



**Deen Dayal Upadhyaya College  
(University of Delhi)  
Science Foundation  
(July, 2021-December, 2021)**



Science Foundation, Deen Dayal Upadhyaya College, University of Delhi, organized its Inaugural Webinar on "Lessons learnt from Nature and its Creations" on September 4, 2021. The speaker of the session was DR. MEENAKSHI MUNSHI, Consultant DBT-National Institute of Immunology (NII), & Former Scientist G/Advisor, Department of Biotechnology. No. of Beneficiaries: 113

**DEEN DAYAL UPADHYAYA COLLEGE**  
(University of Delhi)

**SCIENCE FOUNDATION**

**INAUGURAL WEBINAR**

**DR. MEENAKSHI MUNSHI**  
Consultant DBT-National Institute of Immunology (NII),  
& Former Scientist G/Advisor,  
Department of Biotechnology

**Invited Talk**  
"Lessons learnt from Nature and its Creations"

**4TH SEPTEMBER 2021**  
**11:00 A.M.**

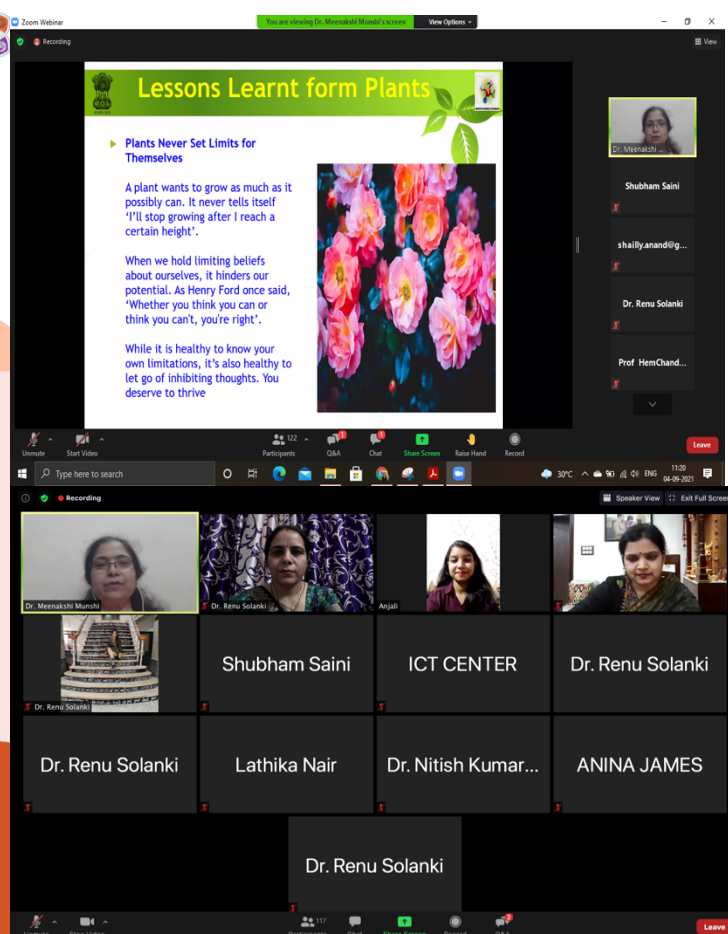
Registration: <https://forms.gle/wZg6ZR22KGEwazTy5>  
\*E-Certificates shall be provided to all the participants

Dr. Shailly Anand  
Event Coordinator

Dr. Renu Solanki  
Convenor,  
Science Foundation

Prof. Hem Chand Jain  
Principal,  
DDUC

Organizing Committee: All Members of Science Foundation



❖ A Virtual Educational Visit/ Tour of ICAR-National Dairy Research Institute (NDRI), Karnal, Haryana was organized under the aegis of Science Foundation & Synapses on 9<sup>th</sup> Sep, 2021. The Speaker Dr. Brajendra Singh Meena was Principal Scientist in the division of Dairy Extension, ICAR- National Dairy Research Institute, Karnal, Haryana. No. of Beneficiaries: 62

**Department of Zoology**  
DEEN DAYAL UPADHYAYA COLLEGE  
(UNIVERSITY OF DELHI)  
under the aegis of  
**Synapses & Science Foundation**  
organizes

**VIRTUAL TOUR**  
**NATIONAL DAIRY RESEARCH INSTITUTE**



DATE: 9th September, 2021  
TIME: 11:00 a.m. onwards  
ZOOM MEETING LINK:  
[https://zoom.us/join/zoom/register/WN\\_ikbcXEUpTgedbh4Zmem15g](https://zoom.us/join/zoom/register/WN_ikbcXEUpTgedbh4Zmem15g)  
\*E-Certificates shall be provided to all the participants

Student Coordinators: Tushant Kumar Saini & Shruti  
(B. Sc Hons. Zoology Semester III)

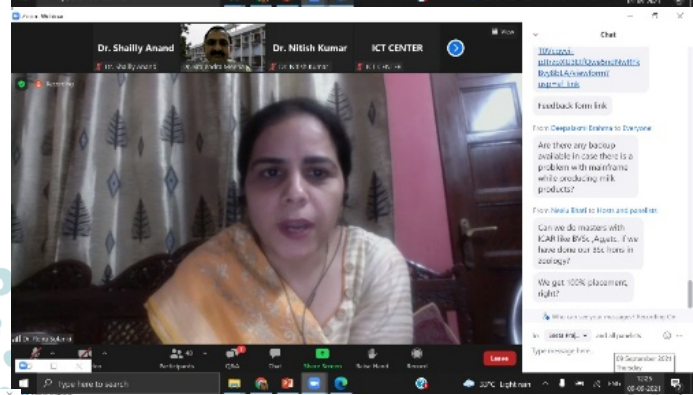
Organizing Committee: Student Office Bearers of Synapses

Dr. Nitish K Mahato  
Event Coordinator

Dr. Shailly Anand  
Convener, Synapses  
Member,  
Science Foundation

Dr. Renu Solanki  
Convener,  
Science Foundation  
TIC Dept. of Zoology



Prof. Hem Chand Jain  
Principal, DDUC



**Livestock Research Centre**

>The Institute possesses an elite herd of 1950 Dairy animals, which include 399 Karan Fries (KF), 32 Karan Swiss (KS), 407 Sahiwal, 154 Tharparkar and 77 Gir cattle and 585 Murrah buffaloes and 296 goats.

>The total milk production of the herd is about 4000 liters per day

NDR - A Q&A



❖ **MICROSPHERE 2021: An International Outreach Program** was organized to celebrate the International Microorganism Day on 17<sup>th</sup> September, 2021 under the aegis of Science Foundation, Synapses & INSCR and in collaboration with IIT Roorkee, Acharya Narendra Dev College, Gargi College, Kirori Mal College, Maitreyi College, Ramjas College, Sri Venkateswara College, Magadh University, Allahabad University and our Industry associate - PhiXgen Pvt. Ltd.

School students, UG students, PG students, Research Scholars, School Principals, College Faculty, Others  
(No. of Beneficiaries) : 937

**Jointly organized by**  
Deen Dayal Upadhyaya College (DU),  
Gargi College (DU),  
IIT Roorkee,  
Kirori Mal College (DU),  
Ramjas College (DU),  
PG Dept. of Zoology (MU) &  
PhiXgen Pvt. Ltd., Gurugram

**In association with**  
Acharya Narendra Dev College (DU),  
Maitreyi College (DU),  
Sri Venkateswara College (DU) &  
C.M.P. College (AU)

**ORGANIZERS**  
**CHAIRPERSON**  
Rup Lal  
(NASI Senior Scientist, TERI,  
New Delhi &  
President, INSCR)  
**PATRON**  
Hem Chand Jain  
(Principal, DDUC, DU)  
**COORDINATORS**  
Shailly Anand  
(Convenor, Synapses)  
Renu Solanki  
(Convenor, Science Foundation)

**SCIENCE FOUNDATION, SYNAPSES & COVALENCE**  
**International Microorganism Day**  
**MICROSPHERE**  
**AN INTERNATIONAL OUTREACH PROGRAM**  
**17th September, 2021**  
**8:30 a.m. onwards**  
**AN INITIATIVE TO PROMOTE MICROBIAL LITERACY & CELEBRATING THE DIVERSITY & WIDE APPLICATIONS OF MICROBES**  
**under the aegis of**  
**INDIAN NETWORK FOR SOIL CONTAMINATION RESEARCH (INSCR)**

**Theme: Science & Society**

**Session 1: "How to enhance science by making it equitable and inclusive"**

Prof. Chandralekha Singh, Department of Physics and Astronomy, University of Pittsburgh

**EXECUTIVE COMMITTEE:**  
C. SHEELA REDDY (PRINCIPAL, SVC, DU),  
MANDI KUMAR KHANNA (PRINCIPAL, RAMJAS, DU),  
VIBHA SINGH CHAUDHARI (PRINCIPAL, KMC, DU),  
PRAMILA KUMAR (PRINCIPAL, GARGI COLLEGE, DU),  
RAVI TOREJA (PRINCIPAL, DDUC, DU),  
HARITMA CHOPRA (PRINCIPAL, MAITREYI COLLEGE, DU),  
SNP YADAV DEEN (HEAD, PG DEPT. OF ZOOLOGY, MU),  
BRIJESH KUMAR (PRINCIPAL, C. M. P. COLLEGE, AU)

**ORGANIZING COMMITTEE:**  
SEEMA MAKHJIA (ANDC, DU),  
ANITA GULATI (DDUC, DU),  
SUJATA KHATRI (DDUC, DU),  
OM PRAKASH (NCMB - NCCS),  
UTKARSH SODI (TERI),  
NIRJARA SINGHVI (PHIXGEN PVT. LTD.),  
AJAIB SINGH (SVC, DU),  
MANVI VERMA (SVC, DU),  
VIBAN KANA (DISHABANDHU COLLEGE, DU),  
JAYA MAHOTRA (HANSRAJ COLLEGE, DU),  
PUSHP KATA (RAMJAS COLLEGE, DU),  
JASPREET KAUR (MAITREYI COLLEGE, DU),  
AESHNA NIGAM (SHIVAJI COLLEGE, DU),  
ANITA DUA (SHIVAJI COLLEGE, DU),  
ANJALI SAXENA (BCAS, DU),  
PRIYA SINGH (DU),  
HELENTHOUS VERMA (RAMJAS COLLEGE, DU),  
MOHA SINGH (PHIXGEN PVT. LTD.),  
NITISH KUMAR MAHATO (DDUC, DU),  
CHARU TRIPATHI (ALLAHABAD UNIVERSITY),  
CHANDNI TALWAR (PHIXGEN PVT. LTD.)

**Get in touch**  
microsphere2021@gmail.com

#### Interactive Sessions on:

Microbial Literacy: A Global Initiative  
The Rise of the Microbe Empire  
Microbial garden within you  
Microbes and Sustainability  
Microbiology: Career Prospects  
DNA from your kitchen (Student Session)

#### SPECIAL ATTRACTION

Microbiology Quiz for School & College Students  
"Celebrating Microbes" Drawing Competition for K12 students  
\*Cash Prize & Certificate of Appreciation will be provided to top scorers



#### INTERNATIONAL MICROORGANISM DAY

September 17th is celebrated as the International Microorganism Day since 2017 to commemorate the milestone year of 1683 when Anton van Leeuwenhoek for the first time wrote a letter to Britain's Royal Society describing the "animalcules" which he had observed under the microscope as the first known description of bacteria.

Let us all take this day as an opportunity to raise awareness towards the significant contribution of microorganisms in our lives especially in the present times when a virus has made the world look even more negative. These invisible ones are mightier than one can imagine and hence it's the time to make everyone aware. Microbial Literacy in the society is the need of the hour if we dream a sustainable future.

#### WHO CAN ATTEND

School students, Undergraduates, Post-graduates, Research Scholars, School Teachers, College Teachers, Researchers, Parents, Family  
- Our Society

#### HOW CAN YOU REGISTER

- No Registration Fees
- Fill in your particulars in the Registration Form: <https://forms.gle/SbNCz6oL6xKnoq7V7>
- E-certificates shall be provided to all the participants
- Zoom meeting link shall be shared with all the registered participants



*Theme: Microbial Literacy Initiative*

*Session II: "Microbiome: The Garden Within You"*

Prof. Rup Lal, NASI Senior Scientist Platinum Jubilee Fellow, The Energy and Resources Institute (TERI),

New Delhi, INDIA

*Theme: History of Microbes*

*Session III: "The Rise of the Microbes"*

Dr. Renu Solanki, Assistant Professor, Department of Zoology, Deen Dayal Upadhyaya College (University of Delhi), Delhi, INDIA

*Theme: Sustainable Housing*

*Session IV: "Microbes & Sustainable Housing"*

Dr. P. C. Ashwin Kumar, Associate Dean – Infrastructure, Indian Institute of Technology Roorkee, Roorkee INDIA

*Theme: Entrepreneurship in Microbiology*

*Session V: "Technology Entrepreneurship"*

Dr. Amjad Husain, CEO, Innovation and Incubation Centre for Entrepreneurship (IICE), Indian Institute of Science Education and Research (IISER), Bhopal, INDIA

*Theme: Sustainable Development Goals*

*Session VI: "Microbes & Global Goals"*

Dr. Utkarsh Sood, PhiXgen Pvt. Ltd., Gurugram, INDIA

*Theme: Career Options*

*Session VII: "Microbiology as a Career Prospect"*

Dr. Gauri Garg Dhingra, Department of Zoology, Kirori Mal College (University of Delhi), Delhi, INDIA

Dr. Roshan Kumar, PG Department of Zoology, Magadh University, Bodhgaya, INDIA

*Theme: Hands-On/ Do It Yourself*

*Session VIII: "DNA from your kitchen" (A hands-on experience)*

Dr. Shailly Anand, Department of Zoology, Deen Dayal Upadhyaya College (University of Delhi), Delhi, INDIA



Biology conference, 1937

## UNLIMITED WORLD OF MICROBES

**Archaea**

- Inhabit Extreme Environment
- Hot-springs, Marshes, Thermal vents or Hyper Saline
- Often mutualists or commensals
- Cell Wall: Pseudopeptidoglycan

**Bacteria**

- Five million trillion trillion !!
- 27-33% of Earth's living biomass
- Vital in Bio-Geochemical cycles
- Cell Wall: Peptidoglycan / Lipopolysaccharide

**Viruses**

- 1 X 10<sup>11</sup> viruses on Ear
- Infect all life forms
- Important means of HGT in Evolution

0.9-3.2x 10<sup>30</sup> Microbes!!

Kallmeyer et al., 2012

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## Microsphere 2021

# SUSTAINABLE DEVELOPMENT GOALS

**Microbes and Sustainable Goals**

Dr. Utkarsh Sood  
Research Associate  
The Energy and Resources Institute,  
New Delhi.

**REC**

**MICROSPHERE 2021: INTERNATIONAL MICROORGANISM DAY**

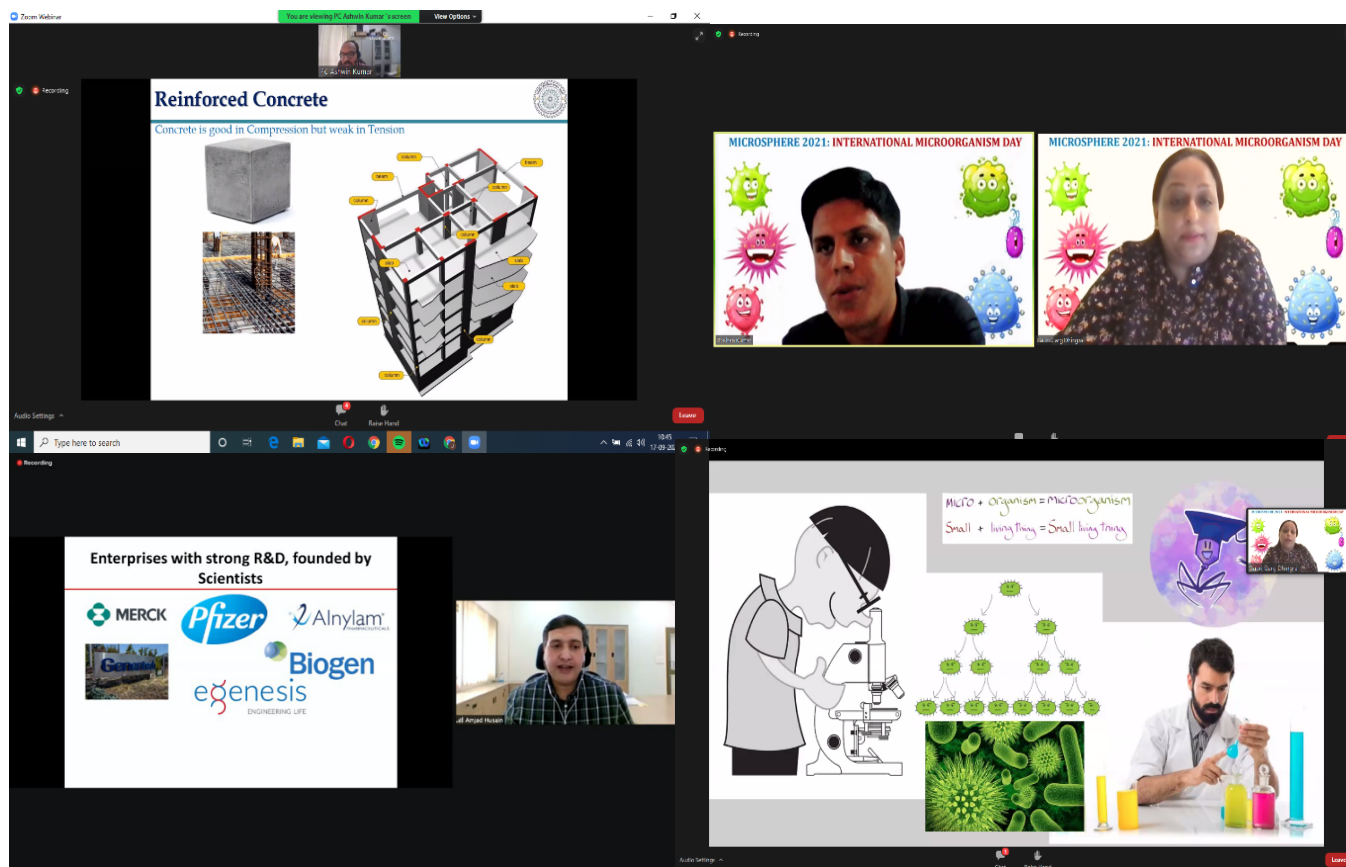
Dr. Shailly Anand

Ankita Kapil

**Do it yourself!**

**DNA Isolation**

Yogita Tomer



❖ An exclusive webinar session for the students of Deen Dayal Upadhyaya College was organised by the subject society of Department of Computer Science , Sanganiika in collaboration with Science Foundation on the topic “Placement and Career Counselling session for undergraduate students and An Orientation to startup and Entrepreneurship” scheduled on 24th September, 2021 in it’s endeavors to empower students to expand their horizons for different career options and also to encourage the entrepreneurship mindset among them. The session was presided over by Mr Manoj Patial, Software developer, Times Internet, Noida who is an alumni of DDUC itself.

 @sanganika
 
 @sanganika\_ddac

**Department of Computer Science**  
**Deen Dayal Upadhyaya College**  
 (University of Delhi)

in collaboration with  
 Science Foundation  
 organizes a webinar on  
**"Placement and Career Counselling  
 Session for Under Graduate Students."**

**Topic**  
**"An Orientation to Start-Ups and Entrepreneurship."**

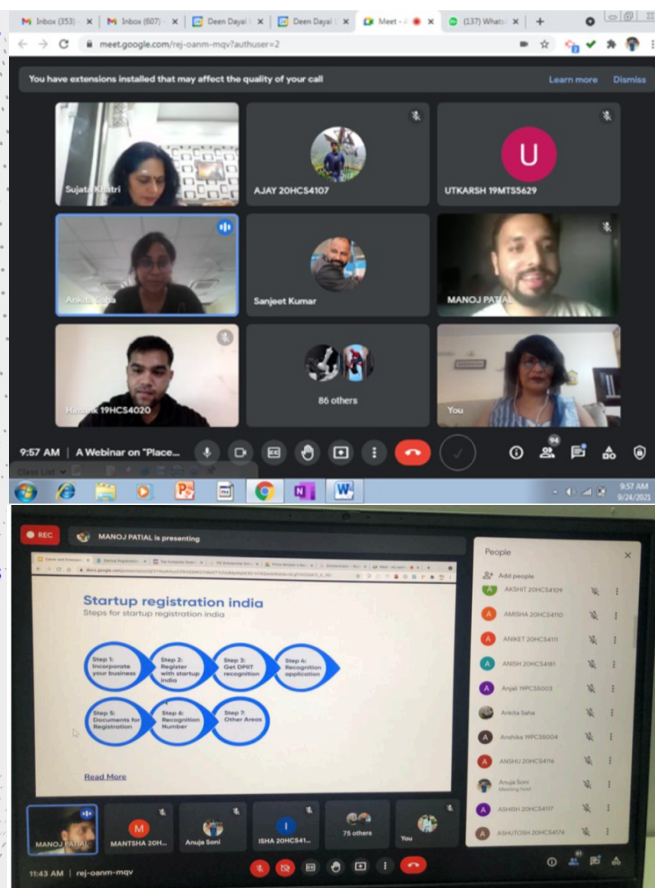

 **24 Sept, 2021**  
**10:00 am onwards**


**Speaker**  
**Mr. Manoj Patial**  
 (Software Developer)  
 Times Internet, Noida

**Dr. Sujata Khatri**  
 Convener

**Dr. Anuja Soni**  
 Convener

**Prof. Hem Chand Jain**  
 Principal



 **A Bridge Program (Bringing Science Home) – An Experiential Learning Program** organized under the aegis of Science Foundation and Synapses from 2<sup>nd</sup> August to 30<sup>th</sup> October, 2021 with nearly 250 UG students. This program was initiated with an objective to connect students with experiments in this online mode by simple household things as the students are unable to attend their regular lab classes because of Covid-19 pandemic. This program also provided the students an opportunity to plan and execute the practicals of their interests.

- (i) 2<sup>nd</sup> August 2021 (Session I): "Isolation of DNA from Plant Sources"
- (ii) 13<sup>th</sup> August 2021 (Session II): "Antibiotic Sensitivity & Resistance"
- (iii) 28<sup>th</sup> August 2021 (Session III): "Let's See Our Own DNA"



(iv) 3<sup>rd</sup> September 2021 (Session IV): "Foldscope: Your Pocket Microscope"

(v) 11<sup>th</sup> September 2021 (Session V): "Food Adulteration: Check Your Food"

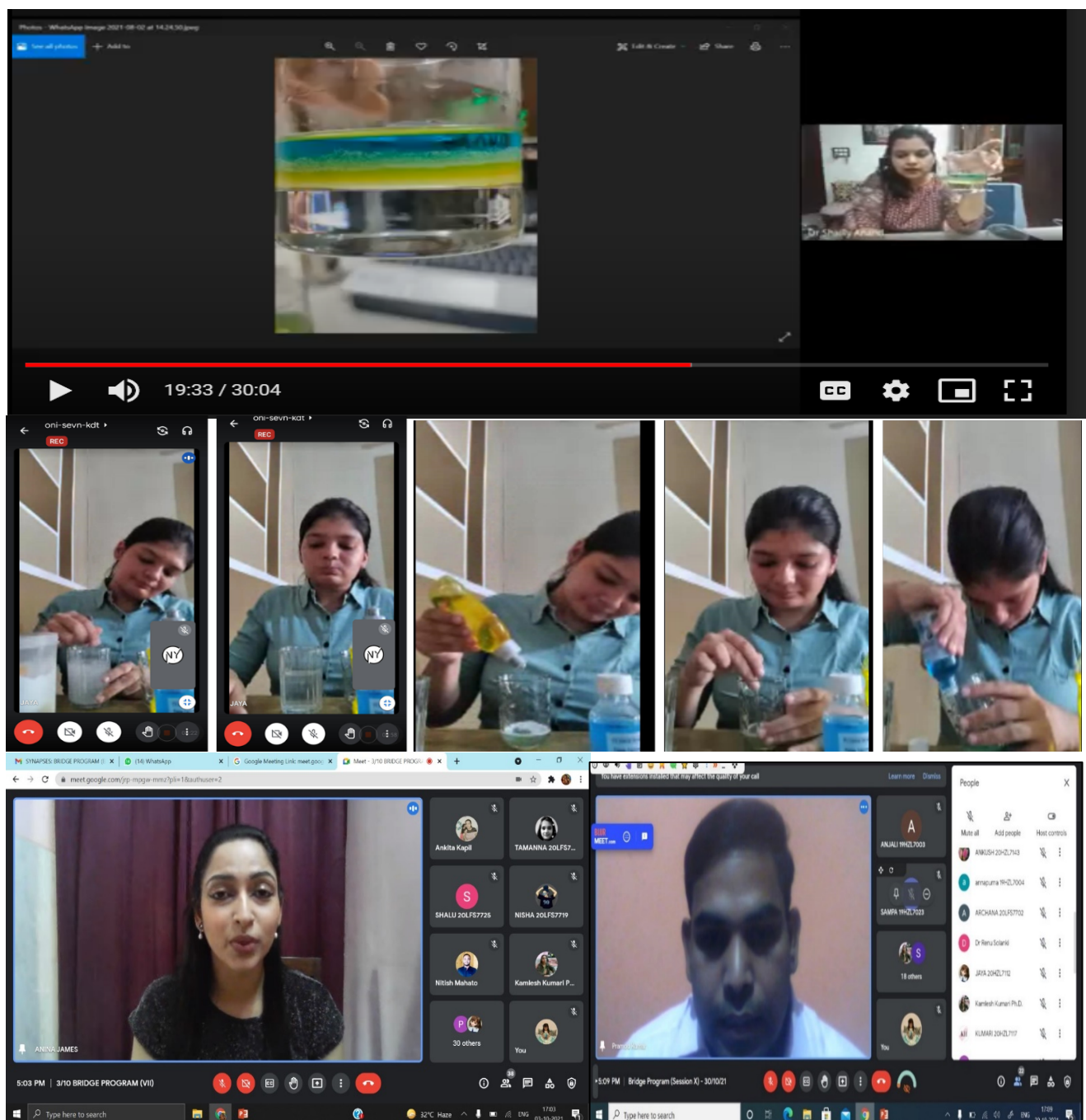
(vi) 25<sup>th</sup> September 2021 (Session VI): "Does temperature affect permeability of cell membrane?"

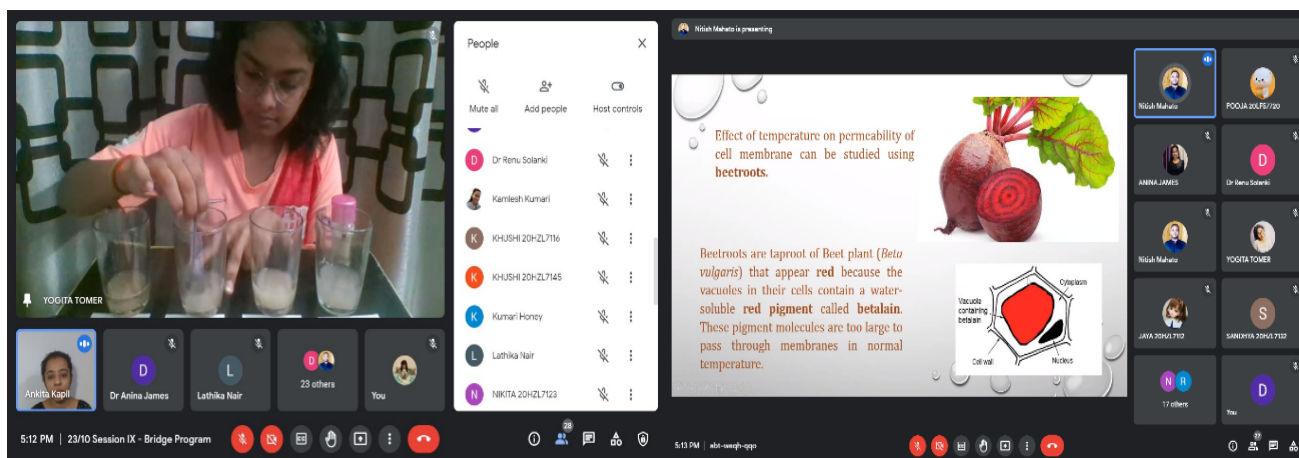
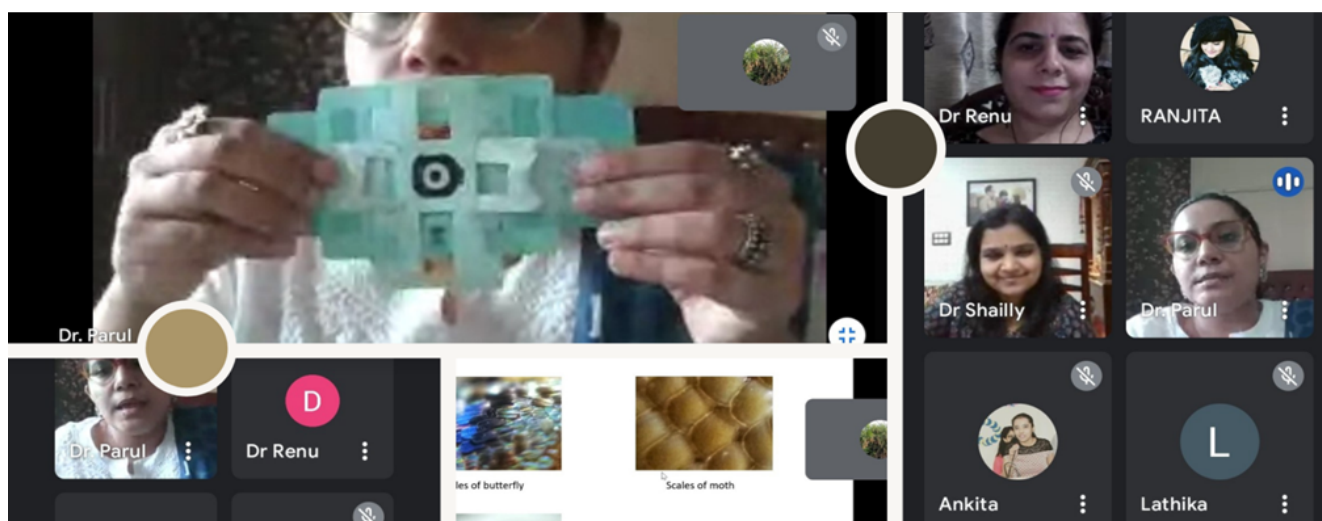
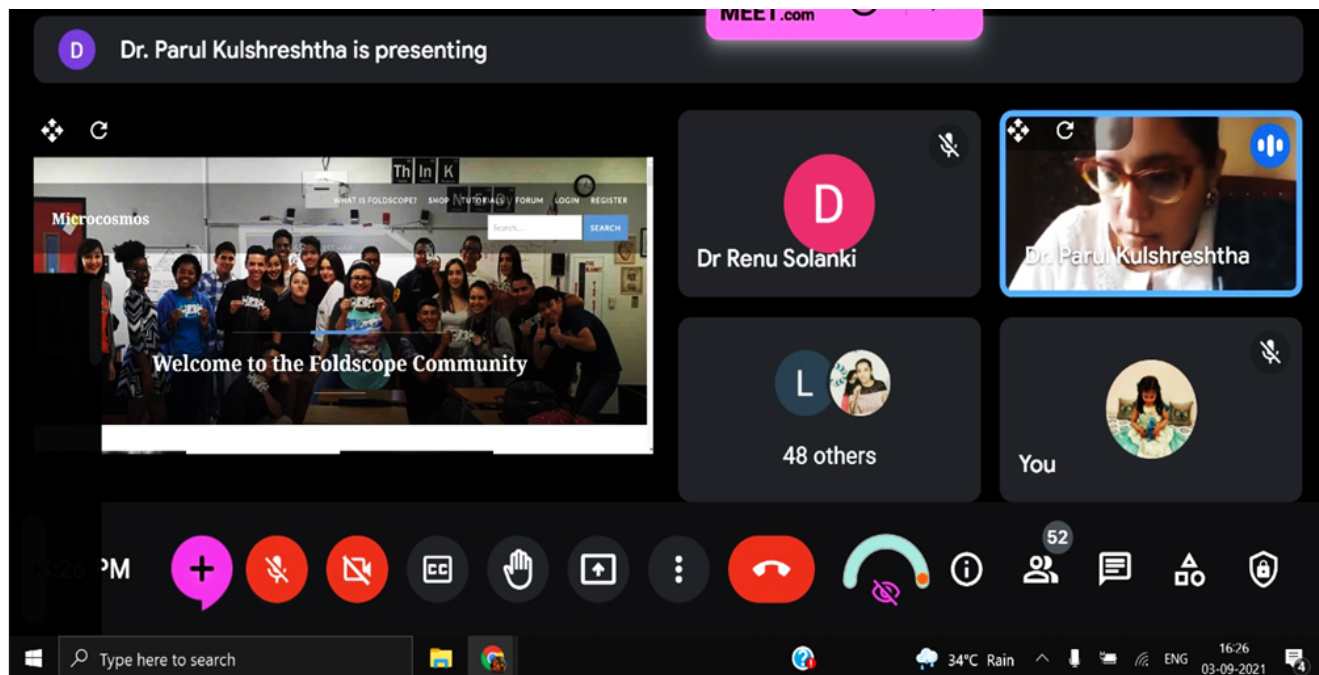
(vii) 3<sup>rd</sup> October 2021 (Session VII): "Your Saliva in Action"

(viii) 9 October 2021 (Session VIII): "Action of Enzymes on Blood"

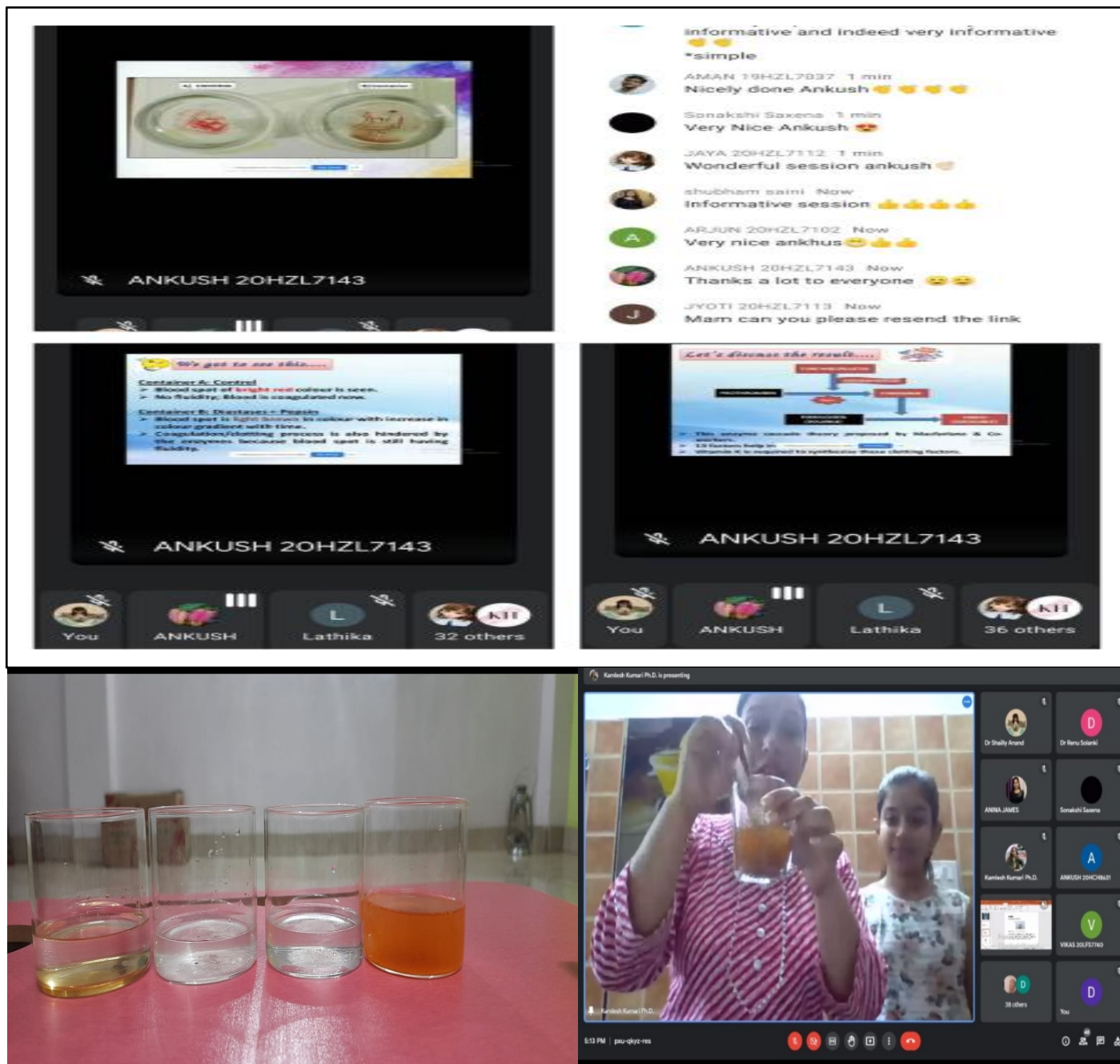
(ix) 23 October 2021 (Session IX): "Does Temperature affect fermentation in yeast?"

(x) 30 October 2021 (Session X): Calculating Air Quality Index (AQI) of an Urban Location"











❖ One month online outreach program was organized with Government Girls Senior Secondary School, AP Block, Shalimar Bagh, Delhi by Science Foundation of Deen Dayal Upadhyaya College in association with Department of Botany, Chemistry, Computer Science,



*Electronics, Mathematics, Physics and Zoology of Deen Dayal Upadhyaya College, University of Delhi and Department of Zoology of Kirori Mal College, University of Delhi from 21<sup>st</sup> Sep, 2021 to 20<sup>th</sup> October, 2021 for students of Class XI and Class XII. The objective of the outreach Program was to promote Science among the Students. A total of 25 sessions were taken by the faculty members of Science Departments based on the topics of their syllabus. No. of Beneficiaries: 72*



**"ALONE WE CAN DO SO LITTLE... TOGETHER WE CAN DO SO MUCH!"**  
— **HELEN KELLER**




**TALK TO US**

**DEEN DAYAL UPADHYAYA COLLEGE**  
(University of Delhi)  
Sector-3, Dwarka,  
New Delhi - 110 078

**SCIENCE FOUNDATION**  
DEEN DAYAL UPADHYAYA COLLEGE (UNIVERSITY OF DELHI)  
DEPARTMENT OF BOTANY  
DEPARTMENT OF CHEMISTRY  
DEPARTMENT OF COMPUTER SCIENCE  
DEPARTMENT OF ELECTRONICS  
DEPARTMENT OF MATHEMATICS  
DEPARTMENT OF PHYSICS  
DEPARTMENT OF ZOOLOGY  
&  
DEPARTMENT OF ZOOLOGY,  
KIRORI MAL COLLEGE (UNIVERSITY OF DELHI)  
*organizes*


*One Month*  
**SCHOOL OUTREACH**  
(Class XI & XII)  
**Promoting Science**  
**21<sup>ST</sup> SEPTEMBER, 2021 ONWARDS**  
**GOVT. GIRLS SENIOR SECONDARY SCHOOL**  
**SHALIMAR BAGH**

**PATRONS**



**PROF. HEM CHAND JAIN**  
Principal,  
Deen Dayal Upadhyaya College  
(University of Delhi), Sector - 3,  
Dwarka, New Delhi

**MS. SUMAN YADAV**  
Head of School,  
Govt. Girls Senior Secondary  
School, AP Block,  
Shalimar Bagh,  
Delhi



**COORDINATORS & RESOURCE PERSONS**

**DR. RENU SOLANKI**  
(CONVENOR, SCIENCE FOUNDATION, DDUC)

**MS. SHIKHA KHATRI**  
(LECTURER-BIOLOGY, GGSSS SHALIMAR BAGH)

DEPARTMENT OF BOTANY, DDUC  
Dr. Charu Kalra  
Dr. Reeta Kumari

DEPARTMENT OF CHEMISTRY, DDUC  
Dr. Sachin Mittal  
Dr. Vinod Kumar

DEPARTMENT OF COMP. SCIENCE, DDUC  
Dr. Sujata Khatri  
Dr. Anuja Soni  
Dr. Abha Jain

DEPARTMENT OF ELECTRONICS, DDUC  
Dr. Poonam Kasturi

DEPARTMENT OF MATHEMATICS, DDUC  
Dr. Paramjeet Kaur

DEPARTMENT OF PHYSICS, DDUC  
Prof. Deepak Jain  
Prof. Kulvinder Singh

DEPARTMENT OF ZOOLOGY, DDUC  
Dr. Renu Solanki  
Dr. Shalby Anand (Convenor, Synapses)

DEPARTMENT OF ZOOLOGY, KMC  
Dr. Gauri Gang Dhillon

**WEEK 1**  
**ZOOLOGY**

**WEEK 2**  
**CHEMISTRY**  
**COMPUTER SCIENCE**

**WEEK 3**  
**BOTANY**  
**MATHEMATICS**

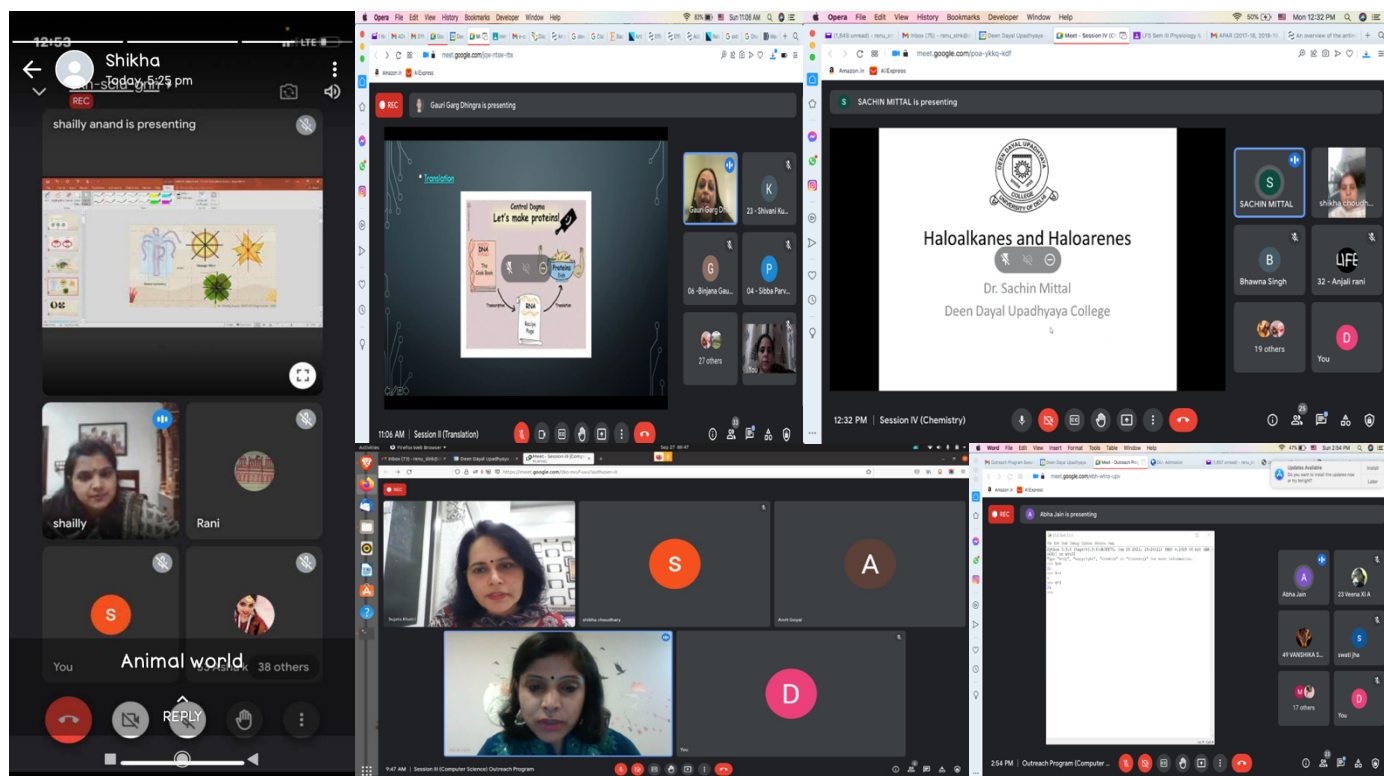
**WEEK 4**  
**PHYSICS**  
**ELECTRONICS**

Session No	Date	Subject	Topic	Class	Coordinators & Resource Person(s)
Session 1	21 <sup>st</sup> Sep, 2021	Biology	Animal Kingdom – Part 1	XI	Dr. Shailly Anand Assistant Professor, DDUC
Session 2	26 <sup>th</sup> Sep, 2021	Biology	Translation	XII	Dr. Gauri Garg Dhingra Associate Professor, KMC
Session 3	27 <sup>th</sup> Sep, 2021	Computer Science	An insight into Microsoft Word: Mail-merge	XI	Dr. Sujata Khatri Associate Professor, DDUC Dr. Abha Jain
Session 4	27 <sup>th</sup> Sep, 2021	Chemistry	Classification, Nomenclature and Methods of preparation of Haloalkanes and Haloarenes	XII	Dr. Sachin Mittal Associate Professor, DDUC
Session 5	29 <sup>th</sup> Sep, 2021	Chemistry	Optical isomerism in organic compounds	XII	Dr. Sachin Mittal Associate Professor, DDUC
Session 6	1 <sup>st</sup> Oct, 2021	Chemistry	Chemistry of Group 15 elements	XII	Dr. Vinod Kumar Associate Professor, DDUC
Session 7	2 <sup>nd</sup> Oct, 2021	Chemistry	Physical and Chemical Properties of Haloalkanes and Haloarenes	XII	Dr. Sachin Mittal Associate Professor, DDUC
Session 8	3 <sup>rd</sup> Oct, 2021	Biology	Animal Kingdom – Part II	XI	Dr. Shailly Anand Assistant Professor, DDUC
Session 9	3 <sup>rd</sup> Oct, 2021	Computer Science	Python	XII	Dr. Abha Jain Assistant Professor, DDUC

Session 10	4 <sup>th</sup> Oct, 2021	Chemistry	Chemistry of Group 16 elements	XII	Dr. Vinod Kumar Associate Professor, DDUC
Session 11	5 <sup>th</sup> Oct, 2021	Computer Science	An insight into Microsoft Excel: Formulas, Functions, Conditional Formatting, Filters and Charts	XI	Dr. Anuja Soni Associate Professor, DDUC
Session 12	6 <sup>th</sup> Oct, 2021	Chemistry	Classification, Nomenclature and Methods of preparation of Alcohols and Phenols	XII	Dr. Sachin Mittal Associate Professor, DDUC
Session 13	6 <sup>th</sup> Oct, 2021	Biology	Respiration in Plants	XI	Dr. Charu Kalra Assistant Professor, DDUC Dr. Shikha Prasad Assistant Professor, DDUC
Session 14	7 <sup>th</sup> Oct, 2021	Biology	Photosynthesis in Plants	XI	Dr. Reeta Kumari Assistant Professor, DDUC
Session 15	8 <sup>th</sup> Oct, 2021	Chemistry	Chemistry of Halogens and Noble Gases (Group - 17 and 18 elements)	XII	Dr. Vinod Kumar Associate Professor, DDUC
Session 16	9 <sup>th</sup> Oct, 2021	Biology	Animal Kingdom – Part III	XI	Dr. Shailly Anand Assistant Professor, DDUC
Session 17	9 <sup>th</sup> Oct, 2021	Chemistry	Physical and Chemical Properties of Alcohols and Phenols	XII	Dr. Sachin Mittal Associate Professor, DDUC
Session 18	10 <sup>th</sup> Oct, 2021	Chemistry	Biomolecules: Nucleic acids	XII	Dr. Gauri Garg Dhingra Associate Professor, KMC



Session 19	10 <sup>th</sup> Oct, 2021	Biology	Photosynthesis in plants Part II	XI	Dr. Dolly Kain Assistant Professor, DDUC
Session 20	11 <sup>th</sup> Oct, 2021	Physics	Moving Charges and Magnetism Part 1	XII	Prof. Deepak Jain Professor, DDUC
Session 21	12 <sup>th</sup> Oct, 2021	Physics	Moving Charges and Magnetism Part II	XII	Prof. Deepak Jain Professor, DDUC
Session 22	13 <sup>th</sup> Oct, 2021	Chemistry	Biomolecules: Carbohydrates Part 1	XII	Dr. Sangeeta Talwar Associate Professor, DDUC
Session 23	16 <sup>th</sup> Oct, 2021	Physics	Alternating Current	XII	Dr. Poonam Kasturi Associate Professor, DDUC
Session 24	17 <sup>th</sup> Oct, 2021	Chemistry	Biomolecules: Amino acids and Proteins, Vitamins	XII	Dr. Renu Solanki Assistant Professor, DDUC
Session 25	17 <sup>th</sup> Oct, 2021	Chemistry	Biomolecules: Carbohydrates Part II	XII	Dr. Sangeeta Talwar Associate Professor, DDUC



**Dr Shailly Anand is presenting**

### SUBPHYLUM: UROCHORDATA

- Also called as Tunicates
- Colonial or sessile
- Presence of notochord and neural cord only in the larval stage, absent in adult
- Presence of **ladder like nerve** (advanced larval form)
- Reproductive Metamorphosis** (Advanced larva changes into a sessile, stationary adult)
- Tail appendages/ spines present!
- Example: *Ascidians* (Sea squirts), *Botulus*, *Dolus*, *Pyrosoma*

23 Veena XI A has left the meeting

11:59 AM | vnd-izbp-tpc

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**VINOD KUMAR is presenting**

### Oxidation States

The electronic configuration of these elements (at 'sp') shows that they require two electrons to attain the stable electronic configuration which they attain either by gaining or by sharing two electrons with other elements. Thus, these elements show both positive and negative oxidation states. **(-2, +2, +4, +6)**

### Negative Oxidation States

The tendency to show negative oxidation states decreases on moving down the group due to a decrease in electronegativity. Oxygen being more electronegative in its group, acquires stable configuration by gaining two electrons and thus forms diatomic ions ( $O^{2-}$ ) thereby exhibiting -2 oxidation state most commonly. However, it is also capable of exhibiting state of -1 in Peroxides ( $H_2O_2$ ,  $EO_2$ , etc.). Sulfur also shows -2 oxidation state in some of its compounds. Example:  $Na_2S$ ,  $K_2S$  etc. The other members of the family hardly show any tendency to exhibit negative oxidation states.

12:57 PM | Outreach Program (Chemistry...

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**anuja soni is presenting**

Sl. No.	Name	Roll No.	Grade	Section	Score	Remarks
1	Adarsh	101	10	A	85	
2	Adarsh	102	10	A	85	
3	Adarsh	103	10	A	85	
4	Adarsh	104	10	A	85	
5	Adarsh	105	10	A	85	
6	Adarsh	106	10	A	85	
7	Adarsh	107	10	A	85	
8	Adarsh	108	10	A	85	
9	Adarsh	109	10	A	85	
10	Adarsh	110	10	A	85	
11	Adarsh	111	10	A	85	
12	Adarsh	112	10	A	85	
13	Adarsh	113	10	A	85	
14	Adarsh	114	10	A	85	
15	Adarsh	115	10	A	85	
16	Adarsh	116	10	A	85	
17	Adarsh	117	10	A	85	
18	Adarsh	118	10	A	85	
19	Adarsh	119	10	A	85	
20	Adarsh	120	10	A	85	
21	Adarsh	121	10	A	85	
22	Adarsh	122	10	A	85	
23	Adarsh	123	10	A	85	
24	Adarsh	124	10	A	85	
25	Adarsh	125	10	A	85	
26	Adarsh	126	10	A	85	
27	Adarsh	127	10	A	85	
28	Adarsh	128	10	A	85	
29	Adarsh	129	10	A	85	
30	Adarsh	130	10	A	85	
31	Adarsh	131	10	A	85	
32	Adarsh	132	10	A	85	
33	Adarsh	133	10	A	85	
34	Adarsh	134	10	A	85	
35	Adarsh	135	10	A	85	
36	Adarsh	136	10	A	85	
37	Adarsh	137	10	A	85	
38	Adarsh	138	10	A	85	
39	Adarsh	139	10	A	85	
40	Adarsh	140	10	A	85	
41	Adarsh	141	10	A	85	
42	Adarsh	142	10	A	85	
43	Adarsh	143	10	A	85	
44	Adarsh	144	10	A	85	
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1:11 PM | Outreach Program (Computer S...

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**Dr Reeta Kumari is presenting**

### Where does the oxygen made by plants come from?

Labelled water ( $H_2O$ ) with a radioactive isotope of oxygen (oxygen-18)

Watered plants...

Produced radioactive oxygen ( $O_2$ ) gas!

(but if you gave plants radioactive  $CO_2$ , they made radioactive sugar)

Martin Kamen (1913-2002)

1:24 PM | Outreach Program (Botany Ses...

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**Respiration in Plants**

The complete oxidation of glucose, which produces  $CO_2$  and  $H_2O$  as end products, yields energy most of which is given out as heat.

**RESPIRATION IN PLANTS**

- Oxidation of food materials (breaking of C-C bonds of complex molecules) within the cell to release energy for ATP synthesis is called **cellular respiration**.
- This energy is used for absorption, transport, movement, reproduction, breathing etc.

Glucose +  $6O_2 \rightarrow 6CO_2 + 6H_2O + ATP$

2:30 PM | Outreach Program (Botany Session 1)

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**AEROBIC RESPIRATION**

It is a complete oxidation of organic substances in the presence of oxygen releasing  $CO_2$ , water & energy.

It occurs in mitochondria.

For this, the pyruvate (final product of glycolysis) is transported from the cytoplasm into mitochondria.

3:04 PM | Outreach Program (Botany Session 1)

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**PHOTORESPIRATION vs PHOTOSYNTHESIS**

**PHOTORESPIRATION** (RUBISCO-1,5-bisphosphate carboxylase/oxygenase)

**PHOTOSYNTHESIS** (RUBISCO-1,5-bisphosphate carboxylase/oxygenase)

RUBISCO: Ribulose-1,5-bisphosphate carboxylase/oxygenase. Involved in first step of Calvin Cycle i.e. carbon fixation.

12:18 PM | Outreach Program (Botany Session 1)

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**People**

- Deepak Jain
- 48-Prema Jain...
- 15-Ragini
- 39-Sandhya Raj
- shikha choudh...
- 41-mansi Dubey
- 45-Tarini Rawat
- 48-Prema Jainth
- 50-Teena Siddie
- 52-Harshita Vats
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2:04 PM | Outreach Program (Physics Ses...

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meet.google.com/bhi-udm-sop

REC Dr Poonam Kasturi is presenting

WHAT IS AC .....POWER/CURRENT/VOLTAGE/EMF.....  
CURRENT SWITCHES DIRECTION i.e. IT ALTERNATES  
IT MOVES FROM ONE TERMINAL TO THE OTHER AND BACK TO THE TERMINAL  
IT MOVES BACK AND FORTH



12:45 PM | Outreach Program (Physics: S...

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meet.google.com/win-axef-gr

REC VINOD KUMAR is presenting

Chemistry of Group-17 & 18 Elements  
(p-Block Elements: Part-III)

Group	Element	Diatomic Molecule	Color
17	Fluorine	F <sub>2</sub>	Yellow
17	Chlorine	Cl <sub>2</sub>	Green
17	Bromine	Br <sub>2</sub>	Reddish-brown
17	Iodine	I <sub>2</sub>	Violet

Dr Vinod Kumar  
Department of Chemistry  
Deen Dayal Upadhyaya College

12:20 PM | Outreach Program (Session III:...

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meet.google.com/lmd-kelf-jpo

REC SACHIN MITTAL is presenting

Preparation of Alcohols  
From Grignard Reagent

$$R-C(=O)-O^- + R'-MgX \rightarrow [R-C(O^-)(R')-O^-MgX] \xrightarrow{H_2O} R-CH(OH)-R'$$

1:42 PM | Outreach Program (Chemistry ...

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meet.google.com/ort-shgh-wyk

REC

1:42 PM | Outreach Program (Session: Bio...

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meet.google.com/qzw-rtsw-rbx

REC

12:18 PM | Session II (Translation)

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meet.google.com/ufq-rikw-cpc

REC Dr. Sangeeta Tahir is presenting

5. The mild oxidation with bromine water or sodium hypobromite yields a monocarboxylic acid (gluconic acid) containing same number of carbon atoms as in glucose, i.e., six.  
**Indicates carbonyl group must be aldehyde group.**

$$CH_2OH(CH_2OH)_4CHO \xrightarrow{Br_2, H_2O} CH_2OH(CH_2OH)_4COOH$$

6. Oxidation with nitric acid yields a dicarboxylic acid (glucaric acid) with the same number of carbon atoms as in glucose.  
**Indicate presence of aldehyde group, along with primary alcoholic group.**

$$CH_2OH(CH_2OH)_4CHO \xrightarrow{HNO_3} COOH(CH_2OH)_4COOH$$

1:31 PM | Outreach Program (Biomolecule...



◆ *Science Foundation and Synapses (Department of Zoology), Deen Dayal Upadhyaya College organized 6<sup>th</sup> Annual International e-Conference of Indian Network for Soil Contamination Research in association with Department of Zoology (DU), Acharya Narendra Dev College (DU), Gargi College (DU), Kirori Mal College (DU), PG Department of Zoology (MU), Maitreyi College (DU), Ramjas College (DU), Sri Venkateswara College (DU), Sri Guru Tegh Bahadur Khalsa College (DU), C.M.P. College (AU), PhiXgen Pvt. Ltd., Gurugram, College of Commerce, Arts & Science, Patna on “MICROBES IN SUSTAINABLE DEVELOPMENT” from 15<sup>th</sup> to 18<sup>th</sup> November, 2021. Total No. of Beneficiaries: 505*





Day 1: 15 November, 2021	
Inauguration	
IST (hrs)	Event [ROOM A]
1700 – 1715 1715 – 1725 1725 – 1735 1735 – 1745 1745 - 1750	Welcome Address by the President: Rup Lal Introduction to INSCR: A. K. Dikshit DU VC Address/Dean Colleges Introduction to Participating Institutions Abstract Book Release
1750 - 1830	<b>Inaugural Lecture 1</b> Chair: Kenneth Timmis and Rup Lal Mitch Schulte (Program Scientist, NASA Headquarters, Washington, DC) “The Mars 2020 mission and NASA’s search for ancient life”
1830 - 1900	Cultural Music Event


1900 - 1910	The Painting Video
1910-1950	<b>Inaugural Lecture 2</b> Jack Gilbert (University of California, San Diego, USA) “The human microbiome in precision medicine”
1950-2000	Concluding Remarks of Day 1: Gauri Garg Dhingra (Kirori Mal College, DU)

## Day 2: 16 November, 2021 (Tuesday)

IST (hrs)	Event	
0900-0940	<b>Inaugural Lecture 3</b> Chair: Sanjay Kumar and Rup Lal Edward F. deLong (Professor, University of Hawaii, Honolulu, United States) <i>“Towards Four Dimensional Microbial Systems Biology in the Sea”</i>	
	<b>Session 1 (0945-1545) [ROOM A]</b> <b>Microbial Ecology</b> Chair: Pratyosh Shukla Co-Chair: Nirjara Singhvi, Mansi Verma, Roshan Kumar	<b>Session 2 (0945-1545) [ROOM B]</b> <b>Microbes in Sustainable Agriculture</b> Chair: Praveen Rishi Co-Chair: Jaspreet Kaur, Ankita Dua, Anjali Saxena
0945-1015	<b>Keynote Lecture</b> Louis-Marie Bobay (Assistant Professor, University of North Carolina) “Biological species concept in Bacteria”	<b>Keynote Lecture</b> Appa Rao Podile (Vice Chancellor, University of Hyderabad) <i>“Microbiome-based approaches for sustainable development”</i>
1020-1040	Vivekanand (Assistant Professor, Malaviya National Institute of Technology, Jaipur) <i>“Biogas and microbial communities”</i>	Sunil Pabbi (Head, Division of Microbiology, ICAR - IARI) <i>“Cyanobacterial Biofertilizer For Sustainability of Rice Based Cropping”</i>
1045-1105	Gunjan Pandey (Research Scientist, CSIRO, Australia) <i>“Biochemistry and genetics of pinorensin mineralization in bacteria”</i>	Venkata Ramana (Professor, University of Hyderabad) <i>“Exploring the unexplored bacterial phyla members of India”</i>
1110-1130	Natesan Manickam (Chief Scientist, CSIR-Indian Institute of Toxicology Research) <i>“Occurrence of Microplastics/ plastics in the marine and terrestrial Environment: ”</i>	Nataraja Karaba (Professor, University of Agricultural Sciences, Bangalore) <i>“Manipulation of specific traits linked to abiotic stress tolerance in crop plants using endophytes”</i>

	<i>Assessing diverse plastisphere bacterial communities and microbiome</i>	
1130-1145	Tea Break 	
1150-1220	<b>Keynote Lecture</b> Anushree Malik (Institute Chair Professor, CRDT, IIT Delhi) <i>“Microbial consortia mediated environmental remediation for textile sector”</i>	Om Prakash (Scientist, NCMR-NCCS) <i>“The Archaea lead in the Ecology of Landfill-Leachate of Pune Municipal Site”</i>
1225-1245	S. Dayananda (Professor, University of Hyderabad) “”	Kapudeep Karmakar (Assistant Professor, Uttar Banga Krishi Vishwavidyalaya, Koch Bihar) <i>“Contamination of food-chain by human pathogens dwelling in rhizosphere: Life cycle and remedies”</i>

1250-1310	MKR Mudiam (Senior Principal Scientist, CSIR-Indian Institute of Chemical Technology) <i>“Analytical strategies to understand occurrence, fate and transport of emerging”</i>	Praveen Rishi (Professor, Panjab University) <i>“Bi-directional Elucidation of Probiotic Intervention for Neurological Manifestations at Gut Brain Axis”</i>
1315-1400	Lunch Break 	
1400-1430	<b>Keynote Lecture</b> Mrutyunjay Suar (Professor & Director General R&D, Kalinga Institute of Industrial Technology) <i>“Building Technology Enabling Ecosystem: Ideation to Enterprise”</i>	<b>Keynote Lecture</b> V. C. Kalia (NRF Fellow, Konkuk University, South Korea) <i>“Emerging Signal Molecules for Soil Enrichment and Plant Growth Promotion”</i>
1435-1455	Pratyosh Shukla (Professor, Banaras Hindu University) <i>“Exploring novel avenues in microbial bioremediation: role of computational tools”</i>	Sivakumar Uthandi (Professor, Tamil Nadu Agricultural University, Coimbatore) <i>“Microbial volatile organic compounds (mVOC) for plant health”</i>
1500-1520	Datta Madamwar (Professor, Charusat) <i>“Deciphering and understanding the microbial synergy towards poly-aromatic hydrocarbon pollution: A metagenomic approach”</i>	Ajay Kumar (Associate Professor, Jacob Institute of Biotechnology and Bioengineering, SHUATS) <i>“Plant growth promoting microbes: A tool for healthy agriculture”</i>


1525-1545	Nageswar Amanchi (Assistant Professor, Department of Zoology, Nizam College) <i>“Alternative tools and tags in Pesticide Toxicology Research - A case study of Ciliates”</i>	Virginia Filipello (PostDoc Fellow, Istituto Zooprofilattico Sperimentale della Lombardia e dell'Emilia Romagna, Italy) <i>“Blue strikes again: Re-emergence of Chromogenic Pseudomonas fluorescens in Dairy Products, Rapid Identification and Strain Characterization in the Dairy Plant”</i>
1550-1630	<b>Plenary Lecture [ROOM A]</b> <b>Chair: Rup Lal</b> <b>Co-Chair: Roshan Kumar</b> <b>Andreas Bechthold (Professor, University of Freiberg, Germany)</b> <i>“Tailoring enzymes involved in natural product biosynthesis”</i>	
1630-1645	<b>Tea Break</b> 	
	<b>Session 3 (1650-1920) [ROOM A]</b> <b>Women in Science</b> <b>Chair: Anju Srivastava (Professor, DU), Sukanya Lal</b> <b>Co-Chair: Seema Makhija, Jasvinder Kaur</b>	<b>Session 4 (1650-1920) [ROOM B]</b> <b>Host Microbiota Interactions</b> <b>Chair: Sunil Pabbi</b> <b>Co-Chair: Utkarsh Sood, Charu Tripathi</b>
1650-1720	<b>Keynote Lecture</b> <b>Agnieszka Dybala-Defratyka</b> <b>(Associate Professor, Lodz University of Technology, Poland)</b> <i>“Computational redesign of LinA and LinB enzymes”</i>	<b>Keynote Lecture</b> <b>Sanjay Kumar (Director, CSIR-IHBT, Palampur)</b> <i>“Himalayan microbial technologies for society, industry, and the environment”</i>

1725-1755	<b>Keynote Lecture</b> <b>Bettina Sontag (Senior Scientist, University of Innsbruck, Austria)</b> <i>“The key role of ciliates in the microbial food web of lakes.”</i>	<b>Keynote Lecture</b> <b>Yogesh Shouche (Scientist, NCCS, Pune)</b> <i>“Human Microbiome: Indian Perspective”</i>
1800-1820	<b>Atya Kapley (Principal Scientist, CSIR-NEERI)</b> <i>“Role of Microbes in Environmental Rejuvenation”</i>	<b>Roshan Kumar (Assistant Professor, Magadh University, Bodhgaya, Bihar)</b> <i>“Phylogenetic Relationships and Potential Functional Attributes of the Genus Parapedobacter: A Member of Family Sphingobacteriaceae”</i>
1825-1845	<b>Rama Chaudhry (Professor, Department of Microbiology, AIIMS, New Delhi)</b> <i>“Antimicrobial Resistance and its Impact on United Nation Sustainable Development Goals”</i>	<b>Gaurav Sharma (DST-INSPIRE Faculty Fellow, Institute of Bioinformatics and Applied Biotechnology, Bengaluru)</b> <i>“Diversity and evolution of chemosensory and flagellar systems amongst Family Vibrionaceae”</i>




1850-1920	<b>Keynote Lecture</b> Kalai Mathee (Professor, Florida International University, USA) <i>“Agricultural plants as a potential source for human and animal transmission of extremely drug resistant Pseudomonas aeruginosa”</i>	K. Annapurna (Principal Scientist, IARI) <i>“Soil Microbiome Governs Soil Health and Sustainable Agricultural Systems”</i>
1930-2010	<b>Plenary Lecture [ROOM A]</b> Chair: Atya Kapley and Rup Lal Co-Chair: Jasvinder Kaur Hilary Lappin-Scott (Honorary Distinguished Professor at Cardiff University, Founder and Director, Lappin-Scott Consulting Ltd.) <i>“Supporting women in science careers, why it is everyone’s job and biofilm research”</i>	

### Day 3: 17 November, 2021


IST (hrs)	Event			
0900-0940	<b>Plenary Lecture [ROOM A]</b> Chair: V. C. Kalia Co-Chair: Shailly Anand Craig Cary (Professor, Department of Biological Sciences, The University of Waikato, New Zealand.) <i>“In Extremis: Discovering the Unique Microbial Ecology of Antarctica’s Terrestrial Refugia”</i>			
0940-1020	<b>Plenary Lecture [ROOM A]</b> Hauke Smidt (Professor, Wageningen University, Netherlands) <i>“Exploring microbial drivers of halogen cycling in pristine and polluted environments”</i>			
1020-1030	Tea Break 			
	<b>Session 5 (1030-1300) [ROOM A]</b> <b>SARS CoV-2</b> Chair: Jyoti Prakash Tamang Co-Chair: Shailly Anand, Helianthous Verma, Renu Solanki (Deen Dayal Upadhyay College)	<b>Session 6 (1030-1310) [Room B and Room C]</b> <b>Empowering Academics through Innovative Research</b>		
		<b>Faculty Oral Talks [ROOM B]</b> Chair: Ravi Toteja (Principal, ANDC) Co-Chair: Charu Dogra Rawat, Jaspreet Kaur	<b>Student Oral Talks [ROOM C]</b> Chair: Om Prakash Co-Chair: Priya Singh, Pushplata (Ramjas College)	
1030-1100	<b>Keynote Lecture</b> Debojyoti (Senior Scientist, CSIR-	1030-1040	OF1 Ishan Saini (Assistant Professor, Indira Gandhi University, Rewari)	OS1 Souvik Das (DAICENTER and Bioinformatics Centre, Sikkim University, Gangtok)

	IGIB, New Delhi) <i>“Reading and writing the genome with precision”</i>	1040-1050	OF2 Reedhu Raj (Assistant Professor, Govt. Victoria College, Palakkad, Kerala)	OS2 Priyambada Pariyar (DAICENTER and Bioinformatics Centre, Sikkim University, Gangtok)
		1050-1100	OF3 Helianthous Verma (Assistant Professor, Ramjas College, University of Delhi)	OS3 H. Nakibapher Jones Shangpliang (DAICENTER and Bioinformatics Centre, Sikkim University, Gangtok)
1100-1120	Shazia Haider (Assistant Professor, JIIT, Noida) <i>“Advances in the research of the SARS-CoV-2 molecular structure and pathogenesis from a systems biology approach”</i>	1100-1110	OF4 Tikam Chand Dakal (Assistant Professor, Mohanlal Sukhadia University)	OS4 Piyush Goel (Indian Institute of Technology, Indore)
		1110-1120	OF5 Juliet Roshini and Mohan Raj (Assistant Professor, Nitte University Centre for Science Education and Research)	OS5 Jeeva Susan Abraham (Acharya Narendra Dev College, University of Delhi)

1120-1140	Mansi Verma (Assistant professor, Sri Venkateswara College, University of Delhi) <i>“Combating SARS-CoV-2 using drugs and phytocompounds”</i>	1120-1130	OF6 Harish Rajak (Sr. Assistant Professor, Institute of Pharmaceutical Sciences, Guru Ghasidas University, Bilaspur (CG))	OS6 Samarth Sharma (Department of Biotechnology, Prayagraj)
		1130-1140	OF7 Janmejay Pandey (Sr. Assistant Professor, Department of Biotechnology, School of Life Sciences, Central University of Rajasthan)	OS7 Srishti Singh (CMP PG College, University of Alahabad, Prayagraj)
1145-1205	Baljeet Kaur (Assistant Professor, Hansraj college, University of Delhi) <i>“Relevant gene selection in cancer microarray datasets”</i>	1140-1150	OF8 Rajni Gupta (Professor, Kirori Mal College)	OS8 Rashi Raj (Sri Venkateswara College, University of Delhi)
		1150-1200	Break	
		1200-1210	OF9 Jasleen Kaur Kalia (Associate Professor, Dyal Singh College, University of Delhi)	OS9 Vanya Garg (Galgotias University)
1210-1230	Milan Surjit (Associate Professor, Thsti - Translational Health Science and Technology Institute,	1210-1220	OF10 Suman Sharma (Associate Professor, Ramjas College, University of Delhi)	OS10 Shweta Mishra (CMP Botany Department)

	Faridabad) <i>“Host-pathogen interactions during SARS-CoV2 infection: insights from virus-host RNA-protein interactome studies”</i>	1220-1230	OF11 Rita Rath (Associate Professor, Dyal Singh College, University of Delhi)	OS11 Nirmala Akoijam (North-Eastern Hill University)
		1230-1240	OF12 Sadhna Gupta (Associate Professor, Dyal Singh College, University of Delhi)	OS12 Sukhjeet Kaur (IIT Bombay)
1235-1255	Manjula Kalia (Associate Professor, Regional Centre for Biotechnology) <i>“Pharmacological modulation of autophagy as a potential therapeutic for Japanese encephalitis”</i>	1240-1250	OF25 Neeraja Sood (Associate professor, Dyal Singh College, University of Delhi)	OS13 Shikha Gupta (Amity Institute of Biotechnology, Amity University, Uttar Pradesh, Noida)
		1250-1300	-	OS14 Sonam Antil (Department of Microbiology, COBS&H, CCS HAU, Hisar, Haryana)
		1300-1310	-	OS37 Saya Laishram (Acharya Narendra Dev College)
1300-1320	Ujjwal Neogi (Karolinska Institute, Stockholm, Sweden) <i>“Multi-omics analysis to understand the host-metabolic reprogramming during SARS-CoV-2 infection associated with disease severity”</i>	INSCR GB Meeting		
1330-1400	<div>Lunch Break</div> 			
1400-1440	Plenary Lecture [ROOM A] Chair: Natesan Manickam Co-chair: Princy Hira (Maitreyi College, DU) Hans H. Richnow (Head, Department Isotope Biogeochemistry, Helmholtz Centre for Environmental Research - UFZ, Germany) <i>“Isotope Fractionation Concept For Characterization of Degradation Processes of Hexachlorocyclohexanes In The Environment And Along Food Webs”</i>			
1445-1525	Plenary Lecture [ROOM A] Chair: Natesan Manickam David van de Vijver (Associate Professor, Viroscience department, Erasmus Medical Centre, Rotterdam, the Netherlands) <i>“The impact of preexposure prophylaxis on HIV prevention. Meeting the United Nations goal of ending the AIDS pandemic in 2030”</i>			



	<p>Session 7 (1530-1800) [ROOM A]</p> <p><b>Microbiology of Extreme Environments</b></p> <p>Chair: Umesh Rai (HoD, DU)</p> <p>Co-Chair: Gauri Garg Dhingra, Princy Hira</p>	<p>Session 8 (1530-1855) [ROOM B]</p> <p><b>Translational and Industrial Microbiology</b></p> <p>Chair: Mrutyunjay Suar</p> <p>Co-Chair: Nitish mahato, Vineet K. Singh, Sumit Sahni</p>
1530-1600	<p><b>Keynote Lecture</b></p> <p>Anil Saxena (Director, NBAIM)</p> <p><i>“Archaea as an option for plant growth promotion and abiotic stress management”</i></p>	<p><b>Keynote Lecture</b></p> <p>Anirban Roy Choudhury (Senior Principal Scientist, CSIR - Institute of Microbial Technology, Chandigarh)</p> <p><i>“Process development and scale up for production of microbial exopolysaccharides: Petri plate to pilot plant”</i></p>
1605-1625	<p>Rakshak Kumar (Scientist, CSIR - Institute of Himalayan Bioresource Technology, Palampur)</p> <p><i>“Exploration of Himalayan microbes for the improvement of hill agriculture”</i></p>	<p>Jyoti Prakash Tamang (Professor, Sikkim University)</p> <p><i>“Integrative Metagenomics and Metabolomics of Some Himalayan Fermented Foods; Microbial Communities and Health Benefits”</i></p>
1630-1650	<p>Tanu Jindal (Group Additional Pro Vice Chancellor (R&amp;D); Director, Amity Institute of Environmental Toxicology, Safety and Management)</p> <p><i>“Exploration Of Extremophiles For Potential Bioremediation &amp; Biotechnological Applications”</i></p>	<p>Vikas Sood (Assistant Professor, Jamia Hamdard University)</p> <p><i>“Host-pathogen interactions during SARS-CoV2 infection: insights from virus-host RNA-protein interactome studies”</i></p>
1655-1715	<p>Anita Kamra Verma (Professor, Kirori Mal College, University of Delhi)</p> <p><i>“Exploiting Microbial Factories for Nanoparticle Synthesis: Novel Nano-biotechnological based Sustainable Bioremediation of Environmental Contaminants”</i></p>	<p>Sanjukta Subudhi (Area Convener, Microbial Biofuels and Biochemicals, TERI, New Delhi)</p> <p><i>“Fermentative production of 2,3 Butane Diol: A sustainable pathway for renewable chemical production”</i></p>
1715-1730	<p>Tea Break </p>	
1730-1800	<p>S. Venkatachalam (DST-SERB Post Doctoral Researcher, Ministry of Earth Sciences, Government of India)</p> <p><i>“Microbial ecology of Arctic fjords and associated glacier foreland ecosystems in the changing climatic era”</i></p>	<p><b>Keynote Lecture</b></p> <p>Ganesh D. Saratale (Associate Professor in the Department of Food Science and Biotechnology, Dongguk University, South Korea)</p> <p><i>“Microbial biopolymers production by utilizing lignocellulosic biomass resources: A sustainable green approach”</i></p>

1805-1825	Charu Tripathi (CMP College, University of Allahabad, Prayagraj) <i>"Insights Into The Lifestyle Of A Thermophilic Genus Thermus"</i>	Kashyap Dubey (Associate Professor, JNU, New Delhi) <i>"Biofoundry of lipstatin from Petriplate to Bioreactor"</i>
1830-1850	-	Utkarsh Sood (The Energy and Resources Institute (TERI), Delhi) <i>"Scale-up and commercialization of 24-desmethyl rifampicin effective against resistant strains of"</i>

	<i>rifamycin Mycobacterium tuberculosis"</i>
1900-1940	Plenary Lecture [ROOM A] Chair: David van de Vijver Co-Chair: Gauri Garg Dhingra Jizhong Zhou (Professor, University of Oklahoma, United States) <i>"Stochastic Processes in microbial community diversity and assembly"</i>

## Day 4: 18 November, 2021

IST (hrs)	Event			
	Session 9 (0900-1340) [ROOM A] <b>Clinical Microbiology</b> Chair: Vibha Tandon Co-Chair: Princy Hira, Gauri Garg Dhingra	Session 6 contd. (0900-1300) [ROOM B and ROOM C] <b>Empowering Academics through Innovative Research</b>		
		<b>Faculty Oral Talks</b> [ROOM B] Chair: Sukanya Lal (Ramjas College, DU) Co-Chair: Jaspreet Kaur, Rajendra Phartyal, P. Jayaraj	<b>Student Oral Talks</b> [ROOM C] Chair: Seema Makhija, Renu Gupta (Maitreyi College, DU) Co-Chair: Ajaib Singh, Kiran Rana, Sripoorna, Jeeva S. Abraham	
	Keynote Lecture	0900-	-	OS16 Neekita D. Charan (Gujarat University)

0900 - 0930	Taifo Mahmud (Professor, Oregon State University, United States) <i>“Biosynthetic studies of microbial- derived <math>\alpha</math>-glucosidase inhibitors”</i>	0910		
		0910 - 0920	-	OS17 Gargi Singh (University of Delhi)
		0920- 0930	-	OS18 Monika Jangra (Chaudhary Charan Singh Haryana Agricultural University, Hisar)
0930 - 1000	<b>Keynote Lecture</b> Karen Lloyd (Associate Professor, University of Tennessee, Knoxville) <i>“Unknown microbes in Earth’s subsurface”</i>	0930- 0940	OF15 Ushmben Bharatkumar Joshi (Assistant Professor, Muis, Ganpat University)	OS19 Shruti Sinha (Department of Technology, Savitribai Phule Pune University)
		0940- 0950	OF16 Taruna Joshi (Librarian, Ramjas College)	OS38 Geetika Arora (ABCR, DU)
		0950- 1000	OF17 Yasir Bashir (Department of Microbiology, Govern ment Medical College Baramulla)	OS21 Rishabh Anand Omar (Department of Environment Microbiology, Babasaheb Bhimrao Ambedka r University Lucknow)
1000 - 1020	Vibha Tandon (Professor, Jawaharlal Nehru University) <i>“Unravelling the Mechanism of Topoisomerase IA as Novel Drug</i>	1000 - 1010	OF18 Sadaf Zakariya (K. J. Somaiya College of Science and Commerce, Vidyavihar, Mumbai)	OS22 Nikhil Ambatkar (Department of Technology, Savit ribai Phule Pune University)

	<i>Target for Combating MDR Bacteria”</i>	1010 - 1020	OF19 Nar Singh Chauhan (Professor, Maharshi Dayanan d University Rohtak , Haryana)	OS23 Swati Maurya (Acharaya Narendra Dev College, Delhi University)
1020 - 1035	Tea Break			
1040 - 1110	<b>Keynote Lecture</b> Eddie Cytryn (Environmental Microbiologist, Institute for Soil, Water and Environmental Sciences, ARO,	1035- 1045	OF20 Debashis Banerjee (Assistant Professor, Amity University)	OS24 Anup K. Singh (ICGEB, New Delhi)
		1045- 1055	OF21 Poonam Dwivedi (Associate Professor,	OS25 Mrunali Patel (Ganpat University)



	Volcani Agriculture Research Center, Israel) <i>“Understanding environmental dimensions of antibiotic resistance”</i>		Ramjas College, University of Delhi)	
		1055-1105	OF22 Renu Baweja (Assistant Professor, Shivaji College, University of Delhi)	OS26 Achamma Thomas (Mahatma Gandhi University, Kottayam, Kerala)
		1105-1115	OF23 Anina James (Assistant Professor, Deen Dayal Upadhyaya College, University of Delhi)	OS27 Kruti Dave (Ganpat University)
1115-1135	Vineet Ahuja (Professor, MD, Department of Gastroenterology and Human Nutrition, AIIMS, New Delhi) <i>“Human Gut Microbiome and Microbiome Manipulation Therapies”</i>	1115-1125	OF24 Smriti Bajpai (Faculty Bhavan's Vivekananda College, Hyderabad)	OS28 Siddhi Bangale (Hislop School of Biotechnology, Hislop College, Nagpur)
		1125-1135	OF13 Vidhi Chaudhary (Assistant Professor, Daulat Ram College, University of Delhi)	OS29 Xiao Liu (Helmholtz-Centre for Environmental Research – UFZ)
1140-1200	Biswajit Kundu (Professor, IIT-Delhi) <i>“Enzyme engineering through iterative learning: the case of L asparaginases”</i>	1135-1145	OF26 Rekha Kumari (Associate Professor, Miranda House)	OS30 S Sripoorna (Acharya Narendra Dev College, University of Delhi)
		1145-1155	OF27 Priya Singh (Assistant Professor, Maitreyi College, University of Delhi)	OS31 Shruti Sinha (Department of Technology, Savitribai Phule Pune University)
1200-1230	<b>Keynote Lecture</b> Praveen Gupta (Director & HOD, Neurology Department, Fortis Hospital, Gurugram) <i>“Gut microbiology in multiple sclerosis”</i>	1155-1205	OF28 Samadhan Yuvraj Bagul (Scientist, ICAR Directorate of Medicinal & Aromatic Plants Research, Gujarat)	OS32 Swati Sharma (Department of Biotechnology)
		1205-1215	OF14 Manisha Arora Pandit (Assistant Professor, University of Delhi, Kalindi College)	OS33 Ishita Pahwa (Amity University Uttar Pradesh, Noida)
		1215-1225	OF30 Sumit Sahni (Assistant Professor, Acharya Narendra Dev College, University of Delhi)	OS34 Sumedha (Department of environmental sciences, Sri Venkateswara College)
1235-1255	Bhabatosh Das (Associate Professor, Translational Health	1225-1235	OF31 Anupama Shukla (Associate Professor, Acharya Narendra Dev	OS35 Jyoti Bakshi (Guru Jambheshwari University of Science & Technology)

	Science and Technology Institute) <i>“Decontamination of Bacteria from Antibiotic Resistance”</i>		College, University of Delhi)	
		1235-1245	OF32 Parminder Kaur (Assistant Professor, Khalsa College)	OS36 Drashya (Acharya Narendra Dev College)

		1245-1255	-	OS15 Dilbag Singh (ICAR- Indian Agricultural Research Institute, New Delhi-110012)
		1255-1305	-	OS37 Pritam Kumar Sinha (MA Gandhi Studies and Peace, IGNOU)
1300-1320	Sachin Khurana (Scholar, Walter and Eliza Hall Institute For Medical Research, Australia) <i>“Parasites are Beautiful: Microscopy bases approaches to study parasitic diseases”</i>	1305-1315	-	OS39 Aryan Arora (Department of Environmental Sciences, Sri Venkateswara College)
		1315-1320	-	OS40 Pynhunlang Kharnaier (Department of Microbiology, Sikkim)
1320-1400	Lunch Break			
1400-1730	Session 10 [ROOM A] <b><i>Microbiology for Science and Society</i></b> Chair: N.K. Ganguly, Kenneth Timmis and Rup Lal Co-chair: Shailly Anand, Charu Dogra Rawat			
1400-1430	<b>Keynote Lecture</b> Kenneth Timmis (Professor, Technical University of Braunschweig, Germany) <i>“The International Microbiology Literacy Initiative”</i>			
1430-1500	<b>Keynote Lecture</b> Terry McGeneity (Professor, University of Essex, United Kingdom) <i>“Visualizing the invisible: class excursions to ignite children’s enthusiasm for microbes”</i>			
1500-1530	<b>Keynote Lecture</b> Rup Lal (NASI-Senior Scientist Platinum Jubilee Fellow, TERI) <i>“Microbiome and Human Health: Societal Perspective”</i>			
1530-1600	<b>Keynote Lecture</b> Daniel McDonald (Professor, University of California, San Diego, United States) <i>“Diet from a poospective: The Microsetta Initiative”</i>			
1600-1630	<b>Keynote Lecture</b> Paola Scavone (Principal Investigator, Departamento de Microbiología, Montevideo, Uruguay) <i>“The use of comics for microbial literacy in children”</i>			

1630-1650	Shailly Anand (Assistant Professor, Deen Dayal Upadhyaya College, University of Delhi) <i>"Microbes in Sustainable Development"</i>
1650-1710	Charu Dogra Rawat (Associate Professor, Ramjas College, University of Delhi) <i>"Inquiry, Inclusivity and InReach- the 3-Is in the M(I)crob(I)ology Educat(I)on"</i>

1710-1740	<b>Keynote Lecture</b> Robert Metcalf (Emeritus Professor, California State University, USA) <i>"Bringing Evidence-Based Microbiology to the Community Level in Lower Nyakach, Kenya, to Eliminate Waterborne Disease"</i>
1800-1840	<b>Valedictory Ceremony</b> [ROOM A]
1800-1810	Chief Guest: Paola Scavone Guest of Honour: Balaram Pani (Professor and Dean of Colleges, University of Delhi)
1810-1815	<b>Welcome: Ravi Toteja (Principal, ANDC)</b>
1815-1825	INSCR Journal Release: Rup Lal Agar Art Competition Winners Announcement
1825-1830	<b>Prize Distribution</b>
1830-1840	Concluding Remarks and Vote of Thanks: Sukanya Lal (Professor, Ramjas College, DU)