REPORT:

SCIENCE FOUNDATION COMMITTEE 2022-23

The Science Foundation committee comprised of the following members in the year 2023-24:

Dr. Priya Goel (Teacher In-charge, Department of Zoology) - Convenor

Dr. Reeta Kumari (Teacher In-charge, Department of Botany) - Co-convenor

Prof. Anurag Mishra (Teacher In-charge, Department of Electronics)

Dr. Sudha Arora (Teacher In-charge, Department of Mathematics)

Dr. Sujata Khatri (Teacher In-charge, Department of Computer Science)

Dr. Nupur Verma (Teacher In-charge, Department of Physics)

Dr. Mahaveer (Teacher In-charge, Department of Chemistry)

Dr. Charu Kalra (Department of Botany)

Dr. Anuja Soni (Department of Computer Science)

Activities related to Science Promotion, Science Outreach, awareness programs and academia-industry interface were organized and successfully culminated. Inter-disciplinary activities were promoted and appreciated by the stakeholders (students, faculty and school students called for the outreach programs). The report highlights all the events conducted under the Science Foundation Committee in the year 2022-23 in chronological order:

Hands-on-workshop on "Green hues in Chemistry:

Pruning the chemical requirement in functional group and ions tests"

(15th & 22nd September, 2022)

The Hands-on-workshop on "Green hues in Chemistry: Pruning the chemical requirement in functional group and ions tests" was held by Covalence, the chemical

society of chemistry, under the aegis of DBT Star College scheme and Science Foundation of Deen Dayal Upadhyaya College. The resource persons, Dr. Mahaveer Genwa, Dr Chetna Angrish, Dr. Jyoti and Dr. Sunny Manohar introduced Green Chemistry and its importance in pruning the chemical requirement in the mandatory chemical analysis scheme. The hands-on session was



conducted successfully on both the days, 15th and 22nd September, 2022.

The session mediated a small effort in learning the importance of giving green ethical dimension to chemistry and that was accomplished through simple experiments- To identify the functional group and ions present in the given organic compound and inorganic salts respectively. The experiment was conducted both by the conventional test tube method and green alternative methods using a grooved tile and spot test by the students. The students were asked to compare the two methods in terms of the of chemicals in the tests, exposure to chemicals, time required and waste generated therein. The students reported the green alternative methods as economical, eco-friendly, relatively accident- and hazard-free and time-efficient.

The target of this event was to change the perception of the upcoming generation for chemistry and see it with a green lens i.e. adopt a safer way to do chemistry in a manner that our health and our environment are not/least affected by them. The experiment designed for was well-executed and the target well-accomplished.









Technical Lecture on "Immunomodulation and its importance in health and disease" by Dr. Anju Srivastava, Department of Zoology, University of Delhi.



Synapses, The Zoological Society of, under the aegis of Science Foundation and DBT Star College Scheme, Deen Dayal Upadhyaya College (University of Delhi)



organised its inaugural lecture on "Immunomodulation and its importance in Health and Diseases" by Prof. Anju Shrivastava, Department of Zoology, and University of Delhi. The lecture started with a brief introduction to Immune System and its importance. The Immune System and its regressive effects were also elaborated with the help of example of COVID. Further, Regulation of signaling mechanism in macrophages, neutrophils

and tumor cells and c-Jun N-terminal Kinase (JNK); the topic displayed immense depth of the lecture with veracious detailing. Numbers of student beneficiaries: 80.

Student-Lecture-Series by Ankush, B. Sc. (Hons) Zoology, Semester V on the topic "Single Use Plastics: How harmful can they be?"



Synapses, The Zoological Society under the aegis of Science Foundation. Deen Dayal Upadhyaya College, University of Delhi presented its first Student-Lecture-Series for the session 2022-2023 on the topic "Single Use Plastics: How Harmful can they be?" by Ankush, B.Sc. (Hons) Zoology, Semester V on 26th September 2022 from 1:00p.m.-1:30p.m. in room no. 307 in

presence of faculty members and students from different courses and departments. The student, in his lecture, highlighted the harmful effects of plastics and focused on motivating the students to use plastic' alternatives in their day-to-day life. Around 45 students attended the event. The presentation was knowledgably relevant and the lecture ended with a healthy interaction. Certificate was provided to the presenter.



SWS01 - AN INSIGHT INTO GOOGLE WORKSPACE HANDS-ON WORKSHOP

DATE: 29th September, 2022

TARGET AUDIENCE: students of various departments of Deen Dayal Upadhyaya

College

WORKSHOP COORDINATORS: Dr. Sujata Khatri, Dr. Anuja Soni

SPEAKER: Yash Bhatt

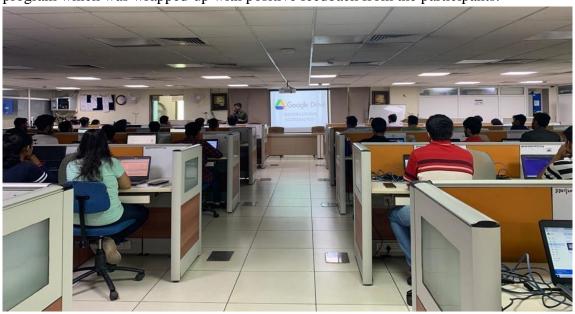
STUDENT COORDINATORS: Suyash Mehra, Kalyani Harbola, Ananta Dutta

Sanganika, the Computer Science society of Deen Dayal Upadhyaya College ,under the aegis of Science Foundation , Deen Dayal Upadhyaya College organised a Workshop for students of various departments of the college , under the convenorship of Dr. Sujata Khatri and Dr. Anuja Soni on 29th September, 2022. Science Foundation, Deen Dayal Upadhyaya College is an initiative taken to provide students knowledge of various subjects and also to provide them a stage to present themselves in front of other students so as to develop their speaking skills as well as confidence. Student Lecture Series and Student Workshop Series are conducted under this, in which a speaker from among the students shares his subject's knowledge with other students.



For this First lecture of Student Workshop Series (SWS01), Yash Bhatt, from BSc (Hons) Computer Science was student speaker, along with his -Suyash batchmates Mehra. Kalyani Harbola, Ananta Dutta as coordinators. 53 Students from various departments of the college participated in workshop. The topics covered included basics of google workspace tools like Google Sheets, Forms, Drive, Docs and Slides. The primary focus was on the practical Hands-on Session students where performed different tasks on the computers and learnt some real life applications of the Google workspace. AutoCrat - A free tool used for bulk operations on document and mail merging was thoroughly discussed, along with two practical implementations - Certificate Generation and Report Card Generation.

The participants were happy with the smooth conduction and organisation of the program which was wrapped-up with positive feedback from the participants.





Workshop on "<u>Butterfly Count- A Campus Walk & Talk on Ecology of Butterflies</u>" by Sohail Madan, Assistant Director, BNHS, New Delhi and Rohal Bahl (Event Facilitator, DDUC Alumnus).

Department of Zoology under the aegis of Science Foundation committee & DBT Star College Program had organised a "Campus Butterfly count - A Walk & Talk program" in association with Bombay Natural History Society, India & CitizenScience.org. by Mr. Sohail Madan, Assistant Director, BHNS, New Delhi on 28th September 2023 in the college campus. With his esteemed presence we had the honor to have Rohan Bahl, a DDUC alumnus as Event Facilitator. With the program starting at 8:30 a.m. the mass was divided into two groups led by the facilitators and Mr. Sohail Madan. A tour of the entire campus was taken by the students under the guidance of BNHS facilitators and a total of 14 different species of butterflies. Common Emigrant butterflies were seen in the campus in maximum range.

- 1. COMMON BANDED AWL
- 2. SMALL BANDED SWIFT



Papilio polytes



Common banded awl



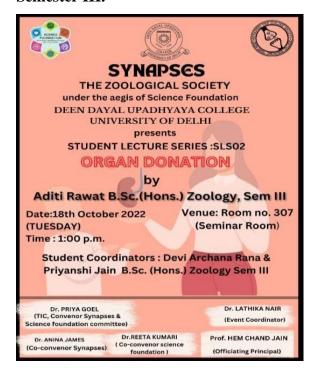


- 3. COMMON MORMON
- 4. PLAINS CUPID
- 5. PALM BOB
- 6. PLAIN TIGER
- 7. DANAID EGGFLY
- 8. RED PIERROT
- 9. LIME BUTTERFLY
- 10. SMALL GRASS YELLOW
- 11. COMMON GRASS YELLOW
- 12. COMMON EMIGRANT
- 13. DARK GRASS BLUE



The handbook-cum-directory titled "Butterflies of India' was distributed by Sohail Madan and it was useful in identifying the species present in the college campus and around areas. The workshop-cum-counting session was truly knowledgeable and invested true facts that harvested a seed of curiosity into the young minds. After the counting workshop, an elucidated presentation was given by Sohail Madan in the seminar hall, that had the necessaryinformation and August facts carrying valuable statistics. No. of student beneficiaries:43.

Student-Lecture-Series-02 on "Organ Donation" by Aditi Rawat, B.Sc. (Hons) Zoology, Semester III.





SYNAPSES, The Zoological Society of Deen Dayal Upadhyaya College, University of Delhi, conducted a 'Student Lecture Series: SLS02' under the aegis of Student of Science Foundation committee & DBT Star College Program on the very riveting topic- ORGAN DONATION by ADITI RAWAT from B.Sc. (Hons.) Zoology and III Semester. The lecture took place on 18th October, 2022 in the Seminar Room- 307 with the esteemed presence of the faculty members of The Department of Zoology and a total of 48 students from different courses participated with great ardour making the lecture reciprocal and due to the noble cause of the topic, the ideology of service to mankind was immersed in the audience Certificate was provided to the presenter.

Lecture Workshop on "Women in Science"

Department of Zoology under the aegis of Science Foundation committee & DBT Star College Program, DDUC organized the first of the WOMEN IN SCIENCE LECTURE SERIES in association with The National Academy of Sciences India- Delhi Chapter. The resource person for the workshop was Prof. Vidita A. Vaidya from Department of Biological Sciences, Tata Institute of Fundamental Research, Mumbai. She highlighted her research group's findings demonstrating that serotonin, via the serotonin2A receptor, enhances mitochondrial biogenesis in rodent cortical neurons, and increases mitochondrial function, respiratory capacity, and ATP generation. There were around 50 participants, and they were extremely enthusiastic during the workshop and after the lecture Prof. Vidita patiently answered all the queries that were put forward by the students as well as faculties. Participants expressed their gratitude towards the speaker and the workshop ended with a vote of thanks.

Link to register for the Lecture:

https://us06web.zoom.us/webinar/register/WN d-mV4enxTvmzJUFS2qIzZw





Science Foundation under the aegis of the DBT Star College Program of Deen Dayal Upadhyaya College and The National Academy of Sciences India - Delhi Chapter.



Deen Dayal Upadhyaya College (University of Delhi) October 25, 2022

Time: 11:00 am

Link to register for the Lecture:
https://us06web.zoom.us/webinar/register/WN_d-mV4enxTvmzJUFS2qIzZw

Prof. Manoj Saxena Coordinator, DBT star program

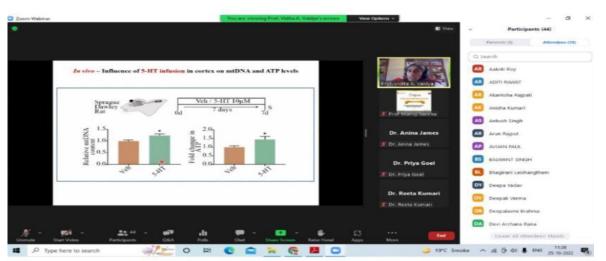
Prof. Hem Chand Jain Officiating Principal

Dr. Priya Goel Convenor, Science Foundation

Dr. Anina James Workshop Coordinator

Dr. Reeta Kumari Co-convenor, Science Foundation

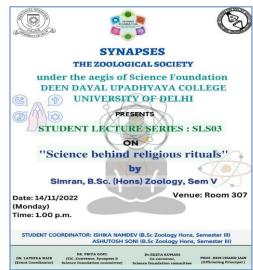
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Student-Lecture-Series-03 on "Science Behind Religious Rituals" by Simran, B.Sc. (Hons) Zoology, Semester V





SYNAPSES, The Zoological Society of Deen Dayal

Upadhyaya College, University of Delhi, conducted a 'Student Lecture Series: SLS03' under the aegis of Science Foundation committee on the topic- "SCIENCE BEHIND RELIGIOUS RITUALS" by Simran of B.Sc. (Hons.) Zoology, semester V. The lecture took place on 14th November, 2022 in the Seminar Room- 307 with the esteemed presence of the faculty members of the Department of Zoology and total of 55 students from the courses- Zoology (Hons.), Life Sciences and Botany participated, making the event energetic and interactive. The lecture elucidated the fact that the ancestral traditions were not only based on stories, but a scientific reason was involved too. The event coordinator for the series was Dr. Lathika Nair and the student coordinators being Ishika Namdev (B.Sc. Hons Zoology) and Ashutosh Soni (B.Sc. Hons Zoology).

<u>Awareness Drive- ORGAN DONATION</u> conducted by Synapses under the aegis of Science Foundation Committee in collaboration with National Service Scheme (NSS), DDUC-chapter.



On 7 December 2022, Synapses, The Zoological Society of Deen Dayal Upadhyaya College under the aegis of Science Foundation in collaboration with National Service Scheme organised 'AWARENESS DRIVE' on the noble cause- ORGAN DONATION. The event coordinator of the event was Dr. Anina James. The Teacher-in-charge of Synapses and Convener of The Science Foundation Committee, Dr. Priya Goel catalyzed this process of making the event huge. The NSS, Programme Officer was Dr. Rajkumari Sanayaima Devi who sustained the collaboration with zeal and ardour. The student coordinators from Synapses were Aditi Rawat and Jasleen Kaur; coordinators from NSS were Komal Mishra and Tanya Gupta. Total of 20 NSS members were present and many students from different courses throughout the college made the event prodigious.



Poster- Making Competition- ORGAN DONATION conducted by Synapses under the aegis of Science Foundation Committee in collaboration with National Service Scheme (NSS).



On 7 December 2022, Synapses, The Zoological Society under the aegis of Science Foundation and in collaboration with NATIONAL SERVICE SCHEME, conducted a 'POSTER MAKING COMPETITION' on the very reverent topic- ORGAN DONATION. The Event coordinators for the Programme were- Dr. Anina James and Dr. Ravi Kumar Goswami. The Teacher-in-charge Of Synapses and Convener of Science Foundation Committee, Dr. Priya Goel, showed her esteemed presence in every step of this event. The Programme Officer from NSS, Dr. Rajkumari Sanayaima Devi, supported the collaboration and pillared this event. The Student coordinators from Synapses were- Devi Archana Rana and Ishika Namdev and from NSS were- Upasna Kala and Om Prakash Kumar. There were total of 16 participants who made this event grandeur, and the winners were:

- 1. Janhavi Hemraj Bhati (B.Sc. Hons Computer Science and semester I)
- 2. Swarnava Dutta (B.Sc. Hons Zoology and semester I)
- 3. Priyonka Basormaty (Bachelor in Management Studies and semester I)



Link for the competition held was- https://forms.gle/FNJtRTzZ7s6h3UKz8

Face Painting Competition on the theme- NATIONAL BIRDS DAY, conducted by Synapses under the aegis of Science Foundation Committee.



Synapses, The Zoological Society of Deen Dayal Upadhyaya College, under the aegis of the Science Foundation, organised an intercollege "Face Painting Competition" on the occasion of National Bird Day, i.e., January 5, 2023. The teacher coordinators present were Dr. Jai Kumar and Dr. Vinay Singh Dagar. Supporting the event as the student coordinators



were Riya Sharma (President) and Shruti Saini (Vice President). Many participants had come from different colleges and showed immense zeal and enthusiasm for the event, with fresh colors eloquently presenting the significance of National Bird Day. The total number of teams present were 20 in number.

The winners announced were-

FIRST- Mansi Verma + Deeksha Verma (PGDAV College)

SECOND- Nikita Rohilla + Uddeshya Sharma (DDU College)

THIRD- Richa Kardam + Aditi Singh (Kalindi College)

Link for the competition was-

https://forms.office.com/Pages/ResponsePage.aspx?id=DQSIkWdsW0yxEjajBLZtrQAAAAA

AAAAAAO TM9cXVUQlQxS0kwUkdFWlBMMVlGNUxVUFBRQU9OUy4u

Quiz Competition on- SCIENCE AND TECHNOLOGY organised by Synapses, under the aegis of Science Foundation Committee in two rounds.

The Prelims Round was conducted on 23 January 2023.

A quiz competition was organised by the Synapses, the Zoological Society of Deen Dayal

Upadhyaya College. Topic of the quiz was "Science and Technology". Prelims round was conducted on 23.01.2023 in room no. 212 from 1.00 to 3.00 PM. Total 14 teams participated and 26 students were present, out of theses 6 teams qualified for final round. Final round was conducted on 31.01.2023. The qualified teams were duly informed to participate in final round.

Quiz master –Mr.Mridul Chansoriya

Patron - Prof. Hem Chand Jain

Convener, Synapses–Dr. Priya Goel

Co-convener, Synapses – Dr Anina James

Event coordinators – Dr. Ravi Kumar Goswami, Dr. Guddu Kumar, Dr. Parikha and student coordinators of Synapses society.





Registration Link:

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The final round was conducted on 31/01/2023.

In the final round, total of 6 teams were qualified and out of which 4 teams participated. The event provided an excellent way to enhance one's knowledge and piquing their interest in understanding facts and scientific inventions. Eight teams qualified for the finale and the details of the competition are listed below-

Quiz Master- Mr. Mridul Chansoriya

Patron- Prof. Hem Chand Jain

Convenor, Synapses - Dr. Priya Goel

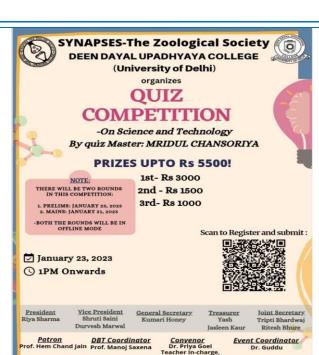
Co-convenor, Synapses – Dr Anina James

Teacher Coordinators- Dr. Guddu Kumar, Dr. Ravi Kumar Goswami and Dr. Parikha Student coordinators- Tripti Bharadwaj and Jasleen Kaur (B.Sc. Life Science)

Link for the competition was-

 $\underline{https://docs.google.com/forms/d/e/1FAIpQLSe33mGvn63Z53qUr4fs6kYgv5MiYx04VJMfT8}$

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Name of Participants	Course	Score and Remarks
 Shreya Upadhyaya 	B.Sc. Life Science -	17.5
2. Suraj Singh	8505893454	(DISQULAIFIED)
	Physical Sciences with	
	Computer Science-	
	9588598856	
1. Shreshtha Kumar	B.Sc. (hons) Computer	82.5
Gupta	Science-	(III POSITION)
Karan Singh	8381931351	
1. Adarsh Kumar Rai	B.Sc. (Hons) Zoology-	102.5
2. Mayank Sharma	7339915953	(II POSITION)
1. Janhavi Chauhan	B.Sc. (Hons) Physics-	117.5
2. Gauransh Bansal	9267923183	(I POSITION)

Webinar- on Intellectual property Rights:

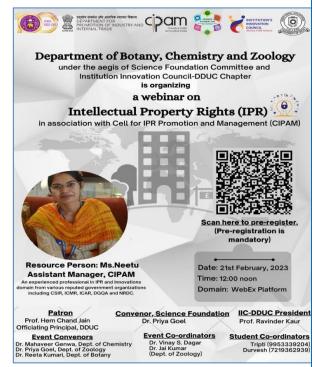
Department of Botany, Chemistry and Zoology conducted a seminar on the topic, 'Intellectual Property Rights (IPR)'under the aegis of Science Foundation Committee and Institutional Innovation Council IIC-DDUC Chapter in association with Cell for IPR Promotion and Management (CIPAM).

The respected speaker of the session was Ms. Neetu, Assistant Manager, CIPAM who is an experienced professional in IPR and Innovations domain from various reputed government organizations including CSIR, ICMR, ICAR, DGQA and NRDC, New Delhi.

The details of the session are mentioned below:

Patron: Prof. Hem Chand Jain

Teacher-in-charge and Convener: Dr. Priya Goel



The session provided an in-depth knowledge of Global Innovation Index, role of IPR in par with NIRF Rankings, contribution of IPR in par with ARIIA Ranking, laws to protect ones invention/innovation, Patents, Trademarks and Copyrights and related issues. The session ended with some questions and answer series and a vote of thanks by the department with grace. The number of participants of the session were 54.

The registration link for the session was-

https://railtel.webex.com/railtel/j.php?MTID=m2ef86db789f545fa1b46867ac46de337



'SCIENCE FOUNDATION COMMITTEE'

Deen Dayal Upadhyaya College

(University of Delhi)

under the aegis of DBT Star College Program organized

SCIENCE DAY'23: an Academia-Industry meet



PROGRAM SCHEDULE

Time	Event	Venue
9:00 am – 9:30 am	Registration	Outside Auditorium
9:30 am - 10:00 am	Inaugural Function: Lighting of the Lamp	Auditorium
	Introductory remarks: Prof. Hem Chand Jain, officiating Principal, DDUC	
	Introduction to the program and Science Foundation: Dr. Priya Goel,	
	Convenor, Science Foundation	
	Introduction to DBT Star College Program: Prof. Manoj Saxena,	
	Coordinator, DBT star college program	
10:00 am - 10:15 am	Keynote lecture	Auditorium
	Dr. Balaram Pani, Dean of Colleges, University of Delhi	
10:15 am - 11:00 am	Lecture-1: The Beginning: Shaping the minds!	Auditorium
	Mr. Ajay Goel	
	Managing Director, Nagarro, India.	
11:00 am - 11:45 am	Lecture-2: Cancer and Society: What Should a Common Man Know?	Auditorium
	Prof. Alok C. Bharti,	
	Molecular Oncology Lab, Department of Zoology, University of Delhi	
11:45 am - 12:00 noon	Vote of Thanks: Dr. Reeta Kumari, Co-convenor, Science Foundation	Auditorium
12:00 noon	Lunch	Outside Auditoriun

No. of student beneficiaries: 355

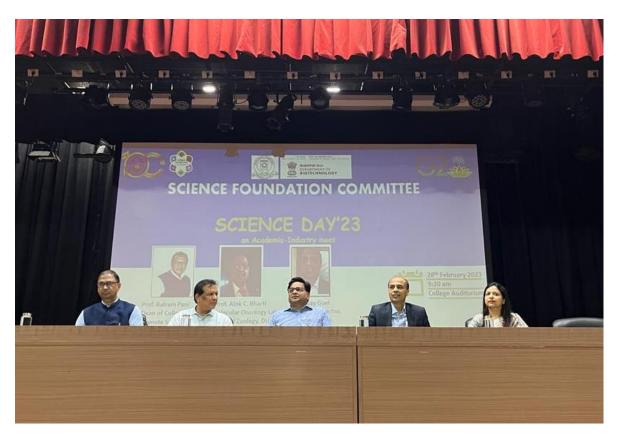
Registered via QR code/google form on Excel Sheet: 303

Registered on Paper: 52

Science day is celebrated on 28th February each year in India to mark the discovery of the "Raman Effect" by Indian Physicist Sir C V Raman for which he earned the Nobel Prize. On this occasion, theme-based activities are organized all over the country.

The theme of ScienceDay'23 is 'Global Science for Global Well Being'.

Inaugural of the event started by Lighting of the Lamp accompanied by Chanting of Saraswati Vandana by the college students. The guests were welcomed with a souvenir and a plantlet and a welcome dance by the college student. Prof. Hem Chand Jain, the officiating Principal of DDUC addressed the gathering with his inspirational message mentioning the importance of National Science Day and motivating the students to understand the true value of Science and their inner spirit to follow their passion in life. Then, Prof. Manoj Saxena, coordinator, DBT Star College Program apprised the students about DBT Star College Status of our college and the research and developmental activities the college keeps organizing under this head. This was followed by Introduction to the program and Science Foundation by Dr. Priya Goel, Convenor, Science. Foundation. She stressed upon the importance of celebrating Science Day in academic institutes. She also apprised the students of the activities being organized in the college under the umbrella of Science Foundation, motivating the college students to be actively involved in the same.







Then Dr. Balaram Pani, Dean of Colleges, University of Delhi was invited on the dais to deliver a Keynote lecture. He discussed the role of Global Science in day-to-day life, making the students aware of the activities University of Delhi keeps organizing for popularization of science.





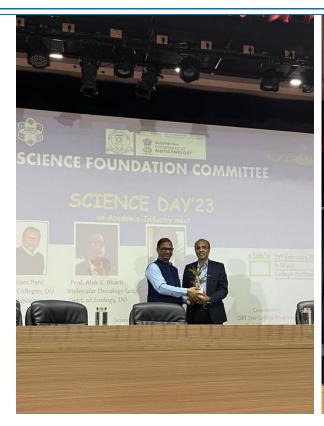








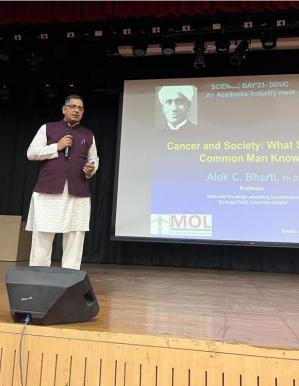
Further, Mr. Ajay Goel, Managing Director, Nagarro, India, delivered a lecture: "The Beginning: Shaping the minds!". Mr.Goel discussed the role Science and technology plays in our daily life, citing various examples. It was a truly inspirational and motivating session for the students. Mr.Goel discussed how students can shape their young minds and create their own start up, their new business models and follow their passion. He also discussed various schemes students can make use of in establishment of their professional start-ups.





The day continued with a Lecture on "Cancer and Society: What Should a Common Man Know?" by Prof. Alok C. Bharti from Molecular Oncology Lab, Department of Zoology, University of Delhi. In this session, students learnt about Cancer cells, their causes, what are the impacts of cancer on society, and how does cancer research and awareness help the society by giving different real-life examples.





Students actively participated in discussing their queries with the Resource persons towards the end of lecture. The day ended with a Vote of Thanks.



Sd/-

Dr. Priya Goel

Convenor

Science Foundation Committee

Deen Dayal Upadhyaya College