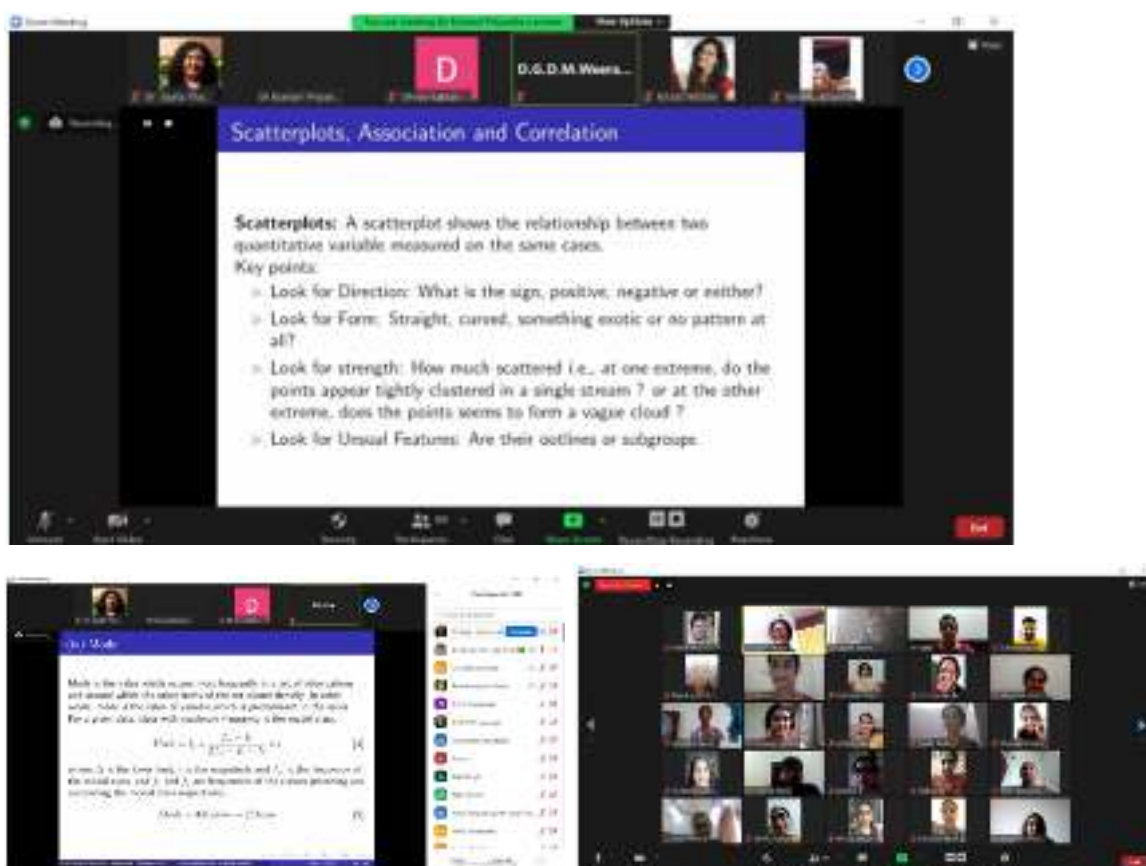


Session 2021-22

DEPARTMENT OF BIOCHEMISTRY

Webinar on “An Introduction to Biostatistics” on July 10, 2021

A webinar on “An Introduction to Biostatistics” was organized under the aegis of DBT sponsored Star College Scheme on July 10, 2021, on the Zoom online platform. Dr Kumari Priyanka, Associate Professor, Department of Mathematics, Shivaji College, University of Delhi. She introduced the participants to the concepts like Big data, Central tendency, scatter plots, correlation, regression with excellent examples which was widely appreciated by the participants. The event was attended by a total of 146 participants.



Webinar on “Covid-19 Vaccines: Challenges and Perspectives” on July 12, 2021

A webinar on “Covid-19 Vaccines: Challenges and Perspectives” was organized under the aegis of DBT sponsored Star College Scheme on July 12 2020, on the Zoom online platform. Dr Kaushik Bharti, Associate Professor, Department of Mathematics, Shivaji College, University of Delhi. She introduced the participants to the concepts like Big data, Central

tendency, scatter plots, correlation, regression with excellent examples which was widely appreciated by the participants. The event was attended by a total of 146 participants.

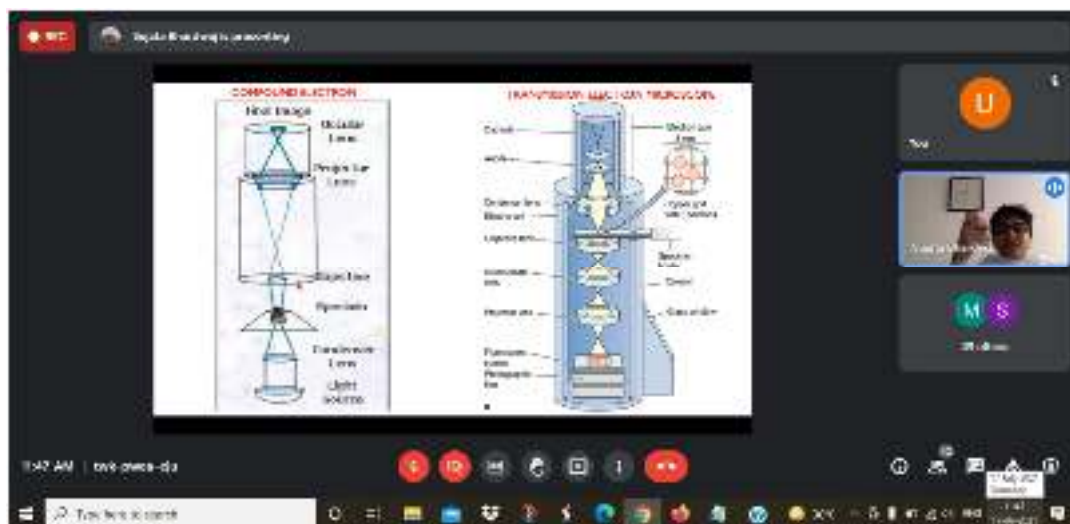


Webinar on “SEM and TEM: Principles and Working” on July 17, 2021

Department of Biochemistry, Shivaji College, University of Delhi, under the aegis of DBT sponsored Star College Scheme organized a webinar on “SEM and TEM: Principles and Working” on July 17, 2021 at 11:00AM on an online virtual platform Google meet. The esteemed speaker for the same was Dr. Sujata Bhardwaj, Associate Professor, Department of Biomedical Sciences, Bhaskaracharya College of Applied Sciences, University of Delhi. She gave an insightful talk on the techniques covering the basic principle, sample preparation, viewing, data analysis and applications in detail. She also emphasized on the importance of sample preparation. The webinar was attended by around 40 participants which included students and faculty members of the department of Biochemistry. Students queries were resolved by the speaker. The webinar ended with a vote of thanks.

Star College
University of Delhi
Department of Biotechnology
Webinar on
SEM & TFM: Principles and Working
Dr. Sujata Bharnalraj
Associate Professor
Khandarkar College of Applied Sciences
University of Delhi

Date: July 11, 2021
Time: 11:00 AM
Platform – Zoom



Webinar on “Mineral Nutrient Deficiency Signaling in Plants: A Functional Genomics Intervention” on August 24, 2021

A webinar on “Mineral Nutrient Deficiency Signaling in Plants: A Functional Genomics Intervention” was organized under the aegis of DBT sponsored Star College Scheme on August 24, 2021, on the Zoom online platform. Prof. Girdhar K. Pandey, Department of Plant Molecular Biology, University of Delhi South Campus, New Delhi, India. He introduced the participants to the concepts like Importance of mineral nutrients in plants, nutrition deficiency symptoms, role of potassium and calcium in plant growth and development, and the signalling pathways involved. The talk ended with a interesting question and answer session, followed by a vote of thanks. The event was attended by a total of 40 participants (33 students, 7 faculty members).

Mineral Nutrient Deficiency Signaling in Plants: A Functional Genomics Intervention

Shivaji College, Delhi University
(24th August 2021)

Girdhar K. Pandey
Department of Plant Molecular Biology
University of Delhi South Campus
Benito Juarez Road, Dhaula Kuan
New Delhi-110021

Sunita Singh

What is the strategy to tackle the PROBLEM of K^+ DEFICIENCY in crop production?

Role of SENSING, SIGNALING, UPTAKE and TRANSPORT

STRESS SENSING

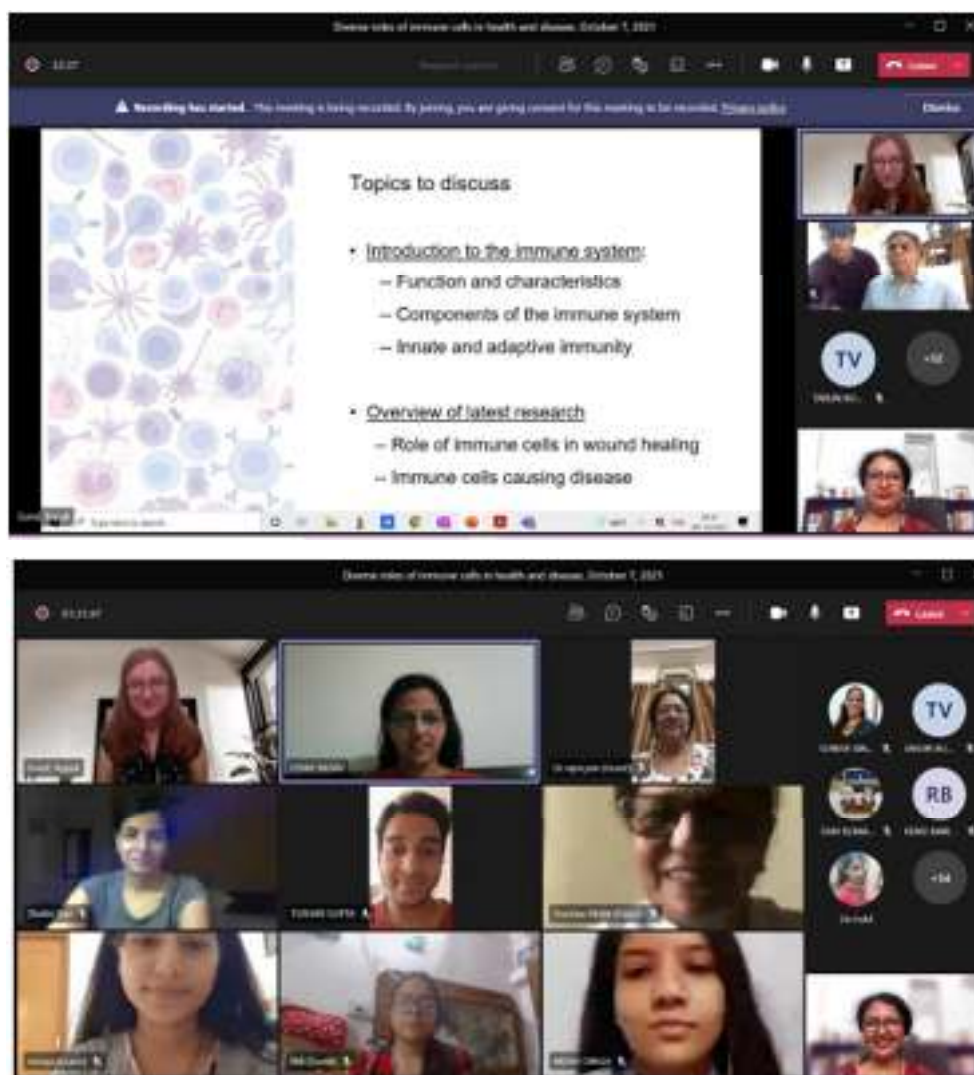
Adaptation & Tolerance

Dr. Jayita Thakur

Sunita Singh

International webinar on “Diverse role of immune cells in health and disease” on October 7, 2021

An international webinar on “Diverse role of immune cells in health and disease” was organized under the aegis of DBT sponsored Star College Scheme on October 7, 2021, on the Zoom online platform. Dr. Rupali Gund, Irving Medical Center, Columbia University, New York, USA, gave an excellent talk on the various aspects of the immune system, its role in protecting the body from pathogens and the conditions under which it may lead to disease. The participants were enthralled by the talk and gave very good feedback. The event was attended by a total of 62 participants.



International Webinar on “A SWEET SCIENCE: EMINENCE OF O-GLYCANS IN HEMATOPOIESIS” on October 21, 2021

The Department of Biochemistry, Shivaji College, University of Delhi (under the aegis of DBT sponsored Star College Scheme) organized an International Webinar on “A SWEET SCIENCE: EMINENCE OF O-GLYCANS IN HEMATOPOIESIS” on October 21, 2021 at 9:30AM on virtual platform Zoom. The speaker of the webinar was Dr. Ankit Tanwar, Post Doctoral Scientist, Department of Cell Biology, Albert Einstein College of Medicine, New York, USA. He is also an alumnus of the department (batch 2009-2012). He shared his work on glycans, how they play a pivotal role in drug discovery. Different O-glycans are required to maintain lymphopoiesis and myelopoiesis. He also shared his model-herbal informatics which has been used for the initial screening of emergency approved drug by DCGI: 2-Deoxy-Dglucose (2-DG) for combating COVID-19 situation in India. It was attended by

around 55 participants including undergraduate students and faculty members. The webinar was concluded by the organizers with a vote of thanks.



Talk on “The hazards of continuing to work at the cost of sleep” on April 7, 2022

Department of Biochemistry, Shivaji College, University of Delhi, under the aegis of DBT Star College Scheme organised a seminar on 7th April, 2022 at 11:00 AM in college auditorium. The seminar was conducted to generate interest of students towards research and spread awareness among students of the different routes possible in basic sciences. The speaker of the seminar was Dr. Birendra Nath Mallick who is a Professor and Director at Amity Institute of Neuropsychology and Neurosciences, Amity University, Uttar Pradesh. He

delivered a talk on the topic “The hazards of continuing to work at the cost of sleep” and gave insight into the research field of neuroscience. He displayed his presentation on his work which is published in a high impact Journal. He explained the importance of sleep, the consequences of sleep deprivation, correlation of Rapid Eye Movement (REM) sleep with levels of noradrenaline, nerve cell communication at different stages of sleep and about the role of noradrenaline in the maintenance of brain. He also explained about his life and achievements in neuroscience while staying in India and talked about the basics of conducting research. The talk was followed by a questionnaire session in which faculty members and students interacted with the speaker and followed a healthy discussion. Efforts were made to clear all the query of the participants. The session was attended by 62 participants including faculty members. The meeting was concluded by the organizers with a vote of thanks and a group picture.



International Workshop on “Hands-on Training Workshop Using Bioinformatics Tools for Understanding Protein Biology” for the students on October 11-12, 2021

The Department of Biochemistry, Shivaji College, University of Delhi (under the aegis of DBT sponsored Star College Scheme) organized an International Workshop on “Hands-on Training Workshop Using Bioinformatics Tools for Understanding Protein Biology” for the students on October 11-12, 2021 from 3:00-5:00PM on virtual platform Zoom. The coordinator and the resource person of the same were Dr. Sunita Singh and Dr. Usha Yadav, Department of Biochemistry, Shivaji College, University of Delhi. It was attended by more than 76 undergraduate and post graduate students from India as well as abroad (Sri Lanka) and 58 students completed the workshop successfully. Day 1 and 2 included hands-on training of various tools of protein sequence analysis, secondary and tertiary structure prediction, NCBI and Uniprot, Translate tool – ExpPASy, Protein Structure Visualization Tools, TMHMM software and Peptide cutter. The workshop was concluded by the organizers with a vote of thanks.



Workshop on “SLR Meta-analysis and Bibliography Research Online Workshop” for the Faculty, PhD and PG students from November 12-16, 2021

The Department of Biochemistry, Shivaji College, University of Delhi (under the aegis of DBT sponsored Star College Scheme) organized an online Workshop on “SLR Meta-analysis and Bibliography Research Online Workshop” for the Faculty, PhD and PG students from November 12-16, 2021 from 3:00-5:00PM on virtual platform Zoom. The speakers were as follows:

Day 1

Dr. Hiren Patel, SRLIM, Surat

Session I: Discussed fundamental steps of systematic literature review

Day 2

Dr. Jaspreet Kaur, Pearl Academy, New Delhi

Session II: Introduction to effect sizes & calculating heterogeneity

Day 3

Dr. Jaspreet Kaur, Pearl Academy, New Delhi

Session III: Meta regression and sub-group analysis

Day 4

Dr. Sahil Gupta, IMS Ghaziabad University

Session IV: Qualitative and Social Media Analysis Using NVIVO

Day 5

Dr. Pooja Goel, Shaheed Bhagat Singh College

Session V: How to write a paper on Bibliometric analysis?

Received more than 350 registrations from India as well as nearby countries and around 75 participants completed the workshop successfully including one from Thailand.

Student-oriented activities conducted under the aegis of the OBT Sponsored Star College scheme include (2020-21):

- Webinars
- Online Workshops on Fundamentals
- Online workshops on Research
- Interdisciplinary and Additive experiments
- Virtual Lab Tours
- Online Seminar Training
- Projects of Interdisciplinary Nature

Day 1: November 12, 2022

Invited Lecture 1



Dr. Biran Patel
V. R. Lakshmi Institute of Management, Sarajevo University, Saraj

- TeXtE: Systems, Literature Review – I.R.A.M. Model (to be Copyright Model)
- The course covers the five fundamental steps of Systems Literature Review
- Outcome: The participants would be getting clear understanding of Literature review's a process and the steps to be followed to review and write a review based paper.

SOME QUESTIONS THAT ARISES FOR OBT

- How to conduct OBT project?
- Is it an INTERDISCIPLINARY work or just a project between Scientists?
- Can we use machine OBT for a journal paper?
- What Platforms are used for research?
- How to get research through a network of science and world?
- How to use the research paper online?
- Can we access the full secondary literature through?
- What should be length of OBT (in a paper) for those in the OBT based paper?
- Can we compare techniques of paper?
- What is the output method of getting OBT. Output is Data Science or Data Science?
- What is value map in OBT. Member of it can include an research bibliography?

QUALITY HIERARCHY FOR RESEARCH PUBLICATION
(ONLY BEST AND GOOD PAPERS)



The pyramid is divided into four horizontal layers from top to bottom:

1. **Top Layer** (Green): High Quality
2. **Second Layer** (Yellow): Good Quality
3. **Third Layer** (Orange): Fair Quality
4. **Bottom Layer** (Red): Poor Quality



A screenshot of a Microsoft Word document showing a text-heavy page with a table and a figure. The text is partially obscured by a watermark.

For the love of Calculations

- $$1 + \frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \dots = 2$$
- $$1 + \frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \dots = 2$$
- $$1 + \frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \dots = 2$$
- $$1 + \frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \dots = 2$$
- $$1 + \frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \dots = 2$$

Day 2: Computation of effect size WHY???



A screenshot of an Excel spreadsheet with multiple columns and rows of data. The spreadsheet appears to be a data analysis tool with various formulas and cell formatting.

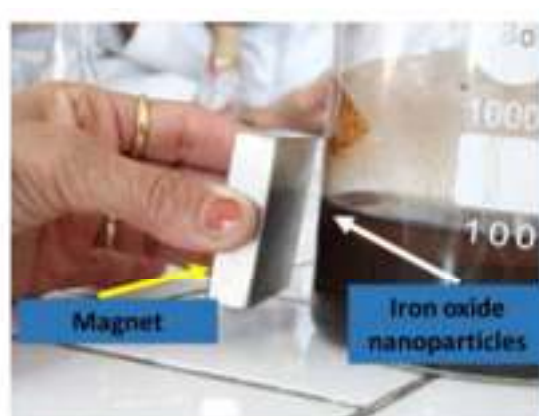
“Hands-on Training Workshop on Green Synthesis of Nanoparticles and their Biomedical Applications” from February 4-6, 2022

The Department of Biochemistry, Shivaji College, University of Delhi (under the aegis of DBT sponsored Star College Scheme) organized a “*Hands-on Training Workshop on Green Synthesis of Nanoparticles and their Biomedical Applications*” from 4-6 Feb, 2022 on virtual platform Zoom. The main objective of the workshop was to introduce participants regarding the methodologies of green synthesis of different types of nanomaterials, characterization using several standard techniques along with their biomedical applications. The speaker of the workshop on 4th Feb was Dr. Anal Kant Jha, Department of chemistry, Tilkamanjhi University, Bhagalpur, India. He explained about green synthesis of nanoparticles using waste products and can be useful for different purposes. On 5th Feb the next speaker was Dr. Abhijeet Mishra, Department of Biochemistry, Shivaji College, University of Delhi. He had shown green fabrication of different nanoparticles such as silver, gold and magnetic nanoparticles and their biomedical applications including anticancer and antimalarial. On the last day of workshop i.e. 6th Feb, our speaker was Dr. Anujit Ghosal, University of Manitoba, Canada. He shared scientific concepts of nanotechnology and its different applications in many areas such as anticancer, drug delivery and food technology.



Workshop on Isolation of Bacterial Genomic DNA using Magnetic Nanoparticles” on 9 March, 9 2022

The Department of Biochemistry, Shivaji College, University of Delhi (under the aegis of DBT sponsored Star College Scheme) organized a Hands-on Training Workshop on “Isolation of Bacterial Genomic DNA using Magnetic Nanoparticles” on 9 th March, 2022. The main objective of the workshop was to introduce participants regarding the methodologies of synthesis of Iron oxide nanoparticles and its use for the isolation of Genomic DNA of E. coli bacteria. Participants were learned about basic concepts of nanotechnology, different methods of DNA isolation and their advantages and disadvantages. Preparation of Iron oxide nanoparticles by co-precipitation method and further its application as matrix for separation of genomic DNA of E. coli cells. It was attended by 34 participants. Apart from Biochemistry students, students from Botany (5 participants), Chemistry (3 participants) and Zoology (5 participants).



First Hands-on Training Workshop on “Isolation of Bacterial Genomic DNA using Magnetic Nanoparticles” for faculty members on April 8, 2022.

The Department of Biochemistry, Shivaji College, University of Delhi (under the aegis of DBT sponsored Star College Scheme) organized a First Hands-on Training Workshop on “Isolation of Bacterial Genomic DNA using Magnetic Nanoparticles” for faculty members on 8th April, 2022. The main objective of the workshop was to introduce participants regarding the methodologies of synthesis of Iron oxide nanoparticles and its use for the isolation of Genomic DNA of E. coli bacteria. Participants were learned about basic concepts of nanotechnology, different methods of DNA isolation and their advantages and disadvantages. Preparation of Iron oxide nanoparticles by co-precipitation method and further its application as matrix for separation of genomic DNA of E. coli cells. It was attended by 10 participants from Shivaji college as well as other Delhi University colleges, as well as Biochemistry students.





DEPARTMENT OF BOTANY

- **A National Webinar on “Genome Editing for Food, Nutrition and Environmental Sustainability” on July 9, 2021.**

Department of Botany, Shivaji College, University of Delhi under the aegis of DBT Star College Scheme organised an online National webinar on “Genome Editing for Food, Nutrition & Environmental Sustainability”. It was held on July 09, 2021 at 11:30 AM on ZOOM Platform. The lecture was delivered by Prof. K.C. Bansal, Former Director, National Bureau of Plant Genetic Resources (ICAR), Pusa, New Delhi & Senior Advisor, Alliance of Bioversity International & CIAT, Asia-India, New Delhi.

Current decade is witnessing greater heights & new dimensions in the field of genetic engineering due to advent of genome editing techniques like CRISPER Cas-9. Prof. Bansal firstly discussed the blend of ‘Science & Societal Needs’. This includes factors like food availability, accessibility & affordability. He mentioned the milestones achieved in methods

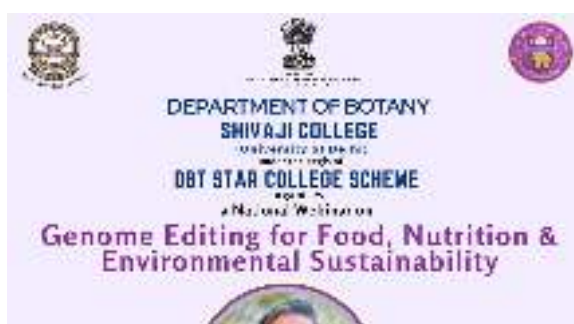
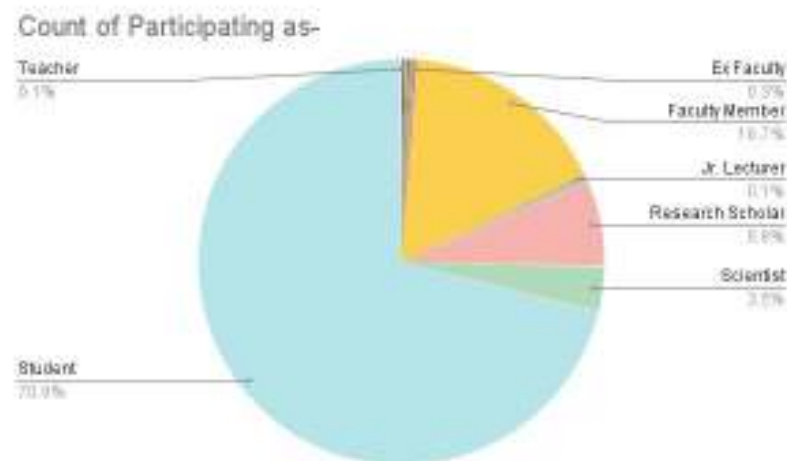
of crop improvement through past years beginning from plant breeding in the 1900s to mutagenesis in 1940's and then to the present Targeted breeding technologies.

He added that by 2050, world population will grow to 9.2 billion and food production must increase by more than 70% which implies triple triple burden of malnutrition. He emphasized that the growing need of nutritionally rich diet within a limited number of resources is difficult to achieve by traditional methods ∴ crops like Beta-carotene enriched banana, rice etc produced through genome editing come in handy. Right from describing the structure of gene to targeted genome editing, Sir explained all the concepts with great details.

The Q & A session with Prof. Bansal was stimulating and he answered all the questions with great thought and enthusiasm. A lot of questions were based on the concerns related effect of gmo crops on natural biodiversity of the world. Participants were intrigued by the Crispr technique and raised several questions related to it. Overall, it was an extremely enlightening & informative session about the utilisation of new genomic technologies for not just crop improvement but also a clean, green environment.

Total number of participants: 286

Evaluation of Participants : The webinar received an overwhelming response with 700+ registrations & 300+ participants including scientists, researchers, professors & students from universities across India. The graphical representation of the same is given below:-





- A five-days long online workshop on “CRISPR- Mediated Plant Genome Editing” was organized under the aegis of DBT Star College Scheme from September 27 to October 1, 2021 on Zoom platform.

It was the united effort of the Department of Botany, Shivaji College along with Global Plant Council, in collaboration with ICAR-National Rice Research Institute (NRRI), Cuttack and Shree Guru Gobind Singh Tricentenary (SGT) University, Gurgaon. The main purpose of the workshop was to introduce genome editing as a potential tool in modern science and its path-breaking impact on agriculture and different avenues of plant sciences. CRISPR gene editing can be explained as a method of genetic engineering quite popular in molecular biology by which the genomes of living organisms may be modified. Recently CRISPR genome editing has shown great potential in plant genome development. The workshop was completely free for the participants, and more than five hundred registrations were received from across the country and various parts of the world. Aim of this workshop was to create awareness about CRISPR-mediated genome editing, a once in a century technology to all who are new to the field, besides solving in-depth queries of scholars and professional who are entering or working in this field.

The inaugural function of the workshop was held on September 27, 2021. The ceremony began with a welcome note by Dr. Anuradha Mal, organizing secretary of the workshop followed by address by Prof. Shiv Kumar Sahdev, Patron and Principal, Shivaji College. For better understanding about the theme of the workshop, the course director Prof. K. C. Bansal provided a detailed insight of the scope of the workshop to the participants. His talk was concluded by the mention of latest trends in CRISPR techniques in plant sciences. The participants were privileged to have another talk from Prof. Roslyn Gleadow, President, Global Plant Council, Monash University, Melbourne, Australia. She gave an insight about the The Global Plant Council and its initiative towards solving demand of higher crop production raised over the globe.

The inaugural was indeed a success followed by academic sessions. The day first academic sessions had two talks: Plant Genome Editing – An overview by Prof. K. C. Bansal followed by CRISPR-Cas reagents by Dr. Kutubuddin Molla, of ICAR- NRRI.

The following four days witnessed active participation by the participants to the lectures delivered. Day 2nd had an academic session where a talk on “Basics of generating knock out mutants” which was given by Dr. Sung Ryul Kim of International Rice Research Institute, Manila, Philippines. On third day, two talks were delivered in the academic sessions. “Precise insertion and deletion with HDR and Prime Editing” by Dr. Sergei Svtashev, Corteva Agriscience, USA and “Plant Transformation with GE reagents and regeneration” by Dr. Piero Barone of Corteva Agriscience, USA. On day four; there was an enlightening session Dr. Yvonne Ludwig of International Rice Research Institute, Manila, Philippines who presented on the topic “ Screening, detection, and validation of mutant plants- Molecular analysis and genotyping”. The last day of the workshop saw an overwhelming response by the participants. It had two academic talks, first of Dr. Kutubuddin Molla of ICAR- NRRI who delivered a talk on “Single base editing in plant genome and its applications” and second was that of Dr. Yiping Qi of University of Maryland, USA who spoke on “Multiplex editing with CRISPR-Cas9”. The workshop was concluded with final remarks of Dr. Sonia Goel, co-convener from SGT, University, Gurgaon, Dr. Anuradha Mal, Dr. Kutubuddin Molla, and Prof. K.C. Bansal. For all the five days, the academic sessions were efficiently moderated by Dr. Kutubuddin Molla of ICAR- NRRI. The workshop concluded successfully with vote of thanks from Dr. Anurag Maurya, co-convener of the workshop.

The total number of Participants of this online workshop were: 180.

CRISPR-MEDIATED PLANT GENOME EDITING
Workshop on 11-12 April 2023

Organized by:
Department of Applied, Clinical and Health
University of Duhok, New Duhok
The Model Agricultural
University of Iraq
1008, Hana, Al-Basrah Governorate, Iraq
Dr. Anuradha Mal, Ph.D., M.Sc., M.A., M.P.H., M.P.S.
Dr. Anuradha Mal, Ph.D., M.Sc., M.A., M.P.H., M.P.S.

Organizing Team:
Dr. Anuradha Mal, Ph.D., M.Sc., M.A., M.P.H., M.P.S.
Dr. Anuradha Mal, Ph.D., M.Sc., M.A., M.P.H., M.P.S.
Dr. Anuradha Mal, Ph.D., M.Sc., M.A., M.P.H., M.P.S.

Programme Schedule:
11 April 2023
08:00 AM - 09:00 AM: Registration
09:00 AM - 10:00 AM: Welcome and Introduction
10:00 AM - 12:00 PM: CRISPR-Cas9: Fundamentals and Applications
12:00 PM - 01:00 PM: Lunch
01:00 PM - 02:00 PM: CRISPR-Cas9: Design and Delivery
02:00 PM - 03:00 PM: CRISPR-Cas9: Editing and Analysis
03:00 PM - 04:00 PM: CRISPR-Cas9: Safety and Ethics
04:00 PM - 05:00 PM: CRISPR-Cas9: Future Perspectives
12 April 2023
08:00 AM - 09:00 AM: Registration
09:00 AM - 10:00 AM: Welcome and Introduction
10:00 AM - 12:00 PM: CRISPR-Cas9: Fundamentals and Applications
12:00 PM - 01:00 PM: Lunch
01:00 PM - 02:00 PM: CRISPR-Cas9: Design and Delivery
02:00 PM - 03:00 PM: CRISPR-Cas9: Editing and Analysis
03:00 PM - 04:00 PM: CRISPR-Cas9: Safety and Ethics
04:00 PM - 05:00 PM: CRISPR-Cas9: Future Perspectives

PLANT SCIENCE GROWING BORDERS
Meeting on community global solutions

Genetics and Epigenetics in Crop Improvement
Dr. Anuradha Mal, Ph.D., M.Sc., M.A., M.P.H., M.P.S.

CRISPR-Cas9: Design and Delivery
Dr. Anuradha Mal, Ph.D., M.Sc., M.A., M.P.H., M.P.S.

mapur mondal

Dr Anuradha Mal

- **Inaugural Lecture of the Botanical Society “Fragrance” entitled “Comparative Genomics and Functional Analysis of Master Regulators: Leveraging (Bio)Informatics, Omics and Biology of Model and Crop Plants for Trait Modification” by Prof. Sandip Das, Department of Botany, University of Delhi was held on January 25, 2022, at 11:30 am via Zoom online meeting application.**

The Department of Botany, Shivaji College, University of Delhi organized an insightful Inaugural Lecture on Comparative Genomics and Functional Analysis of Master Regulators: Leveraging (Bio)Informatics, Omics and Biology of Model and Crop Plants for Trait Modification. It was held on January 25, 2022, at 11:30 am on Zoom online meeting application. The lecture was delivered by Prof. Sandip Das, Department of Botany, University of Delhi.

Bioinformatics is an interdisciplinary branch of biology and computer science concerned with the storage, analysis, and dissemination of biological data. Speaking at the Oxford University Press, Arthur Lesk said that introduction to bioinformatics describes how recent technological advances in the field can be used as a powerful set of tools for receiving and analysing biological data. The current decade is witnessing greater heights in the fields of genetic engineering due to the advent of genome editing techniques. He first discussed genomics-assisted plant breeding which includes genetic engineering, molecular mapping, marked

assisted breeding and selection, and genome editing. He added about new plant breeding technologies (NPBT). He explained comparative statistics of the use of a key natural resource in agriculture such as dependence on annual rainfall and irrigation methods. He emphasized the molecular basis of the regulatory code, its development, and its adaptation. Starting from very basic he briefed about the master regulator in gene regulatory network and explained the architecture of gene regulatory networks controlling flower development in *Arabidopsis thaliana*. Right from explaining the trait modifications crop improvement, Sir explained the phenotype-genotype relationship that is necessary for genomics-driven trait modifications for crop improvement with resources and toolkits. Then, sir threw light on a wide range of disciplines in the field of omics. He elucidated genome- annotation, gene identification based on comparative genomics. Then, Prof. Sandip starting from describing the conceptual framework of miRNA-target interaction explained all the concepts in great detail.

After the speaker finished, there was a question-answer session. A lot of questions were posted by students in the chatbox. Prof. Sandeep dealt in detail with the queries raised by the participants.

The event concluded with the expression of Gratitude to Prof. Sandip Das and all the members instrumental in supporting this extremely enlightening and informative session.

No. of Beneficiaries- 130 (Teachers + students)



- **The Department of Botany under the aegis of DBT sponsored Star College Scheme organized an online webinar entitled “Changing Faces of Indian Agriculture” by Dr. Yudh Vir Singh, Principal Scientist (Agronomy) ICAR- Indian Agricultural Research Institute, New Delhi, India on February 2, 2022 at 11 a.m. via Zoom meeting application.**

The Department of Botany under the aegis of DBT sponsored Star College Scheme organized an insightful online webinar entitled “Changing Faces of Indian Agriculture” on 2nd February, 2022 at 11 a.m. via Zoom meeting application. The guest speaker for the webinar was Dr. Yudh Vir Singh, Principal Scientist (Agronomy) ICAR- Indian Agricultural Research Institute, New Delhi, India.

India is a global agricultural powerhouse, where agriculture is the primary source of livelihood for the majority of the country’s population. Despite being a developing country, the pace at which India is making progress is very rapid and tremendous. As it does not only provide employment but also a sense of empowerment to women living in rural areas besides contributing to the nation’s economy. Since, the population is increasing at a rapid pace along with severe changes to the climate, advent of new techniques in agriculture in addition to the conventional breeding practices is the need of the hour.

Dr. Yudh Vir Singh guided the audience with his knowledge in the field of agriculture and instructed students that how the young generation can learn, acquire, and achieve greater heights which are highly required to make India a more developed nation. He precisely emphasized on the topics like India Green Revolution, its adverse impacts, principles of organic agriculture, organic nutrient management, panchgavya, three farm Reforms, Integrated farming system, Doubling farmer’s money, Different forms of Bharatiya Prakritik Krishi Paddhati (BPKP), Azolla- The best feed for cattle and poultry, Pest management, pest-contaminated fruits and vegetables, application of biofertilizers to crops, different aspects of inorganic farming, nitrate pollution and human health.

The webinar concluded with a quick Question and Answer session. He answered all the questions with great thoughts and enthusiasm. Hence, it was a really knowledgeable, extremely enlightening and interesting session. All the students and teachers thanked Dr. YV Singh for inspiring everyone. The society looks forward to conduct more such webinars in the future.

Number of beneficiaries: 118



- As India celebrates Azadi ka Amrut Mahotsav this year, Department of Botany, Shivaji College, University of Delhi in collaboration with the Office of the Controller General of Patents, Designs and Trade Marks (Ministry of Commerce & Industry, Government of India) organized an online session on Intellectual Property Awareness Programme under National IP Awareness Mission (NIPAM) on February 4, 2022, at 2 p.m. via Zoom online meeting application.

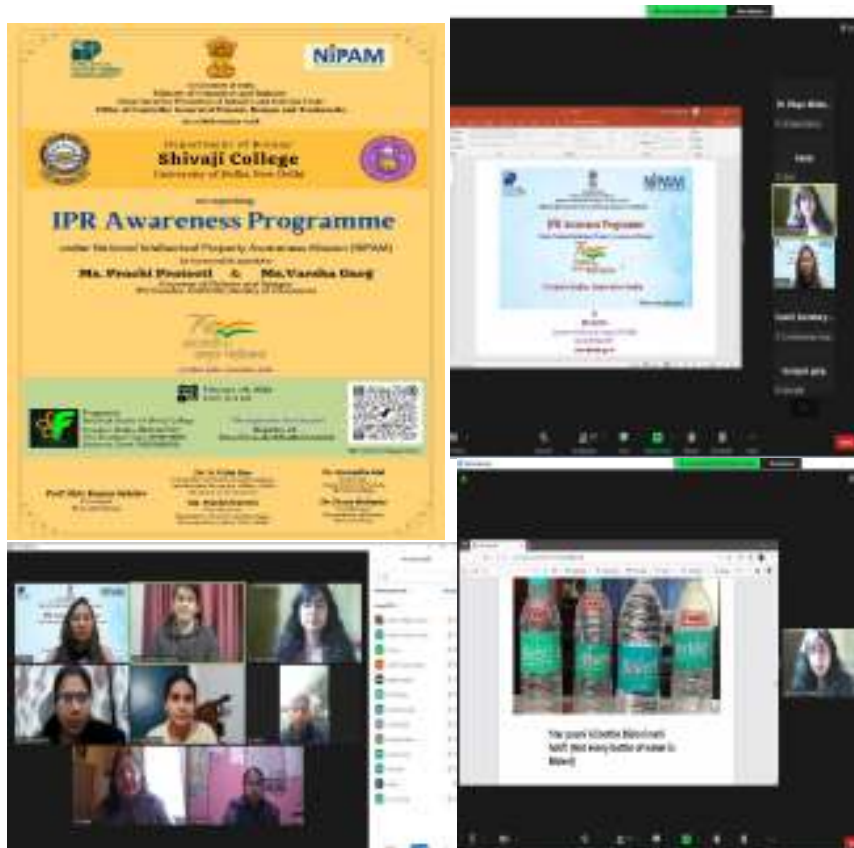
To increase awareness of the recent trends and the scope of IPR in India, the Office of the Controller General of Patents, Designs and Trade Marks (Ministry of Commerce & Industry, Government of India) in collaboration with the Department of Botany, Shivaji College, University of Delhi is organized AN ONLINE SESSION ON INTELLECTUAL PROPERTY AWARENESS PROGRAMME under National IP Awareness Mission (NIPAM) which is a pursuit of Govt. of India to offer consciousness on intellectual property and its rights to at least one million students. It was held on February 4, 2022, at 2 p.m. via Zoom online meeting application. Honorable speakers of the session were MS. PRACHI PRATEETI and MS. VARSHA GARG, Examiner of Patents and Designs IPO Dwarka, CGPDTM, Ministry of Commerce. We feel grateful that they collaborated with us to create awareness about such an important topic and also allow our students and faculty to be a part of the mission of Govt. of India as India celebrates Azadi ka Amrut Mahotsav this year.

With the aim to inspire creativity, entrepreneurship, and innovation among students, Ms. Varsha started the session by providing insight into some key statistics concerned with the topic. She precisely explained that IP i.e. Intellectual Property is a class of property that

includes intangible creations of the human intellect. The main purpose of intellectual property law is to encourage the establishment of an extensive variety of intellectual belongings. Then, she explained the IP ecosystem, its significance, and its rights. From explaining the need for IPR, the Main areas which were emphasized include – Design, Publication, and Trade secrets. Adding on Ms. Prachi explained the functions, protection, and importance of a good trademark that allows a businessman entity to build public goodwill and brand reputation. She briefly elucidated the concept of copyright that allows the owner to choose the ways his/her copyright works are made available to the public, to prevent unauthorized copyright/reproduction. Furthermore, the students learned about geographical indication (GI).

A lively, knowledgeable, and stimulating quiz session followed the presentation by the resource persons. Participants were fascinated by the objective of the National IPR Policy and actively participated in the quiz. All the students and teachers thanked Ms. Varsha Garg and Ms. Prachi Prateeti to enhance IPR awareness and inspiring everyone.

No. of Beneficiaries (Teachers+ Students) attended- 118



DEPARTMENT OF CHEMISTRY

Webinar on the topic “Chemistry: A Central Science of Nature” held on August 28, 2021

The Department of Chemistry, Shivaji College organized a Webinar on the topic “Chemistry: A Central Science of Nature” by Prof. Ashok Kumar Prasad, under the aegis of DBT sponsored Star College Scheme. The webinar was organized under the convenorship of Dr. P. K. Sahu. The co-convenor and host of the webinar was Dr. Richa Arora. The speaker of the talk, Prof. Ashok Kumar Prasad is currently Dean, Faculty of Sciences, Head, Department of Chemistry and IPR Chair of University of Delhi. The event was held on 28.08.2021 (Saturday) at 10:00 AM on Zoom platform. The talk was aired live on the YouTube Channel of the Shivaji College. Around 331 participants attended the event.

The event witnessed participation from faculty and students of various colleges/universities/institutes across India. The event was formally inaugurated by Prof. Shiv Kumar Sahdev, Principal of Shivaji College.

The speaker for the webinar gave insights into how important Chemistry is to understand the basic processes going on in nature. The talk was followed by a Question/Answer session. The participants really appreciated the talk and the presentation of Prof. Ashok Kumar Prasad. The webinar ended with a vote of thanks by the senior most faculty of the Department of Chemistry of Shivaji College, Prof. Manjula Singh.



Webinar on the topic “Intellectual Property Rights: Drafting and filing of Patents in India” held on September 25, 2021

The Department of Chemistry, Shivaji College organized a Webinar on the topic “Intellectual Property Rights: Drafting and filing of Patents in India” by Dr. Kumar Kartikey Yadav, under the aegis of DBT sponsored Star College Scheme. The webinar was organized under the convenorship of Dr. P. K. Sahu. The co-convenor and host of the webinar was Dr. Richa Arora. The speaker of the talk, Dr. Kumar Kartikey Yadav is currently the speaker of the day. He is an Examiner of Patents and Design, Ministry of Commerce and Industry, Government of India. The event was held on 25.09.2021 (Saturday) at 11:00 AM on Zoom platform. The talk was aired live on the YouTube Channel of the Shivaji College. Around 107 participants attended the event.

The event witnessed participation from faculty and students of various colleges/universities/institutes across India. The speaker for the webinar gave insights into different types of IPRs, their importance and how to file patents in India. The talk was followed by a Question/Answer session. The webinar ended with a vote of thanks by the senior most faculty of the Department of Chemistry of Shivaji College, Prof. Manjula Singh.



Lecture Series on the topics “Good Laboratory Practices” & “Biomass waste management for healthy environment, resource conservation and tapping Bioenergy” held on October 30, 2021

The Department of Chemistry, Shivaji College organized a Lecture Series on the topics “Good Laboratory Practices” & “Biomass waste management for healthy environment, resource conservation and tapping Bioenergy” under the aegis of DBT sponsored Star College

Scheme. The webinar was organized under the convenorship of Dr. P. K. Sahu. The co-convenor and host of the webinar was Dr. Richa Arora. The speaker of the lecture series was Dr. NAVINDU GUPTA, currently a Principal Scientist in Division of Environmental Sciences of ICAR-Indian Agricultural Research Institute, New Delhi. The event was held on 30.10.2021 (Saturday) at 10:00 AM on Zoom platform. The talk was aired live on the YouTube Channel of the Shivaji College. Around 251 participants attended the event. The event witnessed participation from faculty and students of various colleges/universities/institutes across India.

Biomass Waste Management Strategies

Dr. Navindu Gupta
Principal Scientist
ICAR-IARI, New Delhi

Deepesh Singh

Dr. Priyanka...

SHIVAJI COLLEGE
NAAC ACCREDITED GRADE "A"
UNIVERSITY OF DELHI
DEPARTMENT OF CHEMISTRY
under the aegis of DBT sponsored Star College Scheme
Organizes
an Online Lecture Series

October 30
2021

10:00 AM

Dr. NAVINDU GUPTA
Principal Scientist
Division of Environmental Sciences
ICAR-Indian Agricultural Research Institute, New Delhi

Lecture 1: Good Laboratory Practices
Lecture 2: Biomass waste management for healthy environment, resource conservation and saving Bioenergy

Coordinator
Prof. Darshan Malik

Convenor
Dr. P. K. Sahu

Co-Convenor
Dr. Richa Arora

Principal
Prof. Shiv Kumar Sahdev

Workshop on the topic “Career Opportunities in Chemistry and How to prepare for Competitive Exams & Interviews” held on February 04, 2022

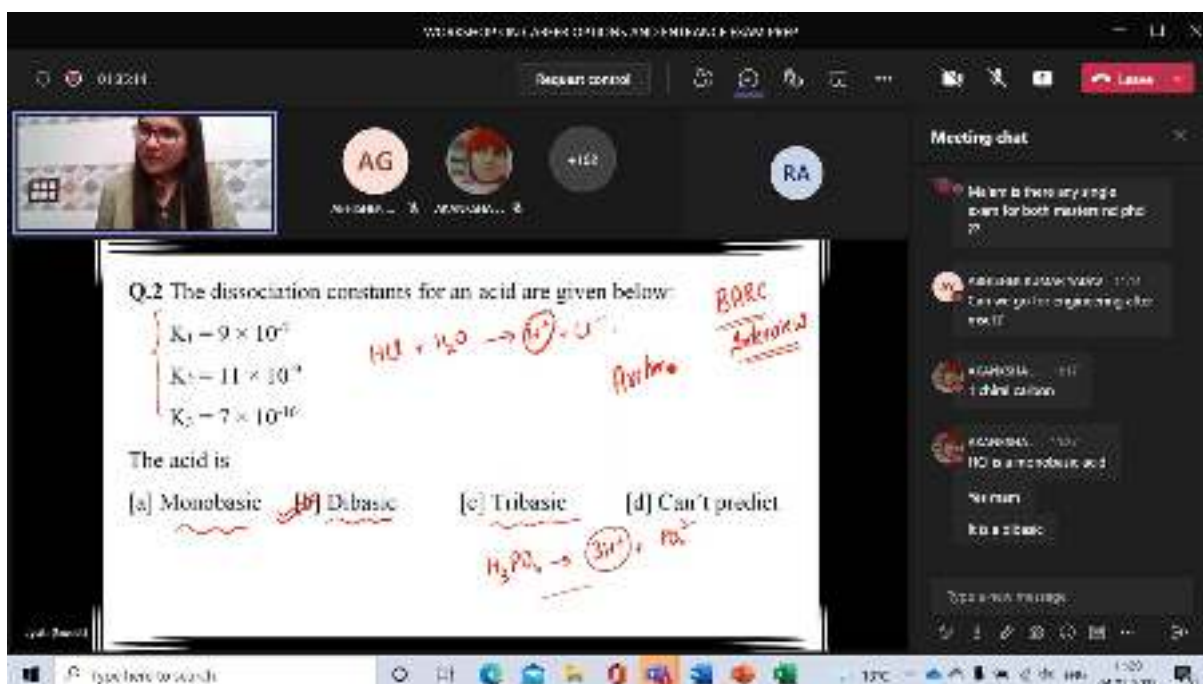
The Department of Chemistry, Shivaji College organized an Online Workshop on the topic “Career Opportunities in Chemistry and How to prepare for Competitive Exams & Interviews” by Ms. Jyoti Rathi, under the aegis of DBT sponsored Star College Scheme. The workshop was organized under the convenorship of Dr. P. K. Sahu. The co-convenor and host of the webinar was Dr. Richa Arora. The speaker of the talk, Ms. Jyoti Rathi is currently founder director of YouTube Channel, J Chemistry. The event was held on 04.02.2022 at 10:00 AM on Microsoft Teams platform. Around 181 participants attended the event.

The event witnessed participation from and students of science courses of Shivaji College. The speaker for the workshop had interactive sessions on “Career Opportunities in Chemistry”, “How to prepare for Competitive Exams” & “How to prepare for Interviews”.

SHIVAJI COLLEGE
NAAC ACCREDITED GRADE "A"
UNIVERSITY OF DELHI
DEPARTMENT OF CHEMISTRY
ORGANIZES
ONLINE WORKSHOP
ON
**CAREER OPPORTUNITIES IN CHEMISTRY AND HOW TO
PREPARE FOR COMPETITIVE EXAMS & INTERVIEWS**
by
Ms. Jyoti Rathi
Founder Director
J Chemistry

February 04, 2022 10:00 AM

Coordinator
Prof. Darshan Malik Convenor
Dr. P. K. Sahu Co-Convenor
Dr. Richa Arora Principal
Prof. Shiv Kumar Sahdev



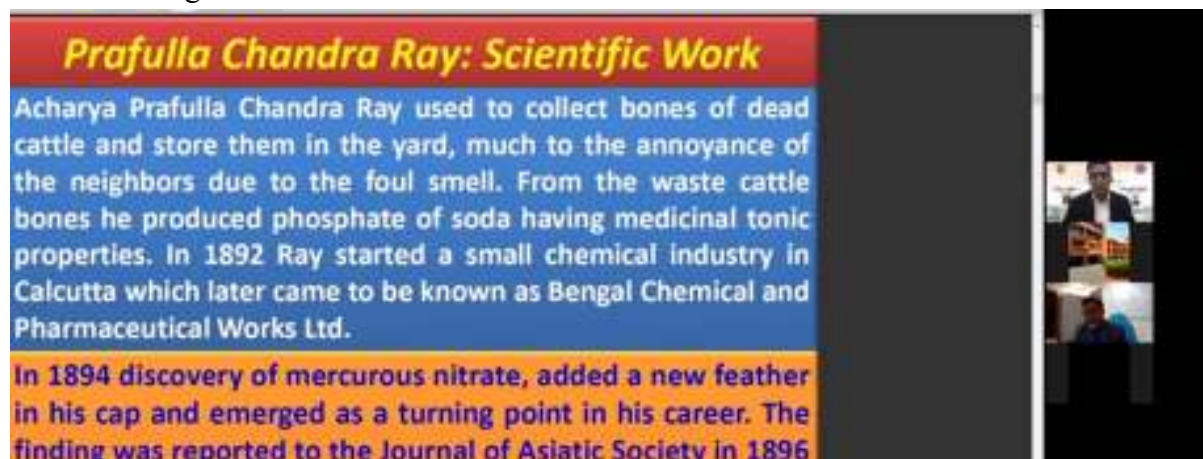
Annual Fest of Department of Chemistry, RASTANTRUM 2022 held on February 22, 2022

Department of Chemistry, Shivaji College, University of Delhi celebrated Azadi Ka Amrit Mahotsav on their Annual Departmental fest, RASTANTRUM 2022. The theme of the fest is “Role of Scientists and scientific moments pre- and post-Independence. The principal of the college Prof Shiv Kumar Sahdev inaugurated the annual event “RASTANTRUM 2022”. Prof Sunil Kumar Sharma and Prof Deewan Singh Rawat from Department of Chemistry, University of Delhi have graced the occasion to commemorate 75 years of Independence Day. Prof Sharma talked about “Science and technology development in Independent India. The journey of 75 years of India has been revived by evoking the contribution of various scientists. Prof Sharma mentioned that India has achieved enormous success in the field of

science and technology which transformed its image from “Snake Charmers” country to lead the world in space technology while other countries imported scientists, doctors and engineers. We created an environment to produce engineers from information technology background while other countries have focused on producing war weapons but India was indulged in transforming our education and technology. No doubt, India has produced Sundar Pichai, Shantanu, Rajeev Suri, Prayag Aggarwal and many more who are the leading CEO’s of various firms globally. In today’s world, the role of technology is indispensable. India has launched satellites and space probes to the moon and mars, established nuclear power stations, acquired nuclear weapon capability and demonstrated firepower in the form of a range of missile’s. Undoubtedly, these are all fabulous achievements of Indian scientists and technologists.

Prof Rawat commenced the talk on the topic “Indian scientists and their contributions to the Indian society: pre-Independence era”. India is the cradle of the human race, the birthplace of human speech, the mother of history, the grandmother of legend, and the great grand mother of tradition. The state of the art is the innovations by Prafulla Chandra Ray, he is the Father of Chemical Industry in India. He wrote a book titled “Hindu Chemist”. Afterwards, he spoke about contributions and struggle of Ramanujan, CV Raman, JC Bose to the Indian society. We need technology in every sphere of our life like weather prediction, infrastructure, threat to diseases, energy, and water security.

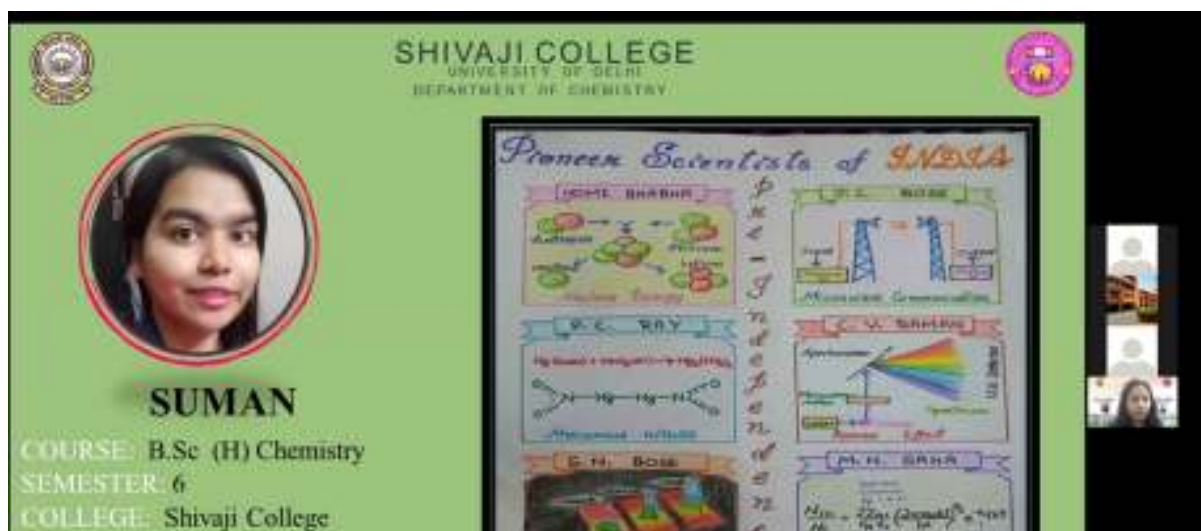
The Department has organized various events such as Just a minute, quiz, slogan writing and poster making competition related to the theme. All the teachers from the department and students of various colleges participated in this annual fest. Dr Rahul Singhal (Convenor) of the event has given vote of thanks.



Prafulla Chandra Ray: Scientific Work

Acharya Prafulla Chandra Ray used to collect bones of dead cattle and store them in the yard, much to the annoyance of the neighbors due to the foul smell. From the waste cattle bones he produced phosphate of soda having medicinal tonic properties. In 1892 Ray started a small chemical industry in Calcutta which later came to be known as Bengal Chemical and Pharmaceutical Works Ltd.

In 1894 discovery of mercurous nitrate, added a new feather in his cap and emerged as a turning point in his career. The finding was reported to the Journal of Asiatic Society in 1896



DEPARTMENT OF ZOOLOGY

Webinar “Genetically Engineered Vaccines: From Clone to Clinical Trials”


Date 16th August 2021

Speaker: Professor Rakesh Bhatnagar, V.C. Amity University, Rajasthan and Former VC BHU & Kumaun University, Uttarakhand.

A webinar was organized by the Department of Zoology under the aegis of DBT Star College Scheme on 16th August 2021 at 9 a.m. on Zoom on the topic, “Genetically Engineered Vaccines: From Clone to Clinical Trials”, by renowned academician and scientist Professor Rakesh Bhatnagar, V.C. Amity University, Rajasthan and Former VC BHU & Kumaun University, Uttarakhand.

The webinar was attended by around 200 participants from all over India.

Prof. Bhatnagar explained how genetically engineered vaccines are designed citing the example of potential bioterrorism weapon Anthrax. He elaborately discussed about various types of Anthrax such as cutaneous, gastrointestinal and inhalation, its causative agent *Bacillus anthracis*, toxin components, pathogenesis and immunogens which subsequently helps in designing a vaccine. He explained how the desired gene (Protective gene PA) is cloned and expressed and post exposure therapeutics was also touched upon by the esteemed speaker. The webinar ended with a vote of thanks by Dr. Parul Kulshreshtha.



SHIVAJI COLLEGE


Accredited by NAAC with 'A' grade
UNIVERSITY OF DELHI

DEPARTMENT OF ZOOLOGY

(UNDER THE AEGIS OF DBT STAR COLLEGE SCHEME)

Organizes a Webinar on

"Genetically Engineered Vaccines: From Clone to Clinical Trials"



SPEAKER

Prof. Rakesh Bhatnagar

VC, Amity University, Rajasthan.
Former VC Ramnarayn Hindu University & Kumaon University, Uttarakhand

16th August, 2021

9.00 A.M.

Zoom


link:
<https://forms.gln/W1w5jzjvYPS1g0D9>

OR

Last Date:
16th August 2021 (9.00 p.m.)

Register through

Scan QR code



@system_shivajicollege

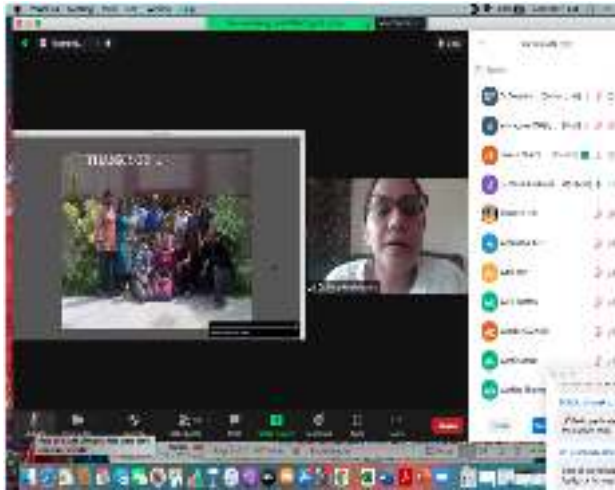
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system.shivajizooology@gmail.com

Convener : Dr. Deepika Yadav
Co-Convener : Ms. Nimita Kant

DBT SCS Coordinator
Prof. Darsshan Malik

Principal
Prof. Shiv Kumar Sahdev



Webinar, “Treatable Genetic Disorders: A Glimpse into the Gene Therapies”

Date: 2nd December, 2021

Speaker: Dr. Veronica Arora

Consultant, Dept of Medical Genetics, Sir Ganga Ram Hospital



A webinar was organized by the Department of Zoology on 2nd December, 2021 on Zoom platform at 11am under the aegis of Star College Scheme for over 100 participants from various disciplines of Zoology, Botany and Life Sciences. The speaker for the event was Dr. Veronica Arora, Consultant, Dept of Medical Genetics, Sir Ganga Ram Hospital. Dr. Arora, a gold medalist in DNB, Medical Genetics at Sir Ganga Ram Hospital held the entire audience captivated with her practical and theoretical knowledge of gene therapies and their current applications in India. She gave a very detailed comprehensive overview of the concept of genetic diseases, mutations and types of gene therapies: ex vivo & in vivo. All students from the streams of Biological Sciences do study the topic ‘Gene Therapy’ and it was a great deal to learn from Dr. Arora who also explained the concept that she is carrying out hands-on in

her laboratory. She stressed on the need of the hour: that is genetic counselling as well. Dr. Arora also discussed various internships and courses being organized in Sir Ganga Ram Hospital that can be taken up by students of Biological Sciences who are interested in gene therapy. Students were extremely happy to know of these opportunities and excited to apply for them as well.

A long interactive session followed her talk where participants bestowed her with a number of questions that reflected their interest in the talk. E-certificates were provided to all participants. A very positive feedback was obtained for such a tour with all participants definitely being interested in other such interactions in future as well.



EXAMPLE OF IN VIVO GENE THERAPY

- In patients with cystic fibrosis, a protein called **cystic fibrosis transmembrane regulator (CFTR)** is absent due to a gene defect.
- In the absence of CFTR chloride ions concentrate within the cells and it draws water from surrounding.
- This leads to the accumulation of sticky mucous in respiratory tract and lungs.
- Treated by in vivo replacement of defective gene by **adenovirus vector**.

VERONICA ANON

Participants (28)

Search

- Shival College (H...)
- VERONICA AN... (Co-host)
- Dr. Deepika Yad... (Co-host)
- YOSHUMI MAKI
- Nity Choudhan

Chat

You can start a video

Hi to Everyone 11:23 AM

Please post your questions in the chat box.

Dr. Ansh will address from post for 5 mins

Who can see your messages? Recording On

Participants

Send message here...

Participants (28)

Search

- Shival College (H...)
- Dr. Deepika Yad... (Co-host)
- VERONICA ANON... (Co-host)
- Prof. Neema D. Madhane
- YOSHUMI MAKI

Chat

Thank you so much!

Dr. Ansh will address in 5 minutes

Thank you so much!

Salamat! Say to Everyone 11:23 PM

PLEASE DO NOT USE YOUR PHONE

Who can see your messages? Recording On

Participants

Send message here...

Workshop based on the topic--Sericulture and its role in women empowerment and sustainable development

Date: 14th February, 2022

Speaker: Dr. Khawairakpam Subas Singh



The Zoology Department of Shivaji College conducted a skill enhancement workshop based on the topic--Advantages of Sericulture and its role in women empowerment on 14th February, 2022 on MS teams platform at 3 pm. Over 70 participants from various departments of Zoology, Botany and Life Sciences joined the session enthusiastically.



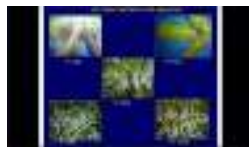
The speaker of this event--Dr. Khawairakpam Subadas Singh--is a scientist as well as a researcher, and has worked in many reputed firms. This session started with the introduction of Sericulture and its importance to maintain the livelihood of women. The speaker of the workshop explained the unique features of the silk industry and qualities of Indian Silk.



It was quite fascinating to know about the Indian Silk and its contribution toward the glorious history of India. The lustrous appearance of Silk and its intricate designs makes it different from the other fabrics. Indian Silk is a symbol of versatility and elegance.



The interactive session contained certain diagrams and information about the topic of discussion. The various stages of the life cycle of Muga Silkworm were elaborated with the diagrams of the same. The speaker also connected the production of silk with entrepreneurship and educated the budding entrepreneurs about this particular subject. The participants also got to know about India's rich heritage and its admirable legacy in reference to silk production.



Toward the end of the session, the participants asked their doubts related to the topic which were answered with great precision. The session imparted a huge amount of information to the students and increased the horizon of their knowledge. This workshop ended with a vote of thanks and token of gratitude extended toward the guest and all the participants.

Positive feedback was obtained from this workshop and all the participants look forward to attending such interactive sessions in the future as well. All the participants were awarded with e-certificates for participation

Lecture based on the topic: Introduction to Herpetology and Remote Sensing Based Conservation

Date: 25th February, 2022
 Speaker: Mr. Indraneel Kulkarni



The Zoology Department of Shivaji College conducted a skill enhancement workshop based on the topic Introduction to Herpetology and Remote Sensing Based Conservation on 25th February, 2022 on Zoom platform at 3 pm. Over 80 participants from various departments of Zoology, Botany and Life Sciences joined the session enthusiastically.



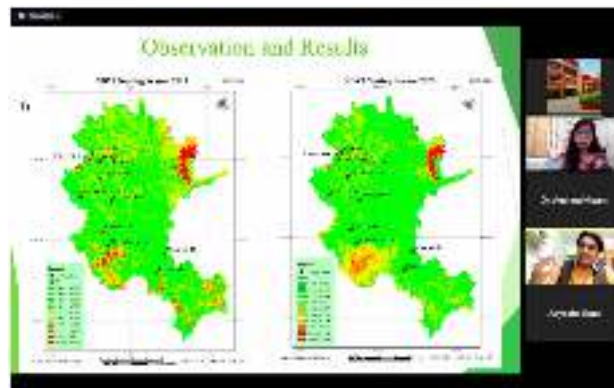
The speaker of the online lecture- Mr. Indraneel Kulkarni-graced us with his benign presence. This lecture started with an introduction on Herpetology and its other aspects. The lecture delivered information on reptiles and amphibians, but the main focus revolved around Snakes.



The participants got to know about various kinds of snakes, such as-Burmese Python, Spectacled Cobra, Monocled Cobra, Russell's Viper, Indian Cobra, King Cobra and many more. The lecture also contained information on venomous and non-venomous snakes, as well as, the ways of identifying them through their physical appearance.



The speaker also explained the behavior of various snakes towards their habitat, and their basic requirements. The lecture also included information on various kinds of toxins present in snakes, and the way in which these toxins affect the human body.



Remote Sensing was also a part of this informative lecture, where participants got acquainted with types of Remote Sensing techniques, and the research work related to this emerging field.



Toward the end of the session, the participants asked their doubts related to the topic which were answered with great precision. The session imparted a huge amount of information to the students and increased the horizon of their knowledge. This workshop ended with a vote of thanks and token of gratitude extended toward the guest and all the participants.

Positive feedback was obtained from this workshop and all the participants look forward to attending such interactive sessions in the future as well. All the participants were awarded e-certificates for participation.

Lecture based on the topic " Seasonality in Wild Birds:Regulation by Environmental Factors

Date: 26th February, 2022



The Zoology Department of Shivaji College conducted an online lecture based on the topic "Seasonality in Wild Birds: Regulation by Environmental Factors" on 26th February, 2022 on MS Teams platform at 4 pm. Over 80 participants from various departments of Zoology, Botany and Life Sciences joined the session enthusiastically.



The speaker of the online lecture-Dr. Gaurav Majumdar-graced us with his benign presence. The lecture started with the introduction on circadian rhythm and its influence on a bird's lifestyle.



In addition to this, the online lecture explained the peculiar lifestyle of migratory birds, such as the Siberian crane and many more. This lecture also highlighted certain environmental factors that impact the life cycle of the wild birds. Factors like Wind Patterns, Sunlight, Temperature, Climate etc., influence the period of migration in a bird's life cycle.



This lecture revolved around Chronobiology—a branch of science that deals with biological rhythms of an organism. In a nutshell, the lecture was quite informative and pushed the boundaries of the participant's knowledge.



Toward the end of the lecture, the participants asked their doubts related to the topic which were answered with great precision. The lecture imparted a huge amount of information to the participants. This lecture ended with a vote of thanks and token of gratitude extended toward the guest and all the participants.

Positive feedback was obtained from this lecture and all the participants look forward to attending such interactive lectures in the future as well. All the participants were awarded e-certificates for participation.

Lecture based on the topic: Insects Matter: Everyday Influence of Insects and Conservation Value

27th February, 2022

Speaker: Dr. M. Ojit Kumar Singh



The Zoology Department of Shivaji College conducted an online lecture based on the topic 'Insects Matter: Everyday Influence of Insects and Conservation Value' on 27th February, 2022 on Zoom platform at 11 am. Over 80 participants from various departments of Zoology, Botany and Life Sciences joined the session enthusiastically.

The lecture started with the introduction on various kinds of insects, and their widespread presence. In today's time, insects are known as 'The true lords of the jungle'.



The online lecture explained about different feeding habits of various insects, and the climate they prefer to thrive in.



This session also highlighted the sustainable development goals from an insect's perspective. It explained several goals which can make the world a better place to live. These are certain

methods which can help us to conserve the environment and save the resources for our future generations as well.



This lecture also highlighted the significance of insects during pollination, the way they act as carriers and play a major role in transferring pollen grains from the anther to stigma.



Toward the end of the lecture, the participants asked their doubts related to the topic which were answered with great precision. The lecture imparted a huge amount of information to the participants. This lecture ended with a vote of thanks and token of gratitude extended toward the guest and all the participants.



Positive feedback was obtained from this lecture and all the participants look forward to attending such interactive lectures in the future as well. All the participants were awarded e-certificates for participation.

Lecture based on the topic: Human Wildlife Conflict

28th February, 2022
Speaker: Mr. Surender Mehra



The Zoology Department of Shivaji College conducted an online lecture based on the topic 'Human Wildlife Conflict' on 28th February, 2022 on the Zoom platform at 9:30 am. Over 80 participants from various departments of Zoology, Botany and Life Sciences joined the session enthusiastically.



The online lecture started with an introduction on Wildlife and its other aspects. This lecture highlighted the issue of loss of wildlife and their habitat due to human interference. The human population is increasing rapidly, and due to this, the human beings disrupt the 'natural shelters' of wild animals and take away their chances of survival.



This lecture depicted the atrocious ways in which human beings kill the stray dogs and other animals by their reckless driving. However, the lecture explained the solutions of all these problems. It emphasized on the idea of crowd management and management of wild animals.



Moreover, this lecture highlighted the illegal and brutal killings of wild animals, as well as the laws associated with it. Certain preventive measures were mentioned too.



Toward the end of the lecture, the participants asked their doubts related to the topic which were answered with great precision. The lecture imparted a huge amount of information to the participants. This lecture ended with a vote of thanks and token of gratitude extended toward the guest and all the participants.

Positive feedback was obtained from this lecture and all the participants look forward to attending such interactive lectures in the future as well. All the participants were awarded e-certificates for participation.

Faculty Training Program Date 1st & 2nd April 2022

Department of Zoology, Shivaji College, organised a two day 'Faculty Training Program' on 'Hands-on Techniques in Developmental Biology' under the aegis of IQAC & DBT Star College Scheme from 1st & 2nd April, 2022. Registrations were invited from pan India and over 30 faculty members registered for the program. 17 participants attended the workshop on both days. There were 2 Modules planned for the program from 9am-4pm:
Module I: Chick Windowing Method: Naked eye observation of early Embryonic development
(Day I)
Module II: Study of life stages of *Drosophila melanogaster* (Day II)

The chick windowing method was a great success for the faculty, as fertilized eggs were bought and especially taught to be handled. A detailed anatomy of the chick egg and development was taught during the program. All the participants could easily perform hands-on manipulation of the eggs, tracing the aspects of chick egg, the yolk, chalaza, air space, practicing the method of making the window themselves to study development.

The study of *Drosophila* was also done in detail where a sheet was provided to all participants to perform dissection of various parts of the fruit fly. The participants were taught to distinguish between the three larval instars, dissect their mouth parts, distinguish between male and female flies, mounting of polytene chromosomes, sex combs and salivary glands. All participants were thrilled to be able to do such work post two years of pandemic where hardly any lab work was being done.

We received an excellent feedback from all participants for the program and they expressed that it was a great learning experience for all of them.



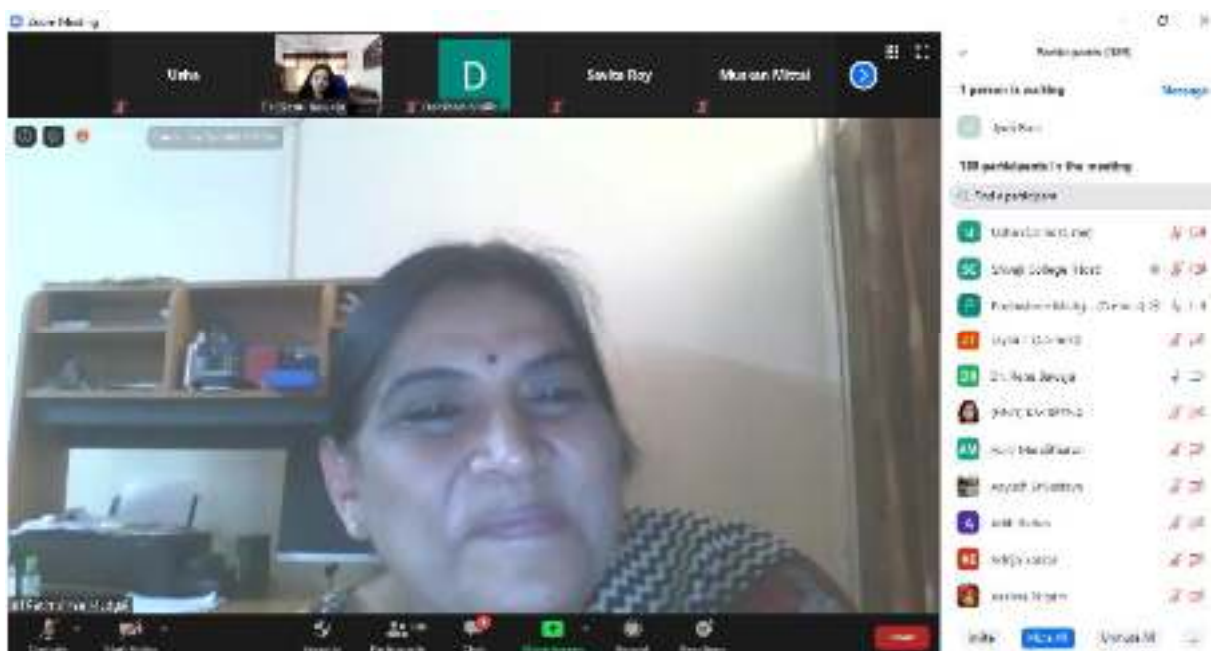
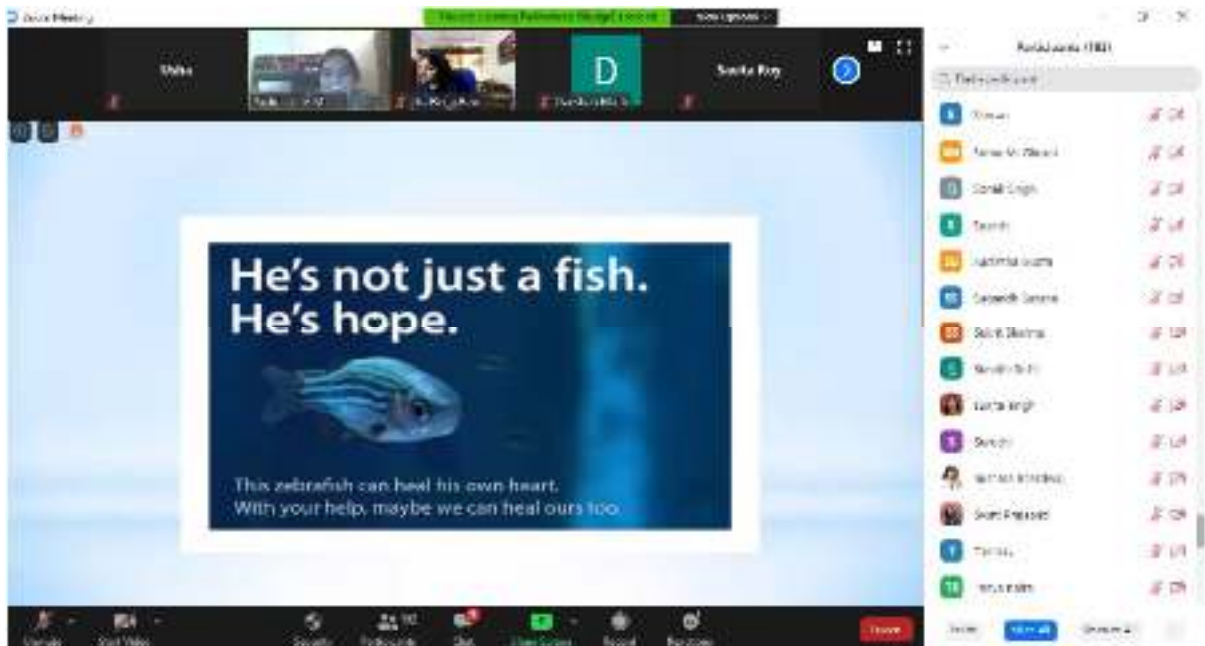


Session 2020-21

DEPARTMENT OF BIOCHEMISTRY

Webinar on “Zebrafish Model System” on May 8, 2020

Department of Biochemistry, Shivaji College, University of Delhi, under the aegis of DBT sponsored Star College Scheme organized a webinar on “Zebrafish Model System” on May 8, 2020 at 03:00 PM using ZOOM meeting platform. The esteemed speaker for the same was Dr. Padmshree Mudgal, Associate Professor, Department of Biochemistry, Daulat Ram College, University of Delhi. The webinar was attended by around 200 participants which included faculty members as well as students from various colleges of University of Delhi. The speaker enthralled everyone with her exciting, beneficial and edifying work on Zebrafish which is an important model organism to study developmental biology. Interesting and relevant questions were asked by the participants at the end.



Webinar on Microbial Genes and Genomes: Impact on our lives, on July 20, 2020

A webinar on Microbial Genes and Genomes: Impact on our lives was organized under the aegis of DBT Star College Scheme on July 20, 2020 on Zoom Virtual Platform

The event was the part of the lecture organized under the ongoing Inter- College Online Summer Training Program on Research Methodology. Professor Yogendra Singh, Professor, Department of Zoology, University of Delhi introduced the participated with the impact of

various microbes on human life. During his talk he mentioned about the role of both pathogenic and friendly bacteria and explained their importance in human life. Further, he also talked about the opportunities in the field of science and research in various Indian and Foreign Universities.

The event was attended by a total of around 126 participants with 20 faculty members and 101 students of different colleges of university of Delhi and other universities across India.

Overall, the webinar was a great success



Webinar on Building Science Technology and Innovation Capacity: An Overview of Ecosystem, on July 22, 2020

A webinar on Building Science Technology and Innovation Capacity: An Overview of Ecosystem was organized under the aegis of DBT Star College Scheme on July 22, 2020 on Zoom Virtual Platform

The event was the part of the lecture organized under the ongoing Inter- College Online Summer Training Program on Research Methodology. Dr. Anita Aggarwal, Scientist E, DST, apprised the participants about the components of any research proposal and how to write the research proposal to any funding agency for financial support. She also mentioned about the various funding agencies which support the research projects related to life sciences, anatomy of Indian Science and Technology sectors, vision, component and focus of DST and other related topics

The event was attended by a total of around 77 participants with 06 faculty members and 71 students of different colleges of university of Delhi and other universities across India.



Webinar on “Meta-Analysis: Predicting Future Using Past” on July 25, 2020

A webinar on “Meta-Analysis: Predicting Future Using Past” was organized under the aegis of DBT sponsored Star College Scheme on July 25, 2020, on the Zoom online platform.

This event was a part of the lectures organized under the then ongoing Six Week Summer Training on Research Methodology, 2020. Dr. Manish Kumar, Assistant Professor, Department of Biophysics, University of Delhi, South Campus, delivered a lecture on Meta-Analysis and its importance and relevance to research work. He took the participants through the steps involved in collecting secondary data and creating new interpretations through them.

The event was attended by a total of 75 participants, of which there were 9 faculty members, 3 PhD scholars, 5 post graduate students and 58 undergraduate students of various colleges and universities. The webinar received uniformly good reviews by all the participants.





Webinar on “Using Oligonucleotides As Drugs: The Story of siRNA, ASO and Aptamers” on September 25, 2020

A webinar on “Using Oligonucleotides As Drugs: The Story of siRNA, ASO and Aptamers” was organized under the aegis of DBT sponsored Star College Scheme on September 25, 2020, on the Zoom online platform.

Dr Arijit Bhowmik, Head Scientist of the Oligonucleotide Therapeutics R&D Core Team, Regeneron Pharmaceuticals Inc., New York, USA, delivered a lecture on the various kinds of oligonucleotides that can be used as drugs. He introduced the participants to the different roles played by siRNAs, ASOs and aptamers towards action as drugs. The event was attended by a total of 86 participants. Apart from the undergraduate students, the event was also attended by 14 were faculty members, 8 PhD Students, 5 postgraduate students.



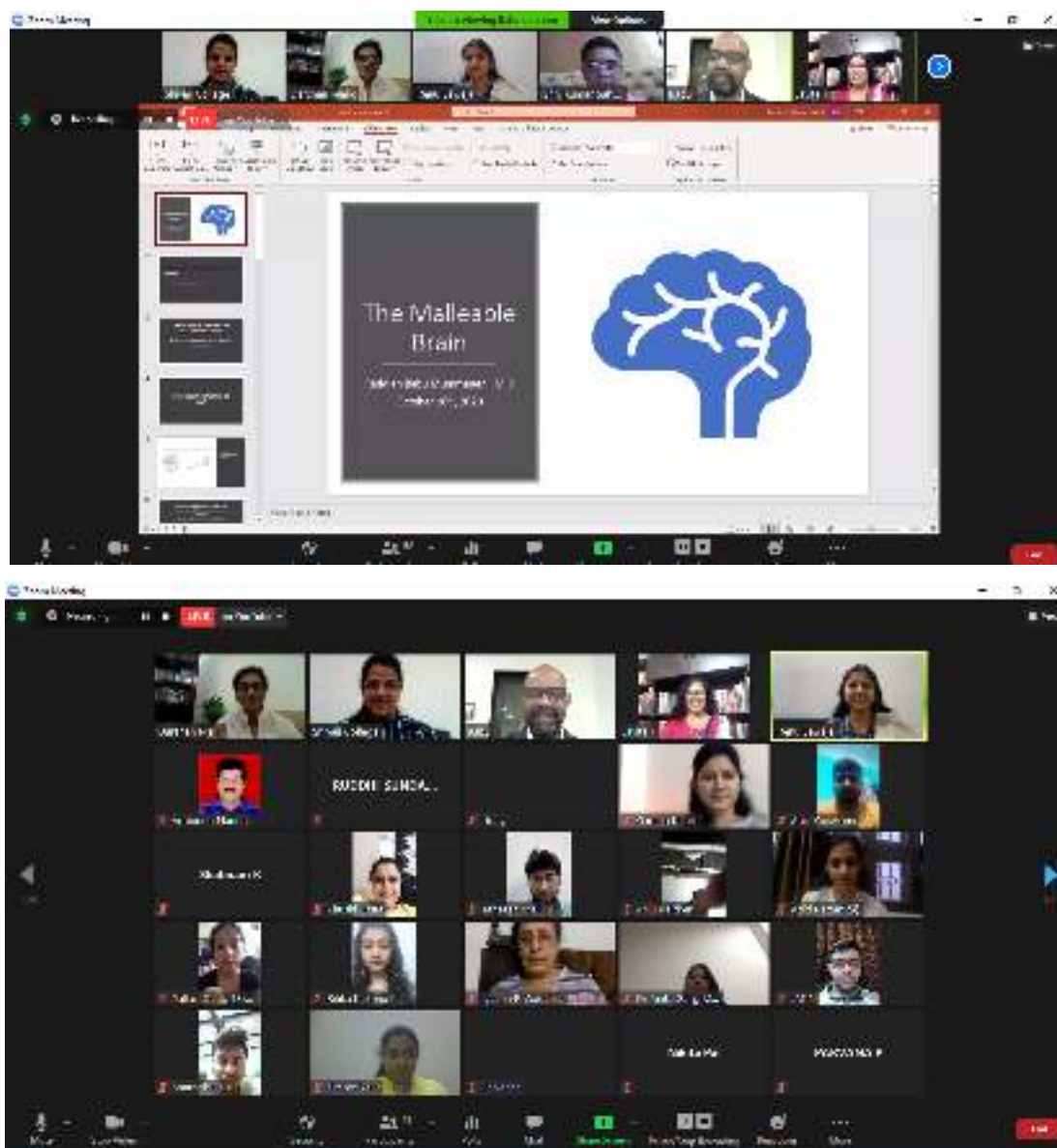
International webinar on “The Malleable Brain” on October 10, 2020

Department of Biochemistry, Shivaji College, University of Delhi, under the aegis of DBT sponsored Star College Scheme organized the international webinar on “The Malleable Brain” on October 10, 2020 at 05:00 PM on virtual platform ZOOM. The esteemed speaker for the same was Dr. Reddiah B. Mummaneni, Neurologist and Sleep specialist in Cedar Park Regional Medical Center, Cedar Park, Texas, USA having more than 23 years of experience in the field of Clinical neurophysiology. He spoke on the complexity of the nervous system, how neurons communicate with each other through connections called Synapses and how can these connections be strengthened? The highlights of the talk were as following:

- Activity dependent refinement of connections, a general feature of circuits in the central nervous system
- Memory and learning
- 4 stages of a new memory formation
- Motivational systems in the central nervous system helping the encoding process
- Sleep and effects of sleep deprivation
- Motivational systems – Dopaminergic pathways of reward
- Benefits of exercise: a) increased cognitive functioning b) increased memory
- Effects on psychological function: a) Better sleep - Adenosine mechanisms. b) Anxiety and depression- Endorphin mechanism

Apart from explicit and implicit memory, four stages of new memory formation were also discussed which are encoding, storage, consolidation and retrieval. The webinar was attended by around 100 participants which included faculty members as well as students from various

colleges of University of Delhi and outside too. The speaker enthralled everyone by emphasizing on the important relationship between sleep and memory. Interesting and relevant questions were asked by the participants at the end which were answered by the speaker. The webinar ended with a vote of thanks.

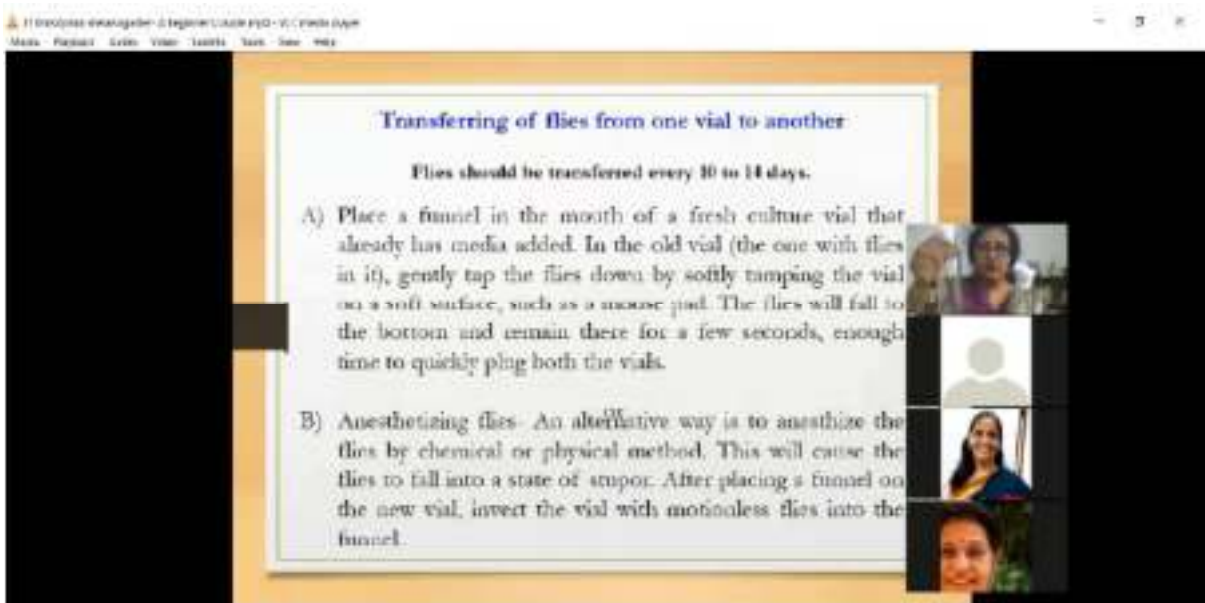


Online Workshop *Drosophila melanogaster*: A beginner's Guide to Culturing and Maintenance on November 12, 2020

An online workshop on “*Drosophila melanogaster*: A beginner's Guide to Culturing and Maintenance” was organized by the department of Biochemistry, under the aegis of DBT sponsored Star College Scheme on November 12, 2020, on the Zoom online platform.

Dr. Jayita Thakur, Assistant Professor of our own department conducted this online workshop, where she took the participants through the importance of *Drosophila melanogaster* as a model system. She informed the audience about the various requirements for maintaining *Drosophila* cultures. Props were also used to explain the various steps involved in *Drosophila* culture.

The event was attended by 120 participants. Apart from the undergraduate students, the event was also attended by 7 were faculty members and 35 school students.



Five-day National Workshop with Hands-on Training through Virtual Platform on Bioinformatics and Biostatistics: A Beginner's Guide, January 16-20, 2021

Workshop Coordinators: Dr. Renu Baweja and Dr. Sunita Singh

Department of Biochemistry under DBT-Star College Scheme organized a workshop on “Bioinformatics and Biostatistics: A Beginner's Guide” for Faculties and Research Scholars of different Universities/Institutions throughout the India. The workshop witnessed the participation not only from Colleges and Department of University of Delhi but also from Institutes and Universities across India including Rajasthan, Punjab, Uttar Pradesh, Guwahati and many more. The Chief Guest of the inaugural Session was Dr. N. latha, Associate Professor, Department of Biochemistry and Coordinator, Bioinformatics Centre, Sri Venkateswara College, University of Delhi. She apprised the participants about the concept and applications of Bioinformatics. This was followed by hands-on-training session on Bioinformatics tools for the beginners by Dr. Dr. Nidhi Jatana Batra, Post-doctoral fellow, Computational structural biology; CSIR-IGIB. She had taught the participants about sequence retrieval from databases, FASTA format, pairwise sequence alignment using BLAST and multiple sequence alignment tools. On the second day of the workshop Dr. Manoj Kumar, Department of Biophysics, AIIMS, had given training on the use of PyMol for visualization of Drug-Protein Interactions. This was followed by the third session on understanding the opensource tool, “R” for statistical analysis of biological data by Dr. Uma Dhawan from Department of Biomedical Sciences, Bhaskaracharya College of Applied Sciences, University of Delhi. The participants were also given hands-on-training on the application of Meta-analysis tools for bioinformatics during fourth day of the workshop by Dr. Jaspreet Kaur from Pearl Academy, New Delhi. On fifth day, Dr Kriti Kaushik, Department of Biochemistry, AIIMS, had given hands-on training on various genome browsers, designing sgRNA for crispr/cas9 and disease genomics. The workshop was concluded with the training session on “From Literature to networks and pathways” using pubmed.mineR by the Chief Guest of Valedictory Session Professor S. Ramachandran, Senior Principal Scientist and Professor of the AcSIR, Faculty of Biological Sciences, CSIR-IGIB. Overall, the training workshop was well-appreciated by all the participants as reflected by the feedback of the sessions of the workshop.

No. of beneficiaries = 40



Day 1: Inaugural Session, Chief Guest: Dr. M. Lallia



Day 1: Hands-on Training Session by Dr. Nishi Lakshmi Rathi



Day 2: Hands-on Training Session by Dr. Manoj Kumar



Day 3: Hands-on Training Session by Dr. Uma Khosla

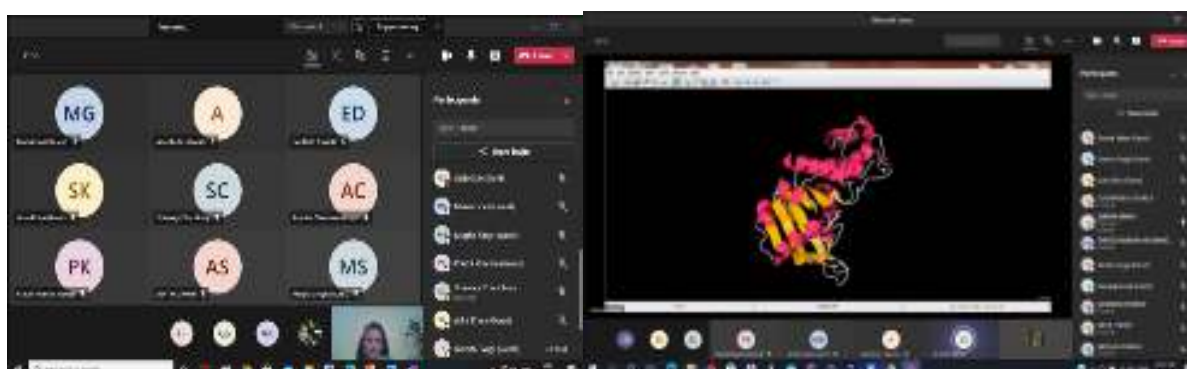
Online Hands on Training Workshop using Bioinformatics Tools for Understanding Protein Biology, April 16-17, 2021

The students of B.Sc (Biochemistry & Home Sciences) and M.Sc (Food & Nutrition) attended the Online Hands on Training workshop using Bioinformatics Tools for Understanding Protein Biology organized by the Department of Biochemistry under the aegis of DBT Star College Scheme from April 16-17, 2021. The participants were from Chaudhary Charan Singh University (Meerut), IIMT University and Shivaji College, University of Delhi. The different applications of bioinformatics, types of databases, introduction to protein databases, protein structure prediction tools, visualization software, introduction to CADD tool and TMHMM software were covered in the different sessions.

No. of participants registered = 99

No. of participants screened and informed by sending mails = 50

No. of participants attended the online hands on training = 45



DEPARTMENT OF BOTANY

- **International Webinar on “Environment, Gender and Climate Change”, on July 27, 2020.**

To keep our students and faculties safe and abreast with the latest developments about the climate changes an International Webinar entitled “Environment, Gender and Climate Change” by Dr. Greta Gerrard, Professor of English, University of Wisconsin, USA; Dr. Vandana Singh, Professor of Physics, Framingham State University, USA and Dr. Vijaya Laxmi Singh, University of Delhi. It was held on July 27, 2020 on Zoom platform. A handbook was released of the same title in the beginning of the webinar.

Participants were immensely benefitted to have the knowledge about how environment is important, whether gender has any role in it and the most important climate change from the speaker.

Number of beneficiaries: 115





- **National webinar on “Impact of Coronaviruses on human central nervous system: latest updates and trends”, on January 16, 2021.**

The Department of Botany, Shivaji College, University of Delhi, organized a National Webinar on January 16, 2021 on the topic “Impact of Coronaviruses on Human Central Nervous System: Latest Updates and Trends”. Resource person for the online program was Dr. Ritu Mishra, DST- INSPIRE Faculty, National Institute of Immunology, New Delhi. The main intent of the webinar was to help students learn more about viruses, beyond their syllabus and to further clear myths and doubts among students about the effects of coronavirus and impart knowledge and awareness about how to deal with the effects and stay safe. Dr. Ritu Mishra began her lecture with a basic introduction and classification of the coronavirus. She further explained about the vascular passage of this virus and how it is capable of breaching the blood- brain barrier and affects the central nervous system of humans. Furthermore, Dr. Mishra highlighted the direct and indirect damage to the brain by coronavirus which included neuro-invasion, hypertension, headaches, neuromuscular agitation and explained about the extrapulmonary involvement of Covid-19. The last segment

of the webinar involved a discussion and doubt solving session where Dr. Mishra took questions from the participants and cleared their queries. The webinar was convened by Dr. Misha Yadav, the Teacher In- Charge of the Department of Botany.

Number of Participants: 107



- **National Webinar on the topic "Decolorization and detoxification of textile waste waters using laccases of *Cyathus bulleri*", on January 21, 2021.**

The Department of Botany, Shivaji College, University of Delhi, organized a National Webinar on January 21, 2021 at Zoom Meeting Platform. The topic of the webinar was “Decolorization and Detoxification of Textile Water using Laccases of *Cyathus bulleri*”. Resource person was Prof. Saroj Mishra, Department of Biochemical Engineering and Biotechnology, Indian Institute of Technology Delhi, New Delhi. The main purpose of the webinar was to introduce the concept of usage of fungus and their products in bioremediation. Prof. Mishra commenced her lecture by first introducing the different disciplines of biochemical research in IIT Delhi that gave a precise idea to the students about the opportunities for them after graduation. She further continued with the topic and explained about the main sources of water pollution in our country highlighting that the maximum waste is contributed by municipal sewage and textile wastes. Prof. Mishra discussed the different dyes used in the textile industry and how they affect the water quality, and explained about the different physical, chemical and biological methods available for treatment of the effluent. She gave a brief introduction about laccases and explained how

these can be grown and genetically engineered in the laboratory. She concluded her lecture by emphasizing on different techniques of detoxification and decolorization of effluents by using native laccases, engineered laccases, combination treatment and solid substrate produced laccase. The last segment of the event included a discussion session where Prof. Mishra solved doubts of the participants. The event was convened by Dr. Misha Yadav, the Teacher-In-Charge of the Department of Botany.

Number of Participants: 141



- **Online Workshop on "Mushroom Cultivation", on March 6, 2021.**

The Department of Botany, Shivaji College, University of Delhi, organized an Online Workshop on March 06, 2021. The topic of the workshop was “Mushroom Cultivation”. Resource person was Mr. Sumit Sharan, Founder of Shroomery, Manesar, Gurgaon. The main aim of the workshop was to introduce the concept of Oyster Mushroom Cultivation and the career prospects of starting a business in this field. Mr. Sumit began his talk by introducing the mushroom family and its life cycle. He further explained about the different types of edible mushrooms and where they can be found in nature. He then discussed the techniques involved in of cultivation of Oyster Mushrooms at home and for commercial purposes as well. He explained the steps of cultivation of Oyster Mushrooms in great detail, discussing all the important parameters, raw materials, etc. required for the same, with the help of videos, which he recorded himself in his Farm at Manesar, Gurgaon. He took queries from the participants throughout his talk and gave valuable inputs about how students can join courses offered in this field and get and give employment. He concluded his talk by

mentioning the various business aspects of mushroom cultivation and how it is an innovative idea for young entrepreneurs. The last segment of the event included the formal vote of thanks. The event was convened by Dr. Misha Yadav, Teacher In-Charge of the Department of Botany and Dr. Smita Tripathi.

Number of beneficiaries: 73



Department of Chemistry

Invited Lecture on “Luminaries of Indian Science: Life and Work of a few Indian Scientist” August 30, 2019

Professor Rajeev Gupta’s lecture titled “Luminaries of Indian Science: Life and Work of a few Indian Scientist” was organized by the Department of Chemistry, Shivaji College. This event was held on 30th August 2019. The Annual lecture is a much-awaited department activity as it gives both students and faculty members the opportunity to benefit from the minds in emerging fields of science. The event opened with short introduction by student coordinator and formally welcomed the guest speaker, Professor Rajeev Gupta, a renowned professor at Department of Chemistry, University of Delhi, Dean of student’s welfare, University of Delhi, Chairman NCWEB, University of Delhi. The event was witnessed by around 200 participants.



Annual Fest "RASTANTRUM 2019" on October 21, 2019

The Department of Chemistry, Shivaji College has organized its Annual Fest “RASTANTRUM 2019” on 21.10.2019. The chief guest, Dr. Lakshmi Raghupathy, former Director, Ministry of Environment Forests and Climate Change, working as Visiting Professor TERI, SAS Advisor & Consultant Sustainable Development visited shivaji college to deliver a talk on “CLIMATE CHANGE IMPACTS & SUSTAINABLE DEVELOPMENT GOALS”. Teacher-In-charge, Dr. P.K. Sahu felicitated the chief guest with sapling of medicinal plant. Around 200 participants took part in the event.

A number of vivacious activities for the students were organized during the fest by the Department of Chemistry, Shivaji College. Based on the issue of the climate change and growing need of taking appropriate measures for the same, various events and competitions were organized for the students and were successfully executed. Students actively participated and showed a great interest in the events.



National Conference on 'Relationship between chemical Sciences and Society'- RCSS 2020 on January 16-17, 2020

The Department of Chemistry, Shivaji College organized a National Conference on 'Relationship between chemical Sciences and Society'- RCSS 2020 on 16th- 17th January, 2020 in college auditorium, Shivaji College. The Conference was built to merge the different fields of chemistry and to address today's most challenging issues relevant to human well-being and sustainable development. The unique forum provided an opportunity of meeting the connoisseurs of their field, learned educators, scholars and eminent scientists from various institutes to exchange knowledge and ideas on newer advances in the arena of chemistry and their impact on society.

Over 169 participants including Vice chancellors from different Universities, Scientists, Professors, Industrialists, and Academicians from premium institutes, Research Scholars and students from under-graduation as well as post-graduation across the nation participated in this mega event.



RCSS-2020

National Conference on



Relationship between Chemical Sciences and Society (RCSS-2020)



Organized by
Department of Chemistry, Shivaji College
University of Delhi, Raja Garden, Delhi-110027
Under DBT Star College Scheme

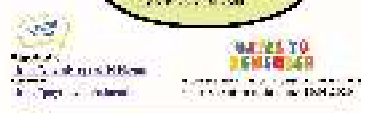
RCSS-2020 is a new platform of providing scientists, academicians and students from all over the country an opportunity to discuss and share all the innovations in the Chemical Sciences and Society. RCSS-2020 will include a range of high-impact plenary presentations, keynote presentations, cutting-edge scientific talks, interactive sessions and exhibitions.

- 1. Prof. A. K. Basak, Vice-Chancellor, IISER University
- 2. Prof. P. K. Bhowmik, University of Delhi
- 3. Prof. A. T. Paul, University of Delhi
- 4. Prof. D. K. Nayak, Indian Institute of Technology
- 5. Prof. K. S. Kumar, University of Delhi
- 6. Prof. S. K. Mishra, IIT
- 7. Prof. B. D. Malhotra, IIT
- 8. Prof. S. K. Mishra, IIT, Kanpur
- 9. Prof. S. K. Mishra, IIT, Kanpur
- 10. Prof. S. K. Mishra, IIT, Kanpur
- 11. Prof. S. K. Mishra, IIT, Kanpur



- ### Areas of Interest
- Biotechnology
 - Environmental Chemistry
 - Food Chemistry
 - Green Chemistry
 - Inorganic Chemistry
 - Organic Chemistry
 - Physical Chemistry
 - Polymer Chemistry
 - Surface Chemistry
 - Analytical Chemistry
 - Computational Chemistry
 - Materials Chemistry
 - Nanochemistry
 - Medicinal Chemistry
 - Environmental Chemistry
 - Food Chemistry
 - Green Chemistry
 - Inorganic Chemistry
 - Organic Chemistry
 - Physical Chemistry
 - Polymer Chemistry
 - Surface Chemistry
 - Analytical Chemistry
 - Computational Chemistry
 - Materials Chemistry
 - Nanochemistry
 - Medicinal Chemistry

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Sponsors:





Webinar on the topic “National Education Policy (NEP)-2020 for Quality Higher Education” on September 19, 2020

The Department of Chemistry, Shivaji College organized a Webinar on the topic “National Education Policy (NEP)-2020 for Quality Higher Education” by Professor A. K. Bakhshi. The webinar was organized under the convenorship of Dr. P. K. Sahu and guidance of Dr. Rajni Kanojia, Teacher-In-Charge of Chemistry Department. The co-convenor and host of the webinar was Dr. Richa Arora. The speaker of the talk, Professor A. K. Bakhshi is currently Vice Chancellor of PDM University, Bahadurgarh, Haryana. The event was held on 19.09.2020 (Saturday) at 04:00 PM on Zoom platform. The talk was aired live on the Facebook page of the Shivaji College. For the webinar, 771 registrations were received. Around 306 participants joined the event.

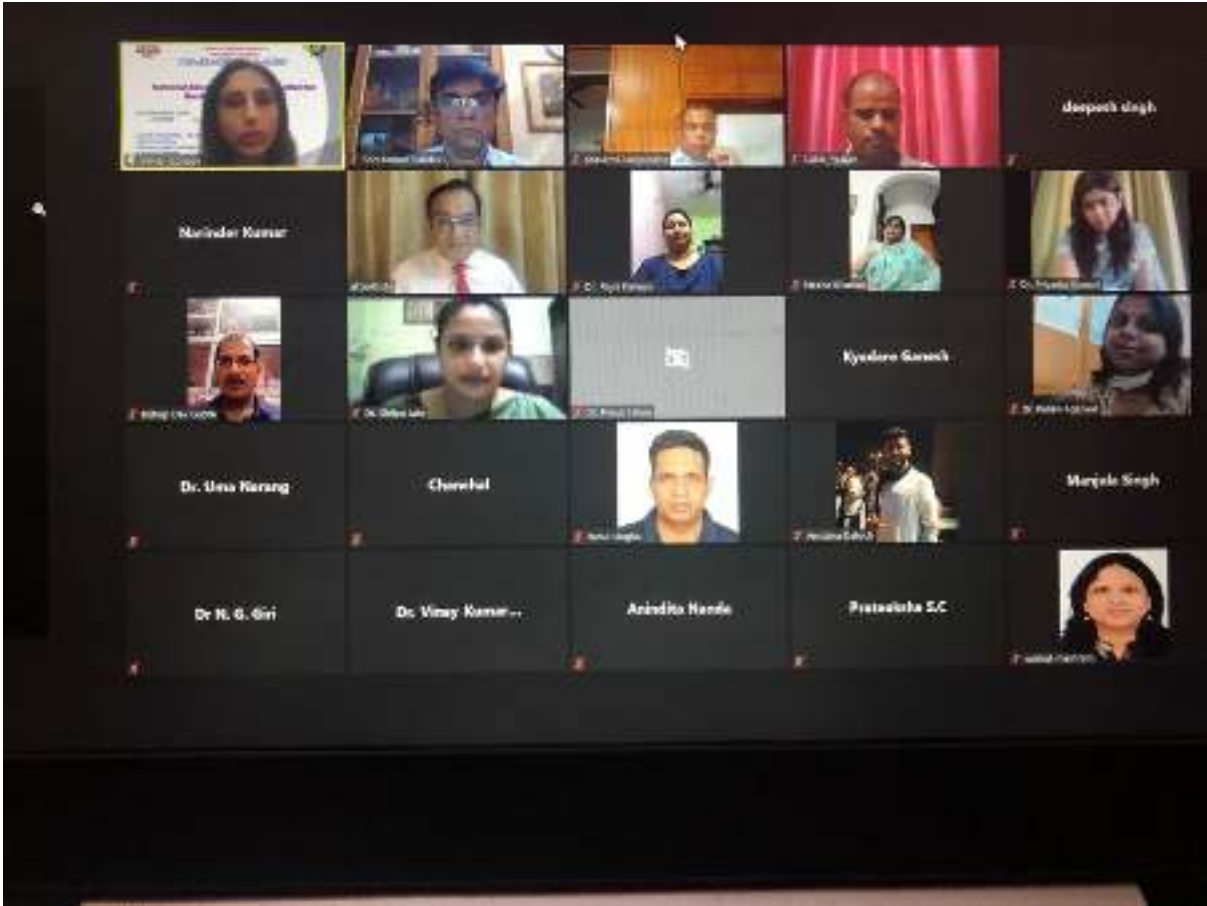
The event witnessed participation from faculty and students of various colleges/universities/institutes across India. The participants joined the event through Zoom as well as Facebook. The event was formally inaugurated by Dr. Shiv Kumar Sahdev, Principal of Shivaji College.

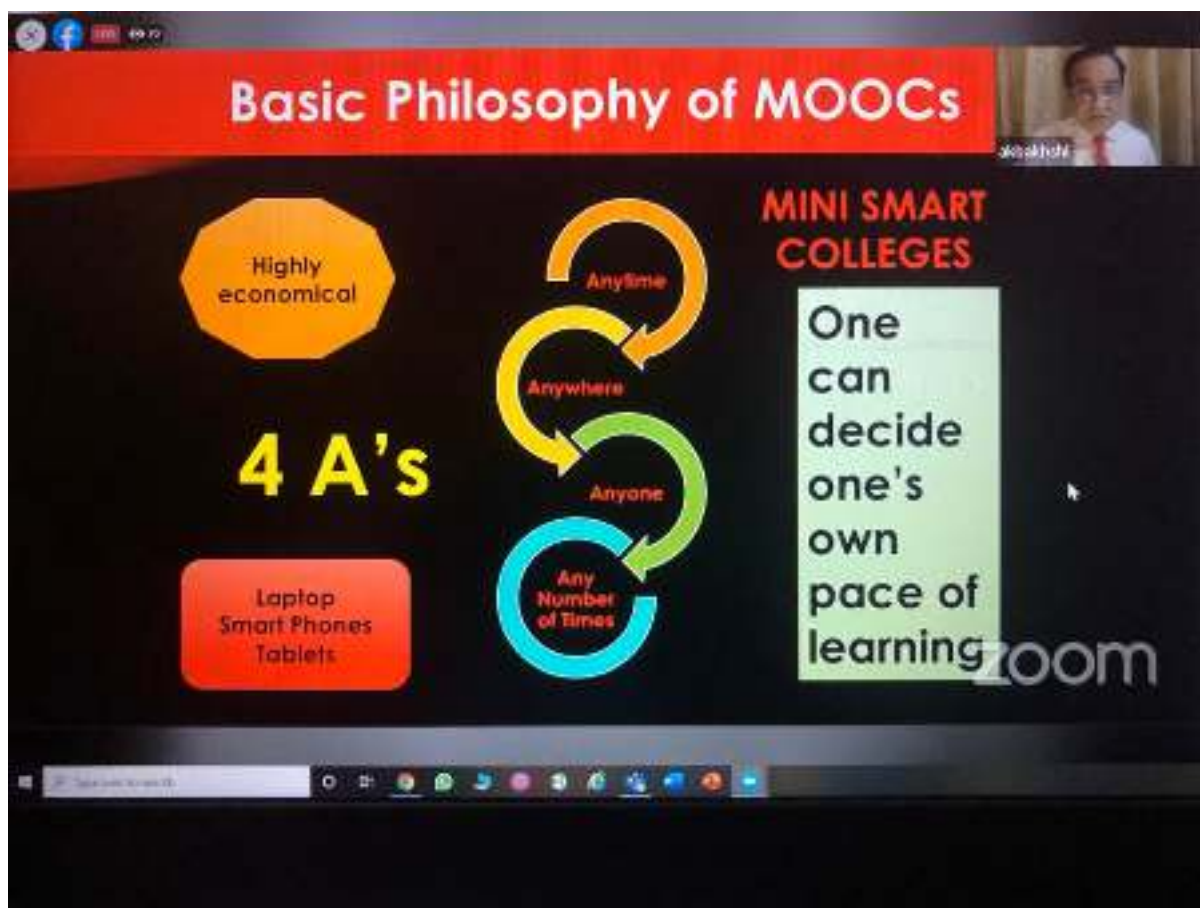
The speaker for the webinar gave insights of National Education Policy (NEP)-2020, touching upon various aspects of NEP. He started from the first NEP and then moved on to the NEP 2020. He tried to explain some of the key factors of NEP and emphasized on how students and faculty can benefit from it. Professor Bakhshi reiterated on the fact that use of ICT tools and technology in education is the need of the hour. He explained how one can integrate classroom teaching with ICT tools to make it more interesting for the students.

Professor Bakhshi ended his talk by sharing some motivational quotes and videos emphasizing on the importance of hard work and perseverance.

The talk was followed by a Question/Answer session. The participants really appreciated the talk and the presentation of Professor Bakhshi and they thoroughly enjoyed it and benefitted from it, which was very clear from the comments they were posting in the chat section of Zoom app and comment section of Facebook page.

The webinar ended with a vote of thanks by the senior most faculty of the Department of Chemistry of Shivaji College, Dr. Manjula Singh.





Webinar entitled “The Contribution of DRDO In Prevention And Management of COVID-19 Pandemic” on 26 September 2020

A webinar entitled “The Contribution of DRDO In Prevention And Management of COVID-19 Pandemic” was organised by the Department of Chemistry of Shivaji College, University of Delhi for the students, scholars and teaching faculties on 26 September 2020, at 4:00 P.M on zoom platform. The webinar was open to public and approximately 170 people were in attendance. During the session attendees share their opinions, thoughts and suggestions for consideration through chat box available to them in zoom platform. The event started with the presence of Teacher Incharge Dr. Rajni kanojia. Before starting the event Saraswati Vandana was chanted with folded hands.

The Principal of the college, Dr. Shiv Kumar Sahadev has inaugurated the programme by his motivated speech. The event was arranged with a purpose of sharing the knowledge of contributions made by DRDO in managing and preventing the COVID-19 situations.

The Keynote speaker of the webinar was Dr. Himanshu Ojha, Scientist E and Joint Director at INMAS DRDO.

Disinfection and sanitization activities of Division of CBRN Defence

Prepared and distributed 2640 liters WHO recommended isopropyl alcohol based sanitizer and 1506 liter HClO in various DRDOs Delhi based labs and offices.

Has been monitoring Corbiqer PRS based test and test sanitization test in DRDOs for and other labs since April 2020.

Removed training Centre based DRDO Labs for routine and deep sanitization.

Provided back-pack sprayers and high pressure pumps to SAC, CDR&EO, M&E, S&M, S&P, J&E, C/O DGLA, L&STIC. Besides, the division has trained Delhi based DRDO Labs for routine and deep sanitization.

REMCOG kit also distributed and distributed in C/O Chairman DRDO, C/O DGLA, and other DELHI DRDO Labs.

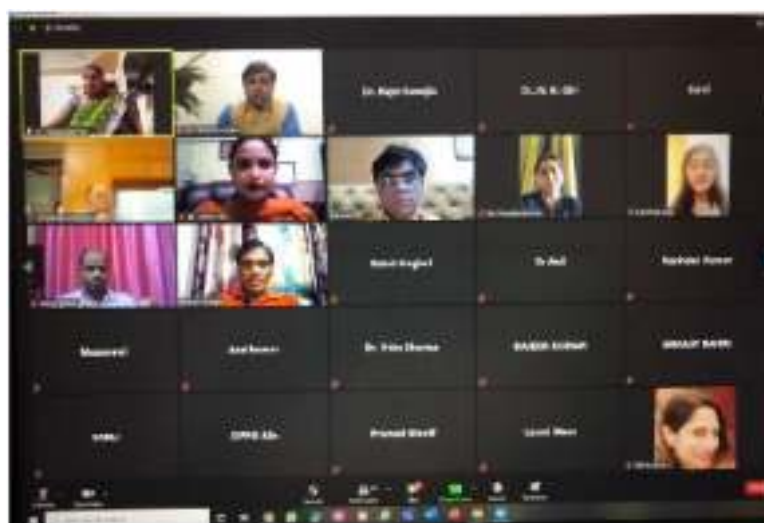
DRDO disinfection committee:- DR&AG acts as nodal agency.

The division under the leadership of O/A DGLS had sanitized Gandhi Sanku Art Museum for the visit of honorable PM on 03-08 Aug 2020.

Deep sanitization services were provided to ICG (SD) Head, SAC and SAC, Bunkar House to and Kalyani cooperative facility, C/O DGLA.

[Vehicle testing](#) [School testing](#) [IIT Delhi](#)

Dr Himanshu Ojha's screen



Webinar on the topic “Correlation of Environmental Chemistry in National Education Policy” on September 27, 2020

The Department of Chemistry, Shivaji College organized a Webinar on the topic “Correlation of Environmental Chemistry in National Education Policy” by Dr. Balaram Pani. The webinar was organized under the convenorship of Dr. P. K. Sahu. The co-convenor and host of the webinar was Dr. Richa Arora. The event was organized under DBT sponsored Star College Scheme.

Dr. Balaram Pani, is the Principal at Bhaskaracharya College of Applied Sciences, University of Delhi. Besides this, he has been given additional charge of some of the most important administrative positions of University of Delhi, given his background of exemplary work. He is currently Director of Campus of Open Learning, University of Delhi, and most importantly has been delegated to be Dean of Colleges, University of Delhi.

The event was held on 27.09.2020 (Sunday) at 04:00 PM on Zoom platform. The talk was streamed live on the YouTube channel of Shivaji College as well as Facebook page of the Shivaji College. The event was attended by around 55 participants.

The event witnessed participation from faculty and students of various colleges/universities/institutes across India. The participants joined the event through Zoom as well as YouTube and Facebook. The event was formally inaugurated by Dr. Shiv Kumar Sahdev, Principal of Shivaji College. The coordinator of DBT sponsored Star College Scheme of Shivaji College, Dr. Darshan Malik also welcomed the guest as well as the participants.

The speaker for the webinar gave insights of National Education Policy (NEP)-2020, touching upon various aspects of NEP. Dr. Pani then emphasized on various environmental issues we have been facing. After this, Dr. Pani very fascinatingly integrated the environmental chemistry with the National Education Policy.

The participants really appreciated the talk and the presentation of Dr. Pani and they thoroughly enjoyed it and benefitted from it, which was very clear from the comments they were posting in the chat section of Zoom app and comment section of YouTube channel.

The webinar ended with a vote of thanks by the senior most faculty of the Department of Chemistry of Shivaji College, Dr. Manjula Singh.

Correlation of Environmental Chemistry in National Education Policy

Prof. Balaram Pani
Dean of Sciences, University of Delhi,
Director, Campus of Open Learning, University of Delhi,
Principal, Bhaskarscharya College of Applied Sciences,
University of Delhi

 **SHIVAJI COLLEGE** 
NAAC ACCREDITED GRADE "A"
UNIVERSITY OF DELHI
DEPARTMENT OF CHEMISTRY
under the aegis of DBT sponsored Star College Scheme
Organizes
a Webinar on
"Correlation of Environmental Chemistry in National
Education Policy"

Dr. Balaram Pani
Dean of Colleges, Delhi University
Chairman GB, SOL
Director, Campus of Open Learning
27 SEPTEMBER, 2020
04:00 PM
Last date of registration: 24-09-2020, 5 p.m.
Link for registration: https://docs.google.com/forms/u/1/d/1Y_VYbM-JuF7yMYkgsGQO1_ja2YvKQyL-1fCEKpbU-1r5d1t
Platform for Webinar: Zoom/YouTube
No registration fee
Coordinator: Dr. Darsikan Malik
Convener: Dr. P. K. Saini
Co-Convenor: Dr. Richa Arora
Patron: Dr. Shiv Kumar Sabdeo
Principal

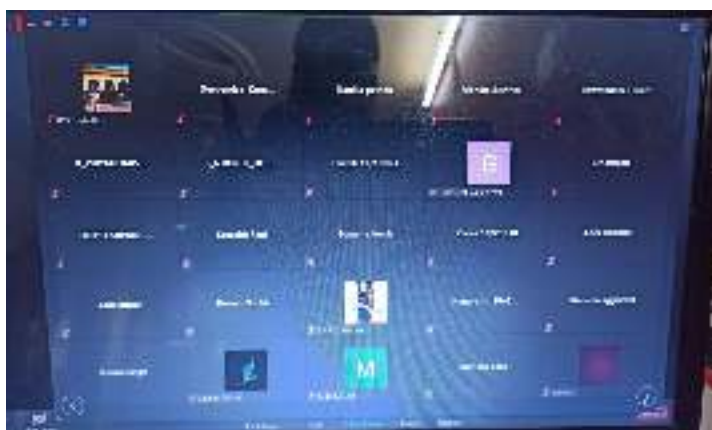


Webinar entitled “Environmental challenges in front of society in current scenario and future strategies” on October 09, 2020

A webinar entitled : “Environmental challenges in front of society in current scenario and future strategies” was organized by the Department of Chemistry of Shivaji College, University of Delhi for the students, scholars and teaching faculties on October 09, 2020, at 4:00 P.M on zoom, Face book and You Tube and platform. The webinar was open to public and approximately 150 people were in attendance. During the session attendees share their opinions, thoughts and suggestions for consideration through chat box on Zoom or in the comments section on YouTube. The event started with the presence of Teacher In charge Dr. Rajni kanojia. Before starting the event Saraswati Vandana was chanted.

The Principal of the college, Dr. Shiv Kumar Sahadev has inaugurated the programme by his motivated speech.

The Keynote speaker of the webinar was Dr. Sandeep Lal, Principal Scientist at Indian Agricultural Research Institute (IARI).



Webinar on the topic “Alzheimer's Disease- Facts, Challenges & Opportunities” on October 17, 2020

The Department of Chemistry, Shivaji College organized a Webinar on the topic “Alzheimer's Disease- Facts, Challenges & Opportunities” by Dr. Ram Singh, Associate Professor, Department of Applied Chemistry, Delhi Technological University. The webinar was organized in a convenorship of Dr. Bhaskar M. Kandpal and guidance of Dr. Rajni Kanojia, Teacher-In-Charge of Department of Chemistry, Shivaji College. The co-convenor and host of the webinar was Dr. Pooja Saluja. The speaker of the talk, Dr. Ram Singh is also

Associate Dean of Student Welfare and Co-Coordinator of IPR Cell of Delhi Technological University.

The event was held on 17-10-2020 (Saturday) at 04:00 p.m. on Zoom Platform and it was also streamed live on Youtube channel of Shivaji College. For the Webinar 700 plus registrations were received.

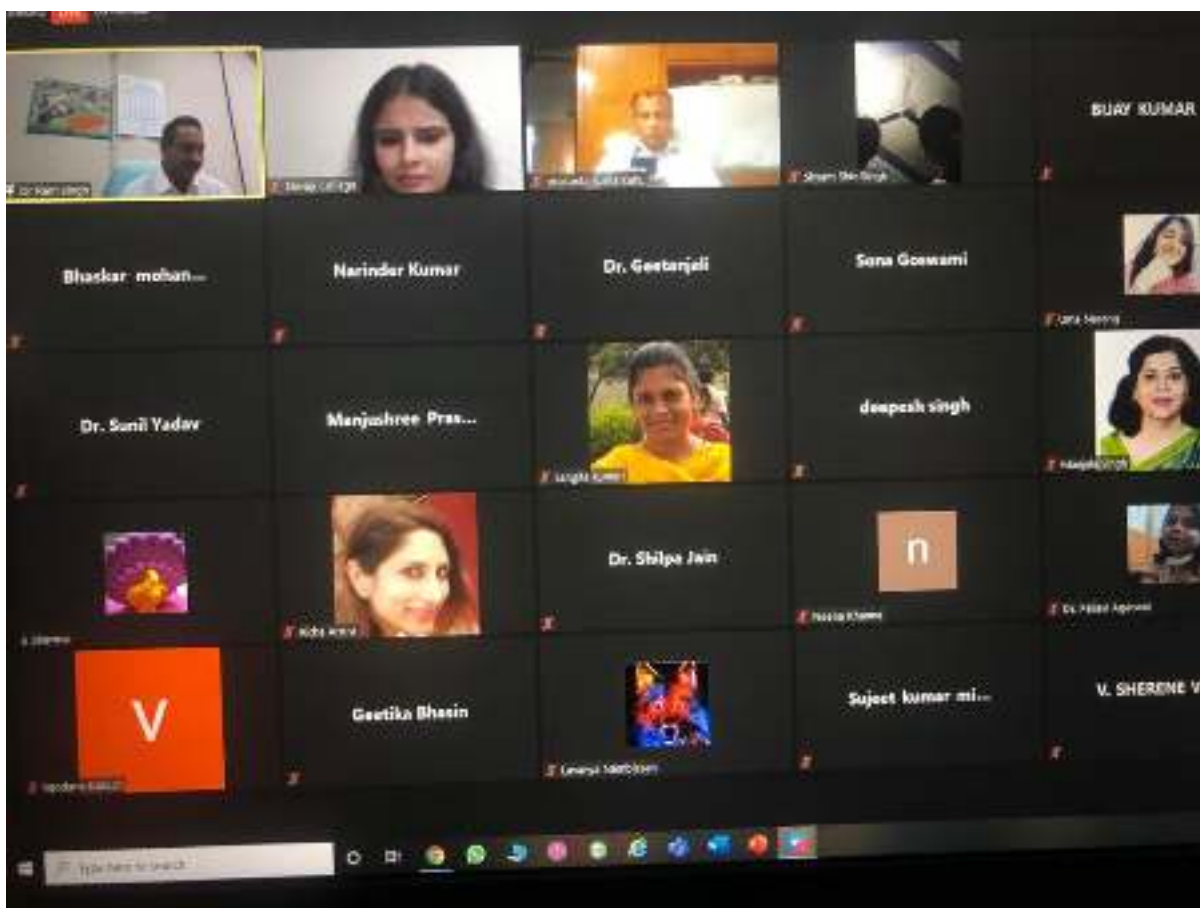
The event witnessed participation from faculty, employee and students of various colleges/universities/institutes/Pharmaceutical across the India. The participants joined through Zoom as well as Youtube.

The speaker of the webinar, Dr. Ram Singh, gave insights of Alzheimer's Disease taking various aspects of the disease. He commenced his talk by explaining the difference between Alzheimer's Disease and Dementia then moved on to the types of Alzheimer's Disease. He tried to explain the main causes of Alzheimer's and educated the participants about them. Dr. Ram Singh has emphasized on the fact that there is no exact cure for the Alzheimer's Disease exist till now though Cholinesterase Inhibitors are given to treat the cognitive symptoms like memory loss, confusion and problem with thinking and reasoning.

Dr. Ram Singh has also shared some motivational videos and glimpse of movies based on the Alzheimer's and Dementia.

The talk was followed by a Question/ Answer session. The participants really appreciated the talk and the sheer clear presentation of Dr. Ram Singh. Participants have been benefitted and enjoyed immensely with this discussion about Alzheimer's. The chat section of Zoom application, Youtube channel was streamed with appreciations and regards from the participants.

The Webinar ended with a vote of thanks by the senior most faculty of the Department of Chemistry, Shivaji College, Dr. Manjula Singh.



Online Annual Fest “RASTANTRUM 2020” on November 02, 2020

The Department of Chemistry, Shivaji College has organized its Online Annual Fest “RASTANTRUM 2020” via zoom platform on the theme Climate Changes 3.0: It’s Now or Never on 2nd November 2020.

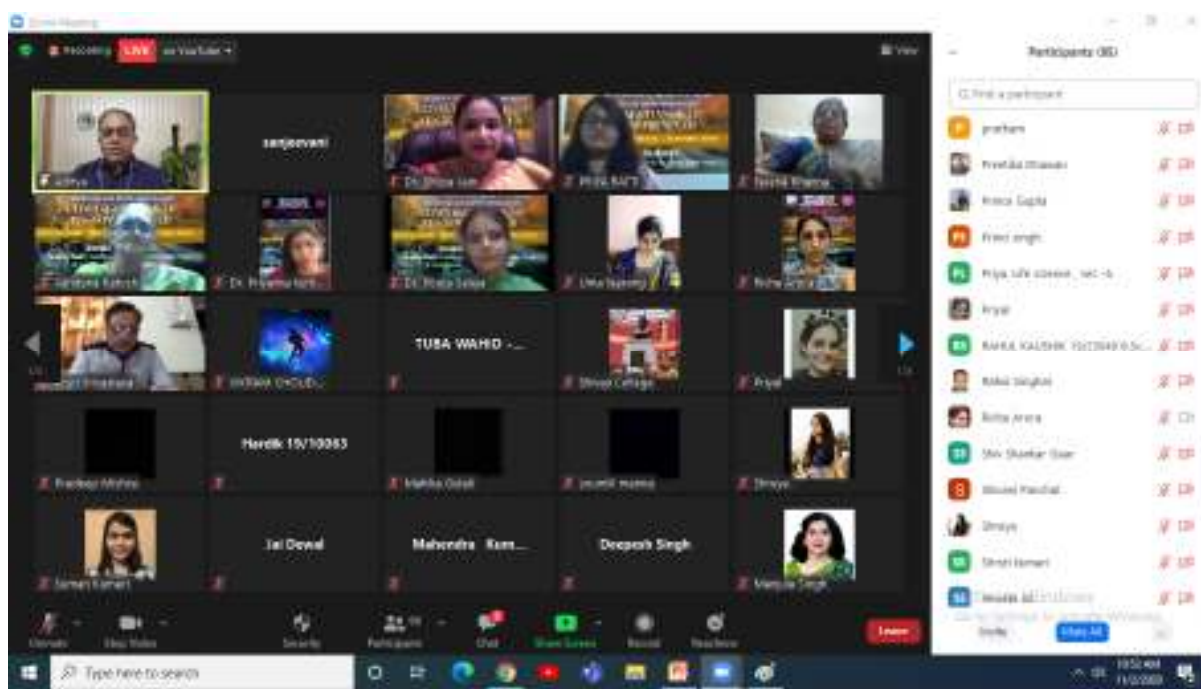
The objective of the fest was to create awareness among students and teachers regarding the Climate changes which affects globally irrespective of region, religion, caste, gender, rich and poor equally and this pandemic situation too is a result of this climate change.

To enlighten students two webinars were organized. The first webinar was delivered by Mr. Aditya Pundir, Director, India & South Asia, The Climate Reality Project India, who delivered an insightful talk on the topic “CLIMATE CHANGE THE NEW REALITY”.

The second webinar was delivered by Dr. Arun Srivastva, Assistant Professor, JNU, Delhi, on the topic “COVID-19 ATMOSPHERIC VARIABLES: AN OBSCURE RELATIONSHIP”.

The UN anthem “ONE LIFE” was also played along with video after the talk.

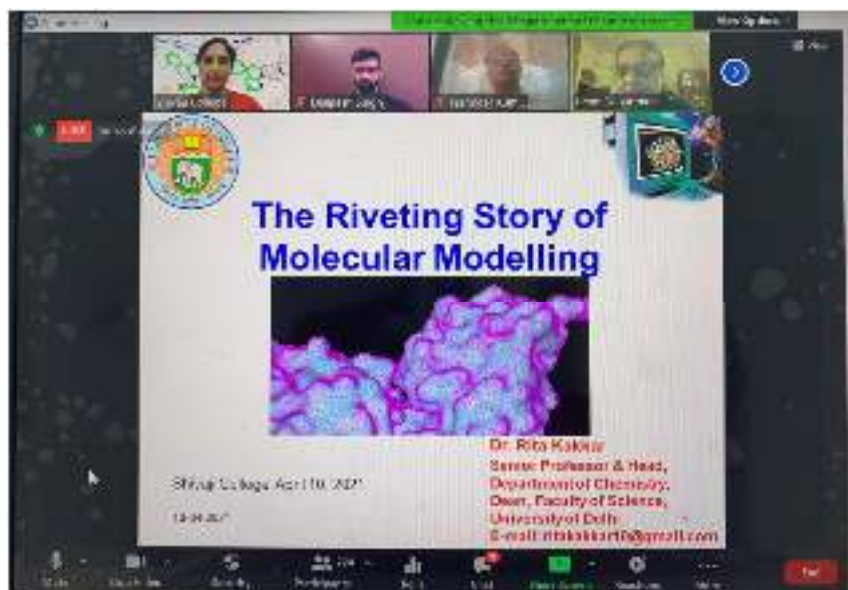
A number of vivacious online activities for the students were also organized during the fest by the Department of Chemistry, Shivaji College. Based on the issue of the climate change and growing need of taking appropriate measures for the same, various events and competitions were organized for the students and were successfully executed.



Online Workshop on “Riveting Story of Molecular Modeling” on April 10, 2021

The Department of Chemistry, Shivaji College organized an Online Workshop on the topic “Riveting Story of Molecular Modeling” under DBT sponsored Star College Scheme.

The event was held on 10.04.2021 (Saturday) at 10:00 AM on Zoom platform. The Workshop involved a talk on “Molecular Modeling” by Professor Rita Kakkar, Senior Professor, Dean (Faculty of Sciences), Head (Department of Chemistry), University of Delhi. She is a pioneer in the field of molecular modelling with an experience of more than four decades. It was followed by hands-on training on “ArgusLab” software by Dr. Richa Arora, Assistant Professor, Department of Chemistry, Shivaji College involving basic structure drawing and calculation of energy and properties like geometrical properties, bond order, charges, and HOMO, LUMO and ESP plots. The event was streamed live on the YouTube channel of Shivaji College. The event was attended by 361 participants.



Department of Zoology

Health Camp: Know your Wellness on July 5 & 9, 2019

Health Camp, “Know your Wellness”, on July 5 & 9, 2019, organised for the students seeking admission in Shivaji College, accompanying parents and faculty members.

Under the DBT Star College Scheme the students were trained to investigate the parameters such as BMI, Blood pressure, Blood sugar levels to infer health of individuals, which were influenced by their lifestyles. Equipped with this knowledge, the students held a health camp where they measured these parameters in students, their parents, faculty members and other staff members. The participants were also handed a health card made by the students, which provided an insight into the parameters and how to improve their lifestyle. This attempt of the students was also covered by Times of India and Dainik Jagran, which helped to spread this social message in Delhi.

Teachers involved:

Dr. Deepika Yadav

Ms. Nimita Kant

Dr. Aeshna Nigam

Dr. Ankita Dua

In an effort to create awareness for the students and their parents seeking admission about their health, a few faculty members of department of Zoology and students held an ongoing health camp. Through measurement of simple parameters like BMI, fat %, skeletal mass, waist circumference they were counselled on how to make small lifestyle changes to maintain a healthy body
 Shashi Nijhawan Ankita Dua Nagpal Nimita Kant @deepika Yadav



Body Mass Index (BMI)

Body mass index (BMI) is a simple screening tool to decide whether a person is underweight, healthy, overweight or obese. It is a representative of body fitness related to age and sex but independent of ethnicity. With age the body fat deposition increases. For the same BMI more women will have more % of total body fat than men.

What does BMI indicate?

- **Low BMI** – Low BMI can indicate poor diet or malnutrition, as well as certain effects that could be a result of a poor reaction to medication.
- **Healthy BMI** – A healthy BMI means you're healthy and are getting enough nutrition.
- **Higher BMI** – Falling into the healthy weight BMI puts you at risk for various diseases such as diabetes and heart disease. You should ideally consult a doctor to discuss methods of weight loss.



BMI is convenient, but has limitations. It only accounts for your total weight and does not account for visceral fat (fat between organs). Athletes with dense muscle mass often have a BMI that puts them in the overweight or obese category despite their low levels of body fat.

Measuring position for abdominal circumference



What to include with BMI measure?

- **Waist circumference (WC)** – a marker which is considered a better predictor of health risks (High risk group: Men > 94 cm, Women > 80cm)
- **Waist-Hip Ratio (WHR)** – Indicator of health risk with more fat around lower body (waist circumference circumference) (High risk group: Men > 1, Women > 0.85)
- **Visceral fat** – Body fat that's stored within the abdominal cavity. It's located near several vital organs, including the liver, stomach, and intestines. Healthy limits are below 15 when measured with fat analysis.
- **Skeletal mass** – Indicates weight of skeletal muscle in your body. Men have 30% more muscle mass than women. Age deteriorates the muscle mass.

Blood Pressure (BP)

A risk factor for heart attack and stroke

"Blood pressure is the force that moves blood through our circulatory system."

Normal Blood Pressure (BP) **Normal Pressure**
Systolic Pressure
Diastolic Pressure

Hypotension (Low Blood Pressure) – Below 90/60 (sudden drop is dangerous and indicative of internal bleeding)

Hypertension (High Blood Pressure) – Above 120/80

Symptoms & Management

- Hypotension has no symptoms. Extreme cases may have headache, shortness of breath, chest pain and fatigue. Hypertension is serious case blurs vision, dizziness, lacks concentration, fatigue and thirst.
- Hypotension and hypertension both can be managed by keeping a constant vigil on the blood pressure, eating a healthy diet, managing stress, drink sufficient water, limit alcohol consumption. In case of hypertension medication should be followed and salt intake should be regulated.

Basal Metabolic Rate (BMR)

BMR is the daily rate of energy metabolism an individual needs to sustain in order to preserve the integrity of vital functions.

Therefore estimating the total contribution of individual BMR to total daily energy expenditure is an important calculation for understanding, developing, and executing weight related interventions.



A Healthy Lifestyle- Key to Healthy Body

- Exercise for 30 mins three times a week.
- Include all food groups- carbohydrate, fat and protein as well as micronutrients in your food.
- Eat you breakfast like a king, lunch like a commoner and dinner like a pauper.
- Get regular health checkups done.
- Do not ignore any persistent and recurring symptoms. Immediately consult your doctor.

KNOW YOUR HEALTH PARAMETERS

Health Parameters	Measure
Weight (kg)	
Height (cm)	
BMI (kg/m ²)	
WC	
WHR	
Blood Pressure	
Total Fat	
Visceral Body fat	
Skeletal muscle	
Basal Metabolism	

Department of Zoology
Shivaji College
DBT sponsored Star College
Scheme

**Know
your
Wellness**



Dragonfly Count Survey, workshop and Lecture on August 20, 2019

The Dragonfly Count Survey, workshop and Lecture was organized on 20 th August 2019 in collaboration with Bombay Natural History Society(BNHS), Conservation Education Centre (CEC) Delhi with support of Department of Forests and Wildlife GNCT of Delhi. The event is planned as a month long festival in Delhi NCR to carry out a census of dragonflies and damselflies and raise awareness regarding their importance. Dr. Ishtiyak Ahmed, Education officer (CEC), conducted a field survey of the campus for the Butterfly Count. Dragonfly and Damselflies are beautiful predatory insects and are indicators of healthy wetland habitats. Generally, brightly coloured, they are active by day and almost all species lay their eggs in or near water. The larve or nymphs develop aquatically and take to the air once they are adult. Dragonflies and Damselflies are important in food chain both as predator and prey. A variety of animals feed on them including birds, amphibians, reptiles, small mammals and other insects. Carnivores are nymphs, they eat mosquito larvae and other aquatic life and as adults feed on insects including mosquitos that cause diseases like dengue and malaria. The presence of dragonflies in campus is a positive sign of nature at work as they breed in freshwater and their larvae feed upon the eggs and larvae of Aedes and Anopheles mosquitoes. This signifies the establishment of a small wetland/pond on the

college campus to increase the population of dragonflies and damselflies for natural mosquito control. Around 100 student participants from B.Sc. Hons Zoology and Life Sciences attended the event.



Campus Butterfly Count Survey, workshop and Lecture on September 19, 2019

Around 100 student participants from B.Sc. Hons Zoology and Life Sciences and 15 interdepartmental faculties. The event was organised in collaboration with Bombay Natural History Society, Conservation Education Centre-Delhi with support of Department of Forests and Wildlife GNCT of Delhi.

The objective was to spread awareness about butterflies, to gather scientific information, which will further help in execution of butterfly conservation, and to initiate experts-public interactions on the subject. Dr. Ishtiyak Ahmed, Education officer (CEC), conducted a field survey of the campus for the Butterfly Count. He highlighted the importance of plant-host interaction during the survey and workshop. Noteworthy suggestions were given by Dr. Ishtiyak Ahmed.



National Seminar on “Recent Trends in Biological Research and Career Prospects” on September 27, 2019

A one-day national seminar, “Trends in Biological Research and Career Prospects”, was organized by Department of Zoology at Shivaji College, University of Delhi, under the auspices of the DBT Star College Scheme Program to strengthen undergraduate science education. Star College Scheme has been initiated by DBT in 2008 to support colleges and universities offering undergraduate education to improve science teaching across the country. Under this program, colleges with ambition and potential for excellence has been identified to provide academic and physical infrastructure

For achieving excellence in teaching and unique exposure of students to experimental science, Department of Zoology, Shivaji College, University of Delhi organized this event, In our continued effort to improve undergraduate science, Department of Zoology is organizing this one day seminar for undergraduate students from various disciplines of life sciences

including Zoology, Botany, and Biochemistry to provide them a glimpse of recent trends in biological sciences and an opportunity to interact with early career scientists and researchers.

Poster Presentation : 18 Scientific poster (44 students and 9 faculty members) were displayed on the theme, “Recent Trends in Biological Research”.

Faculty members of the department guided and mentored undergraduate students for preparing the scientific poster.

Total 146 students from all over the Delhi-NCR registered for the event and around 250 attended the event in the auditorium. Around 20 faculty members attended the event from all over India.



Teachers involved:

Dr. Deepika Yadav (Convener)

Ms. Nimita Kant (Co-convener)

Dr. Aeshna Nigam

Dr. Jitendra K Chaudhary

Dr. Parul Kulshreshtha

Dr. Ankita Dua

Dr. Neetu Singh
Dr. Tarun K Vats
Dr. Nidhi Garg
Dr. Rakesh Roshan

**Webinar entitled, “Biosafety measures and Biocontainment of pathogens in research
”on April 29, 2020**

No. of Beneficiaries: 54

Speaker: Dr. Manpreet Kaur

Platform: Zoom

1. Laboratory biosafety describes the application of specific practices, safety equipment and specially designed laboratories to create a safe environment, both within and outside the laboratory, to work routinely with infectious agents and toxins. In addition, there is monitoring for occupationally acquired infectious and zoonotic diseases, as appropriate.

2. "Biosafety Levels" (BSLs) are designations applied to prevent or protect contacts in laboratories in ascending order of containment based on the degree of the health-related risks associated with the work being conducted.

3. The designations BSL-1, BSL-2, BSL-3, and BSL-4 describe the minimum safe-work practices, specially designed buildings, and safety equipment required to conduct work on infectious microorganisms and other biological hazards.

BIOSAFETY LEVEL (BSL)

BSL-4	BSL-3	BSL-2	BSL-1
BSL-4	BSL-3	BSL-2	BSL-1

BIOSAFETY
Focuses to the application of knowledge, techniques and equipment to prevent personal, laboratory and environmental exposure to potentially infectious agents or hazards. It defines the containment conditions under which infectious agents can be safely manipulated.

BIOCONTAINMENT
Focuses to confine an infectious organism or toxin, thereby reducing the potential for exposure to laboratory workers or persons outside the laboratory, and the likelihood of accidental release to the environment. Physical containment is achieved through the use of laboratory practices, containment equipment, personal protective equipment, and laboratory and facility design.

**Webinar entitled, “Online Guidance Program Regarding Entrance Examinations for
Higher Studies & Scholarships in Biological Sciences” on June 16, 2020**

Number of beneficiaries: 137

Speakers: Dr. Pooja Tanwar from IIT DELHI
& Dr. Aeshna Nigam, Dr. Jitender K. Chaudhary, Dr. Parul Kulshreshtha, Dr. Ankita Dua



Webinar on ‘Epidemiology, Detection, Treatment and Comparative Genomics of SARSCoV-2 and Managing Personal and Professional Life During COVID-19 Pandemic and Lockdown’ on July 9, 2020

A webinar was organized by the Department of Zoology on 9th July, 2020 at 11 am on Zoom Platform entitled, “Epidemiology, Detection, Treatment and Comparative Genomics of SARSCoV-2 and Managing Personal and Professional Life During COVID-19 Pandemic and Lockdown”, under the aegis of DBT sponsored Star College Scheme. The guest speaker for the event was renowned academician Prof. Rup Lal. The webinar was an inter-college, pan India event with over 150 participants including students and faculty. Dr. Deepika Yadav, Convener, Star College Scheme, Department of Zoology welcomed the guest, Prof. Rup Lal, Dr. Shiv Kumar Sahdev, Principal, Shivaji College and all participants. Dr. Shiv Kumar Sahdev conveyed his best wishes for a fruitful event with through his encouraging words. Dr. Aeshna Nigam elaborated on his career achievements. Prof. Lal spoke at length about the molecular aspect of the pandemic, biology of the virus, mosaic pattern of its transmission and his research related on it. His papers spanning the comparative genomics of various *Coronavirus* species were very well described and it was interesting to know that maximum evolution is occurring at the level of RNA replication and processing genes. He even pointed out how the different geographical strains had altered genomic aspects. Such papers can lead to a lot of answers regarding impending vaccine development for the pandemic strain. His message through the webinar focused on ‘Microbiology literacy for the society’ where he conveyed how the role of microorganisms must be highlighted to the general public especially educate children about it. He also gave real life examples of how to handle our personal and professional lives in this unprecedented situation. He stressed on making the

pandemic a learning opportunity, to polish our skill set, spend time with family and focus on personal health. At the end of his lecture, a number of questions were discussed at length with Prof. Lal. The webinar ended with vote of thanks by Dr. Ankita Dua. An overwhelming feedback was obtained by the participants via Google forms, especially faculty all over the country really appreciated Prof. Lal's presentation.



Webinar “Importance of IPR in Pandemic situation: Special focus on Expedite Patent Processing” on July 11, 2020

A webinar was organized by the Department of Zoology on 11th July, 2020 at 11 am on Zoom Platform entitled “Importance of IPR in Pandemic situation: Special focus on Expedite Patent Processing” under the aegis of DBT sponsored Star College Scheme. The guest speaker for the event was Dr. Kumar Kartikey Yadav, Examiner of Patents & Designs Patent Office, Delhi. The webinar was an inter-college, pan India event with 199 participants including students and faculty. Dr. Deepika Yadav, Convener, Star College Scheme, Department of Zoology welcomed the guest, Dr. Kumar Karitkey Yadav, Dr. Shiv Kumar Sahdev, Principal, Shivaji College and all participants. Dr. Shiv Kumar Sahdev inaugurated the webinar with his encouraging words. Dr. Aeshna Nigam elaborated on Dr. Kumar Kartikey Yadav's career profile. Dr. Yadav gave a comprehensive presentation on the topic ‘intangible creations of human intellect’. Intellectual property rights or IPR is a very upcoming topic of discussion these days and he explained the concept right from the very basic upto the current scenario in the pandemic situation. He spoke about advantages of patents to academicians, rights & responsibilities of patent owners, step by step guidance of online & offline patent applications and a lot more. He also spoke about the current drug in

the market for COVID patients, remdesvir, its patent, production and usage for treatment. He had a brilliant pool of knowledge related to subject which he described in an extensive presentation. The webinar ended with vote of thanks by Dr. Ankita Dua. All participants at the end of the webinar filled a feedback form and unanimously appreciated Dr. Kumar Karitkey Yadav's lecture.



Webinar on “Plastics & Endocrine Disruption: A 21st Century Update” on September 24, 2020

Although Covid 19 has shifted the global attention to the its march but there are some environment and health related issues which requires our urgent attention. Plastic usage is definitely one of them. So a webinar was conducted on, “ Plastics & Endocrine Disruption: A 21st Century Update”, on 24th September 2020 under the aegis of DBT Star College Scheme by Department of Zoology having 110 participants. The guest speaker for the webinar was Dr. (Prof.) Deep Dutta, D.M. Endocrinology FRCP, FACE.

He introduced the topic with lucid explanation of how plastic act as a toxic-conveyor-belt, sponging pollutants from surroundings into the tissues and in that way the plastic pollution is changing the very chemistry and Biology of life. Water and air, the two essential fluids on which all the life depends, have turned into global garbage cans.

Once plastic reaches the environment in the form of macro- or microplastics, it contaminates and accumulates in food chains through agricultural soils, terrestrial and aquatic food chains and the water supply.

Microplastics entering the human body via direct exposures through ingestion or inhalation can lead to an array of health impacts, including inflammation, genotoxicity, oxidative stress, apoptosis, and necrosis and endocrine disruptions , which are linked to an array of negative health outcomes including cancer, cardiovascular diseases, inflammatory bowel disease,

diabetes, rheumatoid arthritis, chronic inflammation, auto-immune conditions, neuro-degenerative diseases and infertility.

This interactive session with Dr. Deep Dutta made the participants aware of the various ill health effects caused by plastic usage and enabled them to end the uncertainties and knowledge gaps that undermine the full evaluation of both acute and long-term health risks at all stages of the plastic lifecycle, and limit the ability of consumers, communities, and regulators to make informed choices.



Webinar on, “Butterflies: The Winged Jewels”, on September 10, 2020

No. Of Beneficiaries= 56

The Department organized a webinar on, “ Butterflies: The Winged Jewels”, on 10th September 2020 in collaboration with Bombay Natural History Society & Conservation Education Centre Delhi as a sensitization program for students under Big Butterfly Month India 2020, As part of an annual affair with the explicit purpose of highlighting the status of butterflies in our capital. Education Officer CEC -BNHS Dr. Ishtiyak Ahmed was the resource person for the event.



Webinar on, “Combating the millennium pandemic: Diagnostics & Infection prevention”, September 18, 2020

Participants: ~98 students & faculties

To keep our students and faculties safe and abreast with the latest developments about the pandemic a Webinar entitled “Combating the millennium pandemic: Diagnostics & Infection prevention” by Dr. Devjani De, Head, Microbiology, Dr. Dang’s Lab was held on September 18th 2020 on Google Meet.

Participants were immensely benefitted to have the diagnostic and preventive measures direct from the horse’s mouth.



Webinar on “Online Guidance Program Regarding Entrance Examinations for Higher Studies & Scholarships in Biological Sciences”, on June 16, 2020

Participants: 188

Department of Zoology organized an, “Online Guidance Program Regarding Entrance Examinations for Higher Studies & Scholarships in Biological Sciences” for undergraduate students on 16th June 2020 from 3 p.m. to 6 p.m. on Zoom platform. The Principal Dr. Shiv Kumar Sahdev inaugurated the event with his words of encouragement and convener Dr. Deepika Yadav welcomed all.

Keeping in view the changes that the pandemic COVID-19 has brought along in the higher education sector, the program was designed to make undergraduate students aware of various national and international opportunities available for higher studies, scholarships and career prospects.

Dr. Pooja Tanwer, Research Associate, I.I.T. Delhi and DAAD Fellow delivered a talk on Guidance program for Higher Studies in Biological Sciences. She disseminated latest information regarding various available global scholarships and research opportunities keeping in view the paradigm shift pandemic has brought along.

Dr. Aeshna Nigam & Dr. Ankita Dua, Assistant Professor, Department of Zoology, Shivaji College, D.U. guided the students about Post Graduation in Biological Sciences in India. Dr. Jitendra Chaudhary, Assistant Professor, Department of Zoology, Shivaji College, D.U. further channeled them about the Current Trends of Entrance Examination for admission to Master Programmes. Dr. Parul Kulshreshtha, Assistant Professor, Department of Zoology, Shivaji College, D.U. guided the students about the paths less contemplated by young Scientists: some offbeat options and scholarships. Queries from the participants were addressed.

The program was well received by around 188 participants from all across the country and ended with the vote of thanks by the convener. The students were highly benefitted with this webinar during the lockdown period of COVID-19 pandemic.

Webinar on, “Plastics & Endocrine Disruption: A 21st Century Update”, on September 24, 2020

No. Of Beneficiaries= 110

Although Covid 19 has shifted the global attention to its march, there are some environmental and health related issues which require our urgent attention. Plastic usage is definitely one of them. So a webinar was conducted on, “Plastics & Endocrine Disruption: A 21st Century Update”, on 24th September 2020 under the aegis of DBT Star College Scheme by the

Webinar on “How to Read Scientific Literature & Introduction to MANAV- The Human Atlas Initiative”, on February 24, 2021

Department of Zoology, Shivaji College, University of Delhi, organised a training session on, “How to Read Scientific Literature & Introduction to MANAV- The Human Atlas Initiative”, under the aegis of DBT Star College Scheme on 24th February 2021 from 11:00 a.m. onwards on Zoom platform. Dr. Anupma Harshal W. from IISER, Pune was the resource person for the session. Certificates were awarded to the participants on successful completion of two ONLINE TESTS.

1. English Proficiency Test
2. Post Webinar Questionnaire

Around 227 PAN India participants registered and attended the session including students as well as faculties.



Session 2019-20
Department of Biochemistry

Lecture cum Workshop on Foldscope Microscopy: Basics and Applications on September 20, 2019

Lecture cum workshop on Foldscope Microscopy: Basics and Applications was organized by Department of Biochemistry under the aegis of DBT sponsored Star College Scheme on September 20, 2019 in college premises.

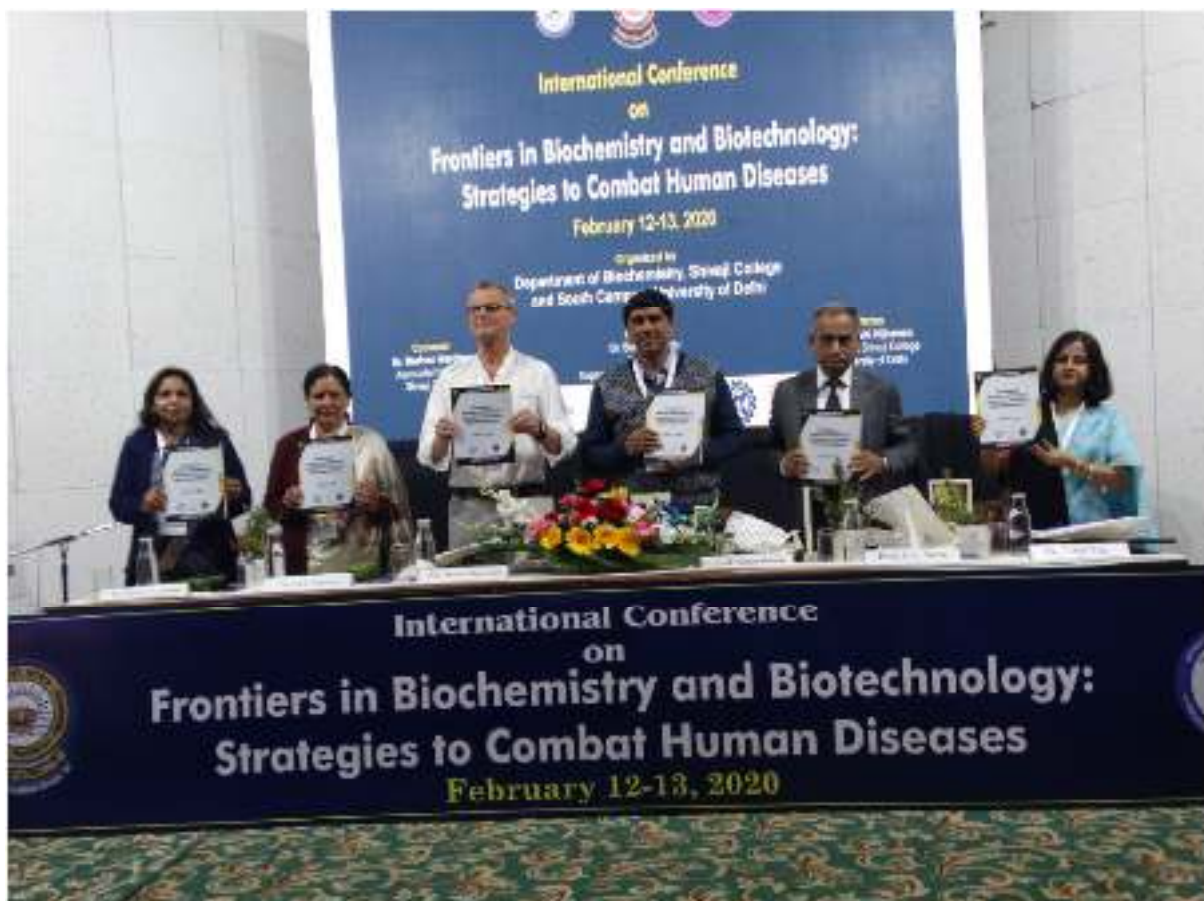
Dr. Uma Chaudhry, Department of Biomedical Sciences, Bhaskaracharya College of applied Sciences, University of Delhi; has delivered the lecture on “Foldscope assembly and usage”. This was followed by hands-on-training on the assembly of Foldscope Microscope where all the participants were given the opportunity to assemble the Foldscope Microscope and visualize different samples of microbes. They also visualized some of the slides prepared with the soil and leaf samples collected from the nearby surroundings. There were 54 students and 7 faculty members participated in this workshop.



International Conference on “Frontiers in Biochemistry and Biotechnology: Strategies to Combat Human Diseases” on February 12-13, 2020

The Department of Biochemistry, Shivaji College (University of Delhi), in association with the Department of Biochemistry, University of Delhi, successfully organized International Conference on “Frontiers in Biochemistry and Biotechnology: Strategies to Combat Human

Diseases” on February 12-13, 2020 in Delhi, India, which was attended by more than five hundred participants across the globe. This conference aim was to bring together distinguished scientists, researchers, teaching faculty, post graduate and under graduate students from around the world on one platform to discuss and debate new developments and scientific advancement that might impact the future strategies to intervene with various debilitating human diseases, ranging from a mechanistic understanding to prevention, diagnosis, treatment, prognosis and eradication. The conference was spun disciplines in biochemistry, molecular biology, cell biology, proteomics, structural biology, clinical biochemistry, drug discovery and design, biotechnology and related fields. The scientific program included keynote address, plenary lectures, invited lectures, oral and poster presentations in four sessions for better insight of human diseases like cancer, cardiovascular diseases, infectious diseases (viral, malaria, tuberculosis, leishmaniasis), blindness, genetic and liver diseases along with molecular mechanism, diagnosis and therapies.



Webinar on “DNA Repair” on April 30, 2020

Department of Biochemistry organized a Webinar on “DNA Repair” under the aegis of IQAC on April 30, 2020 on online platform Google meet. The eminent speaker of the webinar was Professor Umesh Varshney, Department of Microbiology and Cell Biology, Indian Institute of Science, Bengaluru, India. Prof. Varshney is involved in teaching molecular biology and carrying out research in the areas of protein synthesis, and DNA repair in eubacteria. It was attended by more than fifty participants which included faculties and students of other University of Delhi colleges as well.



Department of Botany

- **Seminar on Intellectual Property Rights on November 06, 2019**

Shivaji College, University of Delhi, under the aegis of DBT Star College Scheme organized One Day Seminar on “Intellectual Property Rights” on 6th November 2019. It was a very productive program for students, research scholars and faculties. Dr. Anuradha Mal, the Convener and Dr. Pratima Rani Sardar, the Co-Convener welcome all the dignitaries, faculties, students and participants during the Inaugural session of this program. Intellectual Property Rights (IPR) is an important issue now a days and the idea of hosting such a seminar

in the College is to bring awareness and methodical insights among young Scholars, Scientists and Entrepreneurs. This Seminar has provided a brief introduction about the concepts of patent and patenting processes, trademark and Industrial designs, conventions and biodiversity issues which will help in registration of Inventions. In the present era of composing, writing and publishing whether it is music, research, literature, copyright and plagiarism awareness is the basis of novelty. The Speakers are respected dignitaries from different organizations—Dr. Rekha Chaturvedi, former IPR Chair Professor, University of Delhi; Dr. Malathi Lakshmikumaran, Executive Director, Lakshmikumaran & Shridharan Attorneys, New Delhi; Prof. Alka Chawla, Faculty of Law, University of Delhi; and Ms. Lucy Rana, Associate Partner of S. S. Rana & Co., New Delhi narrated their talks on several aspects related to Intellectual Property Rights. Abstracts were also invited for poster presentation from students, research scholars and faculty members.

This Seminar was conducted with the objective to a give platform to young entrepreneurs and scholars to understand and difficulties in legal aspects of IPR. The various theme of the Seminar was:

- ❖ Copyright issues in the digital domain
- ❖ Impact of IPR on access to medicine
- ❖ International Treaties on IPR
- ❖ Is Patenting Good or Bad for general public?
- ❖ Enforcement of IPR



- **Talk On Smart City and Urban Risks on January 27, 2020**

A talk on ‘Smart City and Urban Risks’ was organized by Department of Botany, Shivaji College under the aegis of DBT Star College Scheme on 27th January, 2020. The Programme was Convened and Co-Convened by Dr. Anuradha Mal and Dr. Pratima Rani Sardar, respectively. The talk was delivered by Dr. Chirashree Ghosh, an Associate Professor at Dept. of Environmental Studies, University of Delhi. In her enlightening talk, Prof. Ghosh emphasized on concurrent risk of ever growing pollution in cities. Particulate matter, gaseous and volatile organic carbons pose serious problem as air pollutants. Still demand of expansion of existing cities and foundation of new city with better facilities are still growing. This situation poses an earnest need to develop model of cities which are advanced but viable for human health. Prof. Ghosh suggested many measures to develop such model of the cities. Use plants in various ways were suggested to mitigate air pollution both in indoor as well as in outdoor situation. She mentioned that various plants can mitigate not only organic pollutants but particulate matters too making the air more suitable to breath. She covered

each and every detail of the topic which was well conveyed to students. Students' participation was huge and interactive in the talk.



- **Online webinar on “Food and Lifestyle to Boost Immunity”, on April 24, 2020.**

Dr. Shantala Priyadarshini, professor at the Department of Shalakyra, Government Ayurveda College, Mysore, Karnataka presented the talk. The objective of the webinar was to help everybody gain reliable knowledge, dos and don'ts and methods of boosting health in the time of pandemic by simply working on diet and lifestyle. Dr. Priyadarshini in her presentation

took us through the various vegetables, fruits, spices that we should try to consume to boost immunity. These included berries of Ashwagandha, gooseberries, banana, dates, raisins, almonds, asafoetida, cumin, coriander (fresh as well as dried seeds). She mentioned Aloe especially for healthy skin and good gut health. She even gave us a couple of recipes with dates, milk, garlic and pepper to prepare at home and consume regularly for aided immunity. Other than food, she also emphasized on the importance of Yoga, and gave us the motto, “Say No To Medication, Say Yes To Meditation”. Post the presentation, she devoted a generous half-hour to address queries of the audience, ranging from solutions to allergies, menstrual cramps, diabetes, heart disease, eye care etc. The session was very helpful, and extremely relevant in the status quo, where all of us are and should keep health at the highest pedestal. The webinar concluded with a formal vote of thanks.

Number of beneficiaries: 22

The image shows a webinar poster on the left and an attendance sheet on the right. The poster is for a webinar titled "A WEBINAR ON FOOD & LIFESTYLE TO BOOST IMMUNITY" by Dr. Shantala Priyadarshini, held in June 2020. The poster includes the logo of the Department of Botany, Shivaji College, and mentions the topic "FOOD & LIFESTYLE TO BOOST IMMUNITY".

The attendance sheet is a table with columns for "Sl. No.", "Name of the Beneficiary", "Date", "Time", "Status", and "Remarks". It lists 22 participants who attended the webinar on June 24, 2020, at 10:00 AM. The status for all participants is "Present".

Sl. No.	Name of the Beneficiary	Date	Time	Status	Remarks
01	Dr. Shantala Priyadarshini	24/06/20	10:00 AM	Present	
02	Dr. Shantala Priyadarshini	24/06/20	10:00 AM	Present	
03	Dr. Shantala Priyadarshini	24/06/20	10:00 AM	Present	
04	Dr. Shantala Priyadarshini	24/06/20	10:00 AM	Present	
05	Dr. Shantala Priyadarshini	24/06/20	10:00 AM	Present	
06	Dr. Shantala Priyadarshini	24/06/20	10:00 AM	Present	
07	Dr. Shantala Priyadarshini	24/06/20	10:00 AM	Present	
08	Dr. Shantala Priyadarshini	24/06/20	10:00 AM	Present	
09	Dr. Shantala Priyadarshini	24/06/20	10:00 AM	Present	
10	Dr. Shantala Priyadarshini	24/06/20	10:00 AM	Present	
11	Dr. Shantala Priyadarshini	24/06/20	10:00 AM	Present	
12	Dr. Shantala Priyadarshini	24/06/20	10:00 AM	Present	
13	Dr. Shantala Priyadarshini	24/06/20	10:00 AM	Present	
14	Dr. Shantala Priyadarshini	24/06/20	10:00 AM	Present	
15	Dr. Shantala Priyadarshini	24/06/20	10:00 AM	Present	
16	Dr. Shantala Priyadarshini	24/06/20	10:00 AM	Present	
17	Dr. Shantala Priyadarshini	24/06/20	10:00 AM	Present	
18	Dr. Shantala Priyadarshini	24/06/20	10:00 AM	Present	
19	Dr. Shantala Priyadarshini	24/06/20	10:00 AM	Present	
20	Dr. Shantala Priyadarshini	24/06/20	10:00 AM	Present	
21	Dr. Shantala Priyadarshini	24/06/20	10:00 AM	Present	
22	Dr. Shantala Priyadarshini	24/06/20	10:00 AM	Present	

- Online webinar on “Presentation Tools”, on April 28, 2020.

The objective of the webinar was to provide some hands-on tips and tricks for working with MS PowerPoint to create impactful, attractive and e-learning/teaching enhancing presentations. Dr. Julka’s session started off with basic tools in MS PowerPoint such as adding images, headers and footers and then slowly he taught us more complex things such as adding complex animations, mathematical equations, inserting YouTube videos in slides, flow charts and graphs, clock, using Master Slide feature and converting PowerPoint presentations to videos. He patiently helped all the participants perform each step at their own computers and addressed their problems right away. During the session, he put special

emphasis on tools which will be extremely useful for elearning/teaching such as inserting one's recorded audio, using a whiteboard during a presentation, and making the teaching environment very lively and fresh. The session proved to be very fruitful for everybody as there were several tips, shortcut keys, and codes to give certain commands to the computer without any hassle or long route. The webinar concluded with a formal vote of thanks. The end of the webinar concluded the Annual Botanical Fest: JUNIPER' 2020. We extend our special thanks to the Officiating Principal, Dr. Shiv Kumar Sahdev and IQAC, Shivaji College for providing us the requisite technical, administrative and moral support.

Number of beneficiaries: 24

