, India during year 2020-2021. The concentration of Cd was assayed using Atomic Absorption Spectrophotometer. The data obtain after water analysis reflected that the concentration of Cd in surface water is high in summers (summer>winter>monsoon), whereas in sediments it is high in winter season (winter>summer>monsoon). The analysis of Cd in organs of H. *fossilis* was measured in order of gills (83.32ppm)>gonads (16.52ppm) >muscles (5.25ppm)>liver (4.50ppm) and in C. punctatus was measured in order of liver (50.21ppm)>gill (9.95ppm)>gonads (8.66ppm)>muscles (2.47ppm).The bioaccumulation factor of the Cd was computed as in liver (H. fossilis 23.0056; C. *Punctatus*156.0381), gills (H. *fossilis* 337.562; C. Punctatus 40.5345), muscles (H. fossilis 45.7443; C. Punctatus12.3008), and gonads (H. *fossilis* 111.8765; C. *punctatus*…44.9204).Haematological parameters also found to be altered in selected fish species. In conclusion, study revealed the Cd accumulated by the edible fish species in Gomti River might be due to the increase in agricultural and industrial influx water. Study also recommended that continuous monitoring of Cd in water, sediment and aquatic biota of Gomti River should be directed to protection of ecological status of the river and its surrounding area.

Abstract No. 26

PSYCHOLOGICAL IMPACT OF COVID-19 ON COLLEGE GOING STUDENTS

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ABSTRACT

Coronavirus/COVID-19 has been declared as Pandemic by World Health Organisation (WHO) and there is a sense of fear and panic all around the globe. The main objective of the study is to find out the academic burden as well as psychological pressure on students. In order to evaluate the basic psychological response of students during the COVID-19 epidemic, a Google online questionnaire method is preferred to collect the data, this research followed a cross-sectional survey. 200 students were sent the questionnaire and out of them 160 responded. 4 responses were incomplete so they were not included. A total of 156 students from different regions of India were classified as Graduate, Postgraduate PhDs, and Post-doctorate on the basis of education degrees. Using SPSS 21.0, data were analysed. For results, descriptive statistics, means, and frequency distribution were used. It is regarded by the qualitative analysis of the findings gathered from participants that, most of the students felt anxious and pressurised due to the adverse situation of COVID-19. Students were reported to suffer a psychological effect of the epidemic and academic stress, anxiety, and depression.

Abstract No. 27

CHALLENGES IN HIGHER EDUCATION DURING COVID-19 PANDEMIC

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ABSTRACT

Sudden Shift from blackboard to an online learning platform during COVID 19 pandemic was a big challenge for both students and teachers as well. A large population of our country resides in villages where internet facilities are either lacking or very poor. Availability of separate devices to everyone was not possible in many families and procuring it was an extra financial burden on them. Students could not stay focused on their studies as many of them live in small houses and congested areas where there is continuous noise disturbing in their online classes. Poor internet connectivity restricted the proper communication between students and teachers. Sometimes students get themselves connected but at the same time they are busy doing something else. Many times there is only one way of communication, as the teacher is unable to make eye contact with students as their video remains off. Poor infrastructure and inadequate knowledge of digital technology was also a hurdle. Many teachers need to be trained in digital technology so that they become friendly and comfortable in teaching through online mode. Peer Interaction among the students is missing and long hours of continuous sitting facing the mobile or computer screen also having adverse effects on mental and physical health. Even a bigger challenge was to teach practical based subjects through online mode. Besides these challenges teaching online on digital platforms allows teachers to interact with their students up to some extent and ensuring the safety of both.We need to invest in training of teachers to improve their efficiency and develop infrastructure for better connectivity. Online content is accessible across time and space. Course content can be accessed from any place with internet connectivity. Self-paced courses help accommodate the busy schedule of students and professionals. With increasing awareness, acceptability of online classes/ courses and availability of better internet facility at least we continued to learn and now after one and half year of pandemic we are better prepared to take the challenges.

Abstract No. 28

IMPACT OF COVID-19 PANDEMIC SITUATION ON EDUCATION SYSTEM OF INDIA

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ABSTRACT

The corona virus (COVID-19) is a zoonotic disease. Zoonotic diseases are transmitted between animals and humans. Diseases passed from animals to humans are a significant threat to human health. The impact of Covid-19 pandemic situation has changed every sphere of human life including education. Many nations started to declare lock down to stop the spread of the disease. Indian Government ordered a nationwide lockdown on the evening of 24 March 2020 to stop the spread of the disease which has made severe impact on the education system of India. There are 993 universities, 39931 Colleges and 10725 Stand Alone Institutions, listed on their portal have been reported by the Ministry of Human Resource Development, Government of India. After China, India has the second largest school system in the world. Due to Covid-19 both students and teachers are impacted. In many educational institutions in the world are closed and teaching-learning and evaluation procedures have been moved to online. Approximately 320 million learners are affected in India. Both the positive and negative impacts of COVID-19 pandemic situation have been observed on education system of India. This review article aim to discuss about the impact of COVID-19 pandemic on education system of India focusing on education of virtual mode and assessment of students who are taken on line classes from settings at home during this pandemic condition.

Abstract No. 29

IMPACT OF COVID-19 PANDEMIC SITUATION ON EDUCATION SYSTEM OF INDIA

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ABSTRACT

For years, in India, proper biomedical waste (BMW) management according to the r ules was one of the undervalued aspects of health care system. Changes were launched by the Government of India's Ministry of Environment, Forests, and Climate Change, which prescribed standardized categories with colour coding for the classification of various biological waste. The segregation, processing, and disposal of biomedical waste is a serious challenge for health care system in India with an increase rate of 7% annually with an expected number of 775.5 tonnes/d by 2022.Because of personal protective equipment (PPE), face shields, and single-use surgical face masks, nitrile gloves the situation could increase as a result of the coronavirus disease 2019 (COVID-19) pandemic. As the new SARS coronavirus 2 with fomite-borne dissemination, their disposal is of ten being carried on along with the non-infectious household or other waste from residential areas where color-coded bins are difficult to be found. Central Pollution Control Board (CPCB), Ministry of Environment, Forest & Climate has published regulations for the management of waste generated during treatment, diagnosis and quarantine of COVID-19 patients in India. In these guidelines use of double layered bags, compulsory labelling of bags and containers as "COVID-19 waste," regular disinfection of dedicated trolleys, maintaining of separate records of waste generated from COVID-19 centres. Hospitals and related institutions should increase their capacities to mobilize and store thebio medical waste. The use of chemical disinfectant spray, microwave disinfectant technique, incinerationmethods(for solid waste) may be used to disinfect the PPE kits, clothes and larger areas i.e. shopping malls, hospital premises/wards, and isolation centres etc. Yellow colour bags are used for solids , chemicals, beddings, blood and body fluid, red bags are used for gloves and bottles, blue bags are used for broken glassware and metallics waste. The strategy of identify, isolate, disinfect, and safe treatment

Abstract No. 30

SOLID WASTE MANAGEMENT IN INDIA DURING COVID-19

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ABSTRACT

Waste management is crucial to human development and health outcomes, especially during the Covid-19 pandemic. The invaluable ser vice provided by the waste management sector ensures that the huge quantity of waste that poses health risks and intensify the spread of Covid-19 is avoided. The issue of solid waste management became a serious problem in developing countries like India during this pandemic and there is a dire need to handle different types of solid waste especially Biomedical Waste (BMW) emerging from different quarters like health care centres, quarantine centres, and homes which itself has become the source for the spread of this contagious virus. The escalated purchase of single-use products and panic buying has further aggravated the problem and thwarted the efforts towards reducing pollution. The government needs to treat waste management. In this paper, we will discuss briefly the impact of Covid-19 pandemic on waste management by following lockdown and social distancing guidelines and enunciate the challenges and the solution to handle this waste in India before it is disposed of. The government needs to call waste management originating from different quarters as essential public service which will help in mitigating the potential threats of this virus on health and environment.

Abstract No. 31

IMPACT OF COVID-19 ON IMPROVEMENT OF SURFACE WATER QUALITY OF RIVER GANGA AT BUXAR, BIHAR

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ABSTRACT

Due to Novel Corona Virus (Covid-19 Pandemic), all types of industries, vehicles and anthropogenic activities suddenly shut off for months. As a result, the sur face water quality of water bodies greatly reduced in terms of SPM(Suspended Particulate Matter). An investigation was done to find out the surface water quality of river Ganga at Buxar, Bihar. During investigation, the surface water quality of river Ganga was examined at various sites which stretches to a distance of 8 km covering the length of the river from Central Jail, Buxarupto the village Sarimpur. The result conclude that the surface water quality of river Ganga is improved during lock down period. This occurs because of the decreasement in the percentage of SPM. As a result, the pollution level of the water of this river also decreases and hence the water quality of river Ganga become more suitable for the growth of aquatic life at this site.

Abstract No. 32

ENVIRONMENTAL ISSUES IN CURRENT PANDEMIC SITUATION

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ABSTRACT

Corona virus disease 2019 (COVID-19) is a contagious disease caused by severe acute respiratory syndrome corona virus 2 (SARS CoV-2). Since its emergence in Wuhan, China (Asia), in December 2019, the virus has spread to every continent and creates global health crisis and the greatest challenge we have faced since World War Two. Its impact has been broad, affecting general society, economy, culture, ecology, politics, and other areas.

The actions taken to control the spread of the virus and the slowdown of economic activities have significant effects on the environment. Therefore, this study intends to explore the positive and negative environmental impacts of the COVID-19 pandemic. It was observed that during pandemic situation, air quality significantly improves in different cities like New Delhi, which are known to be one of the highly polluted cities with an Air Quality Index (AQI) ranging from 500-600ppb (this range is supposed to be hazardous and causes severe health emergencies) magically swooped down to 50ppb AQI (a greener range with a satisfactory air quality and little risks of air pollution). The reduction of GHGs emission, lessens water pollution and noise, and reduces the pressure on the tourist destinations, which may assist with the restoration or healing of the ecosystem. Not only the air became purer but also the endangered flora and fauna started healing itself back to normal. Clear blue skies and empty roads were the rarest of sites in many cities, since vehicular disruption was halted for several hours rather days. The wildlife also breathed a moment of relief because of the deserted roads and the near-silent ambience all around, as a result of which various wildlife animals were witnessed wandering around in the cities.

In addition, there are also some negative consequences of COVID-19, such as increase of medical waste, huge amount of disinfectants is applied into roads, commercial, and residential areas to exterminate SARS-CoV-2 virus. Chaos and the negative effects of the COVID-19 pandemic may have made a catastrophic future seem less remote and action to prevent it more necessary and reasonable. However, it may also have the opposite effect by having minds focus on more immediate issues of the pandemic rather than ecosystem issues such as deforestation.

Abstract No. 33

IMPACT OF COVID-19 PANDEMIC ON BIODIVERSITY

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ABSTRACT

Human civilization increased pressure on biodiversity, with fast urbanization increased devastating effect on biodiversity. This biodiversity plays vital and crucial role in maintaining environmental balance. As far as freshwater biodiversity concern, it is more fragile than marine one. Freshwater biodiversity is more sensitive and any slight change in environmental parameters has huge effect on freshwater ecosystem. Due to the global crises of SARS COVID-19 pandemic and lockdown coming after it; has enormously changed human lifestyle, still we are not recovered from this trauma. Present investigation deals with the subsequent lockdown and post lockdown effect on freshwater biodiversity due to this COVID-19 pandemic. Yet it is very early to conclude the precise effect of COVID-19 pandemic on freshwater biodiversity still an attempt is made with some finding due to lockdown and industrial shutdown which routinely minimize the stress on bioresources and which must help to flourish the biodiversity to some extent. Ban on human travel, industrial shutdown and lockdown automatically help to reduce the carbon emission in environment, which help to boost the biodiversity.

Abstract No. 34

WASTE MANAGEMENT DURING COVID-19 PANDEMIC

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ABSTRACT

COVID-19 pandemics pose a threat to many facets of human society, including energy and waste management. Because of the COVID-19 pandemic, many supply chains are being disrupted. There is an impediment to business operations, portability and assembling areas due to the spread of COVID-19 pandemics that fundamentally affects waste administration. Waste management is a serious concern for human growth and health outcomes during the COVID-19 pandemics. In the lockdown period, the quantity of waste has increased across countries in the panic of purchasing goods for everyday use but the lockdown period decreases energy usage in the transport sector. Usage of personal protective equipment such as masks, gloves, sanitizers, etc. by common people as well as medical industry employees, banks, daily need stores, waste disposal industries, etc., contributes to another route in the generation of waste. So in this pandemic era, there is a grave need for waste management so that we can reduce the spread of COVID-19 infection. Reducing the human interaction will minimise the transmission chain of viruses across the world. This article focuses on discussion of the impact of COVID-19 on waste generation, recycling and disposal.

Abstract No. 35

HEALTHY FOOD AS IMMUNITY BOOSTER DURING COVID-19

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ABSTRACT

We are living during very difficult times ever since the COVID-19 was declared as a global pandemic. Coronavirus continues to spread its wings with changing for ms and scientists all over the world are grappling with imminent dangers that this lethal virus poses to the society. Several drugs and vaccines have come out which all provide immunity upto a certain extent, but still there is no foolproof guarantee that after getting vaccinated one will not get the infection, impact may be less severe though. It has been widely observed that people suffering from chronic illnesses and with relatively weaker immune system are more prone to COVID-19 infections.

Therefore, having a robust immune system is crucial at this stage so that our body can resist any onslaught by the coronavirus. A proper and healthy diet which includes fresh vegetables, lots of citrus fruits, whole grain foods, dairy products can help to ensure that the body is in the strong possible state to battle with the virus. Numerous patients with mild COVID-19 symptoms who were kept in home isolation were cured by just following a healthy diet routine, though recovery in most cases has largely been reliant on the body's natural defense. Henceforth, eating a healthy diet rich in immunity booster foods is of paramount importance at this juncture while observing all other safety health measures and avoid being exposed to the virus. Further studies are needed to prove the importance of immunity booster food to fight severe attacks of coronavirus.

Abstract No. 36

DELTA VARIANT: ITS TRANSMISSIBILITY AND PREVENTION

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ABSTRACT

Coronaviruses (COVID-19) are a wide range of viruses that causes various transmittable diseases from normal cold to high adverse disease like Severe Acute Respiratory Syndrome (SARS-CoV). Many people suffer from COVID 19 virus will face different type of respiratory problems causes severe diseases. These viruses are zoonotic in nature i.e. transmitted between people and animals. Viruses has one or more number of variants due to their ability of constantly mutating. SARS-CoV-2 variants of the coronavirus are making a great concern in many countries. Several variants such as Alpha, Beta, Gamma and Delta are COVID variants which spread easily among peoples and cause severe infection. Nowadays, among these, Delta variant is a common coronavirus variant in the United states which is highly contagious than prior variants and causes serious disease. In a study, it is found that the viral consignment of Delta variant is around 1000 times more than the original COVID 19 variants among infected people with this variant. This Delta variant has become the major variant in most of the world in a very short period of time. Transmission of Delta variant is mostly occurred in non-vaccinated people at a faster rate than fully vaccinated people. Peoples with lower immune system and weaker are at higher risk of affecting with this variant. Fully vaccinated people may also infect by delta variants and transmits the diseases to others. Those peoples are with symptomatic breakthrough infection. Delta variants also slows down the efficiency of COVID 19 antibodies which is formed due to vaccine. This variant is transmitted at a very faster rate, almost more than twice speed as earlier variants. It is an area of concern that if fully vaccinated people with asymptomatic infections can transmit the diseases to other peoples. Almost similar amount of viral material found in non-vaccinated and fully vaccinated people in case of Delta variants. However, in other variants, amount of viral material was low in infected vaccinated people than non-vaccinated. Vaccines are found highly effective in reducing the transmission of viruses and also against the Delta variant with giving good protection from these severe diseases.

Abstract No. 37

PHYSICAL DISTANCING AND PSYCHOLOGICAL IMPACTS OF COVID-19: CHALLENGES AND ITS RESPONSE

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ABSTRACT

Covid-19 is the major problem in the whole world since last two years that completely shrink the human health as well as world's economy. It is a contagious viral disease caused by SARS-CoV-2 and its first case was found in China in Dec 2019. In the last two years this disease spread in nearly all parts of the world and till today more than 30 million cases are recorded overall. Countries like USA, India and Brazil are major impacted by this disease due to high spreading nature which results in lockdown in all corners of the world. It is transmitted from one person to other person through air via sneezing, coughing etc. which accounts for its high spread nature. Therefore, to control the spread of this disease, not only medical treatment but social awareness is also important among the people. So along with the use of mask and sanitizers, it is also advised to maintain the maximum physical distance from one another so that its transmission can be control. But this creates a problem in a dense city like Delhi, Mumbai and California where people have don't enough space to maintain proper physical distance. Apart from its impact on health and economy, it also affects the psychological thinking of people. During the initial days of lockdown, it helps the people to get some psychological stability because people get some time for their family and loving one, which they can't afford in normal busy schedule, but after some time it starts to affects the people's psychological behavior because they can't go outside and live their normal lives. They have to spend the time inside the house which feels like a bird captured in a cage. Longer lockdown creates frustration, anxiety and tiredness among the people which starts to affects their mental health as well as their social behavior. Student and adult society are most affected by this psychological disturbance because they continue to their normal social life. People start to spend their lot of time at online sites which is also a major reason for their stress.

Abstract No. 38

REVIEW ON THERAPEUTIC POTENTIAL OF MEDICINAL PLANTS AGAINST COVID-19

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ABSTRACT

The whole world is entangled by the coronavirus disease (COVID-19) pandemic caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), people are dying in hundreds every day. Without proper medication, it seems impossible for the bringing this global health crisis to a stop. The purpose of this review article is to highlight the importance of phytochemical compounds that have showed potential against coronaviruses. Some important plants like *Glychirrhiza* spp., *Artemisia annua*,*Lindera aggregate Isatisindigotica,* and *Pelargonium sidoides* are employed against corona virus. Active ingredients (glycyrrhizin, myricetin, emodin, scutellarin, apigenin, luteolin, reserpine, aescin, and betulonic acid) of plants have shown good results against the coronaviruses. Pure chemical compounds (crude extract) isolated from medicinal plants such as *Linderaaggregata, Artemisia annua*, *Astragalusmembranaceus, Cassia alata, Saposhnikoviae divaricate, TinosporacordifoliaEcklonia cava, Gymnemasylvestre, Houttuyniacordata, Lycorisradiata, Mollugocerviana, Pyrrosia lingua* etc. have shown tremendous inhibitory effect against coronavirus. Several molecules, including acacetin, amentoflavone, allicin, blancoxanthone, curcumin, daidzein, diosmin, epigallocatechin-gallate, emodin, hesperidin, herbacetin, hirsutenone, iguesterin,, kaempferol, lycorine, pectolinarin, phloroeckol, silvestrol, tanshinone I, taxifolin, rhoifolin, xanthoangelol E, zingerol etc. isolated from plants could even be potential drug candidates against COVID-19. Chemical obtained from plants have demonstrated activity like viral entry inhibition, inhibition of replication enzymes and virus release blockage against the coronaviruses. Therefore, simultaneously with other drugs tested against COVID-19, plant-based drugs should be included for quick development of COVID-19 treatment.

Abstract No. 39

IMPACT OF COVID-19 PANDEMIC ON EDUCATION SYSTEM

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ABSTRACT

The education system has been adversely affected by the Covid-19 pandemic. Schools, Colleges, Institutions and Universities are shut since more than two years across the world. This closure of the educational institutions affected the students learning in various ways. The largest disruption has been caused due to Covid-19 pandemic in education system which resulted into the unemployment of many teaching faculties. All educational institutions have adopted the online teaching which was a big challenge for the teachers and students. Online teaching affected the students below poverty line most and the teaching faculties who were not skilled in computer technology and software used for online teaching.

Abstract No. 40

HERBAL IMMUNITY BOOSTERS

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ABSTRACT

In the wake of the COVID-19 pandemic, prioritizing public health and taking necessary measures is a crucial step to reduce the exposure to the virus. While masking, disinfecting, and maintaining social distance have been the standard guidelines to fight the virus, boosting immunity is also a priority. Vital essence of all body tissues is called “Ojas.” According to principles of ayur veda, Ojas is believed to be responsible for the overall health, well-being, intelligence, immunity and thought-process of humans. According to the concept of Immunity of the body's resistance is not only important for disease prevention but also for speedy recovery from illness. Herbs are known for their several health benefits. They are anti-oxidants, immunomodulators, anti-microbials, anti-inflammatory, aid in digestion etc. However, one very important function of herbs is they help to cleanse toxins and in-turn help boost our immunity. The aim should be to not only protect oneself against COVID-19 but also maintain a healthy body and mind for overall well-being.

Abstract No. 41

COVID – 19: CHALLENGES AND OPPORTUNITIES FOR HIGHER EDUCATION INSTITUTIONS IN INDIA

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ABSTRACT

The spread of pandemic COVID-19 has drastically disrupted every aspect of human life including education. It has significantly disrupted the education sector which is a critical determinant of a country's economic future. In many educational institutions around the world, campuses are closed and teaching–learning has moved online. It has changed the traditional education system to the modern educational technologies model by switching from face to face teaching to online teaching, wherein teaching and assessments are conducted online. It has created an unprecedented test on education. Internationalization has slowed down considerably. In India, about 32 crore learners stopped to move schools/colleges and all educational activities brought to an end. Despite of all these challenges, the Higher Education Institutions have reacted positively and managed to ensure the continuity of teaching–learning, research and service to the society with some tools and techniques during the pandemic. It is to be noted that COVID-19 has adverse effects on education including, learning disruptions, and decreased access to education and research facilities, job losses and increased student debts are the major issues to be taken care of. With this background, the present paper purports to identify the barriers faced by teachers during online teaching and assessment in different home environment settings in India. This paper will also highlight the major impacts of COVID-19 on institutions of higher learning in India. At the end of the paper, some suggestions are also pointed to carry out educational activities during the pandemic situation more effectively.

Abstract No. 42

COVID-19: OPENING OF EDUCATIONAL INSTITUTIONS AND OUR PREPAREDNESS – AN ANALYSIS WITH RESPECT TO LUCKNOW CITY

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ABSTRACT

For over 18 months the world over all the countries have been experiencing the uncertainty of life due to sudden burst of COVID- 19 pandemic. All the economic and related activities such as production, manufacturing, services, education, businesses, employment and so on almost came to stop. However, the induction of information technology in all spheres have at least helped us out to restart the activities and the most significant use of this technology incorporation was in the field of education to assure teaching learning process do not take a back seat and students do not suffer. With Covid -19 vaccination being promoted and curbing of lockdown curbs which ultimately resulted in almost lifting of lockdown, most of the sectors started moving towards normalization with business activities picking up once again. The most delayed sector in terms of lifting of ban was the education sector which of course involves the most difficult decision as no one can dare to expose our children to high risk of infection. The Government in various states have now decided to open school, colleges and higher education institutions for students with Covid Protocol guidelines with 50 percent strength in one particular shift. The students have been given choices to attend classes in online mode, or offline mode or hybrid mode. We all are expecting that things will sooner be normalised but with the fear of III wave of Covid looming large the future still remains uncertain to conduct of classes on face-to face mode. The paper tries to find out the extent of preparedness the government, schools and colleges have done to ensure the safety of students, to what extent covid protocol being followed, is the school administration strong enough to implement all the guidelines, what are the emergency preparations and first aid facility developed to take care it some unexpected seen emerges, are the parents ready to send the students to school and colleges for offline mode of teaching, also to be seen is the infrastructural adequacy in schools and colleges situated in small towns and rural areas. The paper tries to focus on these related aspects and readiness through conduct of sur vey in the city of Lucknow. Secondary information has also been considered wherever required.

Abstract No. 43

COVID-19 PANDEMIC: EMERGING PERSPECTIVES AND FUTURE TRENDS

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ABSTRACT

Spreading rate of mutated corona virus during second wave was very fast. It affects throughout world directly. Every country has lost its human resources due to which not only the social life but economic conditions are also very badly affected. GDP slows down globally because services related to society was stopped due to lockdown. Now we use the resources so rapidly that may create economic imbalance in future. By following the corona safety measures, we should use innovative technologies in our working style so that we can fulfil the needs of present and future populations.

Abstract No. 44

DISTRIBUTION OF COVID-19 WITH COMORBIDITIES IN COMMUNITY DURING SECOND WAVE IN SANGLI AREA

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ABSTRACT

Coronavirus disease (covid-19) is an infectious disease caused by the SARS-CoV-2 virus. Most of the people infected with the COVID-19 virus experienced mild to moderate to severe respiratory illness. During first wave of Covid-19 it was observed that persons above fifty five years of age and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease and cancer were more likely to develop serious illness. We conducted survey during second wave of Covid-19 between March-2021 to June-2021in Sangli city of Covid-19 patients with comorbidities in different strata such as age, sex, economic state, occupation, hygiene /nutrition & analyzed statistically to evaluate comorbidities associated with severe and fatal cases in these strata. Studies revealed that for the association between severe cases and hypertension, diabetes and respiratory diseases, especially between age group thirty five to fifty five and also in old persons irrespective of occupation & economic state. Hygiene & Nutrition are the impor tant players in susceptibility & post Covid care. By using these evaluation we can manage patients at risk and developing policies and guidelines that will reduce future risk of severe covid-19 disease in Sangli city.

Abstract No. 45

COVID-19 CHALLENGES AND ITS RESPONSE

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ABSTRACT

There is a grade of sundry virus (virus) breed that prompt pestilence influence in mammals and birds. These are RNA viruses. In humans, they are foster by respiratory tract infections, which are mostly within due limits in intensity but sometimes fatal. Diseases of the upper respiratory tract. The corona virus is mainly spread through air droplets fomite when an infected person coughs or sneezes within a range of about 3 ft (0.91 m) to 6 ft (1.8 m). Nearby objects and surfaces also fall, after touching these surfaces or objects, their nose, eyes, or mouth are touched by the hands. In Latin language, "corona" means "crown", and the thorn-like structures surrounding the of the virus have a crown-like shape in the electronic micrograph .WHO named this disease as COVID 19 asper its emergence. The three key things to look for are fever, coughing, and shortness of breath Upper respiratory secretions (specimen from nose or throat should be sent for evaluation. There is no specific treatment (antiviral drug) for infection with this virus. Therefore only supportive treatment can be offered. Paracetamol for fever, anti- allergic, hot saline gargle and steam inhalation (as this virus does not survive up to 35 ° C. Sore throat and antibiotics and other adjunctive therapy for pneumonia IV fluids, oxygen, etc.). The WHO and the Centre for Disease Control (CDC) have stated that the two main groups of individuals who are susceptible for infection are either elderly or having some of the health conditions (diabetes, heart disease, lung disease etc.) .People with serious indications need to be admitted in hospital .The antiviral medication called remdesivir is the first medication to get FDA approval for treatment of patients hospitalized with COVID-19. Several experimental trials are in the way to explore medications applied for another situations that can combat with COVID-19 and to develop new ones. For example, trials for tocilizumabare under way, applied to cure autoimmune disorders. The FDA is likewise permitting experimental examinations and hospital application of blood plasma from individuals who've had COVID-19 and retrieved.

Abstract No. 46

EPIDEMIOLOGICAL OUTCOME OF SARS-COV-2 GENOME IN INDIA AND GLOBALLY

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ABSTRACT

The emergence of severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) came into reality on December 2019. The disease that is caused by this novel virus is COVID-19 is a great pandemic of concern globally. The emergence of this novel virus has reported from Wuhan city, China in early December and soon after its emergence the virus starts spreading globally. Along with America, Brazil , India is also the greatest impacted country in the world. The World health organization is keeping eyes on COVID-19 situation and collecting data through global surveillance system on exact scenario of SARSCoV2 and its emerging mutants/variants. The virus is mutating with multiplication in humans which is of great concern for scientist for disease management. Emerging studies reported mutations in samples collected from COVID-19 patients and these mutations varies from country to country and even region to region within countries. The worldwide data on circulating sequences of SARS-Cov2 and co-relation with immunological findings is essential for solving the system of pathogenesis. of SARSCoV2

Abstract No. 47

ASSESS THE CHANGES IN THE DIETARY PATTERN OF COLLEGE GOING GIRLS AFTER COVID-19 SECOND WAVE

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ABSTRACT

COVID-19 pandemic 2021 has led to life style changing challenges across the world. People were first time acquainted the term social distancing and self-isolation. During lockdown colleges were closed, college going girls were forced to stay at home. Now college going girls became more concerned for their health. They want to leave healthy and disease free life. So they have changed their dietary pattern. They included local herbs, spices, local -seasonal vegetables and fruits in their diet. Over 80% college girls reported use of herbs like turmeric, mace, nutmegcumin seeds, ginger and black pepper more after second wave. 85% college girls consumed healthy and home cooked food ..only 15% liked junk food like pasta Macaroni & Maggi etc. Around 73% girls reported daily use of local--seasonal vegetables and seasonal fruits. This research paper assessing the changes in the dietary pattern after covid-19 second wave. It will also explore about girls future health and well being after the pandemic.

Abstract No. 48

A PRELIMINARY SURVEY ON THE MYTHS OF COVID-19 VACCINE

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ABSTRACT

Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus. Protect ourselves and others from infection by washing our hands or using an alcohol based rub frequently, not touching our face and getting vaccinated. Equitable access to safe and effective vaccines is critical to ending the COVID-19 pandemic, so it is hugely encouraging to see so many vaccines proving and going into development. COVAXIN, India's indigenous COVID-19 vaccine by Bharat Biotech The other approved vaccines are COVIESHIELD, SPUTNIK-V and ZYCOV-D vaccine (approved recently for people under 18 years of age). Vaccinating India, the second most populous country in the world with more than 1.3 billion citizens, is a gargantuan task.People above 60 years of age and those over 45 with comorbidities were given COVID-19 vaccination from March 1st. By the month of July, just 54% of people above 60 were vaccinated and people of age group 18-44 were jabbed with 12.2 crore doses which accounts to just 10% of the total vaccine. Initially people did not turn up for vaccination and it resulted in covid vaccine wastage as high as 37%in some states such as Jharkhand, Chhattisgarh and Tamilnadu. But eventually, the number of people turning up for vaccination picked up.India gave six million jabs on an average every day in August, compared to 4.3 million daily jabs in July, according to official data. But still Experts say India needs to administer more than 10 million doses a day consistently to fully inoculate all eligible adults by the end of this year. Indian government has so far given more than 686 million doses of three approved jabs. But only about 17% of eligible adults have been fully vaccinated since the beginning of the drive in January. Still majority of people are yet to be vaccinated and this is due to fear and misinformation about vaccine. Fear of third Covid wave hitting India in the next few months have added an urgency to the vaccination programme. Vaccine hesitancy has also been hindering the vaccine rollout, particularly in rural areas. In the impoverished state of Bihar, where vaccine hesitancy is rife owing to misinformation campaigns on social media and WhatsApp and fears that vaccines will cause infertility or death, there have been reports of attacks on mobile vaccination centres. Yet hesitancy is also present among the educated elite, including doctors, some of whom are concerned in particular by the domestically produced vaccine Covaxin, which still does not have World Health Organization approval. This reluctance amongst the public against vaccination is being fueled by some myths. Hence there is a need to create scientific awareness among people and annihilate these myths through scientific explanations. This paper aim to debunk some of those myths in an attempt to motivate people to get vaccinated based on various reports and articles published by national and international agencies on impact of COVID-19 pandemic.

Abstract No. 49

CHALLENGES AND OPPORTUNITIES IN EDUCATION SECTOR DURING PANDEMIC PERIOD

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ABSTRACT

Education is the basic need in the modern time which strengthens moral and ethical values in any society. Education is the mean which not only helps people to get some degree or jobs, but it is more than that. It provides a path to people to live their life, to be a responsible person in their society and to make this planet a better place. Since the many centuries, education becomes a par t of our live and many ancient records and manuscript are present which describe the presence and evolution of educational centers like gurukuls, in past history. Even in the modern time, education becomes the main pillars of any country which define the current as well as future vision of that country. But since the last two years, education sector is badly affected by COVID-19 pandemic. It shrinks the traditional culture of education and shifts the teaching method from offline interaction to online mode. For a developed country, this impact is not too much, but for an undeveloped country or a developing country, this pandemic badly affects their education str ucture. In these countries, resources are not available to all students to continue their study via online method. Due to this reason a large number of students have to leave their study in the middle and have to do some work for their family due to economical crisis. Apart from, student, teachers life also affected in this period because many teachers do not have enough knowledge about the electronic gadgets and online means of education. But on the other side, this pandemic also opens a number of new opportunities in the educational sector. It helps in modernization of the old education system, because new technologies are implemented in education to enhance its reach to maximum lear ners. It also gives an oppor tunity to those educators, who are not previously linked to any recognized institute, to show their efficiency. This also increases the content or subject material available for the students which ultimately enhance the student's productivity. So, we can say that this pandemic has negatively impacted the educational sector but it also opens up a large of opportunities for the people.

Abstract No. 50

RESKILLING WORKFORCE: AN OPPORTUNITY UNDER NEW NORMAL

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ABSTRACT

The Global Economy entered its most negative approach towards environment during medieval period with the onset of industrial revolution. The last five centuries witnessed hyper industrialization, urbanization followed by rapid cutting of forest, depletion of biodiversity etc. The pace of industries led development reached its zenith in twentieth century. However, this is the period witnessed emergence of formal employment, skilling, manufacturing, processing etc. Several new terms were coined and Industrial revolution galvanised economy of whole world. The pandemic affected everything right from lifestyle to laid down procedures of manufacturing, processing, marketing, and working in offices. The Global Economic Development in the last five centuries have created the clear divide of the world in three categories of countries such as High-Income Economies, Middle Income and Low -Income Economies. The pandemic spared no country and refuted the very notion of high-income countries that they are wealthy, technologically sound and equipped with modern health care systems to fight any ailment. The spread of pandemic and catastrophe redefined the concept of eco-friendly and sustainable development. Already environment related issues such as carbon and greenhouse gas emission, falling biodiversity, depleting green cover, hole in ozone layer are identified and industrial restructuring is being done, still, under NEW NORMAL strong need of innovations is felt. The Indian Institute of Human Settlements has mentioned in its report that the green sector across premier metro cities can generate more than 5000 jobs in a cities' municipal bodies of these, 150 - 2,500 jobs may be generated in the renewable energy sector depending on the size of a town, 30 - 2,000 jobs in waste management, 20 - 125 in green transport and 80 - 1,700 in urban farming. India's shift to a green economy has potential to create more than 3 million jobs in the renewable energy sector alone in next decade as per estimates of the International Labour Organisation. This sector has already created about 47,000 new jobs in India in 2017, employing 432,000 people (India Spend, July 2018). The number of jobs in India's green energy sector, excluding large hydropower projects, rose by 12% in just one year to 2017.

Abstract No. 51

EFFECTIVESAFETY MEASURES AGAINST PANDEMIC COVID-19

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ABSTRACT

Since December, 2019, Corona virus, SARS-CoV-2 have came into existence and up till now world is still in the state of shock. In current scenario world has been facing COVID -19 pandemic. Public health and safety measures could be undertaken in order to overcome from infection threat and mortality. The unabated transmission is due to lack of drugs, negligence of vaccines by certain people and therapeutics against this viral outbreak. But research is still underway to formulate the vaccines or drugs by this means, as scientific communities are continuously working for pharmacologically active compounds that might offer a new insight for infections and pandemics. Therefore, the COVID-19 situation highlights an immediate need for effective therapeutics against SARS-CoV-2. Towards this effort, the vital concepts related to COVID-19, in terms of its origin, transmission, clinical aspects and diagnosis. However, here, we have formulated ancient means of traditional medicines or herbal plants to beat this pandemic.

Abstract No. 52

BIODIVERSITY AND SUSTAINABLE AGRICULTURE IN PRESENT COVID-19 SCENARIO IN EASTERN UTTAR PRADESH

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ABSTRACT

Biodiversity is the web of life on which agriculture depends. Since beginning of civilization biodiversity has enabled farming systems to evolve and develop. Biodiversity is the origin of all species of crops and domesticated livestock. Biodiversity and agriculture are strongly interrelated because while biodiversity is critical for agriculture, agriculture can also contribute to conservation and sustainable use. The different crop varieties and animal breeds used in agriculture around the world are based on the world's genetic diversity. In addition, biodiversity directly supports agriculture systems by helping to ensure soil fertility, pollination and pest control. The Eastern Uttar Pradesh situated at foothills of the Himalaya having rich agricultural biodiversity. Most of the people living in the forest are maintaining as well as protecting the biodiversity, although anthropogenic interferences and modern means of development have threatened the rich biodiversity. During Covid-19 period people has realized the importance of rich floral diversity to save humanity. Minimum causality has been occurred in these areas having rich biodiversity. The present study deals with various aspects of biodiversity and its uses in present pandemic situation of Eastern Uttar Pradesh.

Abstract No. 53

HERBAL IMMUNE-BOOSTERS ARE WARRIORS AGAINST PANDEMIC

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ABSTRACT

'CO' stands for corona, 'VI' for virus, and 'D' for disease. Formerly, this disease was referred to as '2019 Novel Corona virus' or '2019-nCoV.' The COVID-19 virus is a new virus linked to the same family of viruses as Severe Acute Respiratory Syndrome (SARS) and with different symptoms; the most common symptoms of COVID-19 are fever, dry cough, and tiredness. Other symptoms that are less common and may affect some patients include loss of taste or smell, aches and pains, headache, sore throat, nasal congestion, red eyes, diarrhea, or a skin rash. Some of the commonly describe herbs described in Ayurvedic literature which help to boost our immunity are **Amla**, **Ashwagandha**, *Black cumin*, *Garlic*, Ginger, Guduchi, **Makhana**, **Mulethi**, Neem,**Tulsi**, Turmeric etc.

Abstract No. 54

REPURPOSED DRUGS AND ALTERNATIVE THERAPIES FOR COVID-19

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ABSTRACT

Pandemics like SARS-CoV-2 and its associated illness named COVID-19 (coronavirus disease 2019) have become a regular occurrence in the past recent decades. Though, novel Coronavirus devastated human lives, its earlier cousins SARS-CoV1, MERS and lesser known infections like 229E, NL63, OC43, HK01 were less threatening. Humankind should brace up towards identifying, managing and finding a suitable cure to prevent incidence of such deadly diseases. It is a well-known fact that viral diseases can be curbed only with vaccines. In this respect, the world has witnessed both the design and delivery of vaccines against SARS-CoV2 in a record time. Candidates for Vaccines designed vary from targeting proteins or nucleic acids (DNA and RNA) of the virus, with or without adjuvants with a potency to generate memory. Though, this has been lauded by the entire humankind, there is still the need for other therapeutics to control and treat COVID-19. Therapeutic Drugs are inexhaustible group of molecules that showed some promise in diagnosis, treatment or prevention of SARS-CoV-2 but provide no form of 'memory'. In conclusion, we summarize the current knowledge on the therapeutic options other than vaccines or licensed antiviral drugs that can be repurposed to be considered for the treatment and prevention of the SARS-CoV-2 virus.

Abstract No. 55

THE COVID-19 NUTRITION BALANCE: MAKING NUTRITION A PRIORITY

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ABSTRACT

Social distancing and regular handwashing are the most effective and proven methods to reduce risk and spread of the coronavirus disease (COVID-19). However, along with general questions on how to safely shop for and prepare food, many are wondering about the more specific role of diet and nutrition during this pandemic. Nutrition is intricately linked to immunity and to the risk and severity of infections. Poorly nourished individuals are at a greater risk of various bacterial, viral, and other infections. Conversely, chronic or severe infections lead to nutritional disorders or worsen the nutritional status of affected people. Therefore, it is imperative for all of us to pay attention to our diet and nutritional status during the ongoing COVID-19 pandemic. An adequate intake of zinc, iron and vitamins A, B12, B6, C and E is essential for the maintenance of immune function with different effects. In the current scenario, COVID-19 has imposed a new set of challenges for the individual to maintain a healthy diet. The act of confining to one's home has significant impacts on one's health, including changes in eating patterns, sleeping habits and physical activity. It would promote sedentary behaviours that affect mental and physical health and lead to an increased risk of obesity. Fear and anxiety may also cause changes in dietary habits leading to unhealthy dietary patterns and less desire to eat or with lessened enjoyment during eating. A balanced diet will guarantee a strong immune system that can help withstand any assault by the virus.

Abstract No. 56

REPURPOSED DRUGS FOR MANAGEMENT OF COVID-19

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ABSTRACT

A novel corona virus called SARS CoV2 has caused prime public health crisis, around the world, since its outbreak in early 2020. Its infection causes acute respiratory distress syndrome and other complications for which there are no drug available for treatment. Hence the other strategy left to treat COVID-19 patients is to re-purpose existing drugs and provide immediate relief to suffering population instead of novel drug discovery which is expensive and time consuming process. These dr ugs may target many cellular processes to reduce the viral load on patients by many ways, for example by inhibiting replication cycle in virus or inhibit entry of virus or obstructing translocation into nucleus. Among the class of drugs, which are repurposed, are mostly antiviral drugs like remdesivir, favipiravir, ritonavir, gancyclovir etc. Many antibiotics such as Azithromycin, Ivermectin, Nitazoxinide, valrubicinetc are also found effective to reduce COVID -19 associated symptoms. Anti cancer dr ugs like Ruxolitinib, bevacizumab, carmofur, carfilzomib, Nivolumab, pembrolizumab, Imatinibetc which functions by reducing hyperinflammation, inhibiting vascular permeability, blockade of replication, restoration of immune homeostasis or blocking cell entry, have also shown promising results in clinical trials. Use of monoclonal antibodies like Tocilizumab, hydroxychloroquine, chloroquine was also found reducing COVID-19 symptoms and was recommended extensively by medical practitioners.

Abstract No. 57

EFFECTIVENESS OF ONLINE LEARNING DURING COVID-19

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ABSTRACT

The COVID-19 pandemic has wreaked havoc on every aspect of society. It has caused profound disruption to the education system as governments around the world have temporarily closed educational institutions to contain the spread of the corona virus. E-learning was underutilized in the past especially in developing countries. However, the current crisis of the COVID-19 pandemic forced the entire world to rely on it for education. Face-to-face classes have been canceled and moved online, bringing about the rise of online learning that has allowed learners to continue their education. The sudden transition from face-to-face to online learning has, however, posed numerous challenges for students, teachers, administrators, and education leaders. Drawing on previously published sources, this article first attempts to explain different terms used to describe online learning. It then discusses key challenges posed by the widespread adoption of online learning during the pandemic, followed by a discussion of suggestions made by different researchers to enhance the effectiveness of online learning. The article concludes with a summary of key challenges and suggestions and brief recommendations for the broader adoption of online and blended learning in the post-COVID-19 world. This study highlights the challenges and factors influencing the acceptance, and use of e-learning as a tool for teaching within higher education. Thus, it will help to develop a strategic plan for the successful implementation of e-learning and view technology as a positive step towards evolution and change.

Abstract No. 58

ROLE OF MEDICINAL PLANTS FOR IMMUNITY BOOSTER AGAINST SARS CoV-2 INFECTION

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ABSTRACT

The corona virus disease COVID-19 came to be as an outbreak and has taken an expense on human health. This disease reveals that it can be lethal. Aged person and people with other medical circumstances, may be more susceptible and become remarkably ill. The existing pandemic situation mandates scientific vigilance, hence we exploration to medicinal plants like Ocimum tenuiflorum, Zingiber officinale, Piper nigrum, Glycyrrhiza glabra, Hibiscus sabdariffa, Cichorium intybus, Chrysanthemum coronarium, Nigella sativa, Anastatica hierochuntica, Euphorbia species, Psidium guajava and Epilobium hirsutum. The Indian system of holistic prescription known as "Ayurveda". Natural herbal remedies show more effectiveness which is moves towards in these day with the help of traditional medicine. The factual of the Immunity booster is to determine component of natural lineage have an antiviral outcome. This booster helps to prevent humans from infection by SARS-CoV-2. The molecular docking technique is used to disclose the interaction between molecules which is already researched and the protein. Many molecules (Crocin, Digitoxigenin, and b-Eudesmol, amentoflavone, hypericin and TorvosideH, Clpro, PLpro and RdRp suggested rocymosin B, verbascoside, rutin, caftaric acid, luteolin 7-rutinoside, fenugreekine and cyanidin 3-(6"-malonylglucoside)) which play a role as inhibitors against the protease of SARS-CoV-2. Compound Andrgrapholide from Andrographis paniculata as a potential inhibitor of the main protease of SARS-COV-2. In Indian medicine, amentoflavone from the plant Torreyanucifera with a higher docking score. In molecular target pathway, cytokine–cytokine receptor interaction, TNF, NOD & Toll-like receptors, NF kappa B and JAK-STAT3 signalling pathway are related to inflammatory, innate and adaptive immune responses. In conclusion, the identified natural compounds from medicinal plants acts as herbal booster for increasing immunity against SARS-CoV-2 infection in patients.

Abstract No. 59

ANGIOTENSIN-CONVERTING ENZYME 2 AS A SARS-COV-2 FUNCTIONAL RECEPTOR

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ABSTRACT

Angiotensin-conver ting enzyme 2 (ACE 2) belongs to the rennin-angiotensin system (R AS) and is a potential therapeutic target for the control of cardiovascular diseases and hypertension. The lungs, cardiovascular system, intestines, kidneys, and adipose tissue all express ACE2. SARS-CoV-2 virus matches 80% of its sequence with SARS-CoV virus and infection is initiated via the interaction of the virion spike glycoprotein with the target cell's ACE2 receptor. Due to the dual function of ACE2 as a SARS-CoV-2 receptor and a RAS regulator, the therapy of COVID-19 presents a conundrum of limiting virus entry while protecting ACE2 physiological functions. Thus, an in-depth review of recent advances in ACE2 research and its relationship to the virus is required immediately in order to present a feasible answer to the conundrum. The goal of this review is to summarise the role of ACE2 as a novel SARS-CoV-2 receptor and a negative regulator of the RAS system, as well as the implications for the coronavirus disease pandemic of 2019 and associated cardiovascular diseases.

Abstract No. 60

IMPACT OF COVID-19 ON THE ENVIRONMENT AND LIFE

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ABSTRACT

The environment is a geographical area where all living creatures and non living components interact with each other in natural system. Both are interrelated to each other, a slight change may interrupt their interrelationship. Covid-19 Pandemic is a wreaking havoc from December 2019 till date. However, there are pros and corns on the life of human. Environment, wild life recouped after few week of lockdown and started rejuvenate itself in various ways. 1. Air quality improved during lockdown but climatic change appeared like flood. 2. India's carbon dioxide emissions fell by around 1% in the year 2020. 3. In India dissolved oxygen level have increased during 22 March 2020 to September 2020 in rivers. As schools were closed, our social environment and psychological environment were badly affected. Mental health and psychiatric symptoms were very prominently visible,Coronaphobia was the by-product of pandemic. The first most reason for the potential spike in suicide and unemployment was pandemic. In this paper following enlisted impact of pandemic in various field of life as well as various phases of life such as ● Natural Environment ● Social Environment ● Psychological Environment.

Abstract No. 61

COVID-19 SECOND WAVE AND ITS IMPACT ON ENVIRONMENT

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ABSTRACT

Corona pandemic is worst incident ever happened to human being. WHO declared the illness resulting from the new virus COVID-19 a public health emergency of international concern? The novel corona virus has exposed severely India's healthcare system. Similar is the case with US which is the most developed country. According to UN chief this is most challenging crisis since Second World War. Total number of corona infection worldwide is 222,130,500and deaths around 4,592361. India added 3,92,864 active cases and 4,41,042 deaths approximately. With each infection, a chance for a virus to mutate in to one that can sicken humans and sometimes, global livelihood. As such, a vaccine alone, no matter how effective, will not bring the balance towards health because COVID-19 is not a disease it is a symptom of an exhausted planet. The renewal of healthy relationship to our one shared mother , planet Earth is the cure. Besides having bad effects on human lives Covid-19 has much positive impact on our society. While the fear of naval Corona virus pandemic is still spreading air pollution and noise pollution are significantly decreasing. People are trying to stay inside to avoid chances of contamination. In the mean time sighting of migratory birds and endangered species of animals were daily updates on social media. The virus may be claiming lives all across the globe, captured people inside their house it seems to have certain positive effects in India as well as abroad. People are taking care of each other, spending time with family and taking care of their immunity.

Abstract No. 62

THE IMPACT OF SECOND WAVE OF COVID-19 ON WOMEN RAG PICKERS IN INDIA

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ABSTRACT

Coronavirus illness 2019 (COVID-19) is a communicable illness caused by the coronavirus 2 (SARS-CoV-2) that affects acute respiratory syndrome. In December 2019, the first known case was discovered in Wuhan, China. This pandemic has not abated, and the second wave of COVID-19 has wreaked havoc in India, with spiraling cases, diminished supplies of important treatments, and an increase in deaths. Rag pickers were on the front lines of COVID-19 prevention teams because they managed the city's waste while exposing themselves to infection and disease. They provide numerous benefits to the city, such as reducing the amount of waste for incineration and preventing waste from collecting on streets, shops, railways, homes and other places, thereby maintaining human safety. Rag pickers are currently facing significant health and financial risks in India. Most people haven't been able to go out and collect waste since the pandemic began. The large percentage of their income come from selling trash and recyclable materials to scrap dealers, but these junk shops were also closed due to the country's ongoing crisis. Many rag pickers are facing starvation and poverty as a result of lack of work.The severe impact of the pandemic on their life and livelihood means that, wherever possible, rag pickers were stepping out for work, regardless of protection for their own safety and health. The objective of this study is to highlight the impact of the second wave of COVID-19 among women rag pickers, as well as the risk factors they faced during pandemic. The major electronic databases including UGC and Web of Science journal articles were searched and analyzed for conducting the study. We therefore in this review, summarize that the government must recognize the importance of rag pickers and include them in frontline workers protection and insurance plans. Their livelihood must be improved, and have routine checkups and access to essential medicines. The government should also work to ensure provision of protective gear such as masks, gloves, stick and boots, as well as sanitation products for them.

Abstract No. 63

DELTA VARIANT - TRANSMISSION AND ITS CONSEQUENCES IN INDIA

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ABSTRACT

Viruses constantly change through mutation. A variant has one or more mutations that differentiate it from other variants in circulation. As expected, multiple variants of SARS-CoV-2 are documented globally throughout this pandemic. To inform local outbreak investigations and understand national trends, scientists compare genetic differences between viruses to spot variants and the way they're associated with one another. Delta variant, also referred to as lineage B.1.617.2 and Indian variant may be a variant of lineage B.1.617 of SARS-CoV-2, the virus that causes COVID-19. It was first detected in India in late 2020. The World Health Organization named it the Delta variant on 31 May 2021 First identified in India, Delta Plus has now been found in the U.S., U.K., and nearly a dozen other countries. India has labeled it a variant of concern, but the Center for disease control and prevention of U.S health department and WHO haven't. The Delta variant, also referred to as B.1.617.2, can spread more easily, consistent with the U.S. Center for Disease Control and prevention. The strain has mutations on the spike protein that make it easier for it to infect human cells. That means people could also be more contagious if they contract the virus and more easily spread it to others. It is now the dominant strain within the U.S. The Delta variant causes more infections and spreads faster than earlier sorts of the virus that causes COVID-19. It might cause more severe illness than previous strains in unvaccinated people. In fact, researchers have said that the Delta variant is about 50% more contagious than the Alpha variant, which was first identified within the U.K., consistent with The Washington Post. Alpha, also referred to as B.1.1.7, was already 50% more contagious than the first coronavirus first identified in China in 2019. Public health experts estimate that the typical one that gets infected with Delta spreads it to 3 or 4 people , as compared with one or two people through the original Corona virus strain, consistent with Yale Medicine. The Delta variant can also be ready to escape protection from vaccines and a few COVID-19 treatments, though studies are still ongoing. Scientists are still tracking the info to work out how deadly it's . Based on hospitalizations within the U.K., the Delta variant does seem to be more likely to steer to hospitalization and death, particularly among unvaccinated people, consistent with a recent study published in The Lancet. Now vaccine makers are testing booster shots to seek out if they will better protect against the Delta variant and other variants that emerge in coming months. Covid-19 cases, symptoms of Delta tend to be a touch different than other strains, but that doesn't necessarily mean the associated symptoms are more severe. Fever, headache, pharyngitis and runny nose are common, while cough and loss of smell aren't . Other reports link Delta to more serious symptoms, including hearing disorder , severe gastrointestinal issues and blood clots resulting in tissue death and gangrene. Research is ongoing to work out if Delta infection is related to increased hospitalization and death. One early study assessing the risk of hospital admission in Scotland reported that hospitalization is twice as likely in unvaccinated individuals with Delta than in unvaccinated individuals with Alpha. Therefore as it is the variant of concern in India so the present study is aimed to discuss the virus transmission and prevention thoroughly.

Abstract No. 64

THE IMPACT OF SECOND WAVE OF COVID-19 ON SCHOOL GOING STUDENTS IN INDIA

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ABSTRACT

Coronavirus illness 2019 (COVID-19) is a communicable illness caused by the coronavirus 2 (SARS-CoV-2) that affects acute respiratory syndrome. In December 2019, the first known case was discovered in Wuhan, China. This pandemic has not abated, and the second wave of COVID -19 has wreaked havoc in India, with spiraling cases, diminished supplies of important treatments, and an increase in deaths, particularly among the youth. In India, it has impacted a large number of students. To combat the spread of COVID-19, most governments decided to temporarily close schools. The closure of schools and the decision to move formal classes to online platforms is rising learning inequality among children and driving a large number of children out of school due to the digital divide. Many students who do not have the financial ability to attend online classes probably suffer. Many students are having difficulty obtaining the necessar y devices for online classes. P arents are not so free that they keep watching the children the whole time, so they give mobiles to the children for classes, but some children start using the phone incorrectly. Teachers who are accustomed to using Blackboard, chalk, books, and regular classroom methods are completely unfamiliar with digital instruction. The most pathetic condition is of government schools. There are students in India who attend school solely for the purpose of getting food at the Mid-Day Meal. Many students were facing a shor tage of food as a result of the school closures. Most of the children have forgotten to read and write and some are engaged in child labour to help their families because they come from very poor family. However, there is a silver lining to every cloud that will benefit both students and teachers in the long run.

Abstract No. 65

COVID-19 AND THE CHALLENGES OF ONLINE LEARNING

Mousumi Dutta

IGNOU

ABSTRACT

The COVID-19 that has affected economies around the world has also battered education systems in developing and developed countries. Some 1.5 billion students close to 90% of all primary, secondary and tertiary learners in the world are no longer able to physically go to school, colleges and universities. As a solution we have seen rise of e-learning, whereby teaching is undertaken remotely and on digital platforms. Many online learning platforms – BYJUS, COURSERA, UNACADEMY, Youtube channels have come up with different online cer tificate course. Many universities have star ted online courses for their students. University teachers are uploading video of them teaching a subject on the university websites. Even with transformation to online learning students and teachers are facing problems in this new mode of teaching and learning. This study aims to determine the challenges and obstacles confronted by the students of B.Ed (19-21) in DBMS College of Education, Jamshedpur, during switching to online learning in the second semester of 2020 due to the COVID-19 pandemic. The contribution of this study is to evaluate the learners' new experiences in online education and to assess the feasibility of the virtual methods of learning. This is achieved by analysing 100 learner's responses to the survey-based questionnaire. A descriptive statistical method was used for the study. It is found that the main problems that influence and impact online learning during COVID-19 are related to technical, academic, and communication challenges. The study results show that most lear ners are not satisfied with continuing online learning, as they could not fulfill the expected progress in learning performance.

Abstract No. 66

HEALTHCARE SYSTEM IN INDIA: CHALLENGES AND WAY FORWARD

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ABSTRACT

Epidemiologists pan-India are projecting the third possible outbreak of corona virus. With mutants knocking healthcare systems every now and then, and our past experiences of coping with this menace, drags all our whims and fancies towards healthcare system of India. Three aspects namely, *accountability, transparency and access* have become central to the discourse around the care-giving sector. Unprecedented event like this, tests the system's resilience, adaptability and response towards it. Previous outbreak incidences undoubtedly exposed the vulnerability of our health care systems in all possible domains-be it preliminary testing, primary, secondary and tertiary healthcare facilities and access, hospitalization issues like manpower, admissible capacity/bedding facilities, basic infrastructures and equipments, out-pocket expenditure ,vaccination (hesitance ,R&D ,commercial production, tussle around indemnity clause) etc. Critics have been questioning the policymaking and expenditure spectrum (as the percent of GDP) in the healthcare system of late. Various government initiatives, incentives, and stimuli etc though successfully managed to blanket loopholes in the system, but how far have we succeeded in bridging them –remains a potential question! Long term resilience, adaptability and preparedness rests in policymaking, expenditure on their implementation, R&D etc. This study thus intends to bring forth the challenges faced while coping with this outbreak, inequality and other challenges in accessing the healthcare facilities and associated monetary challenges in tandem. Also, the pivotal rhetoric would be around already existent government initiatives and technologies that could be /have been successfully deployed in fighting this grave event and the potential way forward.

Abstract No. 67

COVID-19 AND ITS IMPACT ON EDUCATION SYSTEM

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ABSTRACT

Education is one of the most important for the building of nation. It is necessary that each and every person in the society should be educated. Education teaches human values and develops the confidence of students or builds them to face challenges of the life. India is doing best in education. As the covid-19 came into existence, it badly affects all aspects of the society like health, economic, education, industries etc., of which the education system was very badly affected. The spread of covid-19 has affected very much on education system all over the world. Many educators have had to really evaluate their teaching methods and determine whether they have truly been meeting the needs of all their students. Now it is time to evaluate the education system before and after the pandemic 2020. The school system closes for the safety of students and teachers, so in this condition only virtual learning become a way of life as students to learn from home as well as many teachers to teach them from home. Due to pandemic the education system has completely changes from the traditional education to the virtual learning, which has both positive and negative effects.

Abstract No. 68

IMPACT OF CORONA VIRUS DISEASE -19 (SARS-COV-2) ON HUMAN ORGAN SYSTEMS: A META ANALYSIS

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ABSTRACT

Present Meta-analytical study is based on the previous scientific studies, and data collected, compiled and interpreted since the onset of Corona virus disease (COVID-19) pandemic in India and across the globe. The virus belongs to Coronaviridae family that encompasses alpha, beta, gamma and delta strains. SARS-CoV-2 is a beta corona virus that belongs to Orthocoronavirinae subfamily and comprises a 29903 base single stranded RNA genome which is surrounded by spike shaped membrane glycoproteins. Most of the preliminary studies and data indicate that Corona virus damages not only the respiratory tract but also other organ systems of the human like cardiovascular system, hepatic system, renal system, immune system, and nervous system leading to multiple organ failure and many related co-morbidities that occasionally result in high mortality rate. The primary target of the virus is respiratory tract where it gains invasive entry by interacting with a specific receptor namely Angiotensin conver ting enzyme 2 receptor (ACE2) present on the surface of respiratory tract. ACE2 is also expressed in vascular epithelial cells, lung epithelial cells, renal tubular epithelia cells, leydig cells in testes, and gastrointestinal tract (GIT). The virus severely damages the respiratory system and causes acute respiratory distress syndrome (ARDS). Upon gaining the entry in different organ systems the virus starts high levels of inflammatory responses resulting in release of interferons, TNF-alpha, interlukines (IL-6.IL-10, IL-1beta), Chemokines and colony stimulating factors which is turned in to cytokine storm thereby kicking a cascade of devastation. Earlier studies indicate that the vir us exhibits the wide range of neurological manifestations including Cerebro-vascular implications, acute polyneuropathy, headache, encephalopathy, encephalitis, seizures, hypogeusia as well as some non specific symptoms. Likewise it results in many serious complications in kidney, lever, cardio-vascular system and GIT. However more studies are needed to authenticate the impact of the virus in the different organ systems of human.

Abstract No. 69

COVID-19 SECOND WAVE: CONSEQUENCES AND ITS SOLUTIONS FOR SUSTAINABLE DEVELOPMENT

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ABSTRACT

Sustainable development emphasizes developing the country in different ways such as economic progress, improvement of environmental conditions and basic needs of society. The economic progress of a country is usually dependent upon industries, innovation and infrastructure. The basic needs of society are food, good health, quality education and employment. The main purpose of sustainable development is to fulfill all these requirements of the society but due to the Covid-19 pandemic, the aims of sustainable development have been significantly changed, drawing our attention to new realities and ways of life never imagined before. The impact of the pandemic on society is long-lasting and difficult to measure. During the second wave, many companies have been forced to close down and economic activity declined, due to which thousands of people have become unemployed, and poverty level has increased. This has also affected the financial status of the country. The production and transportation of food were affected, which led to an increase in the hunger level. Health facilities were overloaded due to the paucity of health resources. Closure of school and limited internet access reduced students' access to learning. All these deficiencies proved to be a massive challenge for sustainable development. To make sustainable development it is necessary to meet the challenges arising during the second wave of Covid-19. For this, it is necessary to increase health facilities, make the internet accessible at all places, production and transportation of food and continuation of financial activities of the country.

Abstract No. 70

IMPACT OF COVID-19 PANDEMIC ON OBSESSIVE COMPULSIVE DISORDER–A CASE STUDY

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ABSTRACT

Obsessive Compulsive Disorder (OCD) is where an individual tries to resist certain thoughts which are termed as obsessions and feels driven to perform certain compulsions in order to resist those thoughts and often fail to do so. The ongoing Covid-19 global pandemic caused by the novel pathogen SARS-coV-2 has caused a major havoc. Certain containment measures such as frequent washing of hands, social distancing, disinfection of your surroundings have been reported as necessary to curb the transmission of the disease. At the same time the consequences of quarantine and isolation on psychological well-being of an individual is an important aspect of this pandemic which needs to be addressed. This results in the increase of risk of various mental disorders, including obsessive-compulsive disorder which may put forth unique challenges for certain people. This preliminary study aimed to evaluate the development of and changes if any, in OCD symptoms in the urban population of Delhi-NCR with respect to before and during the pandemic. The study also investigated the impact of lifestyle such as diet, sleep cycle and pattern and also physical exercise on OCD. It was expected that the COVID-19 outbreak might be a stressful event which might pose a greater risk to people of acquiring and developing contamination symptoms of contamination OCD. An online survey in the form of a questionnaire was circulated among people of different age groups including different genders and the results were analyzed for the present objective of the study. It was found that the containment measures provided by the health care advisories, are being taken utmost care at a greater degree of extent by the individuals as compared to before the pandemic. It was also found that the extent of concern regarding Covid-19 is very high in both females and males, the lifestyle habits such as diet, sleep quality, exercise, all these three factors had a specific role to play in increasing the risk of obsessive-compulsive disorder. The study concluded that the Covid-19 pandemic apart from posing a horrific effect on the physical health of an individual is also silently affecting the mental and social behavior of a person. Thus, it becomes of uttermost importance to give attention to this side of the pandemic too. Further studies may be done in order to emphasize on the impact of Covid-19 pandemic on obsessive compulsive disorder in reference to clinical samples and manifestations.

Abstract No. 71

IMPACT OF COVID-19 ON RICE FARMERS OF ODISHA

Nitiprasad Namdeorao Jambhulkar, Biswajit Mondal, Sumant Kumar Mishra and Lotan Kumar Bose

ICAR-National Rice Research Institute, Cuttack

ABSTRACT

Corona-virus disease (COVID-19) is an infectious respiratory disease caused by the SARS-COV-2 virus. First case of COVID-19 was reported in December 2019 from China in the world. In India, the first case of COVID-19 was reported in January, 2020 from Kerala. Till now, the virus has been spread to 223 countries and more than 22 crore people were infected and more than 45 lakhs were died due to infection with COVID 19. In India, more than 3.3 crore persons were infected and more than 4.4 lakh persons were died due to it. Out of total cases worldwide, 14.88% infected cases and 9.62% deaths recorded from India. Due to rapid increase in the COVID-19 cases, the nationwide lockdown was announced on 24th March, 2020. As a result, COVID-19 pandemic affect all sectors including agriculture in the country. A study was undertaken with the objective of assessing the impact of COVID-19 over rice farmers. Data was collected from the rice farmers of Jajpur, Ganjam and Bhadrak districts of Odisha. The analysis of the data showed that 51% farmers did not get rice seed or good quality seed was not available; 69% farmers reported unavailability of pesticide and fertilizer in the market; 42% farmers reported delay in transplanting due to unavailability of farm labour; 44% farmers reported high labour charges; and 24% farmers reported unavailability of implements for different operations of rice cultivation; they cultivated less area due to unavailability of labour from fear of getting infected; production was low, which results in low income to the farmers. Two percent farmers even did not move to the field and kept their land fallow due to the fear of COVID-19. All the farmers reported increase in the cost of cultivation due to high labour charges, increase in the price of all the input supply material and hiring charges of different implements. All these factors impacted their income which ultimately affects sustenance of their family.

Abstract No. 72

THE ROLE OF SMALL INDIGENOUS FRESHWATER FISH SPECIES IN NUTRITIONAL AND LIVELIHOOD SECURITY

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ABSTRACT

Small indigenous freshwater fish species (SIFFS) are not only the plentiful source of animal protein but also a necessary source of micronutrients and fatty acids. As the SIFFS are consumed entirely along with bones, provide phosphorous, calcium and vitamins to the human diet. SIFFS contribute a significant constituent of food eaten by poor families, mostly those are in the neighbourhood of freshwater resources. These fish species play an important role in the nutritional security of rural people and the improvement of countryside economy. They are usually prolific breeder and inhabit in vast inland water resources ranging from rivers, tributaries, flood plains, wet lands, lakes, ponds, tanks, beels, streams, paddy fields and low land areas. Most of the species are hardy in nature and comfortably adjust in shallow water bodies without any supplementary feed. Management and conservation of SIFFS are vital for sustain the biodiversity, ecosystem stability and livelihoods of susceptible populations. Propagation of SIFFS in freshwater resources can considerably recover the malnutrition and improve the health of nation. A suitable plan is essential to initiate the need based culture practice with emphasize on locally important SIFFS and employment of rural people.

Abstract No. 73

EFFECT OF NEEM LEAVES ON BODY WEIGHT OF ALBINO RAT

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ABSTRACT

Azadirachta indica commonly known as neem or nimba is the member of family Meliaceae. Almost every part of the tree has found applications in indigenous medicines for the treatment of a variety of human ailments. Leaves of neem are delicate foliage and alter nate imparlpinnate 20 - 37 cm long . Four groups of albino rats treated with neem leaves and compare with the control group of albino rat and find the result with normal body weight in comparison with the control group of animals.

Abstract No. 74

PHYTOCHEMICAL SCREENING OF A PLANT EUPHORBIA HIRTA. COMMONLY USED IN BREATHING TROUBLES.

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Government Girls' Degree College, Aurai, Bhadohi (U.P.), India.

ABSTRACT

COVID-19 pandemic is a lesson to human population by nature. It is not only warning us that we are disturbing the nature but also to adhere with Mother Nature for sustainable development. The whole population of world tilted towards the natural resources for their happy and healthy life during pandemic meanwhile some uncommon herbal plants became popularized along with the some common herbal remedies. Present study deals with phytochemical screening of a medicinal herb E.hirta. Commonly used by the tribes for different ailments but now it is known for a good remedy in breathing troubles. HPLC analysis of methanolic extract of the herb proves the presence of some important chemicals showing antioxidant, anti-inflammatory, analgesic, antipyretic activities useful in breathing troubles.

Abstract No. 75

MUCORMYCOSIS (BLACK FUNGUS) AN EMERGING THREAT DURING 2ND WAVE OF COVID-19 PANDEMIC IN INDIA: A REVIEW

Ajaz Ahmed Wani

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ABSTRACT

Covid -19 treatment makes an immune system vulnerable to other infections such as Black fungus (Muceromycosis). India has been facing a high rates of COVID-19 since April 2021 with a B.1.617 variant of the SARS- COV2 virus is a great concern. Mucormycosis is a rare type of fungal infection that occurs through exposure to fungi called mucormycetes. These fungi commonly occur in the environment particularly on leaves, soil, compost and animal dung and can entre the body through breathing, inhaling and exposed wounds in the skin. The oxygen supply by contaminated pipes and use of industrial oxygen along with dirty cylinders in the COVID-19 patients for a longer period of time has created a perfect environment for mucormycosis (Black fungus) infection.

Abstract No. 76

IMPACT OF COVID 19 ON MENTAL HEALTH

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ABSTRACT

The coronavirus disease 2019 or the COVID-19 pandemic has led to global health, social, and economic instabilities. The quarantine measures which were forcefully applied have led to slow but visibly emerging public mental health crisis. This review (sourced from the data available online via reliable scientific sources) helps to investigate the mental health impact of the pandemic on populations. A high prevalence of stress, anxiety, depression, the risk of substance use, suicide, domestic violence, and complicated grief are on an increase. Various studies conducted worldwide (China, Italy, Canada, Portugal, Singapore, etc.) including detailed online Surveys reported moderate to severe anxiety symptoms, depressive symptoms, severe stress levels and poor sleep quality. Another observation was a high prevalence of general psychological disturbances and posttraumatic stress, adjustment disorder symptoms, suicidal thoughts, frustration, exhaustion, discrimination, isolation from loved ones, worry about infecting them, loneliness, anger and social stigma. Positive emotions and life satisfaction has decreased. To counteract these affects it is crucial to provide the population with accurate and up-to-date information about the pandemic situation, suicide prevention services should be reinforced. Mental health services provides and practitioners can provide support through e-mail, phone, and video consultations to the public to understand common and natural stress responses and self-care practices, practicing good sleep hygiene, eating healthy, exercising, identifying negative thoughts. We will depend on high-quality research to guide us in this battle against a unique enemy to measure harmful effects, assess long-term stress responses to understand how the world is adapting.

Abstract No. 77

IMPACT OF COVID-19 PANDEMIC SECOND WAVE ON SHRIMP AQUACULTURE IN ANDHRA PRADESH, INDIA

Anuprasanna Vankara

Yogi Vemana University, YSR (AP), India

ABSTRACT

Shrimp aquaculture industry is a rapidly growing, protein producing sector in India and shrimp is one of the biggest export commodities in aquaculture sector worth billion US dollars. India is exporting about 5.4 billion US dollars seafood products of which 70% constitute shrimps. Andhra Pradesh is one of the major shrimps producing state and more than 90% seafood are exported to foreign countries like US, China and UK. There is about 176,000 hectares of shrimp farming area in India of which 90% of it is used for Pacific white shrimp production, 8-9% for black tiger shrimp and 1% freshwater giant prawn. COVID-19 has critically impacted on demand and export of shrimps. It also showed its impact on hatcheries and shrimp farming industry by hiking the marketable prices for post-larvae (PLs) in view of shortages expected in the forthcoming months. Still, many of the aquafarmers financially suffered and committing suicides to compensate their loss during this pandemic. There are many new aquaculture support schemes offered by both central and state governments to support the aquafarmers and double the production and export of aquaculture products.

Abstract No. 78

ANALYSIS OF PIPELINE SAFETY USING CFD

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ABSTRACT

Natural gas may be a present hydrocarbon gas mixture consisting primarily of methane. It's aflammable, explosive, poisonous and harmful gas. One easy method to import gas from a far away location is to transfer it through gas pipelines. These pipelines may run underground also as underwater. There are cases where the pipelines are exposed to ambient also. Due to severe atmospheric conditions, high pressure and accidents, there are instances of pipeline explosion leading to gas leakage. This may cause poison death of citizenry also as other living creatures and environmental pollution. This work involves the model and analysis of little segment of gas pipeline and to seek out the range of diffusion of gas in vertical direction subjected to different pipeline outside conditions like 1)when surrounded by air 2) when surrounded by saltwater. ANSYS Design Modeler is employed for modeling and ANSYS FLUENT is employed to analyze the problem. The species transport and chemical reaction processes are considered in the analysis. Various graphs and contours are plotted to review the effect of changes in values of variables like wind velocity and leakage hole diameter.

Abstract No. 79

PROMINENT INTELLIGENCE OF AYURVEDA AND YOGA TO DEFEAT THE NEWLY DISCOVERED COVID19

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ABSTRACT

In ancient era, people used to work very hard in their routine life for better survival and they did not get tired and not fall ill so easily, they were physically fit due to their healthy lifestyle without any extra efforts and undoubtedly, they did not get sick so frequent, that was all about their well build and powerful immune strength. Immune system is a protective body shield that fights against infections and other invaders. Due to modernization the traditional way of life has become extinct and individuals have to take additional supplements in tablet formulations to boost their immune system. A weak immune system leads individual to constantly get sick from bacteria and viruses. Present article focuses on the traditional strategies to boost the immune system by using the plants as medicine from the literature of Ayurveda and secondary, enlightened discipline including the mental, physical and spiritual behavior of body that is Yoga.

Abstract No. 80

BIODIVERSITY MANAGEMENT THROUGH THE HUMAN ENVIRONMENT

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ABSTRACT

Even if most of Earth's remaining natural ecosystems could be protected from development, they could not adequately maintain biodiversity. The remaining wild is simply not large enough to meet all services, habitat needs or to provide important ecological services, and many of these still- natural ecosystem will inevitably be transfor med by human use in coming decades. Clearly , the success of biodiversity conservation will depend upon how well the overall landscape is managed to minimize biodiversity loss. Human needs and activities must be reconciled with the maintenance of biodiversity, and protected areas must be integrated into natural and modified surroundings. Farms, forests, grazing areas, fisheries, and villages belong on the same planning grid as land restoration projects, protected areas, and species–conser vation efforts. The scale of such effects must be tailored to both ecological processes and the needs and perceptions of local communities. This integrative approach is here termed bioregional management. A bioregion is land and water territory whose limits are defined not by political boundaries, but by the geographical limits of human communities and ecological systems. Such an area must be large enough to maintain the integrity of the region's biological communities, habitats, and ecosystems; to support important ecological processes, such as nutrient and waste cycling, migration, and stream flow; to meet the habitat requirements of keystone species; and to include the human communities involved in the management, use, and understanding of biological resources. It must be small enough for local residents to consider it home. A bioregion would typically embrace thousands to hundreds of thousands hectares. It may be no bigger than a small watershed or as large as a small state or province. In special cases, a bioregion might span the borders of two or more countries.

Abstract No. 81

CHALLENGES OF ONLINE LEARNING DURING COVID 19 PERIOD

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ABSTRACT

Online learning is education that takes place over the internet. It is often referred as e-learning. Online learning is a type of "distance learning" the umbrella term for any learning that takes place across distance and not in a traditional class room. An advantage of online learning during covid-19 is that it reduces the financial cost. Online education is far more affordable and cheaper as compared to physical learning. This is because online learning eliminates the cost points such as transportation, student needs and most importantly, real estate. Online learning is tedious, risky and boring during covid-19 and the amount of new information can be overwhelming. Not only it frustrates the students, but also upsets the teacher. The lecturer gets distracted once in a while too, after all we are humans. Some of the major drawbacks of online courses are fairly obvious, that is technical glitches, problem of individual learning, lack of support, poorly designed courses, inexperienced or incompetent instructors etc. Online platforms are becoming popular. For some people study with face to face learning may still be the best option. Instructors are able to better understand the interest of students and it is easier to generate group excitement about subject. Traditional education system of classroom enhances quick study, memorization and retention of knowledge among students. At the age of School going, students are quick in their ability to memorize and retain learning materials. Education at school classroom and home tuition is a better way than the online learning, for students.

Abstract No. 82

IMPACT OF COVID-19 ON RICE FARMERS OF ODISHA

Nitiprasad Namdeorao Jambhulkar, Biswajit Mondal, Sumant Kumar Mishra and Lotan Kumar Bose

ICAR-National Rice Research Institute, Cuttack (Odisha), India

ABSTRACT

Corona-virus disease (COVID-19) is an infectious respiratory disease caused by the SARS-COV-2 virus. First case of COVID-19 was reported in December 2019 from China in the world. In India, the first case of COVID-19 was reported in January, 2020 from Kerala. Till now, the virus has been spread to 223 countries and more than 22 crore people were infected and more than 45 lakhs were died due to infection with COVID 19. In India, more than 3.3 crore persons were infected and more than 4.4 lakh persons were died due to it. Out of total cases worldwide, 14.88% infected cases and 9.62% deaths recorded from India. Due to rapid increase in the COVID-19 cases, the nationwide lockdown was announced on 24th March, 2020. As a result, COVID-19 pandemic affect all sectors including agriculture in the country. A study was undertaken with the objective of assessing the impact of COVID-19 over rice farmers. Data was collected from the rice farmers of Jajpur, Ganjam and Bhadrak districts of Odisha. The analysis of the data showed that 51% farmers did not get rice seed or good quality seed was not available; 69% farmers reported unavailability of pesticide and fertilizer in the market; 42% farmers reported delay in transplanting due to unavailability of farm labour; 44% farmers reported high labour charges; and 24% farmers reported unavailability of implements for different operations of rice cultivation; they cultivated less area due to unavailability of labour from fear of getting infected; production was low, which results in low income to the farmers. Two percent farmers even did not move to the field and kept their land fallow due to the fear of COVID-19. All the farmers reported increase in the cost of cultivation due to high labour charges, increase in the price of all the input supply material and hiring charges of different implements. All these factors impacted their income which ultimately affects sustenance of their family.

Abstract No. 83

REDUCTION OF SOLID WASTE DUMPS IN RELIGIOUS PLACES DURING PANDEMIC OUTBREAK IN BENGALURU

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ABSTRACT

Solid waste of different types both biodegradable and nonbiodegradable are found in the religious or worship places. Biodegradable waste consists of fruits, flowers, leaves, prepared food items, plantations, sweets and nonbiodegradable waste consists of paper, plastic covers, plastic plates, plastic cups, wooden poles, metal pieces, clothes, flags etc were found during festivals, functions, yatras, ur us, massive gatherings, weddings in religious places like Temples, Mosques, Dargahs Churches, Gurudwaras, Jain mandirs, Buddhists viharas during the pre COVID 19 period. as the people used to gather to celebrate in large. These gatherings show the richness of a person or place who celebrates depending on caste, sect and groups. Large gatherings led to huge dumping of solid wastes in religious place and the surroundings. Cleaning of wastes was highly risky and tiresome for the contractual cleaning staff, BBMP Pourakarmikasor Safaikarmacharis and waste pickers as the waste was thrown on roadside, surrounding area, roadside trees near religious places. The vendors and street hawkers af ter selling their goods used to dump the leftover wastes near these places, The solid waste produced will be in many tones of weight. The solid waste dumping caused untidy and attracted rodents, microorganism, crows and street dogs and cats. F oul odour or smell, leading to disease, allergy to the people who are exposed to those dumps were seen. The air, water, and land pollution was high before the pandemic outbreak. During pandemic the religious places were closed to public leading to zero or minimal solid waste production and during relaxation of lockdown these places were restricted with physical distancing and sanitization and the public were also given instructions of offerings and gathering of minimal people which led to the reduction of solid waste production in religious places leading to reduction of air, water and soil pollution. In the month of April to August 2020 there was zero waste production due to complete lockdown and in September there was relaxation of lockdown people started visiting to these places and increased in number and started gathering and slowly increasing in dumping of solid waste by April 2021 and again restrictions are done after the month of April 2021 and visitors are restricted in these religious places and this will lead to zero solid waste productions. During the second wave till September 2021 the solid waste dumping was reduced in religious places in Bengaluru and people were instructed to have a COVID appropriate behaviour.

Abstract No. 84

IMMUNO BOOSTING PROPERTIES OF PLANTS USED IN KADHA AGAINST COVID-19

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ABSTRACT

Covid- 19 is a pandemic disease which has become spread over worldwide over 205 countries, since its emergence in Wuhan, China in December, 2019. Covid-19 is a viral disease caused by Corona virus having symptoms like cough, cold, fever and shortness of breathing to severe conditions which may lead to death of the patient and most of the countries of the world are struggling to survive against this disease. To combat this situation Ayurvedic treatments are being used along with allopathic treatments and vaccination. Since long time, Ayurvedic medicines are being used in the form of Kadha which consists of various medicinal plants (Herbs) having phytochemicals to control various respiratory disorders such as cough, cold and flu. During Covid time in India most of the population used Kadha in their daily routine to boost their immunity against Covid-19. Medicinal plants have numerous phytochemicals which are responsible for their medicinal properties. So this review has summarized medicinal properties of ingredient plants of some immune boosting kadhas are being used in India against Covid-19.

Abstract No. 85

IMPACT ON SOCIAL LIFE DURING COVID-19 PANDEMIC SECOND WAVE

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ABSTRACT

In May 2020, many jurisdictions around the world began lifting physical distancing restrictions against the spread of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). This gave rise to concerns about a possible second wave of coronavirus disease 2019 (COVID-19). These restrictions were imposed in response to the presence of COVID-19 in populations, usually with the broad support of affected populations. However, the lifting of restrictions is also a population response to the accumulating socio-economic impacts of restrictions, and lifting of restrictions is expected to increase the number of COVID-19 cases, in turn. This suggests that the COVID-19 pandemic exemplifies a coupled behavior-disease system where disease dynamics and social dynamics are locked in a mutual feedback loop. The second wave of the coronavirus disease of 2019 (COVID-19) pandemic. It has affected the Indian population at an alarming rate and has so far infected 25,385,043 people, and has taken 280,683 innocent lives (18 May 2021). The second wave is spreading rapidly and has severely affected the country recently. It is believed to be the second-worst pandemic that has affected the country almost after 100 years.

Abstract No. 86

ROLE OF AUTOTROPHS ESPECIALLY ALGAE IN INCREASING THE OXYGEN LEVEL IN THE ATMOSPHERE TO FIGHT WITH SECOND WAVE AND EXPECTED THIRD WAVE OF CORONA VIRUS

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ABSTRACT

Corona virus is RNA virus and its genetic material gets mutating frequently causing severe infection of naso respirator y system named as COVID-19. Corona virus affected almost each and every area of the world as global pandemic and causes millions of deaths and affected the financial growth and development of all most every country. At a time when India has barely put behind the horrors of the second wave of COVID-19 pandemic Delta variant of SARS-CoV-2 was responsible for towering second wave of the corona virus pandemic causing more severe COVID-19. This is mainly why Delta Plus variant of SARS-CoV-2 has become a worry for an anticipated third wave, which can be prevented or mitigated at least on the basis of lessons learnt from the past two waves of COVID-19 pandemic. The third wave of corona virus depends on the how much vaccination, exposure rate and standard precautions taken. Algae, plants and some bacteria are autotrophs. Algae are fundamental components of quantic ecosystem. Autotrophs are the producers in the food chain. Most of them have the ability to produce more oxygen in the atmosphere via photosynthesis. Algae produce the highest levels of oxygen in the planet and can consume more carbon dioxide than trees because it can cover more surface area, grow faster. Prochlorococcus Chisholm et al., Chroococcus Nägeli, etc. releases more oxygen in the atmosphere. In this second wave of COVID-19 across the country significant number of corona virus patients have been found to experience shortness of breath, leading to oxygen support. As we know that oxygen exchange from air to blood in the lungs and from blood to tissues is dependent on partial pressure difference of the oxygen. Due to environmental ecological disbalance the partial pressure of oxygen in the air is relatively less in the urban area which frequently causes breathing discomfort. This problem becomes more remarkable or acute in patients of COVID-19. By introducing more autotrophs in urban area we can increase the quantity of the oxygen in air which may decrease the condition of oxygen crises. Therefore, it is important for patients who have contracted COVID-19 to look for ways to increase oxygen levels at home and outside environment. Some important oxygen producing indoor plants like Areca palm, Spider Plant, Snake Plant, Money Plant and Gerbera Daisy may be planted to increase the oxygen level at home. Some plants are also producing more oxygen planting such kind of trees will help to produce more oxygen like Banyan Tree, Neem Tree, Peepal Tree, Curry Tree, Bamboo Tree, etc. This paper deals with autotrophs - algae and other plants increasing the oxygen level to fight with corona virus to help the people.

Abstract No. 87

CHALLENGES FACED BY CHRONIC KIDNEY PATIENTS UNDER MAINTENANCE HAEMODYLIASIS DURING COVID-19 PANDEMIC SECOND WAVE

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ABSTRACT

Abstract: As per the current worldwide scenario Covid-19 Second wave hit hard and its impact is huge on CKD patients as well. As they are already suffering a morbid disease, lower immune response and psychological distress getting in contact with Covid-19 while undergoing dialysis is a huge challenge. Understanding their challenges will not only make us understand present but also equip us with better ways to deal with Covid pandemic in upcoming future times. The authors find out the impact of Covid-19 Second Wave on patients who need to visit hospitals even during this hard times. Information gathered from Patients and their primary caregivers can be utilized to analyze present scenario as well as upcoming future Covid-19 Waves. According to many research studies done on Kidney Patients it is found that they are prone to many psychological problems along with a physiological disease. Undergoing dialysis during Covid-19 Second Wave which was fatal because of Delta Variant of Corona Virus becomes much more distressing and depressing. Therefore, aim of this study will result not only to understand present aim but also it will provide a great knowledge about precautionary solutions for the upcoming future.

Abstract No. 88

IMPACT OF 2ND WAVE OF COVID-19 ON ALGAL-DIVERSITY OF GANGA AT KANPUR

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ABSTRACT

The India's largest river has been intensely studied to better understand the impact of climate change and direct human interventions on river water quality and quantity. Of particular importance is agricultural discharges are modifying the dissolved inorganic constituents. The covid-19 pandemic lockdown provides a rare opportunity to anthropogenic on river biodiversity. The month -long lockdown due to corona virus lead to decrease in pollution level in river Ganga at Kanpur. The study found that there has been a drastic change in the diversity of algae.

Abstract No. 89

CHALLENGES AND DEVELOPMENT FOR COVID-19 SECOND WAVE IN BHILWARA-RAJASTHN

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ABSTRACT

The most number of population is living in the ruler area of Rajasthan. The rural health care infrastructure of Bhilwara district of Rajasthan is insufficient and unprepared to restrict COVID-19 transmission, particularly in several densely populated region. The COVID-19 pandemic poses a unique challenge due to a lack of testing services, lake of knowledge about transmission of the disease, a shaky surveillance system, and, most importantly, inadequate medical care. The consequences of this pandemic, particularly the lockdown strategy, are multifaceted. The potential ramifications of the COVID-19 epidemic for rural population of the Bhilwara district are highlighted in this paper.

Abstract No. 90

POPULATION ANALYSIS FOR NSARS-COV-2 SUSCEPTIBILITY AMONG DIFFERENT BLOOD GROUPS IN NANDED, MAHARASHTRA, INDIA.

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ABSTRACT

In December 2019, a novel beta coronavirus outbreak was reported in Wuhan, China. The causative agent was reported nSARS-CoV2, and it results in the COVID19 global pandemic in early 2020 and still underway. There are multiple risk factors associated with the rise in nSARS-CoV2 infection and COVID19, such as Co-morbidity and age. It was reported that the blood group played a vital role in the susceptibility of nSARS-CoV2 infections from earlier findings. However, there are a few research and clinical findings are available to support the hypothesis. We aim here to study blood group and its relation in susceptibility of nSARS-CoV2 infection. Further, based on results, the biochemical profile of the most susceptible and resistant blood group will be carried out. Here, we will be addressing the role of microRNAs, vitamins, and genetics in the higher risk of nSARS-CoV2 infection among a population. MicroRNAs are small non-coding RNA molecules associated with the regulation of expression of various genes. Role of microRNAs in blood groups is not well established; however, studies have demonstrated several microRNAs remain associated with RDH antigen. Rh blood group, D antigen also known as Rh polypeptide 1 or cluster of differentiation 240D is a protein that in humans is encoded by the RHD gene. The RHD gene codes for the RhD erythrocyte membrane protein that is the Rh factor antigen of the Rh blood group system. The nSARS-CoV2 susceptibility and Blood Group remain unknown, and possibly a differential expression of these antigens may cause varying susceptibility of nSARS-CoV-2 infections.

Abstract No. 91

THE DELTA VARIANT OF COVID-19: VIRUS OF CONCERN

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ABSTRACT

Delta variant (B.1.617.2) of COVID-19 is a "virus of concern" due to its double contagious nature and transmission rate. This virus is not specific for a particular age, therefore targeting equally to all age groups. Till August 2021, the Delta variant has been reported in 142 countries globally. The mutation in a single amino acid in the spike protein of SARS CoV-2 makes it more infectious than another variant of the virus. This change is called P681R, which transforms a proline residue into an arginine. Indian SARS-CoV-2 genomics consortium (INSACOG) identified continuous change in delta variant as K417N mutation of spike protein, that leads to bir thed sub-lineage AY.12 (B.1.617.2.1) as new delta plus strain of the virus. The same K417N mutation was recognized in the beta variant (B1.351) of SARS CoV-2. This is marking the fear to spread the third wave of COVID-19 in India. Fever, Headache, Cold and Sore throat are the most common symptoms of the Delta variant. Today's we have multiple numbers of vaccines such as Covishield, Covaxin, Sputnik, AstraZeneca, Moderna, and Pfizer are available to fight against COVID-19, still, there is no treatment working efficiently. The continuous nature of mutation makes this virus more severe and difficult to encounter day by day. Therefore, prevention is the only option to deal with this pandemic situation.

Abstract No. 92

COVID-19 SECOND WAVE: DANGER TO DANGEROUS VARIANTS OF SARS-COV-2 AND VACCINATION STRATEGY FOR SOCIAL LIFE AND SUSTAINABILITY

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ABSTRACT

More than 1.5 year since coronavirus disease 2019 (COVID-19) was declared a public health emergency and later on a Pandemic by World Health Organization (WHO); the lethal severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) continues to interrupt public life worldwide. There are several nations that have seen a two-wave design in revealed instances of COVID 19 pandemic, with a first wave of infection during early 2K20 followed by ongoing second wave. To control the pandemic at early stages, nations are taking extensive actions to quicken the vaccination drive, mean while SARS-CoV-2 virus mutations leads the emergence of different new variants make it highly contagious and challenging to public health. In November 2020, the SARS-CoV-2 lineage B.1.1.7, first detected in the United Kingdom (UK), was assessed to be 40-80% more contagious than the wild type SARS-CoV-2. Since then there were several demographic danger to dangerous variants of SARS-CoV-2 have been identified from various countries including India: 614G; 20C-US; B.1.1.7/ Alpha; B.1.427/ B.1.429/ Epsilon; CAL.20C; B.1.526/ Iota; B.1.525/ Eta; B.1.351/ Beta; B.1 with 9 mutations; B.1.1.28.1/P.1/ Gamma; B.1.1.28.3/ P.3 / Theta; B.1.1.28.2/ P.2/ Zeta; B.1.617.1/ B.1.617.3/ Kappa; and B.1.617.2/ Delta. To combat or curb the COVID-19 spread, the Government of India did the commendable job by one of the biggest vaccinations drives with the aim of vaccines pan-India free of cost since 16th January, 2021. As per the report of the Press Information Bureau, several brands of COVID-19 vaccines available in India right now including: Covishield; Covaxin™; HDT-301; ZyCoV-D; RBD219-N1; Sputnik V. The data of COVID-19 from Government of India showed that, there are 32857937 total cases; 32028825 recovered and discharged successfully cases; 439529 death cases; as well as 389583 active cases by 02 September, 2021, 08:00 IST. However, sum of 524868734 COVID-19 samples tested by 02 September, 2021; and 663037334 vaccination doses have been given pan India by making a world record (excluding China) of vaccination (12577983 doses) in one day on 31 August, 2021.

Abstract No. 93

CHALLENGES AND OPPORTUNITIES IN EDUCATION SECTOR DURING COVID 19 OUTBREAK

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ABSTRACT

The COVID-19 pandemic is causing more than 1.6 billion children and youth to be out of school in 161 countries. This is close to 80% of the world's enrolled students. The COVID-19 pandemic has already had devastating impacts that are likely to have long-term social and economic consequences. We were already experiencing a global leaning crisis, as many students were in school, but were not learning the fundamental skills needed for life. The crisis has exacerbated already-widespread educational inequalities due to factors relating to gender, disability, immigration, mother tongue, learning difficulties or other sources of socioeconomic disadvantage. Consequently, e-learning is now the way to transform the education sector. It is showing a positive transformation and schools and colleges in rural areas are also adapting to technology day by day. Today's challenge is to minimize the negative impact of this epidemic on learning and school education, and to build on this experience in order to re-emerge on the path of faster and improved learning. As the education system responds to this crisis, they also need to consider how to recover more forcefully. All stakeholders need to regain their sense of responsibility, better understand and recognize the need to fill the opportunity gap and ensure that all children receive the same quality educational opportunities. In this paper we'll discuss, challenges and opportunities in education sector during Covid 19 outbreak.

Abstract No. 94

STRUCTURE BASED MOLECULAR DOCKING TOWARDS IDENTIFYING PHYTOCHEMICALS AS MUTATED EGFR INHIBITOR IN BREAST CANCER

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ABSTRACT

Plants produce secondary metabolites which serve humanity in treating various deficiencies and diseases. 2 plants used in Ayurveda, an ancient Indian system of medicine in treating cancer were considered for the study. Breast cancer surpassed lung cancer in 2020. EGFR is an oncogene, which is commonly over expressed in breast cancer. Targeting EGFR mutations using phytochemicals will be promising due to higher efficacy and less side effects. Docking have become an essential that facilitates study of molecular and structural diversity in an organised manner. The phytochemicals were identified from Dr. Dukes database and IMPPAT and 3D structures were retrieved from PubChem. These phytochemicals were targeted against the native and mutant structure of EGFR retrieved from PDB. 153 compounds passed the SwissADME test for drug likeness. These were taken for further docking studies. 12 compounds among them showed a good docking score against EGFR mutations in breast cancer. Further pharmacophore analysis also confirmed these phytochemicals as a better option in treating EGFR mutations in breast cancer.

Abstract No. 95

HEALING OF EARTH AND ECOSYSTEM UPGRADATION DURING COVID-19 LOCKDOWN

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ABSTRACT

The COVID-19 pandemic has led to dramatic loss of human life world wide. The economic and social disruption caused by the pandemic is devastating. Coronavirus has caused many negative things to world but in this tragic situation mother earth takes the advantage and rejuvenates. Coronavirus resulted in earth vaccine by reducing air, water, land and noise pollution, As the transport and human mobility where stopped during lockdown. Ganga river was found suitable for wildlife and fisheries propagation. Many animals where seen on roads during lockdown. Wildlife gets a chance to reclaim their land. Air quality index was marked decline. Noise pollution was reduced. Decrease in sewage and industrial waste in river. Vital environment changes have been evidenced during lockdown. Nilgai was spotted roaming free on the street of NOIDA in March. A huge flock of flamingos migrated to Mumbai. People of Jalandhar and Saharanapur viewed snow-capped Himalayan range. The dissolved oxygen level was increased. The group of monkeys were having pool party in the society of Mumbai. Authors tried to explain the healing of earth and ecosystem up gradation during Covid-a9 and following lockdown.

Abstract No. 96

PSYCHOSOCIAL IMPACT OF COVID-19 PANDEMIC ON SCHOOL EDUCATORS' MENTAL HEALTH AND ROLE OF COGNITIVE COMPETENCE IN COPING WITH SUCH ADVERSITIES

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ABSTRACT

The impact of psychosocial factors on the mental health of ordinary and professional people is normally a theme in various psychological and clinical studies but now it is more relevant due to the pandemic caused by Covid-19. This study was focused on the effect of different aspects of pandemics like job losses or salary cuts led to economic abuse, gender discrimination, teaching-learning paradigm shift, learning new skills, learning attitude, household workload, the expectation of family members, and responsibilities on educators' negative mental health and role of knowledge, skills, and abilities as components of cognitive competencies in coping and managing such adverse issues. Participants for the study were educators having an age range in early and middle adulthood. Statistical tools descriptive, correlational and regression analysis were used. Educators having high knowledge, skills, and abilities levels have managed this adversity up to some extent, but moderate cognitive competent educators were impacted more and faced negative mental health symptoms. Childhood self-esteem and high cognitive competencies give psychological strength to cope and manage mental health issues from routine stress to the natural disaster-caused negative impacts.

Abstract No. 97

COVID-19 AND ONLINE EDUCATION: CHALLENGES AND OPPORTUNITIES

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ABSTRACT

The COVID-19 pandemic has wreaked havoc on every aspect of society by affecting the human life in every aspect including education. The pandemic has forced the shutdown of many physical activities worldwide, including educational. It has significantly disrupted the education sector which is a critical determinant of a country's economic future. This situation leaves educational institutions no choice but to migrate from to face-to-face classes to online mode of education. Approximately 320 million learners are affected in India during COVID -19. Both the positive and negative impacts of COVID -19 pandemic situation have been obser ved on education system of India. It has changed the traditional education system to the modern educational technologies model by switching from face to face teaching to online teaching. Education and technologies always come together, but with the pandemic it took new level. Although this can be seen as forced transition, but at the time only fusible solution.

Abstract No. 98

NANOTECHNOLOGY IN DIAGNOSIS OF COVID-19

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ABSTRACT

Now days, the whole world is suffering from the Novel Corona virus pandemic. The intervention of nanotechnology are play a vital role in bringing multi-disciplinary ways of developing affordable, reliable, and powerful tools for diagnosis, personal protection, and new effective medicines. Therefore, non-toxic nanoparticles have been under development for clinical application to prevent and treat COVID-19. Nanoparticles are using in treatment of viral infection. Some nanomaterials, such as silver colloid, titanium dioxide, and diphyllin nanoparticles, are considered promising antiviral agents and those nanomaterials are effective management of delivery platforms for the coronavirus infection. Nanoparticles showed good promise to provide nano vaccines against viral infections. Here, we discuss the useful of nanoparticles that may be applied as a drug itself or as a platform for the aim of drug. We pay particular attention to highlighting the functional role of gold nanoparticle (AuNP)-based detection technique in term of improvements in sensitivity, detection range, and time. Meanwhile, the advanced strategies based on nanoparticles to detect viruses will be described with the goal of encouraging scientists to design effective and cost-benefit nanoplatfor ms for prevention, diagnosis, and treatment. This review designed purposely to highlight the perspective contributions of nanotechnology in the war against COVID-19 pandemic.

Abstract No. 99

SOCIETAL AWARENESS AND SAFETY MEASURES TO COMBAT COVID-19 PANDEMIC

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ABSTRACT

Battle against covid-19 depends very much upon the societal awareness and safety measures and self consciousness of people towards the safety. Covid-19 transmission and protective measures covid-19 spreads primarily from person to person. Fighting this disease is our joint responsibility. You can protect yourself by avoiding or limiting time spent in crowded places, poorly ventilated, indoor locations, keeping physical distancing and avoiding prolonged contact with others. Open windows when indoors to increase the amount of outdoor air.You can protect yourself: clean your hands and your surroundings frequently. Most of the disease are spread from contaminated water and polluted air so to prevent this we must check the water quality and plant more and more trees around us. Yoga has also proven to be an effective therapy for curing the patients from deadly diseases. The exercises are a homely method to cure such diseases and have been very easy to do. Covid strains being so wide and having so many variants need good immunity to battle with so having a healthy diet can be helpful in many ways for pre covid war. Being healthy does not only include food but also includes good sleep healthy lifestyle and a proper routine for a healthy body. Immune system is build with a number of things and proper nutrition good sleep and pure mind combine all of it.

Abstract No. 100

IMPACT OF COVID-19 PANDEMIC ON MENTAL HEALTH AND SOCIALITY

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ABSTRACT

COVID-19 comes with several negative health impacts specially those related with mental problems, the depth and scope of which are greater than any other natural and manmade calamity leading to prolonged stress and uncertainty. In several countries strict lockdown although help a lot to control community transmission of COVID-19, however, this was not without cost. Persons with comparatively more prone toward COVID-19 and their poor health status associated with mental illness were found more vulnerable to mental distress. The level of mental distress was found much higher in adults aged between 18 – 24 years in comparison to older aged peoples. It is argued that lower level of mental distress among older people is the result of higher baseline levels of well-being. Social isolation during COVID-19 lockdown has increased alcohol consumption among people with alcohol use disorder (AUD). This isolation also relapse those previously abstinent to alcohol use. Peoples endorsed drinking more than normal during the pandemic. Persons who lost jobs and those who had sleep disruptions, changes in eating behaviors, and higher levels of depression and stress were more prone to risk. Various adverse health consequences such as high blood pressure, stroke, liver disease and cancer are associated with heavy alcohol use. In addition to this alcohol-impaired accidents and driving fatalities are also very common during this pandemic. Depression, sleep problem, more probability of intimate partner violence, child abuse, and neglect and ultimately linked to suicide are some major complications that are make boil by heavy alcohol consumption. All these alcohol-related health and social consequences leads to substantial economic burden. Unfortunately peoples who prefer to use alcohol argue and promote alcohol as a way to cope with pandemic-related stress. Thus it can be say that psychological distress related to COVID-19 is significantly associated with alcohol use. Having a pet was linked to maintaining better mental health and reducing loneliness. The strength of the human-animal bond did not differ significantly between species with the most common pets being cats and dogs followed by small mammals and fish. Also, nature around one's home may help mitigate some of the negative mental health effects of the COVID-19 pandemic. More frequent greenspace use and the existence of green window views from the home were associated with increased levels of self-esteem, life satisfaction, and subjective happiness, as well as decreased levels of depression and loneliness.

Abstract No. 101

POLLUTION CONTROL MEASURES OF THE CEMENT INDUSTRY (A CASE STUDY OF PRISM CEMENT SATNA)

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ABSTRACT

Cement preparation includes mining; Crushing and grinding of raw materials (prissy-parish limestone and clay); Soothe materials in a kiln; Resulting in cooling of the clinker; Mixing clinker with gypsum; And milling, storage, and receiving finished cement. This process generates a variety of wastes including dust, which is captured and recycled into process. The process is very energy-intensive, and there are strong incentives for energy conservatism. The gases emitted from the clinker cooler are used as secondary combustion air. The dry process using preheaters and preliners is economically and environmentally preferable to wet process, as energy consumption is about 200 kg per kg (J / kg) - about half that for the wet process. Some solid waste products from other industry, such as power stations, slag, roasted pyrite residues, and pulverized fly ash (PFA) from foundry sands can be used as additives in cement production. Due to technological advancements, cement making companies have been able to produce higher volumes than in the past. However, high production levels have also been identified as a major cause of pollution. Using appropriate technology for use in the cement industry can go a long way towards reducing on-site waste and pollution. This paper examines options in practice to reduce pollution by Prism Cement Satna, cement manufacturing company works for development of cement and klink, and this will help to ensure legislative compliance. This study can play a role for cement manufacturing industry as by adopting appropriate technology and computer modelling, the industry can not only reduce production waste but also can comply with the law with environmental protection. The paper examines the techniques and methods used for reducing pollution by cement companies.

Abstract No. 102

PHYTOTOXIC EFFECT OF LATHYRUS SATIVUS ON SEED GERMINATION AND SEEDLING GROWTH OF LENS CULINARIS

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ABSTRACT

In present investigation lentil (*Lens culinaris* or *Lens esculenta* L.) is taken as a target crop to study the effect of *Lathyrussativus* L. which grow as weeds in the fields. This weed affects the growth of lentil and decrease the productivity of this crop. The seeds of lentil were germinated and grows in different dilution (diluted with distilled water) of root extracts of the *L. sativus* in Petrie plates under lab condition. The germination percentage of the seeds were higher in control as well as extract treated seeds but it gradually declines in 50 to 90 % of the extract concentration indicating the toxic effects of the extract was effective at higher concentration. The effect of different concentrations of *L. sativus* root extract on shoot and root length of *L. esculenta* was evaluated at the five, seventh and tenth days after germination. Data revealed that shoot and root lengths of the test plants were significantly decreased at all concentrations of extract.The root fresh and dry weight of the germinated seedling was also following the same pattern and it declines as the extract concentration increases. There was a significant decrease was obser ved in the germination and as well as the growth as compared to the control (without extract). The seeds of both the crops mixed and germinated in pots together. Similar effects were observed as mentioned above. This indicates that *L. sativus* shows potential allelopathic behavior with lentil. Chiang et al. (2003) mentioned that the effect of plant extracts on seed germination comes from the various chemical constituents present in these plants. Chemical constituents (secondary metabolites) affect seed germination and plant productivity. Inhibition effects typically result from a combination of allelochemicals which interfere with various physiological processes in the receiving plant (Mominul Islam et al., 2018).Due to the growth inhibition by these allelochemicals in our studies on *Lens esculenta* L. there was an inhibition of one or more physiological process and more importantly the photosynthetic process which is a prime importance for the plant.

Abstract No. 103

EFFECT OF IMMUNOSTIMULANT OCIMUM TENUIFLORUM IN DISEASE MANAGEMENT OF FRESH WATER CARP, LABEO ROHITA **HAMILTON**

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ABSTRACT

An experiment was conducted to study the immunostimulatory effect of Ocimumtenuiflorum in the fresh water edible fish Labeorohita. Fish pathogenic bacteria Aeromonashydrophila was used as an antigen to evoke immune response. The immune response in fish was measured by quantifying antibodies produced in the control and experimental fishes. O. tenuiflorum leaf extract significantly enhanced the primary and secondary antibody response and an inverse relationship was observed between the dose of leaf extract and the degree of immunostimulation. The observed immunostimulatory property of O. tenuiflorum.Labeorohita has an implication in the maintenance of finfish health in fresh water intensive aquaculture practices. A 60 days study was conducted to evaluate the efficacy of water extract of Ocimumtenuiflorum Linn. leaf on the immune response and disease resistance of Labeorohita fingerlings against the Aeromonashydrophila infection. Ocimumtenuiflorum sanctum extract was incorporated in the diets (at 0.0%, 0.05%, 0.1%, 0.2%, 0.5% and 1%) of Labeorohita, rohu fingerlings (6.6 ± 0.013 g). After 42 days blood, plasma and serum were sampled to determine super oxide anion production, lysozyme activity, total immunoglobulin in plasma, blood glucose, serum total protein, albumin, globulin, albumin:globulin ratio, WBC, RBC, haemoglobin content. Fish were challenged with A. hydrophila after 42 days and mortalities were recorded over 18 days post infection. The results demonstrate enhanced super oxide anion production, lysozyme activity, total immunoglobulin in plasma, serum total protein, globulin, total RBC counts, total WBC counts and haemoglobin content ($P < 0.05$) in treatments group compared with control group. Dietary O. sanctum extracts of 0.2% showed significantly ($P < 0.05$) higher protection relative percentage survival (RPS 40.00 ± 5.773%) against A. hydrophila infection than control. These results indicate that O. tenuiflorum leaf extract stimulates the immunity and makes L. rohita more resistant to bacterial infection (A. hydrophila).

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Abstract No. 104

EFFECTS OF LARGE DOSES INTAKE OF ASCORBIC ACID ON BLOOD GLUCOSE LEVEL AND OXYTOCIN IN FEMALE RATTUS RATTUS

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ABSTRACT

Blood glucose level in the group of Rattusrattus fed with large dose 100mg/100gm body weight of ascorbic acid (vitamin C) showed a decreasing trend till the last 60th days. On 60th day the drop of blood glucose level is 18% significantly. In lactating Rattusrattus oxytocin concentration significantly increases during suckling period. Large doses intake of ascorbic acid also elevates the OT level remarkably.

Abstract No. 105

EFFICACY OF OYSTER MUSHROOM IN PROMOTING BIOCHEMICAL, HEMATOLOGICAL AND HEALTH STATUS OF CATFISH CLARIAS BATRACHUS

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ABSTRACT

The present study was conducted to investigate the efficacy of a Oyster mushroom aqueous methanolic extract supplementation on the immunological and Haematological indices, digestive enzyme activity and growth performance of the Clariasbatrachus. Oyster mushroom was added to a basal diet at the rate of 0 (CA0), 0.1 (CA0.1), 0.5 (CA0.5) and 1 g kg−1 (CA1), and Clariasbatrachus was fed this diet for 45 days. Respiratory burst activity was significantly increased in all experimental groups on days 15 and 30 compared to the control ($P < 0.05$). L ysozyme activity was significantly increased over all sampling times compared to the control except in CA1 ($P < 0.05$). Myeloperoxidase activities were significantly increased in all experimental groups compared to the control ($P < 0.05$). Haematological parameters were significantly decreased compared to the control ($P < 0.05$). Trypsin and lipase activities were significantly increased in CA0.5 and CA1 compared to the control ($P < 0.05$). Amylase activity was significantly improved in all experimental groups compared to the control ($P < 0.05$). Final weight, weight gain and SGR were significantly enhanced in CA0.1 and CA1 compared to the control ($P < 0.05$). FCR was not different in any of the experimental group ($P > 0.05$). These results demonstrate that dietary supplementation with an aqueous methanolic extract has beneficial effects on the immune responses, digestive enzyme activity and growth performance of Clariasbatrachus.

Abstract No. 106

FISH DIVERSITY OF CHITTAURA JHEEL, A WETLAND OF TARAI REGION OF BAHRAICH DISTRICT

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ABSTRACT

Wetlands are one of the most productive ecosystems which play a significant role in the ecological sustainability of a region. They are cradles of biological diversity, providing the water and primary productivity upon which countless species of plants and animals depend for survival. They are probably the earth's most important fresh water resources which provide food and habitat for much aquatic life including threatened and endangered species. So, conservation of wetlands is very much essential as wetlands are one of the most threatened habitats of the world. Various beneficial functions of wetlands like sustaining life processes, water storage, recharge of ground water, water purification, storehouse for nutrients and stabilisation of local climate, help in maintaining the ecological balance. Besides these multi-pronged eco-climatic utilities, the wetlands are also potential resource for enhancing fish production through capture and culture based fishery development. The present study is undertaken to assess the fish diversity of naturally occurring Chittaura Jheel of Bahraich district of Uttar Pradesh. The 21 fish species were recorded from the wetland during June,2020 - July,2021, indicated that this wetland is rich in fish diversity. Average fish catch composition comprised Indian major carp (45.50 %), catfishes (22.0 %) and miscellaneous group (32.5 %). Besides indigenous carps, the other commercial species encountered were Wallagoattu, Channamarulius and Notopterusnotopterus.It has been found that management of wetland has received inadequate attention as a result, it is subject to anthropogenic pressures, including land use changes in the catchment; pollution from households, encroachments and over exploitation of its natural resources.

Abstract No. 107

IMPACT OF SPENT WASH ON HAEMATOLOGICAL PARAMETERS OF INDIAN CAT FISH, MYSTUS VITTATUS (BLOCH)

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ABSTRACT

The alcohol distilleries are growing extensively worldwide due to wide spread industrial applications of alcohol such as in chemicals, pharmaceuticals, cosmetics, beverages, food and perfumery industry, etc. In India, distilleries are one of the largest industries, generating vast quantities of effluent (known as raw effluent or spent wash), which is potentially a great cause of aquatic and soil pollution. The industrial production of ethanol by fermentation results in the discharge of large quantities of high-strength liquid wastes. Distillery wastewater is one of the most polluted waste products to dispose because of the low pH, high temperature, dark brown colour, high ash content and high percentage of dissolved organic and inorganic matter with high biochemical oxygen demand (BOD) and chemical oxygen demand (COD) values. Its characteristics are depending on the feed stock and various aspects of ethanol production process. Spent wash polluted the water bodies in two ways; first, the highly colored nature which can block out sunlight, thus reducing oxygenation of the water by photosynthesis and hence becomes detrimental to aquatic life. Second, it has a high pollution load which would result in eutrophication of contaminated water sources. Distillery waste water, without any treatment can result in depletion of dissolved oxygen in the receiving water streams and poses serious threat to the aquatic flora and fauna. The 96h LC50 of distillery effluent for Mystusvittatus was 3.0% (v/v). Present study deals with the impact of distillery waste water at various sublethal concentration levels (0.5%, 1.0% and 1.5%) on the blood parameters of, Mystusvittatus after 30 days of exposure. Observations revealed that 0.5% of effluent concentration produced no significant alterations in various haematological parameters except for clotting time and immature erythrocytes. However,1.0% of effluent concentration brought significant alterations in hematocrit as well as clotting time and 1.5% of effluent concentration produced highly significant ($P<0.001$) alteration in most of the haematological and serum biochemical parameters.

Abstract No. 108

FISH DIVERSITY OF BHAGDA TAAL, A WETLAND: THREATS AND CONSERVATION STATUS

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ABSTRACT

In recent years, it was realized that the fish and fresh waters are one of the most vulnerable resources in nature that have been heavily impacted by human usage and regulation. Uttar Pradesh has vast potential of aquatic bioresources and offers considerable scope of inland fisheries development and aquaculture. The fishery resources in tarai region of eastern U.P. are available in the form of rivers, streams, reservoirs, wetlands, lakes, ponds and tanks exhibited rich fish diversity. Uttar Pradesh is one of the prominent zones of wetland resources of the country. River borne and river fed wetlands are concentrated mostly in riverine and flood prone belt of eastern U.P. Natural wetlands are ox-bow lakes, deep pools, waterlogged depressions, marshes and swamps. These wetlands are extremely diversified in their size, shape, depth, gaseous contents, nutrient status, biotic diversity, aquatic weed infestation and production status.

Fishes are very important components of the wetlands and they play an important role in food web. An attempt has been made to study the fish fauna naturally occurring in BhagdaTaal of district Balrampur, Uttar Pradesh. The survey was focused mainly on fish biodiversity and undertaken during July, 2020 to June, 2021. There is a possibility of significant enhancement in fish yield from the wetland by converting it from capture to culture-based capture fishery resource through appropriate management interventions.

Abstract No. 109

BIODIVERSITY OF CERCOSPORA IN BAHRAICH AND SHRAWASTI FOREST DIVISION OF U. P.

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ABSTRACT

Members of Cercospoeae group are important plant pathogen and responsible of serve economic losses, attacking particularly all the areal parts of plant though their role is more important as leaf parasites forming numerous necrotic spots. The taxonomic treatment of a fungal organism is the first requirement for any studies concerning its biology. In fact, without being equipped for ascertaining the correct identity of a fungal pathogen all studies concerning its phyto pathological aspects would be misleading. The weed and forest plants serve as reservoirs of leaf spot pathogens which on getting opportunity may spread to agriculture and horticulture plants. During our survey Feb. 2018 to Aug. 2021 in Shrawasti and Bahraich Forest Division we came across Two hundred sixty angiospermic plant spices' being parasitized by foliicolous fungi. The collection, herbarium preparation and laboratory processing for identification of the fungus was followed by Hosagauder and Kapoor (1984) as described in Asterinales of India. Out of Two hundred sixty angiospermic accessions forty-two hosts were found to be parasitized by different species of Cercospora. Out of forty-two, seven accessions of Cercospora are still to be identified up to species rank. The forty-two angiospermic hosts are belonging to 35 genera of 24 families. Three hosts are still unidentified in want of inflorescence, flower or a taxonomist. It is surprising to note that in certain cases single slide preparation showed the presence of more than one fungus viz. Phaseoluscoccineus, Capsicum annum were recorded with two fungi whereas rest hosts with single fungus. The list reveals that family Moraceae is represented by five susceptible hosts where as Apocynaceae and Paplionaceae with three hosts each; Araceae, Cucurbitaceae, Fabaceae, Malvaceae, Solanaceae and Verbenaceae with two hosts each and rest of the fifteen families were found to be infected by a single fungus only.

Abstract No. 110

HUMAN HEALTH AND NUTRITIONAL IMPACT OF BIODIVERSITY

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ABSTRACT

People depend on biodiversity in their daily lives, in ways that are not always apparent or appreciated. Human health ultimately depends upon ecosystem products and services (such as availability of fresh water, food and fuel sources) which are requisite for good human health and productive livelihoods. Biodiversity loss can have significant direct human health impacts if ecosystem services are no longer adequate to meet social needs. Indirectly, changes in ecosystem services affect livelihoods, income, local migration and, on occasion, may even cause or exacerbate political conflict. Additionally, biological diversity of microorganisms, flora and fauna provides extensive benefits for biological, health, and pharmacological sciences. Significant medical and pharmacological discoveries are made through greater understanding of the earth's biodiversity. Loss in biodiversity may limit discovery of potential treatments for many diseases and health problems. Biodiversity plays a crucial role in human nutrition through its influence on world food production, as it ensures the sustainable productivity of soils and provides the genetic resources for all crops, livestock, and marine species harvested for food. Access to a sufficiency of a nutritious variety of food is a fundamental determinant of health. Nutrition and biodiversity are linked at many levels: the ecosystem, with food production as an ecosystem service; the species in the ecosystem and the genetic diversity within species. Nutritional composition between foods and among varieties/cultivars/breeds of the same food can differ dramatically, affecting micronutrient availability in the diet. Healthy local diets, with adequate average levels of nutrients intake, necessitates maintenance of high biodiversity levels. Intensified and enhanced food production through irrigation, use of fertilizer, plant protection (pesticides) or the introduction of crop varieties and cropping patterns affect biodiversity, and thus impact global nutritional status and human health. Habitat simplification, species loss and species succession often enhance communities vulnerabilities as a function of environmental receptivity to ill health. Biodiversity provides numerous ecosystem services that are crucial to human well-being at present and in the future.

Abstract No. 111

BUTTERFLIES THE PERFECT INDICATORS OF ENVIRONMENTAL HEALTH

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ABSTRACT

Butterflies are the potential umbrella group for biodiversity conservation. They are good subjects for dispersal studies and have enormous ecological importance. After bees, butterflies are the second category of insects which are very specific to their food plants. Some plants are shared by a number of butterflies as food. Use of butterflies as "indicators" is possible because they need three types of vegetation populations for their survival and distribution. This distribution is highly related with the phenological stages of the plants, the three types of plant population categories are larval food plants, nectar plants, and shade plants. Butterflies are the wild indicators of the ecosystem; these insects tell us everything about the healthier ecosystem. These are effective pollinators, butterflies visit the flower to eat nectar and this is mutually beneficial relationship. Some species of butterflies migrate over long distance; carry pollen to be shared across plants which are far apart from one another. These insects also provide food for other organisms, for example; birds, reptiles amphibians and also acts as biological pest control. But the population of these insects decline rapidly due to human activities, habitat destruction, uses of pesticides and unawareness of people about the importance of flying flowers.

Abstract No. 112

THERAPEUTIC POTENTIAL OF MEDICINAL PLANTS

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ABSTRACT

The therapeutic use of herbs is as old as human civilization and has evolved along with it. Local practitioners have used indigenous plants and herbs for centuries all over the world to treat a variety of ailments and these have exhibited clear pharmacological activities. Historically, herbal drugs were used as tinctures, poultices, powders and teas followed by formulations, and lastly as pure compounds. Across the cultures, knowledge about use of medicinal plants exists in the form of local folklore available with families, tribes and cultures, handed down from generation to generation. Plants have been well documented for their medicinal uses for thousands of years and traditional medicines are still a major part of habitual treatments of different maladies in different parts of the world. In recent years, there has been growing interest in alternative therapies and the therapeutic use of natural products, especially those derived from plants. Plants are considered as one of the main sources of biologically active materials. Phyto-chemical screening of medicinal plants has contributed a great deal for the discovery of new drugs. A number of medicinal plants have been subjected to detailed chemical investigations and this has led to the isolation of pure bioactive molecules which have been pharmacologically evaluated. As a result, new drugs have been discovered, along with new applications.

Abstract No. 113

IMPACT OF AQUEOUS EXTRACT OF EUPHORBIA TIRUCALLI PLANT LATEX ON SERUM PROTEIN OF CHANNA PUNCTATUS FOLLOWED BY RECOVERY

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ABSTRACT

The aim of this study was to assess the impact of aqueous extract of Euphoria tirucalli plant latex on the serum protein of snakeheaded Murral, *Channa punctatus*. 10 – 10 Fishes were exposed to two different sub lethal concentrations (20% and 40% of 30h-LC_{50}) of freshly prepared aqueous extract of Euphorbia tirucalli for 30 hours and 60 hours exposure time as well as in control group. In both experimental groups (20% and 40% of 30h-LC_{50} sub lethal concentrations) serum protein level was observed decreased with increase the sub-lethal concentration as well as the exposure time of aqueous extract of Euphoria tirucalli plant latex. The changes in serum protein were both dose and time dependent. For recovery, experimental fishes were transferred to normal water and kept for 7 days. After 7 days of withdrawal period, serum protein level of fishes was improved. This study reflects the changes in serum protein level of *Channa punctatus* due to aqueous extract of Euphorbia tirucalli plant latex and recovery results showed that its effect was reversible.

Abstract No. 114

DIVERSITY OF FLUKES (TREMATODA: DIGENEA) IN FRESHWATER FISHES OF INDIA: PERSPECTIVES TO HEALTH CHALLENGES AND SUSTAINABILITY

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ABSTRACT

The digeneantrematodes (flukes) are parasiticplatyhelminthes and employed variable hosts to complete their life cycles. Thereby these are entrenched in different ecosystems, more commonly aquatic ecosystem affected by local environmental conditions and manmade activities. The term trematoda used after their dorsoventrally flattened leaf like body shape and conspicuous suckers. The aquatic fauna, most often fishes are infected by these parasitic flukes. The parasitic occurrence, infestations, and distribution pattern negatively influenced the growth rate, reproductive potential and heath of the host fishes. The host-parasite interaction behavior in turn deteriorating the food quantity, production y and food value of fishes and thereby leads to economic loss to the countries. These trematodes are of equal and considerable medical and zoonotic importance as well. Thus these are the principal disease causing and health challenging agents among societies using natural or wild aquaculture system as dominant food sources for sustainable livelihood. Based on the literature survey, it was noticed that the study of immune response against helminthes are of immense attention. There is an huge diversity of flukes have been documented from fishes by several schools of Parasitology in yesteryears. The present study deals to explore the diversity of parasitic flukes in fresh water fishes from India perspectives to health challenges and sustainability. The findings of the review will be helpful in the management of parasitic and food borne diseases in future for the mankind and sustainable development.

Abstract No. 115

STUDIES ON FOLIICOLOUS FUNGI ASSOCIATED WITH SOME PLANTS IN KATARNIAGHAT WILDLIFE SANCTUARY BAHRAICH U P

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ABSTRACT

The leaves provide a very suitable habitat for the growth & development of fungal pathogen by providing ample surface area and nutrient supply. Such leaf inhabiting fungi are known as foliicolous fungi and the invaded area of the leaf appears as leaf spot or leaf lesion. The weed and forest plants serve as reservoir of leaf spot pathogen which on getting opportunity may spread to agriculture & horticulture plants. The foliicolous fungi or leaf fungi mainly include black mildews, rusts, smuts, powdery mildews, downy mildews and sooty moulds. Taxonomically, black mildews belong to several taxonomic groups such as Hyphomycetes, Meliolales, Schiffnerula and its anamorphic forms, Asterinales, Meliolinaceae, etc. In contrast to powdery mildews, black or dark mildews are obligate ecto-parasites producing black colonies on the surface of the host plants. The present study entitled is undertaken with the main aim of isolating, culturing and identification of foliicolous fungi or leaf fungi causing considerable damage to forest plant of economic importance. Keeping this in view the authors surveyed Katarniaghat Wildlife Sanctuar y Bahraich UP during July 2018- August 2021. The authors collected fifty fungal genera with fifty-three species has been found on fifty -three different flowering plant species which belong to fifty-two genera of forty families.

Abstract No. 116

BENEFICIAL MICROBES IN FERMENTED FOODS AND ITS EFFECT IN COVID-19 PANDEMIC

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ABSTRACT

Recent COVID-19, a viral outbreak, shows high demand for unconventional antiviral agents that can reduce the risk of infection and promote faster recovery. Fermented foods (FFs) have been recognised as antioxidants and anti-nutritive factors to mitigate COVID-19. FFs may be defined as food produced by people using their local knowledge from locally available plant or animal sources or adding starter cultures contain beneficial microorganism that alter the substrates biochemically and organoleptically into edible and nutritious foods that are culturally and socially acceptable to consumers. These foods are found as heritage foods in every part of the world. The rich diversity depends on ethnic communities, dietary habits and the availability of the raw material. Studies have shown that probiotics, most of which are naturally present in fer mented foods in the form of lactic acid bacteria (LAB), can enhance their host's immunity that affect both the upper respiratory tract and gastrointestinal viral infections. Probiotic bacteria and bioactive compounds in fermented foods exhibit antiviral activity against respiratory and tracheal viruses. Increased toxicity of natural killer cells, increased production of pro-inflammatory cytokines, and increased cytotoxicity of T-lymphocytes have been shown to stimulate immune system activity and cause action. However, fermented foods, probiotics, prebiotics, and synbiotics are capable to transform the gut and possibly at distant sites such as the respiratory tract. Specific therapeutic strategies can be proposed, such as the use of probiotic for patients with COVID-related gastro-intestinal symptoms and in those with mild-moderate systemic symptoms, trying to prevent cytokine storm. At last, much scientific knowledge is needed to establish science based recommendations of prebiotics and probiotics to prevent or treat COVID-19 infections.

Abstract No. 117

MICROGLIAL STIMULATION AND UPREGULATED STAGES OF SOME SPECIFIC INFLAMMATORY MEDIATORS AFTER JAPANESE ENCEPHALITIS INFECTION IN BV2 AND NEURO2A CELL LINES.

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ABSTRACT

Japanese encephalitis (JE) disease, a viral brain fever and the causal organism of this disease is Japanese encephalitis virus. In spite of the accessibility of efficient vaccines for this deadly infection, JE is the principal reason of epidemic viral encephalitis in children in South-east Asia. Presently no proper treatment available for the JE disease which might be probably be appropriate to imper fect interpretation of JEV pathogenesis . The JEV infections lead to permanent neurological scarcities even in those who stay alive after the disease. Activated microglia may play a potentially detrimental role by eliciting the expression of pro-inflammatory cytokines such as interleukin (IL)-1β, IL-6, and tumor necrosis factor-α (TNF-α) influencing the surrounding brain tissue. Microglial activation, proinflammatory cytokine release and leukocytes trafficking are associated following JEV disease in CNS. How the form detection receptors perceive the viral component nucleic acid and how the microglial and neuronal cells behaves following JEV infection is still unelucidated. There is scarcity of data on the expression levels of TLRs, cytokines and chemokines in JEV infection in invitro model. To explore the molecular mechanisms of JEV infection of neuronal cells and of microglial cells, we studied in this study, the expression profile of TLRs, Cytokines and chemokines in JEV infected microglial cell line BV2 and Neuronal cell line Neuro2A. For the present study, we create the mouse model of diseases encephalitis by IC injection of JEV for virus proliferation, disease progression and damage study. Our results demonstrated the exaggerated release of some specific TLRs, cytokines and chemokines in invitro cell culture of microglial and Neuro 2A cell line which are linked with difficult outcome in in vivo study.

Abstract No. 118

ARTIFICIAL INTELLIGENCE (AI): RECENT TRENDS IN CLINICAL TRIALS AND DRUG DISCOVERY

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ABSTRACT

Nowadays, the future of clinical trials is changing rapidly due to the introduction of Artificial Intelligence (AI) system to study the clinically significant patterns and algorithms generated upon the input from the trial. AI is progressively playing the role of a extempore in drug discovery and clinical research. Also, the application of AI is also increasing in the healthcare domain. These advances can possibly change numerous parts of patient care, patient experience, critical care and pathology labs. During the clinical trials of drugs, the high failure rates lead to inefficient drug development cycle which increases expenses of the pharmaceutical industry. The technique of artificial intelligence allows the order and decision makers to examine if study clinical trials in real life conditions which ensures the accuracy of the trials. Thus, decreasing the implications of the pharmaceutical industry and growing the success rates of the trial. Moreover, clinical trial is A much time-consuming process involving 5-15 years for just one drug molecule with lot of Investment. The use of clinical trial can reduce the time required for the trial and its investment Reduces to one half. Although, the use of the AI powered clinical trials one drug from every 200 Drugs passes this phase easily with genuine results which is much better than the traditional conventional procedure. Besides the use of clinical trials can improved in automated documentation of the clinical trial data under the database of the concerned company be retrieved and accessed very easily. The growing future of AI will remain the generation of high precision medicine and even Prediction of multi drug resistance in clinical trials and research.

Abstract No. 119

AIR POLLUTION IN KANPUR IS A HAZARDOUS ENVIRONMENTAL ISSUE

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ABSTRACT

Kanpur is the 12th most populated city in India and the second largest city in the state in UP after Lucknow. The name of the city is believed to have derived from Karnapur('Town of Karna one of the heroes of Mahabarat). The area of city is 403.70Km square. Kanpur came in with an yearly average of PM 2.5 reading of 48.5 mew ɜram/m**3 in 2019. Among the major causes of air pollution in Kanpur are industrial sectors, vehicles, road dust and domestic cooking. the industrial sector is the biggest contributor to this cause. Emission from vehicles proliferating tanneries and coal burnt by industries combine to produce a toxic cocktail of air pollutant in the city. Each day, the tanneries pump out about 30 crorlitres of polluted water into the adjacent Ganga's river. The combined effect of outdoor and household air pollution causes about 7 million premature deaths every year largely as a result of increased mortality from stroke, heart disease, lung cancer in the world.

Abstract No. 120

FARMER PRODUCER ORGANIZATION (FPOS) - A STRATEGY FOR WOMEN'S SOCIO-ECONOMIC EMPOWERMENT THROUGH COLLECTIVE ACTION

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ABSTRACT

A Producer Organization (PO) is a legal entity formed by primary producers, viz. farmers, milk producers, fishermen, weavers, rural artisans, craftsmen etc. A producer organization can be a producer company, a cooperative society or any other legal form which provides for sharing of profits/benefits among the members. It is formed and operated by women and farmer collectivization as one of the important element to solve their problem and based on that FPOs are formed in 2002 by the amendment in the Companies Act, 1956. For the vast majority of the people, agriculture offers a source of income and employment. The agricultural industr y makes a substantial contribution to national income. The agriculture industry in India accounts for 17.6% of the country's GDP and employs about 54.6 per cent of the country's workers. Small and marginal farmers are responsible for 44% of the operating area. Small and fragmented landholdings, climate change, diversification due to rapid urbanization, inadequate market and storage facilities, unorganized sector, lack of credit facilities, and low knowledge of supply chain management and business plans are all challenges that the Indian agricultural sector is facing. Especially this all problems became more during COVID 19 pandemic and due to lockdown farm women confront issues such as a shortage of inputs, finance, and selling their produce as a result of these obstacles. Farm women are frequently driven into debt cycles as a result of low remunerative prices, price fluctuations, intermediaries, inappropriate marketing, and so on. To solve these challenges Farmer Producer Organizations (FPOs) are one approach for small and marginal farmers and farm women respectively. Improvement in socio economic status of the farmers is possible only through collective action and commercialization of their agricultural activities. Farmer producer organization (FPO) is a means to bring together the small and marginal far mers and other small producers in the local communities to build their own business enterprise that will be managed by professionals. FPO can help farmers for production of agricultural produce as well as during the process and marketing agricultural products. The dream of doubling farmer's income is only possible through collective action approaches that are FPOs.

Abstract No. 121

ORAL DELIVERY OF INSULIN: THE NOVEL APPROACHES FOR DIABETES PATIENTS

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ABSTRACT

Diabetes mellitus is a major pathologic condition which is responsible for the major healthcare problem in worldwide. The insulin is the commonly used for the treatment of the diabetes. Insulin is a hormone that is synthesized in the cells of the pancreas as a pro-insulin precursor and is converted to insulin by enzymatic cleavage. The resulting insulin molecule is composed of 51 amino acids arranged into two polypeptide chains the A and B chains. It regulates the metabolism of carbohydrate and fats by promoting the absorption of glucose from the blood to Skelton muscles and fat tissue and by causing fat to be stored rather than used for energy. Insulin also inhibits the production of glucose by the liver. The insulin is given by iv. And by other route. The oral delivery of insulin helps to reduce the problems which are faced by the patient during the administration of t the insulin. Diabetes, is a group of metabolic diseases in which there are high blood sugar levels over a prolonged period. The major barriers in oral administration of insulin; Enzymatic Barrier, Intestinal transport of insulin, Dosage form stability. The oral delivery of insulin is under studies. The use of the carrier and modification may help to form the better result. Some of the oral product are under clinical trial and which give the relief to the diabetes patient form the problem faced during long term treatment.

Abstract No. 122

SUSTAINABLE SOLUTION FOR PPE DISPOSAL THROUGH LCA APPROACH

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ABSTRACT

In the middle of COVID-19 pandemics, there have been subsequent increase in the usage of Personal Protective Equipment kits by frontline health and sanitation communities, to minimize the likelihoods of infections. The used PPE kits, potentially being infectious, pose a threat to human health, ter restrial, and marine ecosystems, if not scientifically handled and disposed. However, with stressed resources on treatment facilities and lack of training to the health and sanitation workers, it becomes vital to vet different options for PPE kits disposal, to promote environmentally sound management of waste. Given the various technology options available for treatment and disposal of COVID-19 patients waste, Life Cycle Assessment analysis of PPE provides essential guidance in identifying the environmentally sound alternatives. In the present work, Life Cycle Assessment of PPE kits has been performed under two disposal scenarios, which included landfill and incineration (both centralized and decentralized) for six environmental impact categories covering overall impacts on both terrestrial and marine ecosystems, which includes Eutrophication Potential, Acidification Potential, Human Toxicity Potential, Freshwater Aquatic and Eco toxicity Potential. The decentralized incineration has emerged as environmentally sound management option compared to centralized incinerator among all the impact categories, also the environmental impact by transportation is significant and cannot be neglected for long-distance transportation. Present findings can help the regulatory authority to delineate action steps for safe disposal of PPE kits.

Abstract No. 123

MALARIA VACCINE IS STILL A DREAM

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ABSTRACT

A vaccine typically contains a disease-causing microorganism that is often made from weakened or killed forms of the microbe, its toxins or one of its surface proteins which are unable to cause disease but can boost the immune system. As such (parasite), they have evolved several mechanisms to escape the immune attack and overcome their hosts. A parasite protein, which plays an important role in the host cell invasion and multiplication, are considered to be candidates for vaccine development. Malaria parasite has complex life cycle, so generally vaccines are not successful and the progress towards vaccine development also was very slow. Malaria is a global problem since from centuries and the three distinct stages in malaria that have been identified as the potential targets for effective anti-parasite immune response in human. In present scenario, RTS, S (Mosquirix) is the only leading vaccine developed against malaria, but requires four injections, and has a relatively low efficacy, so not recommended by WHO. RTS, S is based on vaccine candidate CSP central repeat region of P. falciparum, highly fatal species but new vaccine candidate genes to be acknowledged which will increase our knowledge over parasite vaccine development and helpful in malaria elimination in future. A multi-component vaccine should be developed that can provide both types of immunity, including the cellular and humoral immunity. Unfortunately, we don't have any licensed vaccine against malaria till date.

Abstract No. 124

INTEGRATED PEST MANAGEMENT APPROACHES ON POPULATION DENSITY OF MAJOR INSECT PESTS OF CAULIFLOWER IN GURUGRAM DISTRICT OF HARYANA

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ABSTRACT

Integrated pest management refers to an ecofriendly approach in insect pest management system, in which all available suitable techniques or sustainable components are applied in a unified manner so that the pest population can be manage below economic threshold level. The most important feature of IPM approaches is towards minimizing the pesticidal residues in field soil. The present study was conducted in Khanpur village of block Pataudi, Gurugram district of Haryana during the year 2017-18. The data were collected on the basis of insect pest surveillance throughout the four blocks of the district i.e. Pataudi, Farukhnagar, Sohana & Gurugram. The performance of IPM package was significant in terms of larval population density of two major insect pests, *Plutella xylostella* (L.) and *Spodoptera litura* (F.) at selected blocks of Gurugram district, Haryana.

Abstract No. 125

IMPROVEMENT OF IMMUNITY OF FISHES BY AN INDIGENOUS PLANT SOURCE

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ABSTRACT

Labeo rohita (200 ± 27 g) was taken as expermental fish source and were fed with the experimental diet containing an indeginous plant source, namely, *Achyranthesaspera*. Control groups were fed with normal diet without the plant source. After four weeks of feeding, fishes were injected with a protein antigen, i.e., bovine serum albumin (BSA). Blood samples were collected on days 7, 14, 21 & 28, after antigen administration. Antigen-specific antibody response was determined by ELISA. Spleen was sampled on day-14 after antigen administration and antigen clearance was deter mined by immuno-electron microscopy. The results indicated that antigen-specific antibody levels were elevated in the fish treated with *A. aspera* and also it was observed that the injected antigen was efficiency cleared from the system in fishes treated with the plant source. In following experiment, after feeding for 4 weeks, *L. rohita* fingerlings (3 ± 0.7 g) were immunized with heat-killed *Aeromonashydrophila*, a bacterial pathogen. Two weeks later *L. rohita* were experimentally infected with live *A. hydrophila*. 70 % of survival rate was observed in *A. aspera* treated group, but in the control group only 22% survival was observed. Results indicate that *A. aspera* increased the survival rate by stimulating theimmunity in *L. rohita*.

The Indian sarus crane, *Grus antigone antigone* (State Bird of Uttar Pradesh): An eternal symbol of unconditional love, devotion and good fortune with high degree of marital fidelity.

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