



Ram Lal Anand College University of Delhi



Invites application for
4 week Online Certificate Course

For Undergraduate Students on

Science Writing and Research Ethics

Organised by
Department of Microbiology
under the aegis of

DBT STAR College Scheme

**Start Date
(tentative):
6th July 2020**

Important dates:

Registration opens on: 29th June 2020

Registration closes by: 4th July 2020

**Limited Seats and preferences
will be given to RLA students**

Link for online registration:

https://docs.google.com/forms/d/e/1FAIpQLSfdU6DS_qLz5jy6buy2i2zBegZiuNAOXkKkU2_T0aMFOc0QWQ/viewform?usp=sf_link



COURSE HIGHLIGHTS

- Effective scientific writing
- Searching the literature
- Referencing tools
- Plagiarism
- Communicating Science

KEY HIGHLIGHTS

- Expert Lectures twice a week
- Interactive session once a week
- Weekly assignments
- Hands on training

For further information, please contact:
dr.shaliniswami@gmail.com

Dr. Shalini Swami
Coordinator

Dr. Prerna Diwan
Coordinator, Star College Scheme

Dr. Rakesh Kumar Gupta
Principal

Department of Microbiology
Ram Lal Anand College, University of Delhi,
5, Benito Juarez Road, Dhaula Kuan
New Delhi 110021



Proposed Online Addon Certificate Course

“Science Writing and Research Ethics”

for Undergraduate Students

Under

DBT-Star College Scheme

Objective: This course is designed to provide knowledge and training of key writing and analytical skills to students for communicating scientific information to researchers and the general public. This course will focus on imparting new skills to undergraduate students to be effective scientific writers. In this course students will be engaged with practical examples and a variety of exercises covering all aspects of scientific writing to enable them to bring the research findings into the format of a scientific manuscript suitable for publication. This will also help students in future while writing reviews, Thesis, letter of Intent, grant/proposals, letters of recommendation and communicating to general audiences and in mass media.

Course Coordinator: Dr. Shalini Swami;

Star College Scheme Coordinator: Dr Prerna Diwan

Course Modalities

Duration: 4 weeks (Including Lectures and Hands On Exercises)

Hours: 30; Total intake: Maximum 50

Eligibility: Students Pursuing B.Sc (Hons) degree

Registration Open: 29th June, 2020; Proposed Course Dates: 6th July, 2020-6th August, 2020;

Course registration fees:

- Nil for RLA students
- Rs. 500 for Non-RLA students

Curriculum delivery: Synchronous video or web conferencing via google meet

Duration of Class: 2 hours/session

Lectures and interactive session with experts: 2 days a week (Wednesday and Thursday)

Online reflective post-session assignment and hands on activity: 1 day a week (Friday); **Discussion with the teachers:** 1 day a week (Monday)

Final Quiz: Last Day 6th August 2020 (Tentative);

Total no. of assignments: 8

Note: Out of 8 assignment it will be mandatory to complete 6 assignments in time bound manner for the successful completion of the course.

Week 1:

- Introduction to the modules
- Learning outcome of the course
- Know Your Audience
- Why is scientific writing and publishing important?
- Introduction to peer review exercise and how it works?
- Understand the impact factor system and rating of the journal
- UGC care list
- Communication with the editorial board

Week 2:

- Know your Paper and its relevance
- Introduction to searching the literature (Review Article and Critical Review)
- Search for literature using search engine facilities (WoS, Scopus, Google Scholar and Pubmed)
- How to find a good and relevant literature review

- How to read, summarise and critically evaluate the finding of articles
- How to present key finding of published articles
- How to discriminate high quality science from low quality science.

Week 3:

- Introduction to Scientific Writing
- Principles of effective writing (cutting unnecessary clutter and verbs)
- Titles and writing abstracts
- Framing better sentences and paragraphs.
- Organization and streamlining the writing process
- Data Analysis and data presentation
- Referencing using Endnote
- Format of an original manuscript.

Week 4:

- Reviews, commentaries and opinion pieces
- The publication Process; Selecting a Journal for Publication
- Issues in scientific writing
- What is Plagiarism and its detection
- Determining Authorship
- Ghostwriting
- Reproducible research
- Maintenance of log book
- Communicating science beyond published, peer reviewed and scientific articles.
- Communicating science and Engaging lay audience.

Assessment:

- Writing of an abstract based on real research data.
- Effective Presentation of given dataset
- Summarizing and critically evaluating the published scientific papers
- Practical exercises based on PubMed, Scopus, Google search and Endnote.
- Quiz after each module

**Department of Microbiology
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5, Benito Juarez Road, Dhaula Kuan
New Delhi 110021**



**Online Addon Certificate Course
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Plan for Week-II			
Day and Date	Resource Person	Timings	Topic
Day 4 Monday, 20th July 2020	Dr. Rinu Sharma Assistant Professor University School of Biotechnology Guru Gobind Singh Indraprastha University	11am-12.30 pm	Finding good and relevant literature, reading, summarising, critically evaluating and presenting the finding of articles, Discriminating high quality science from low quality science
Quiz 3			
Day 5 Wednesday, 22nd July 2020	Dr Vibha Gupta Associate Professor Department of Biotechnology, Jaypee Institute of Information Technology (JIIT)	11-12 pm	How to Structure or Organize a Scientific paper
	Dr Monali Bhattacharya Associate Professor Department of Humanities & Social Sciences, Jaypee Institute of Information Technology (JIIT)	12-1pm	Principles of Effective writing: Language skills required in Writing
Quiz 4			
Day 6 Friday, 24th July 2020	Dr Prerna Malhotra, Assistant Professor, Department of English, RLA College	11am-12 pm	Citation and Referencing
	Dr Sunila Hooda Assistant Professor, Department of Microbiology, RLA College	12-1pm	Referencing using <ul style="list-style-type: none"> • Endnote • Mendeley
Quiz-5			
Assignment I will be uploaded on Google classroom : Submission deadline 27th July 2020			

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Plan for Week-III			
Day and Date	Resource Person	Timings	Topic
Day 7 Monday, 27th July 2020	Dr. Vandana Gupta Associate Professor Department of Microbiology, RLA College	11 am-12.30 pm	<ul style="list-style-type: none"> • Ghost writing • Determining Authorship
Quiz 6			
Day 8 Wednesday 29th July 2020	Ms Subhra Priyadarshini Chief Editor, Nature India Nature Research	11-12.30 pm	<ul style="list-style-type: none"> • Popular Science Writing
Quiz 7			
Day 9 Saturday, 1st August 2020	Dr. Rajeev Kaul, Department of Microbiology University of Delhi South Campus	11.30 am-1.30 pm	<ul style="list-style-type: none"> • Reviews, Commentaries and Opinion Pieces • The publication Process; Selecting a Journal for Publication • Issues in Scientific Writing • What is Plagiarism and its Detection
Quiz-8			
Assignment III will be uploaded on Google classroom : Submission deadline 4th August 2020			

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Plan for Week-IV			
Total Hours: 5.5 hours			
Day and Date	Resource Person	Timings	Topic
Day 10 Wednesday 5th August 2020	Dr Perna Diwan, Associate Professor Dept of Microbiology, RLA College	11am-12.00 noon	Presentation in Scientific Conferences
	Dr Nidhi S Chandra, Assistant Professor RLA College	12.00-12.30pm	Writing Logbook/Lab Notebook, Reproducibility, Concept of Replicates
Quiz 8: 1-1.15 pm			
Day 11 Friday 7th August 2020	Dr Seema Gupta Associate Professor Dept of Microbiology, RLA College	11-12.30 pm	Data Presentation in Science writings
	Dr Shalini Swami Coordinator Assistant Professor, Department of Microbiology	1-1.15 pm	Interaction , feedback and Closing Remarks
Final Assignment: 2hrs			

The Department of Microbiology, Ram Lal Anand College organized a four-week online course on “**Science Writing and Research Ethics**” under aegis of the **DBT Star College Scheme**. It was hosted on google meet from 13th July, 2020 to 7th August, 2020.

The online course was planned and devised with an aim to provide students necessary skills and knowledge imperative for quality science writing, communication as well as research ethics. The curriculum composition for the four-week online certificate course was to cover all the relevant knowledge and skills most importantly to prepare the students to write, present and communicate science more effectively in scientific communities as well as to lay audience.

We had **114** registered participants from all over India for the course including Under Graduate students and research scholar from several Universities and Research Institutions working in ICMR and DBT funded projects. The **70** participants were shortlisted based on their profile. Certificate of participation and appreciation were awarded to **63** participants on the basis of their successful completion of quiz after each session and mandatory attendance of at least 3 complete sessions.

Several Distinguished resource persons invited for sharing their expertise In Scientific Writing and Research Ethics which includes **Prof. N Raghuram**, School of Biotechnology, GGS Indraprastha University; **Dr. Rinu Sharma**, University School of Biotechnology GGS Indraprastha University; **Dr. Rajeev Kaul**, Department of Microbiology, University of Delhi; **Dr. Monali Bhattacharya**, Department of Humanities & Social Sciences Jaypee Institute of Information Technology; **Dr. Vibha Gupta**, Department of Biotechnology, Jaypee Institute of Information Technology.



RAM LAL ANAND COLLEGE
DBT STAR COLLEGE
UNIVERSITY OF DELHI
DEPARTMENT OF MICROBIOLOGY



Presents a certificate course
on

Duration
40 hours
Saturday & Sunday

PYTHON
In Biological Sciences

16th January, 2021

Limited number of seats
Only For undergraduate
and postgraduate
students

Scan to Register



Payment link:

<https://www.payumoney.com/customer/users/paymentOptions/#/0393F2FFF08FA76E25095AF01FC24B6D/Payments1/21>

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Resource Person:



Dr. Kshipra Chauhan

**Founder: EduBooster Research and Technology
Consultancy, Ph.D (Biotechnology), National
Institute of Malaria Research, JCMR**

Patron:

**Dr. Dr. Rakesh Kumar Gupta,
Principal, Ram Lal Anand College**

Organizing Committee

**1. Dr. Purna Diwan, Associate Professor &
Coordinator, DBT Star College Scheme**

**2. Dr. Shalini Swami, Assistant Professor,
Department of Microbiology**



Ram Lal Anand College

5, Benito Juarez Marg, South

Campus New Delhi-110021

URL: www.rlacollege.edu.in

Email: rlac.du@gmail.com



About the College

Ram Lal Anand College is a Co-Educational University of Delhi maintained college, fully funded by UGC (Govt. of India). The college offers 14 undergraduate Programmes for students of different streams including Humanities, Commerce and Science along with one Post Graduate Degree Program in Hindi. The college is a NAAC accredited college with a B++ Grade.

About the Department

The Department of Microbiology at the college has been recently recognized as a Star College by the Department of Biotechnology (DBT), Govt. of India. It offers B.Sc. Honours degree program in Microbiology which is a prestigious and highly sought-after program. As part of new initiatives taken by college, the Department for Microbiology is committed to training of students in advanced and emerging fields, imparting new skills and knowledge for their future growth and employability. In the recent years, the department has organized many International and National seminars, workshops and certificate courses.

Why to join: Python, An asset in contemporary biology

The genome sequencing and powerful computational analysis revolution has empowered the biological science to solve complex biological problems in efficient, reproducible and swift mode. Experts from different stream of biological science (Microbiology, Zoology, Botany, Biochemistry, Bio medical Sciences, Plant breeding, Biotechnology etc) can take help from Genomics to reveal the structure, content and evolution of genomes and may apply that knowledge to further study the function and global properties of genome for the advancement of medicine and diagnostics.

In order to analyze and manipulate biological Data, in the form of DNA sequences, Protein Sequences and protein structure in research or jobs, it is essential to know a powerful programming language to perform day to day tasks. Industries require data Analyst, variant Analyst, data Scientist, NGS data analyst, who are going to analyze genome data or SNP data or NGS data or Microbiome data. The job profiles of these positions require programming experience as a must.

As per latest forecast this type of research market is expected to reach over 13 billion by the end of 2023. Hence, there will be high demand of workforce who is expert in Biology and can handle the data by writing some scripts. Therefore, joining this course on python programming language will certainly benefit biological science students.

Python is easy to use, easy to understand and have a vast library of routine tasks, which makes it easy for the beginners to write the scripts for data analysis and manipulation. This course will be a hands-on training program with writing and executing python scripts applicable in day to day tasks of biological data analysis workflow.

Presents

Ten-weeks (40hrs) Online Certificate Course

on

**Python in Biological Sciences
(Under DBT Star College Scheme)**

Start Date: 16th January, 2021

Beginner friendly

Requires Laptop/PC

Organized by:

Department of Microbiology

Resource Person



Dr. Kshipra Chauhan is the founder of EduBooster Research and Technology Consultancy. She is a diversified professional having 14+ years of R&D and Academic experience as Scientist, Research fellow and lecturer. She is a PhD in Biotechnology from National Institute of Malaria Research under the aegis of ICMR.

Course Modules

- a. Introduction to Programming and python
- b. Data Structures (Variables, expression, statements)
- c. Text or string manipulation, DNA Data manipulation
- d. Conditional tests in DNA sequence handling
- e. Iterations and functions: sequence data analysis
- f. Lists, dictionaries and tuples: Biological sequence analysis
- g. GUI using Tkinter
- h. Problem solving with real time python script writing

Course overview

This course will cover the algorithms for solving various biological problems and handful of programming challenges helping students to implement in Python. As it is a widely used programming language in scientific community this course will equip our students with more advanced computational skills which is needed in their future scientific career.

Who should Attend

The course will be very useful for UG and PG life science students. Students who are in the final year of examination of their bachelor's degree program will be given preference

Course Structure: Each week will cover modules through online lectures and hands-on sessions. The course will also offer interactive sessions with the expert and exhaustive practice through assignments and quizzes.

Duration and Timings : 10 weeks (30+10 hours) ; 2 hours every (Saturday & Sunday); 3:00-5:00 PM;

Course Fees:

- Non-RLA students: 1000/- (to be paid online)
- Free for RLA students

PATRON

**Dr. Rakesh Kumar Gupta Principal,
Ram Lal Anand College**

Organizing Committee

1. Dr. Prerna Diwan, Associate Professor & Coordinator, DBT Star College Scheme
2. Dr. Shalini Swami, Assistant Professor, Department of Microbiology

Registration Link:

<https://docs.google.com/forms/d/e/1FAIpQLScFc5IjPITviOeOR3LzV5WwWDbObdYFqAjMZ92tUilWWIBQZQ/viewform?vc=0&c=0&w=1&flr=0>



Last Date for registration and Payment of fees 15th January, 2021

Payment link:

<https://www.payumoney.com/customer/users/paymentOptions/#/0393F2FFFC8FA76E25095AF01FC24B6D/Payments1/2128>

**For further information, please contact:
Dr. Shalini Swami (9958479607), Email:
microrlastar@gmail.com**

The Department of Microbiology, Ram Lal Anand College organized a ten-week online course on “**Python in Biological Sciences**” under aegis of the **DBT Star College Scheme**. It was hosted on google meet from 16th January, 2021 to 10th April, 2021.

The online course was planned and devised with an aim to provide students necessary skills and knowledge imperative to analyze and manipulate biological Data, in the form of DNA sequences, Protein Sequences and protein structure in research job profiles it is essential to know a powerful programming language to perform day to day tasks. The curriculum composition for the ten-week online certificate course was to cover all the relevant knowledge and skills most importantly to prepare the students for data Analyst, variant Analyst, data Scientist, NGS data analyst job, who are going to analyze genome data or SNP data or NGS data or Microbiome data. As these job profiles require mandatory programming experience.

We had **81** registered participants from all over India for the course including Under Graduate students and research scholar from several Universities and Research Institutions including Martin Luther Christian University, Shillong, Delhi Technological University, New Delhi and Central University of Punjab, Punjab. Certificate of successful completion of the course were awarded to **32** participants on the basis of their performance in final assignment and quiz at the end of the session and mandatory attendance of all the sessions.

Python Programming language expert and eminent resource speaker **Dr. Kshipra Chauhan** was invited to conduct the sessions on “**Python in Biological Sciences**” for ten-weeks. She is also the founder of EduBooster Research and Technology Consultancy and a very diversified professional having 14+ years of R&D and Academic experience as Scientist, Research fellow and lecturer. She was a PhD in Biotechnology from National Institute of Malaria Research under the aegis of ICMR.

AN

ONE WEEK FACULTY DEVELOPMENT PROGRAM

ON

BIOSAFETY,
BIOETHICS AND
INTELLECTUAL
PROPERTY RIGHTS

A REPORT

One week FDP
envisaged under
the DBT Star
College Scheme

and

organized by the

Department of
Microbiology,

Ram Lal Anand
College

The Department of Microbiology, Ram Lal Anand College organized a one-week FDP on Biosafety, Bioethics and IPR under aegis of the DBT Star College Scheme, in the last week of August, 2020 (24th Aug, 2020 to 28th Aug, 2020).

The FDP was planned and conceived with an aim to enhance the knowledge of faculty of biological sciences engaged in teaching undergraduate (at the University of Delhi and other Institutes) in the areas of Biosafety, Bioethics & IPR. The expected outcome was that faculty undergoing this FDP would be better equipped to orient and educate students in the planning and responsible conduct of research.

We had 203 registered participants which included faculty members and research scholars from several Universities and Research Institutions and Higher education Institutes from all over India, Central University, Punjab; University of Rajasthan, Bodoland University, Kokrajhar, Assam; CUSAT, Cochin; Law College, Mysuru; Lyallpur Khalsa College, Jalandhar apart from various Colleges affiliated to the University of Delhi, to name a few. Certificates of successful completion were awarded to **113 participants** on the basis of the mandated compulsory attendance of at least 3 complete sessions.

Distinguished resource persons invited for sharing their expertise with the enrolled FDP participants include **Dr Shailesh Pawar**, Scientist E & Officer I/C, ICMR- National Institute of Virology (NIV); **Dr Senthil Kumar Venugopal**, Professor & Dean, FLSB, SAU; **Dr Sucheta Kurundkar**, Director Training, Clinical Development Services Agency, THSTI; **Prof. N Raghuram**, School of Biotechnology, GGS Indraprastha University; **Dr Gurinderjit Randhawa**, FNAAS, Principal Scientist and Head, Division of Genomic Resources, ICAR-NBPGR; **Dr Sunil Archak**, Officer-In-Charge, Biotechnology (Plant Science) Agriculture Knowledge Management Unit, ICAR-NBPGR; **Dr Ram R Shukla**, Supervisory Patent Examiner, USPTO and **Dr Diptendu Das**, Senior Scientific Officer, AERB.

With great pride and joy, we also invited one of our bright, well-established alumni, **Ms Richa Chaudhry**, to make use of this platform and share her knowledge. All details about the speakers, the topic of talk and schedule may be found in the following day-wise program schedule:

One-week Online Faculty Development Program on Biosafety, Bioethics and IPR

Under DBT Star College Scheme

For Faculty of Biological Sciences and Research Scholars

24th to 28th August, 2020

3.00 to 6.00 pm on Google Meet

Schedule for DAY 1, 24th August, 2020

Time	Name of Resource Person	Proposed Title of Talk	Topics to be covered
3.00 pm to 5.00 pm	Dr. Shailesh D Pawar Scientist E & Officer I/C ICMR- National Institute of Virology (NIV)-Mumbai Unit (Formerly Enterovirus Research Center), Haffkine Institute Compound, Acharya Donde Marg, Parel, Mumbai-400 012	An Introduction to Biosafety: Biosafety levels, Biosafety Cabinets and Risk Group Classification	<ul style="list-style-type: none"> Biosafety levels Types of biosafety cabinets Risk groups of microorganisms Disposal of biohazardous waste National Biosafety Guidelines and Regulations
5.00 pm to 6.00 pm	Dr. Senthil Kumar Venugopal Professor & Dean, FLSSB, SAU	Implementation of Biosafety Guidelines in India and Role of the Institutional Biosafety Committee (IBSC)	<ul style="list-style-type: none"> An overview of the national regulatory system for Biosafety Role of DBT, MoEF, RDAC, RCGM, GEAC and IBSC Functioning and responsibilities of the IBSC Communication with RCGM, PIs and Funding Agencies

Schedule for DAY 2, 25th August, 2020

Time	Name of Resource Person	Proposed Title of Talk	Topics to be covered
3.00 pm to 5.00 pm	Dr. Sucheta Banerjee Kurundkar, PhD, MBA Director Training Clinical Development Services Agency Translational Health Science & Technology Institute, Department of Biotechnology, Ministry of Science & Technology, Government of India NCR Biotech Science Cluster, 3rd Milestone, Gurgaon- Faridabad Expressway, Faridabad 121001	National Ethical Guidelines for Biomedical and Health Research Involving Human Participants and Children	<ul style="list-style-type: none"> National Ethical Guidelines for Biomedical Research Clinical trials for Medical Research Patient informed consent questionnaire

5.15 pm to 6.15 pm	Prof. N Raghuram School of Biotechnology, GGS Indraprastha University, Sector 16C, Dwarka, New Delhi - 110078, INDIA. Chair, International Nitrogen Initiative Co-Investigator, UKRI-GCRF South Asian Nitrogen Hub Editor-in-Chief, Physiology and Molecular Biology of Plants SC Member, UNEP Global Partnership on Nutrient Management President, SCON/ING, Trustee, Sustainable India Trust & VP, PHSSFSS	An Overview of Intellectual Property Rights	<ul style="list-style-type: none"> • Introduction and importance/need for intellectual property rights (IPR) • Different types of IPR • Genesis and Development of IPR in India • Some important examples of IPR.
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Schedule for DAY 3, 26th August, 2020

Time	Name of Resource Person	Proposed title of Talk	Topics to be covered
3.00 pm to 5.00 pm	Dr. Gurinderjit Randhawa, FNAAS Principal Scientist and Head Division of Genomic Resources ICAR-National Bureau of Plant Genetic Resources New Delhi-110012	GMOs and LMOs: Concerns, Challenges and Regulations	<ul style="list-style-type: none"> • GMOs/LMOs: Concerns and Challenges & Overview of International Agreements especially Cartagena Protocol • GMO applications in Food and Agriculture & Environmental Release of GMOs • Role of Regulatory Agencies (IBSC, RCGM, GEAC) • Risk Assessment, Risk Management and Risk Communication
5.00 pm to 6.00 pm	Dr Sunil Archak Officer-In-Charge Biotechnology (Plant Science) Agriculture Knowledge Management Unit ICAR- NBPGR, Pusa Campus	IPs and their Management in Agriculture	<ul style="list-style-type: none"> • New Plant varieties: Requirements, Rights of Breeder, Extent and Duration • Commercializing Biotechnology Inventions, Case Studies • Biotechnology Research and IPR Management

Schedule for DAY 4, 27th August, 2020

Time	Name of Resource Person	Proposed Title of Talk	Topics to be covered
6.00 pm to 7.00 pm	Dr Ram R. Shukla , Ph.D. Supervisory Patent Examiner, AU 1635, 1632 Technology Center 1600 USPTO (571)-272-0735	Patent Application and Examination Process at the USPTO	<ul style="list-style-type: none"> • The INTERNATIONAL Patent System • USPTO • Patent Application Process in the USA • Timelines of International Applications
7.15 pm to 8.30 pm	Dr. Ram R Shukla , Ph.D. Supervisory Patent Examiner, AU 1635, 1632 Technology Center 1600 USPTO (571)-272-0735	Introduction to Patent Cooperation Treaty	<ul style="list-style-type: none"> • An Introduction to WIPO 2 • An Overview of the PCT System • Filing of a PCT Application • International Cooperation

Schedule for DAY 5, 28th August, 2020

Time	Name of Resource Person	Proposed Title of Talk	Topics to be covered
3.00 pm to 5.00 pm	Ms. Richa Chaudhary	The Patenting Scenario in India	<ul style="list-style-type: none"> • Patents: Types of inventions protected by a patent • Need for a patent; Claims; Searching a patent • Drafting of a patent; Step-wise filing of a patent, Grant of patent • Patent infringement, Rights and Duties of patent owner • Granted Patents vs Patent Publications • Indian patent Act 1970 and recent amendments
5.00 pm to 6.00 pm	Dr. Diptendu Das Senior Scientific Officer, AERB PhD Chemical Engineering, IIT Bombay	An Introduction to the use of Radioisotopes in Laboratories and an Overview of AERB guidelines	<ul style="list-style-type: none"> • AERB/RSD/RES guidelines for using radioisotopes in laboratories • Precautions to be taken • Safer Alternatives to the use of radioisotopes: an overview.

Feedback report:

Most of the participants found the sessions very relevant, very engaging, very useful and informative. Some were impressed with the beautiful illustrations and explanation and described the FDP as 'awesome' and the best ever and requested for organizing more such events. Some called for better time management, as the talks tended to be quite long on Day 2. Most of the participants requested us to share the presentations and videos for future reference and these were provided, wherever feasible. Please find attached, feedback responses for all the days in pdf format.

The Organizing Team:

All faculty members of the Department of Microbiology actively supported and contributed to the conducting of the FDP. The team consisted of:

Dr Rakesh K Gupta, Principal and Patron

Dr Purna Diwan, Coordinator, DBT Star College Scheme

Dr Vandana Gupta

Late Dr Kusum R Gupta

Dr Nidhi S Chandra

Dr Sunila

Dr Shalini Swami

Dr M Salome John (Coordinator)

The list of registered participants (203):

Sunila
Yamini Agrawal
Dr Sunita Aggarwal
Asmathunnisa G
GULSHAN KUMAR
Saumya Chaturvedi
Divya
Ritu Raj Sinha
Chandan Kumar
Dr. Abha Jain
R.K.Rangaswamy.
डॉ० रवेन्द्र राजपूत
DR RAMESH H RATAGERI

Dr. G. L. ARUNA
Dr.Rashmi Hosamani
Dr. SHIVANANDA M K
Shabeena Anjum K S
Ramesh T N
Salma
ANILKUMAR H S
Parvinder Kaur
Taruna Arora
Dr Meenakshi Vachher
ADITI VERMA
Rishu Thakur
Jacinth Rajendra
Prachi Rani
Sandeep Yadav
Kriti Tyagi
Nidhi S Chandra
Swagata Karmakar
Garima Malik
Dr. Ranjana Roy Mishra
Vaishnavi Pant
Dr Sweta Yadav
KAKOLI DUTT
Navjyoti Chakraborty
gagandeep singh
Manish Kumar
Dr. Sunita Singh
Shikha Srivastava
Dr. Vineeta Kashyap
M. Abdul Kareem
Priyadarshini
Ashok Saini
Prof Sujata Mohanty
Shvetambri
Surendra Kumar Yadav

Shivam Mishra
SHIVANI SINGHAL
Dr Gajraj Singh
Ruchita Singh
Vishawjeet Barik
Omarlin Kyndiah
Renu Bhadana
Gareth Gordon Syngai
Sonia Rani
Abhishekraj K S
Dr. P. Sumithira
Indu Bhatt
ARCHANA SINGH
Anju Chhibbar
R. SUNDARALINGAM
S. PREMINA
Vaibhav Kumar Nain
Shalini swami
POOJA SHANKAR
Bremkumar K S
R Pirabhakaran
Shalini Sehgal
Mona Arora
L.T.Thirumarudhan
SURESH R
Kiruthika Natarajan
Dr. Kuldeep Sharma
K .S.KUMARAVEL
Periasami Nagappan
Rahul Gawarguru
Shivani Chauhan
Dr. Indu Varshneya
Dr Tejpal Dhewa
Pragati Vishwakarma
M.Umameswari

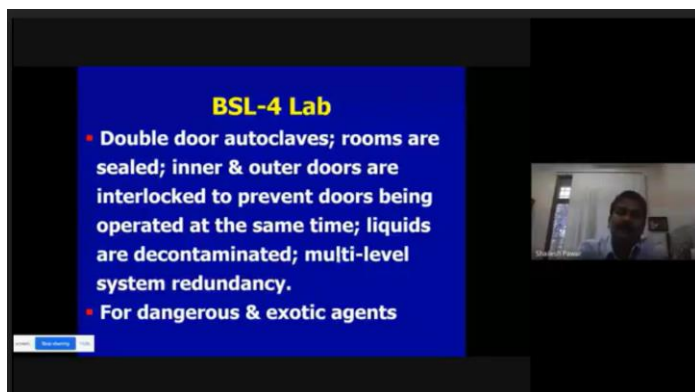
Vandana gupta
Sanjay Babaji Sapkal
R.Venkataraman
Bijender Singh
Vinod Kumar
Km Ambika
Nidhi
Neha Singh
Pratibha Rauniyar
Hanumant Ramchandra Shinde
Arushi Jain
Muskan govil
Kanchan Rana
Koshki Shishoo
Khushi jain
Parshant kumar sharma
Dr. A. Archana
Divya Sharma
Shreya
Dr.Sugandha Singh
JYOTIBA SHIVAJI KUMBHAR
V A PRATYUSHA
Megha yadav
Srishti Kharoliya
Gunjan Sachdeva
SHRUTI GAUTAM
Indu
Shwetang
Dr. Pooja Bansal
Dr. Joseph Davis
Abhishek Jain
Tamanna Mittal
Shilpa S Chapadgaonkar
Dr Vijay Jagdish Upadhye
Dr. INDERJEET KAUR

Manisha Mishra
Y. Yoshi
DIBU DIVAKARAN
Dr. V. RAMESH
E. VENKADESWARAN
E. ALLI RANI
Manu Solanki
Shalu Garg
Ashish Singh
Kush Kumar
ADITYA BAJAJ
Rajni Jindal
AJAY KUMAR GARG
SHIKHA KUCHHAL
Bronson Kumar Khangembam
Dr Sunil Kumar Srivastava
Dr. Rekha
Rajeshwari
Suresh Nath
MERUGA AROGYA SHEELA
Indira P Sarethy
Nitin Chauhan
Dr. Neeru Bhagat
Arpit Tyagi
Pranshi Agrawal
AMAN RAJ
ISHIKA KAIN
Soniya
Monika Heikrujam
Ambika Sharma
Sapna Bai
Dr. Raj Kumar Koiri
Naveen
Prof. (Dr.) Surender Kumar Sharma
Dr. Rekha Gupta

Cheerfulman
Namrta gupta
Sukhcharan Kaur
James
Tarun Adarsh
Arun dev Sharma
Vinodinee Dubey
hanumant singh rathore
Varnika Mathur
Shikha Gorke
Dr. Pilli Rajeswari
Surya Pratap Singh
Ashutosh Pande
Namita Ashish Singh
Dr. Bhawna Saxena
Saurabh Dutta
Jahnvi Hora
Isha Dhingra
TANYA
Anupama Mukherjee
TENANG R. MARAK
Sudip Sinha
SWARAJ MOHANTY
Nitish Rai
Avinash Marwal
Shrikant MALI
M Salome John
Dr. Rupinder Singh
Yash Chaudhary
Kusum R Gupta
Dr. Siva P.K. Chetri
Dr Lakshmi
Sunil Kumar Verma
ARUN KUMAR KASHYAP
Dr. Bhawana

Vanshika Kothari
Heikham Dayami
VISHAL DASHORA
Devender Kumar
Mona kriti
Mohini Talwar
Dr. V. Vengadessan
Dr Prerna Diwan
Dr. R. Lakshmi
Rajesh kumar
SHIVAJI MISRA
Dr Meenakshi Samartha
Inderpreet Singh
Dr Pooja Palwankar
Riya Roy

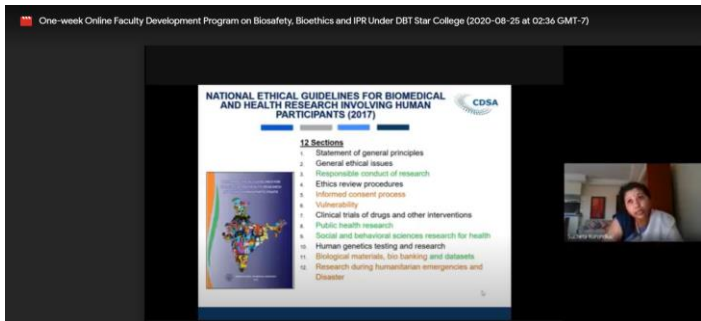
Online Proceedings in images:



Dr Shailesh Pawar



Dr Senthil Kumar Venugopal



Dr Sucheta Banerjee Kurundkar



Prof N Raghuram



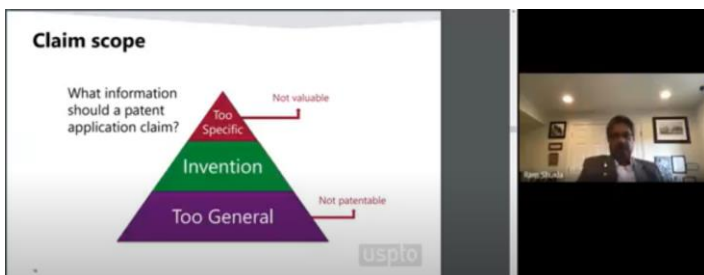
Dr Gurinderjit Randhawa

Thank You

Dr Sunil Archak
Principal Scientist & ICAR National Fellow
Officer In Charge, Agriculture Knowledge Management Unit
ICAR-National Bureau of Plant Genetic Resources
New Delhi

NBPGR

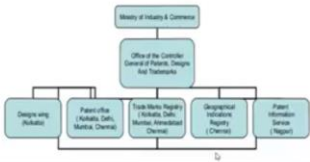
Dr Sunil Archak



Dr Ram R Shukla

IP Offices in India

Organization Structure – IP Offices



Ministry of Industry & Commerce

Office of the Controller
General of Patents, Designs
and Trademarks

- Copyright
(Arts)
- Patents (Bio,
Metals, Ceram,
Polym, Mech,
Chem)
- Trade Marks (Regd)
- Geographical
Indications
(Regd)
- Patent
Information
Service
(Regd)



Filing a Patent Application

Who can file a patent application?

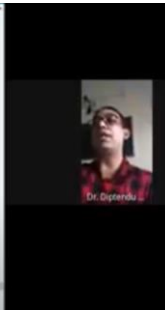
- A patent application can be filed either by
 - First and true inventor; or
 - Assignee of the inventor; or
 - Legal representative of any deceased person.
- India follows "F2F" system i.e. *first to file*.



Department Alumnus, Ms Richa Chaudhary

Challenges in Radiation Protection

- Radiation source control** -
Radioactivity control **Exposure control**:
Temporary worker dose control, Internal dose control, Exposure control during the potential events (DND breaks, HPI, JHT and SOD heavy water leak), maintenance work during the on-power entries.
- Knowledge up gradation of HP Professionals**, ICRP recommendations, IAEA requirements and guidance, Current regulatory requirements and guidance
- Calibration of Radiation Instruments** - Calibration Laboratories (dose rate, energy, angular, traceable to primary standards), ISO (202-18 standards) and other international standards.
- Design Improvements**:
Operating experience feedback, Tritium removal, Use diagnostic rad. Instruments



Dr Diptendu Das, AERB

Brochure:

 Ram Lal Anand College University of Delhi Benito Juarez Road, New Delhi 110021			
One-week Online Faculty Development Program on Biosafety, Bioethics and IPR Under DBT Star College Scheme			
24th to 28th August, 2020			
<p>Ram Lal Anand College is a University of Delhi maintained college, fully funded by UGC (Govt. of India). The Honours degree in Microbiology is a prestigious and highly sought-after course of the college and has been recently recognized as a Star Course by the Department of Biotechnology (DBT), Govt. of India. This recognition mandates training of faculty in emerging fields important for imparting new skills and knowledge to students. The undergraduate course curricula of Microbiology, Botany, Zoology, Biochemistry, Biomedical Sciences and other life sciences courses of University of Delhi contain a full paper on Biosafety, Bioethics and IPR issues.</p> <p>The main objective of this Faculty Development Program is to enhance the knowledge of faculty of biological sciences, engaged in teaching undergraduate (at the University of Delhi and other institutes) in the areas of Biosafety, Bioethics & IPR.</p> <p>The expected outcome is that faculty undergoing this FDP will be better equipped to orient and educate students in the responsible conduct of research.</p>			
Last date of Registration: 23 rd August 2020 Register here: https://forms.gle/LR5v63GvLQnZBWZQ7 Target audience: Faculty and Research scholars Timings: 3.00 to 6.00 pm on Google Meet			
Organised by: Department of Microbiology			
Coordinator: Dr. M Salome John Assistant Professor	Coordinator: DBT Star College Scheme Dr. Purna Diwan Associate Professor	Patron: Dr. Rakesh K Gupta Principal	
For further information, please contact: Dr. M Salome John (88605 04883), Email: microrlastar@gmail.com Dr. Sunila Hooda (9810473771)			

PROGRAM SCHEDULE	
DAY 1	24th August, 2020
 Dr. Shalish D Pawar Scientist E & OIC ICMR, NIV An Introduction to Biosafety: Biosafety Levels, Biosafety Cabinets and Risk Group Classification 3-5 pm	 Dr. Senthil Kumar Vanugopal Professor & Dean, FLSB, SAU Role of Institutional Biosafety Committees (IBSC), Implementation of Biosafety in India 5-6 pm
DAY 2	25th August, 2020
 Dr. Sucheta Banerjee Kurundkar Director Training, CDSA-THSTI National Ethical Guidelines for Biomedical and Health Research Involving Human Participants & Children 3-5 pm	 Prof. N. Raghuram Professor, GGSIP University, An Overview of Intellectual Property Rights 5-6 pm
DAY 3	26th August, 2020
 Dr. Gurinderjit Randhawa FNAAS, Head & Principal Scientist, Division of Genomic Resources, ICAR-NBPR GMOs and LMOs: Concerns, Challenges and Regulations 3-5 pm	 Dr. Sunil Archak Principal Scientist, NBSPOR IPRs and their Management in Agriculture 5-6 pm
DAY 4	27th August, 2020
 Dr. Ram R Shukla Ph.D. Supervisory Patent Examiner, Technology Center 1600, USPTO	<ol style="list-style-type: none"> 1. Patent Application and Examination Process at the USPTO 4-7 pm 2. Introduction to Patent Cooperation Treaty 7.15-8.30 pm
DAY 5	28th August, 2020
 Ms. Richa Chaudhary Project Manager, Sagacious IP The Patenting Scenario in India 3-5 pm	 Dr. Diptendu Das Senior Scientific Officer, AERB An Introduction to the Use of Radioisotopes in Laboratories & an Overview of AERB Guidelines 5-6 pm

Poster:

	
RAM LAL ANAND COLLEGE UNIVERSITY OF DELHI PRESENTS	
One Week Online Faculty Development Program on Biosafety, Bioethics and IPR	
Registration QR code 	
UNDER DBT STAR COLLEGE SCHEME 24th to 28th AUGUST, 2020 3 to 6pm on Google Meet	
Inviting Science Faculty and Research Scholars to take this opportunity and listen to many luminaries and experts in these areas.	
Registration link: https://docs.google.com/forms/d/e/1FAIpQLStfJ0d1ob-gKfZiPQEqKnlCnwR_4AsTeleQn6J4MRE-qb5hw/viewform?usp=sf_link	
Dr M Salome John Coordinator	Dr. Purna Diwan DBT Star College Scheme Coordinator
Dr Rakesh Kumar Gupta Principal	

DEPARTMENT OF MICROBIOLOGY REPORT 2020-2021

The Department of Microbiology (henceforth, the department) walked into the 31st year of its establishment at Ram Lal Anand College. During the Academic year 2020-2021, the department continued its long legacy to innovatively enshrine knowledge and ignite critical scientific thinking among students. In its second year of recognition under the *Star College Scheme* of the Department of Biotechnology, Government of India, the department organised online summer internship programs which benefited many students who were actively involved in this internship. Department has running grants of about 80 lacs under the able leadership of Dr. Prerna Diwan and Dr. Rakesh Kumar Gupta. Dr. Vandana Gupta was conferred with “International Distinguished Women Scientist award” for superior performance in Microbiology Conferred by Center for Professional Advancement, Vijayawada, Andhra Pradesh.

Owing to the ongoing COVID-19 pandemic, many online events were organised by the department:

1. An Alumni lecture (July 3rd 2020), where Dr. Prateek Arora (Batch 2011) Postdoctoral fellow at University of Bern delivered a talk on “Polarity establishment in the developing zebrafish epidermis” and also counsel the students on the different career options.
2. An online departmental orientation (18th November 2020) to orient the new students about the program and various activities of the department.
3. Two certificate courses under the co-ordinatorship of Dr. Prerna Diwan and Dr. Shalini swami: A 30 hrs course on ‘Scientific Writing & Research Ethics’ (13th July to 7th August 2020) to equip the students with the crucial aspect of communicating science and a 40 hour online course on ‘Python in Biological Sciences’ (16th January to 11th April 2021) with participation of around 70 and 32 students across different universities respectively.
4. Dr. Vandana Gupta initiated a social outreach campaign UDISHA: An HPV Vaccination Initiative in January 2021, which aims to create awareness about Human Papillomavirus, which causes 6 types of cancers and the vaccines available. Anurag Singh (3rd yr) and Abhilash Jeas George (2nd yr) are the members of the core team.
5. E-poster making competition on the topic ‘Recent Advances in SARS-CoV-2: Prophylaxis/ Therapeutics/ Diagnosis’ (28th January 2021). Saumya Samridhi (RLAC) won this competition.
6. A two days National Workshop entitled “Molecular Docking in Drug Design” (31st March and 1st April 2021) on using bioinformatics softwares: InstaDOCK and SeeSAR. The webinar was delivered by **Dr. Imtiyaz Hassan**, Assistant professor at Jamia Millia Islamia; and **Dr. Girinath Pillai**, Director and Chief Scientific Officer at Zastr Innovations. The program was attended by 216 participants on Day 1, and 233 on Day 2 including students and faculty members from different universities across the country. All the participants were also provided with a two-week academic license of SeeSAR.
7. One week Faculty Development Program under the convenership of Dr. Salome John entitled ‘Biosafety, Bioethics and IPR’ (August 24th to 28th, 2020) with learned speakers from India and abroad. This FDP aimed to orient the faculty towards

guidelines for biosafety, GMO research, radiation safety, and protection of IPR through patenting.

8. NIPGR and THSTI organised a webinar series for our students under the 'Science Setu' program. Scientists from NIPGR including **Dr. Gitanjali Yadav, Dr. Manoj Prasad, Dr. Senthil-Kumar Muthappa, Dr. Aashish Ranjan, Dr. Senjuti Sinharoy,** and **Dr. Gopaljee Jha** delivered talks on different aspects of plant sciences. **Dr. Krishnamohan Atmakuri, Dr. Amit Pandey,** and **Dr. Rajesh Kumar** from THSTI delivered talks on 'Disease biology and innovative molecular intervention strategies'.
9. Articles, review papers and book chapters written by students of the department found space in International journals of repute and other international print. Anurag Singh, Bhawna Sharma, Fardeen Shahanshah, Simran Preet Kaur worked on different aspects of COVID-19. Anushka Sharma, Anurag Singh, Lalit Mohan, Priya Bhatia, Shreya Kapoor, Simran Preet Kaur, Tanya Srivastava worked on chapters highlighting the Industrial Applications of Soil Microbes. While Priya Bhatia, Anushka Sharma, Abhilash Jeas George, D Anvitha, Pragya Kumar worked on antibacterial activity of medicinal plants against ESKAPE pathogens.

Students participated in various intercollege, national and international events as listed below and brought laurels to the department.

1. Nikhil Gupta was awarded an Inspire Scholarship under Scholarship for Higher Education (SHE) and Chanuka Nisalanka Wijewardana was awarded the Nehru memorial scholarship scheme for international students by Indian council for cultural relations (ICCR).
2. Pritika Baranwal was shortlisted for presenting the idea in 'Nature Hack For Clean Air Hackathon' organized by Clean Air Asia India.
3. Priya Bhatia was awarded "Best Speaker" for National Level Microbiopodium Contest organized by Government Institute of Science Aurangabad.
4. Poorvi Saini and Ananya Grewall presented a poster entitled 'In Silico approach for identification of potential plastic degrading bacteria' in an International conference "The World Microbe Forum 2021" organized online by ASM and FEMS on 27th June 2021.
5. Anchal Dhiman secured 2nd position in a Quiz competition organised by Rotary club of DSC; 3rd Position in Micro-Quiz organized by MSI; and winner of the Brain Over Binge competition organized by Kirori Mal College.
6. Saloni Jain secured 2nd rank in MICRO-QUIZ, organised by MSI- Delhi Unit; 1st position in Microgrid Crossword series organised by MSI- Delhi Unit; and 2nd position for Poster Making Competition organised by Department of Microbiology, IHE.
7. Anurag Singh secured 2nd position in Crossword organized by Department of Microbiology, BCAS; 1st position in a mini clip competition and 2nd position in a scientific Pictionary competition organized by the Department of Microbiology, Gargi College. He also secured 3rd position in "Trade Station" event organised by the Department of Mathematics, RLAC.
8. Saumya Samridhi secured 2nd position in Sanrachna - The storytelling competition organized by NSS, RLAC.

9. Harmeet Singh Wadhwa secured 2nd position in the Doodle competition organised by Department of Microbiology, BCAS.
10. Ujjwal Sharma, D. Anvitha, and Shubhag Singh have excelled in various Extracurricular activities other than academics.

Report Prepared by
Anurag Singh
(BSc. Hons. Microbiology, 3rd year)

Dr. Vandana Gupta,
Teacher Incharge

Representative Images

Tertiary Structure Prediction Methods

Any given protein sequence

Compare sequence with proteins have solved structure

- > 35% Homology Modeling
- < 35% Fold Recognition
- < 35% *ab initio* Folding

Structure selection

Structure refinement

Final Structure

Participants (225)

Find a participant

RLA IQAC (Host, me)

Imtiyaz Hassan (Co-host)

Anurag Singh (Co-host)

Pritika Baranwal (Co-host)

rakshita yadav (Co-host)

Invite Mute All

Chat

active site and how to use it for that ligand more than one?

From NARAVANAN (E) to Everyone:

not all ligands bind to the predicted active sites, there comes the difference

To: Everyone File

Type message here...

Day 1 of a two day National Workshop entitled “Molecular Docking in Drug Design”

Molecular Docking

Problem

- Determine the optimal binding structure of a ligand (a drug candidate, a small molecule) to a receptor (a drug target, a protein or DNA) and quantify the strength of the ligand-receptor interaction.
- Where the ligand will bind?
- How will it bind?
- How strong?
- Why?
- What make a ligand binds to the receptor better than the others?
- ????

(a) Catalytic Function (b) Regulatory mechanism (c) Cleft Detection

(d) Geometrical Analysis (e) Flexibility

(f) Conservation (h) Interaction Energy

$E = \sum E_{int} + \sum E_{ext} + \sum E_{intra} + \dots$

$\nabla \cdot (\nabla \phi) - \nabla^2 \phi = -4\pi\rho = 0$

Participants (198)

Find a participant

Waiting Room (1) Message

Ritisha dhapola

In the Meeting (198)

RLA IQAC (Host, me)

Girinath Pillai (Co-host)

Invite Mute All

Chat

environment during molecular docking.

From Anurag Singh to Everyone:

Kindly fill the attendance form: <https://forms.gle/7enVDWQzhGRfSLG48>

To: Everyone File

Type message here...

Day 2 of a two day National Workshop entitled “Molecular Docking in Drug Design”

Meeting details

People (63) Chat

Vandana Gupta 12:38 PM
Sir Publication fee is a big issue too for deciding on the list

Nishant Saini 12:41 PM
True

Ritika 12:42 PM
Is there any issue or loss if we publish scientific writing in blogs?
How do we protect our blogs from plagiarism?

RLAIQAC IQAC 12:46 PM
we are enjoying dont worry

RLAIQAC IQAC 12:48 PM
same with sage journals

Send a message to everyone

Certificate course on 'Science Writing & Research Ethics'

Meeting details

People (40) Chat

Add people Host controls

IN CALL

- Sunila Hooda (You)
- 7049 Saumya Sinha
- 7056 Manpreet Singh
- Akanksha Mishra
- AMIT MICRO

Certificate course on Python in Biological Sciences

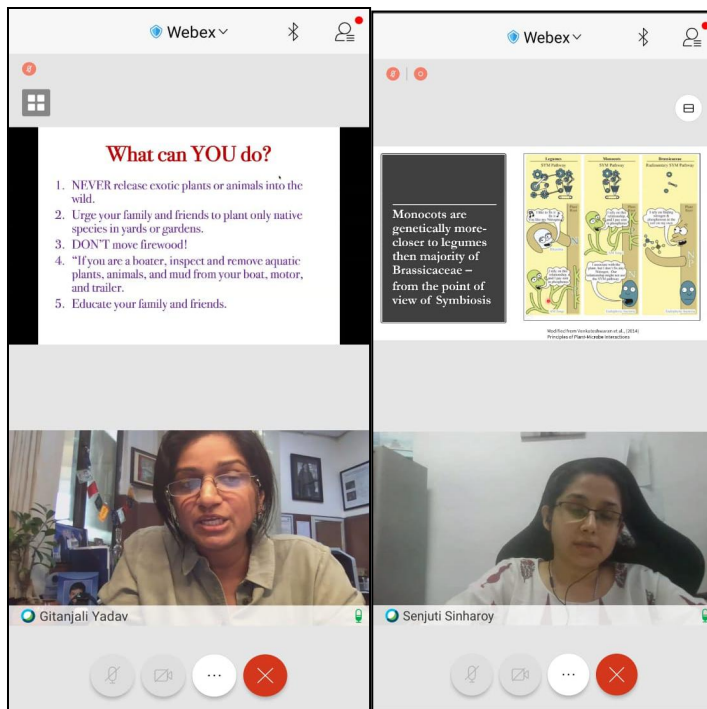
Meeting details

People (80) Chat (11)

Add people

- Sunila Hooda (You)
- Abdul Kareem - 3867
- ALLIRANI EZHUMALAI
- Ambika Sharma
- Ambika upadhyay
- Arogyasheela Meruga
- Arun Kumar Kashyap

FDP on 'Biosafety, Bioethics and IPR'



Dr. Yadav and Dr Sinharoy in the webinar organised by NIPGR under Science Setu program.



Mikrobiologika organized various activities and events for the students throughout the session 2020-21.

1. Society elections were organised in February 2021 and office bearers Anurag Singh as President, Poorvi Saini as Vice-President, Pritika Baranwal as Secretary and Rakshita Yadav as Treasurer were elected.
2. An expert talk on “Be Cancer Aware” along with an Introductory talk on UDISHA: An HPV Vaccination Initiative was organized by the society in association with Rajiv Gandhi Cancer Institute and Research Centre on 22nd March 2021. The talk was delivered online by Dr. A. K. Dewan (Director, Surgical Oncology), RGCIRC. It was attended by 115 participants including students and faculty members of different colleges, who were familiarized with various types of cancer, emphasizing on how the use of tobacco containing products, alcohol and several radiations lead to these cancers. In the second part of the webinar, Dr. Vandana Gupta initiator of an online community outreach program “UDISHA: An HPV Vaccination Initiative” elaborated about it, which aims to create awareness about Human Papillomavirus, which causes 6 types of cancers. She highlighted the need of HPV vaccination in girls and boys aged 10-19 yrs with the available vaccines namely, cervarix and gardasil.
3. **MIKROVITAE 2021**, the annual department fest of Mikrobiologika was held on 3rd April 2021. Inter-college competitions were held which saw over 141 participation from students. The ‘Brain Break’ quiz competition was won by Ishani Sharma (BCAS), while Sahil Raina from RLAC secured 3rd position. Simran Kaur (SRCAW) won the crossword competition, while Saloni Jain (RLAC) secured 3rd position. The logo designing competition saw 17 entries, of which Anurag Singh (RLAC) won the competition, while Meet Makwana (RLAC) stood second. The participants displayed their immense interest and an astonishing amount of effort.
4. Based on results of the logo designing competition, the society also announced its new logo.

On behalf of DR. KUSUM R GUPTA (Convener, Mikrobiologika)

Report prepared by
Mr. Anurag Singh
Society President
(B.Sc Hons. Microbiology, 3rd Yr)

DR. VANDANA GUPTA
Teacher Incharge
Department of Microbiology

RAM LAL ANAND COLLEGE
DBT STAR COLLEGE
 "MIKROBIOLOGIKA" society, Department of Microbiology
 In association with
Rajiv Gandhi Cancer Institute and Research Centre (RGCIRC)

Presents
EXPERT TALK: "BE CANCER AWARE"
 BY
Dr. A.K. Dewan
 Director, Surgical Oncology
 (Rajiv Gandhi Cancer Institute and Research Centre)

Monday, 22nd March 2021 from 12:30-1:30pm

Along with an Introduction to
UDISHA: An HPV Vaccination Initiative
 by the members of the Dept. of Microbiology, Ram Lal Anand College, New Delhi, who are conducting a survey cum awareness campaign about HPV and cancers caused by it in order to assess the awareness level and to create awareness and encourage people to proactively take the timely vaccination and safeguard against these cancers.

Register here: <https://forms.gle/Q6PVbRd8TCnh557>
 Zoom link for talk: <https://zoom.us/j/93166048087?pwd=ZWljbFZlVUJlbnU5OTluNTNkbnhVZz09>
 (Participation certificates to be provided)

Student Co-ordinators
 Anurag Singh (President) - 9471158656
 Poorvi Saini (Vice-President) - 8800267195
 Abhilaash - 9594466214

Patron
 R. K. Gupta
 Principal

Organizers:
 Dr. Kusum R. Gupta
 Dr. Prema Diwan
 Dr. Sunila Hooda
 Dr. Vandana Gupta

PREVENT CANCER

- Avoid using indiscriminate estrogen (Menopause)
- Hold onto one partner
- Avoid preserved (nitrites + nitrates) and cured foods. Limit junk food. ROLE OF ORGANIC FOOD.
- Avoid color additives
- Wash insecticides off all fresh fruits and vegetable
- REDUCE RISK BY 5% WITHOUT TOBACCO
- REDUCE RISK BY 1% WITH PROPER DIET
- REDUCE RISK BY 1% WITH WT REDUCTION
- EAT RIGHT, BREATH RIGHT, WEIGH RIGHT, LIVE RIGHT.

Dr. Dewan's presentation at Expert talk: "Be Cancer Aware"

RAM LAL ANAND COLLEGE
University Of Delhi
DBT star college
MIKROBIOLOGIKA
 Department of Microbiology
 organizes
MICROVITAE 2021

3rd April 2021
 EVENTS: 1:30PM onwards
 VALEDICTORY SESSION: 06:00PM

Further details in attached Posters

Last date to register:
 1st April 21, 12:00PM

BRAIN BREAK (Quiz)

CROSS WORD

LOGO DESIGNING

STUDENT CO-ORDINATORS
 > Anurag Singh 9471158656
 PRESIDENT
 > Poorvi Saini 9650683279
 VICE-PRESIDENT
 > Prihika Baranwal 8447026321
 SECRETARY
 > Rakshita Yadav 8800424416
 TREASURER

ORGANIZERS
 Dr. Kusum R Gupta
 Dr. Vandana Gupta
 Dr. Sunila Hooda

PATRON
 Dr. Rakesh K Gupta
 PRINCIPAL

BRAIN BREAK

MICROVITAE 2021

Microbiologia
 Department of Microbiology,
 Ram Lal Anand College, University Of Delhi

Brain Break competition at Microvitae'21.

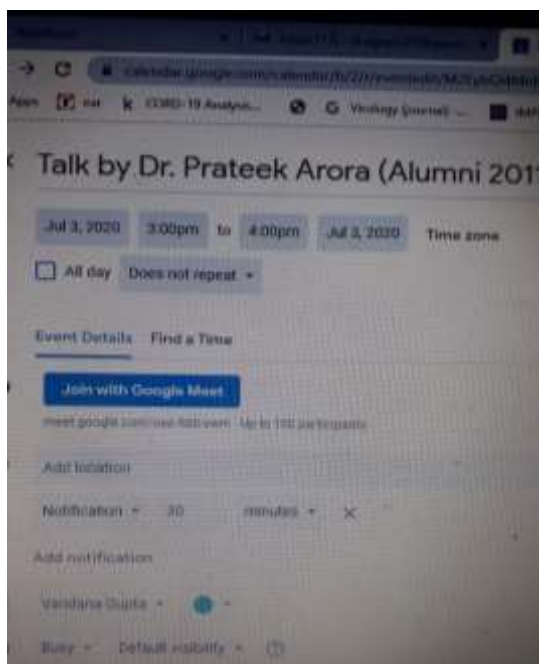
Alumni Lecture

Department of Microbiology, Ram Lal Anand College

Dated: 3rd July 2020

An Alumni lecture was organized by the department of Microbiology on July 3rd 2020 on Google meet at 3:00 pm. The resource person for the session was Dr. Prateek Arora, who is alumnus of our department of the batch 2011. Dr. Prateek Arora is now a Postdoctoral fellow at University of Bern. The meeting started with introduction of Dr. Prateek by our respected Principal, Dr. Rakesh Kumar Gupta. The topic of his talk was “Polarity establishment in the developing zebrafish epidermis” and also counselled the students on the different career options. He also discussed the importance of bioinformatics skills in a researcher's journey for understanding the biological process in addition to a tool for structural and functional analysis.

A total of 50 students of B.Sc (H) microbiology and 8 faculty members participated in this event. The session ended with vote of thanks by Dr. Vandana Gupta.



MICROVITAE' 21

Microvitae, the annual department fest of Mikrobiologika was held on 3rd April 2021. Inter-collegiate competitions were held and students from about 12 colleges participated in the fest. Three events were hosted- a quiz "Brain Break", Crossword Competition, and Logo Designing Competition. The schedule of the program was planned such that students could participate in all events.

The event commenced at 1:30 p.m. The first event was a fun-pact quiz competition consisting of two rounds. Round 1 was the Wipeout round wherein the link of google form having questions from the Life Science domain, spotting, and riddles were shared on the WhatsApp group with responses being submitted within 15 minutes. Total 51 students participated and 10 teams were promoted. Round 2 was named Brain break Bingo, held on Google Meet, in which numbers were given in the form of a Numerical type question. BINGO tickets were sent via email, questions were dictated and participants had to strike off that number in their ticket.

The second event was the Crossword (lone wolf), the platform here was Excel File-based. 73 students participated in this contest. The last event was a Logo designing competition. 17 students participated and submitted wonderful logos from which 3 winners were selected. The response received from various colleges and the feedback of the participants was positive. The valedictory session was at 6 pm on the same day. Dr. Salome John announced the winners. The participants displayed their immense interest and an astonishing amount of effort. Overall the event was well organized and successful.



RAM LAL ANAND COLLEGE

University Of Delhi

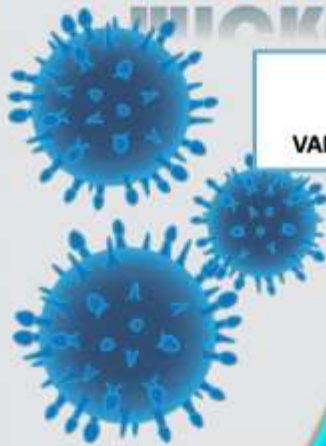
DBT star college

MIKROBIOLOGIKA

Department of Microbiology

organizes

MICROVITAE 2021



3rd April 2021

EVENTS: 1:30PM onwards
VALEDICTORY SESSION: 06:00PM

Further
details
in attached
Posters

Last date to
register:
1st April 21,
12:00PM

CROSS
WORD

BRAIN
BREAK
(Quiz)

LOGO
DESIGNING

STUDENT CO-ORDINATORS

- > Anurag Singh 9471158656
PRESIDENT
- > Poorvi Saini 9650683279
VICE-PRESIDENT
- > Pritika Baranwal 8447026321
SECRETARY
- > Rakshita Yadav 8800424416
TREASURER

ORGANIZERS

- Dr. Kusum R Gupta
- Dr. Vandana Gupta
- Dr. Sunila Hooda

PATRON

- Dr. Rakesh K Gupta
PRINCIPAL



RAM LAL ANAND COLLEGE

University Of Delhi

DBT star college

MIKROBIOLOGIKA

Department of Microbiology

organizes

MICROVITAE 2021

LOGO DESIGNING COMPETITION

LOGO for MIKROBIOLOGIKA society

Last date of submission – 1st April 2021, 12:00pm

**E-certificates to all
winners**

REGISTER HERE:

<https://forms.gle/wGooL2m5hRbn3stw7>

Last date to register:
1st April, 12:00pm

BACKGROUND: Mikrobiologika is the Microbiology Departmental Society of Ram Lal Anand College. Microbiology is the study of microscopic organisms, such as bacteria, viruses, archaea, fungi and protozoa. It is an interdisciplinary course which overlaps with other areas of biology such as genetics, immunology, virology, cell biology, molecular biology, ecology, physiology, bacteriology, biotechnology and bioinformatics. For more information, refer to <https://rlacollege.edu.in/pdf/Course-Benefits/Microbiology-Course-Benefits.pdf>

RULES

1. One participant can submit one entry only. The first submitted entry would be considered.
2. Participants are required to attach their entry in the registration form itself before the last date of submission.
3. The entry has to be compulsorily computerized and is to be submitted in the pdf format.
4. Name of participant should be written on the top corner of the sheet along with the affiliation. The file name should be "Name of participant_College"
5. Decision of jury is final and binding.





RAM LAL ANAND COLLEGE

University Of Delhi

DBT star college

MIKROBIOLOGIKA
Department of Microbiology
organizes

MICROVITAE 2021

Crossword

Date - 3rd April 2021, Time -1:30 pm

E-certificates to all
winners

REGISTER HERE:

<https://forms.gle/BZCcrErYrhfN7qHL6>

Last date to register:
1st April , 12:00pm

RULES

1. Only individual participation is allowed.
2. The crossword will be sent to the registered email address. The solved crossword should be submitted back to pratikabaranwal19058564002.mic@rla.du.ac.in in both excel and pdf format. Name of the file shall be "Name of participant_College"
3. 60 minutes will be given for the submission.
4. The earliest one with the maximum correct words will win the contest.
5. Decision of jury is final and binding.





RAM LAL ANAND COLLEGE

University Of Delhi
DBT star college

MIKROBIOLOGIKA
Department of Microbiology
organizes

MICROVITAE 2021

BRAIN BREAK

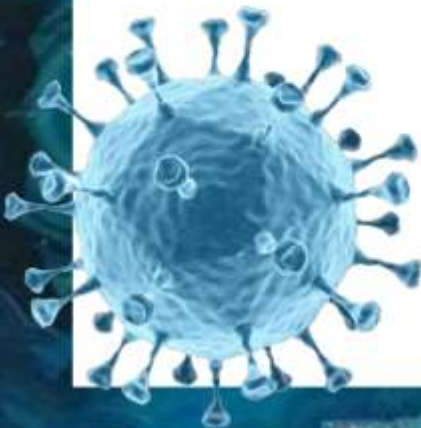
(QUIZ)

Date - 3rd April Time - 3:00 pm

E-certificates to all winners

REGISTER HERE:
<https://forms.gle/ytRdKSFVd3Xq1nta6>

Last date to register:
1st April , 12:00pm



RULES

1. Only individual participation is allowed
2. Quiz will consist of two rounds.
3. First round will be "Wipe Out Round" and the next will be the "Finale Round".
4. Participants are required to have a stable network connection for fair conduction of the event.
5. Participants are requested to join five minutes prior to avoid any delay.
6. Participants are required to join the Whatsapp group for further communication.
<https://chat.whatsapp.com/KGbs67dV8Z06BYemVe8NM9>
7. Decision of jury is final and binding.

Students Awards in the competitions:

S.NO.	Name	Name of Event (Inter/Intra College)	Institution	Position
1.	Anurag Singh	Logo Designing	Ram Lal Anand College	1st
2.	Meet Makwana	Logo Designing	Ram Lal Anand College	2nd
3.	Bharmjeet	Logo Designing	Swami Shraddhanand College	3rd
4.	Simran Kaur	Crossword	Shaheed Rajguru College of Applied Sciences for Women	1st
5.	Simran Preet Kaur	Crossword	Ram Lal Anand College	2nd
6.	Saloni Jain	Crossword	Ram Lal Anand College	3rd
7.	Ishani Sharma	Brain Break	Bhaskaracharya College of Applied Sciences	1st
8.	Arnab Basak	Brain Break	Bhaskaracharya College of Applied Sciences	2nd
9.	Sahil Raina	Brain Break	Ram Lal Anand College	3rd

MOLECULAR DOCKING IN DRUG DESIGN

A two days workshop on “Molecular Docking in Drug Design” was organized by the Department of Microbiology, Ram Lal Anand College on 31st March and 1st April 2021, 11 am to 4 pm on both days which included both theories as well as the hands-on session using bioinformatics softwares: InstaDOCK and SeeSAR. The webinar was delivered on the online platform, Zoom Cloud Meeting. Dr. IMTIYAZ HASSAN and Dr. GIRINATH PILLAI were the guest speakers on days 1 and 2 respectively. The program was attended by about 90 students from our college and about 196 participants from other institutions on both days. The participants included students and faculty members from different universities across the country.

On Day 1 of the event Dr. Sunila Hooda, assistant professor, Department of Microbiology, RLA welcomed the gathering and moderated the event while Dr. Vandana Gupta, Associate Professor, Department of Microbiology, RLA formally introduced the guest speaker. Dr. Hassan started with the background of Bioinformatics and gradually shifted towards using InstaDOCK for virtual screening of drugs. He emphasized on the need for *in silico* screening of ligands especially during the paucity of time and how InstaDOCK can be used at ease for this purpose.

Moreover, on Day 2, Dr. Sunila Hooda welcomed the gathering and moderated the session while Dr. Prerna Diwan, Associate Professor, Department of Microbiology, Ram Lal Anand College, formally introduced the speaker. Dr. Pillai in his very interactive talk entitled ‘Explore Bioactive Conformation Using Docking in SeeSAR’ walked the participants through the advantages of using SeeSAR for molecular docking. The participants were also provided with a two-week academic license of SeeSAR for using and implementing the learnings. The webinar was informative and was appreciated by the participants in the feedback obtained from them as google forms. Participants were eager to be a part of more such events in the future.

VENUE - Zoom Cloud Meeting

(<https://zoom.us/j/96749351142?pwd=andhR0k1aUFYUkREOGFEcTZWZVIOQT09>)

Live on Youtube-

Day 1 Session 1 and 2 <https://www.youtube.com/watch?v=7vQKlayZnlw>

Day 2, Session 1 <https://www.youtube.com/watch?v=BkIqkIMCeg4>

Day 2, Session 2 <https://www.youtube.com/watch?v=t-8PFG5qdHI>



DEPARTMENT OF MICROBIOLOGY
RAM LAL ANAND COLLEGE



presents

DBT Sponsored National Workshop Under Star College Scheme
On
MOLECULAR DOCKING IN DRUG DESIGN



DR. IMTAIYAZ HASSAN

Assistant Professor (Structural Biology)
Centre of Interdisciplinary Research in
Basic Sciences
Jamia Millia Islamia

InstaDock: (<https://hassanlab.org/instadock/about>)

DAY-1 31ST MARCH 2021
"Introduction to InstaDock"

TALK: 11AM - 01PM
HANDS ON SESSION : 02PM - 04PM

Prerequisite softwares
(USE LAPTOPS / DESKTOPS ONLY)

PyMol (<https://pymol.org/2/>)

Register: <https://forms.gle/EBCsLmc3Fkv65Bst8>

LAST DATE TO REGISTER 31ST MARCH 2021 | 05:00 PM

Zoom Meeting link:

<https://zoom.us/j/96749351142?pwd=andhR0k1aUFYUkRlOGFecTZWZVl0Q009>

Participation E-certificates will be issued only to those who attend both days' sessions.

DAY-2 1ST APRIL 2021
"Explore Bioactive
Conformation using
Docking in SeeSAR"

TALK: 11AM - 01PM
HANDS ON SESSION : 02PM - 04PM



DR. GIRINATH PILLAI
Director & Chief Scientific Officer
Zastra Innovations
Mentor of Change
Niti Ayog's Atal Tinkering Lab
Govt. of India

ORGANIZERS

STUDENT COORDINATOR
Anurag Singh
9471158656

Dr. Vandana Gupta | CONVENER
Dr. Prerna Diwan
Dr. Sunila Hooda

Dr. Rakesh K Gupta
PRINCIPAL

Zoom Meeting Grid (4x5):

- Row 1: RLA IQAC, Ms. Manisha Wa..., [Muted], [Muted], Vandana Gupta
- Row 2: Sureshchit, [Muted], Indumathy, Shivanj Gang, Anurag Singh
- Row 3: Priyika Saranwal, [Muted], Vansh Sharma RL..., Dr. Manpreet Ka..., Madhura Priya
- Row 4: Dr. Sauresh Shah, NARAYANAN (B), Sadaf Fatima, [Muted], Bahammullah
- Row 5: Lijya Sara The..., [Muted], [Muted], [Muted], [Muted]

Chat Window:

- From Indumathy Sharma to Everyone: Good morning
- From Anurag Singh to Everyone: Hello when are we going to start?
- From Sandhya Saranwal to Everyone: Good Morning Dr Indumathy Saran
- From Indumathy Sharma to Everyone: Good Morning
- From Shivanj Gang to Everyone: Good morning everyone
- From Dr. Shubra Saran to Everyone: Good Morning

Drug Design / drug discovery

What's a drug?

A substance that treats/cure a disease.

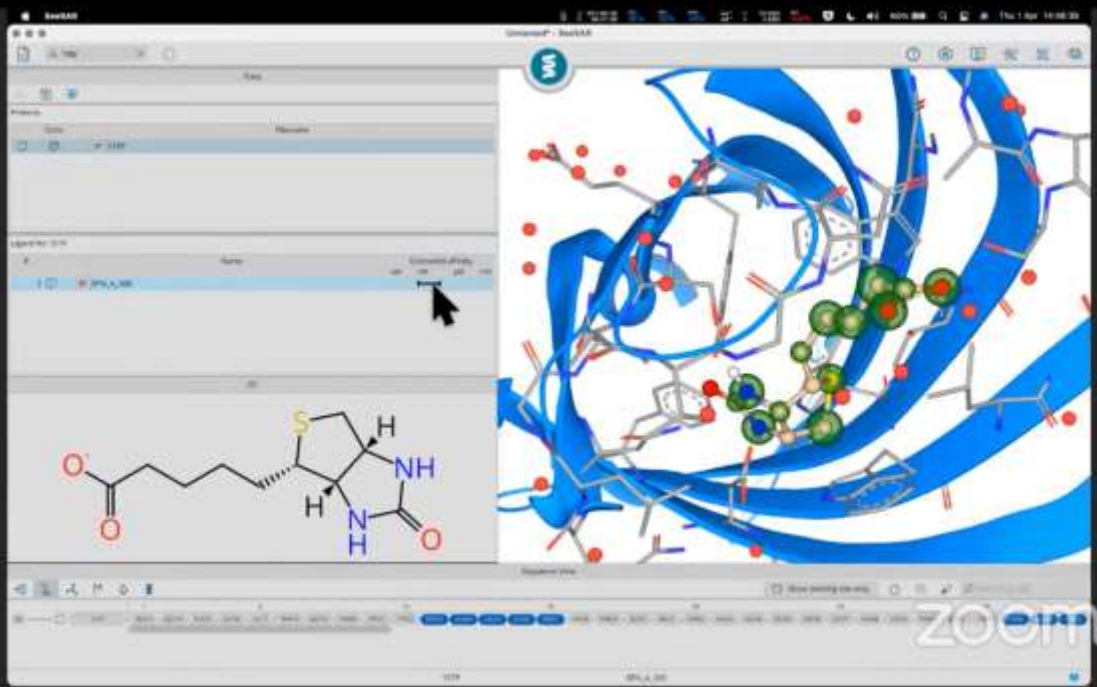
A small molecule that interacts with a target, (often protein involved in the disease process; activator/inhibitor)

Drug discovery:

The process of finding such a small molecule – combination of approaches

Natural Consequences

- ▶ Higher pace (stakeholders, managers)
=> algorithmic challenges
- ▶ Non-specialists more involved
=> communication challenges
- ▶ Basic CADD skills are helpful throughout pharmaceutical R&D
=> UI / learning curve challenges



Expert talk: BE CANCER AWARE

An expert talk on “Be Cancer Aware” along with an Introductory talk on UDISHA: An HPV Vaccination Initiative was organized by Mikrobiologika, Department of Microbiology, Ram Lal Anand College on 22nd March 2021, 12:30 pm to 1:30 pm. The webinar was delivered on the online platform, Zoom Cloud Meeting. Dr. A. K. Dewan (Director, Surgical Oncology), Rajiv Gandhi Cancer Institute and Research Centre was the guest speaker. The programme was attended by 115 participants including students, faculty members of the college and many participants from other colleges also joined. Dr. Sunila Hooda, Assistant Professor, Department of Microbiology, RLA welcomed the gathering and moderated the event. Dr. Purna Diwan, Associate Professor, Department of Microbiology, RLA introduced the resource person.

Dr. Dewan explained in very simple terminologies the meaning of cancer, various types of cancer, emphasizing on how the use of tobacco containing products, alcohol and several radiations lead to various types of cancer. He elaborated about Lung cancer, breast cancer, prostate cancer, cervical cancer and mouth cancer.

In the second part of the webinar, Dr. Vandana Gupta elaborated about UDISHA: An HPV Vaccination Initiative, which aims to create awareness about Human Papillomavirus, which causes 6 types of cancers. She highlighted the two available vaccines against HPV, namely, cervarix and gardasil, and described the HPV linked cancers in males and females.

The queries of the participants were clarified at the end of the talk. The webinar was concluded with a vote of thanks by Dr. Purna Diwan. The webinar was well informative and well appreciated by the participants in the feedback obtained from the participants as google forms.

GOOGLE Meeting: (meet.google.com/bjs-kdkj-yyv)



Rajiv Gandhi Cancer Institute
and Research Centre
100, Okhla Industrial Estate, New Delhi-110025
Ph: 91111 2333 3333 Fax: 91111 2333 3333

RAM LAL ANAND COLLEGE

DBT STAR COLLEGE

"MIKROBIOLOGIKA" society, Department of Microbiology

In association with

Rajiv Gandhi Cancer Institute and Research Centre (RGCIRC)

Presents



EXPERT TALK: "BE CANCER AWARE"

BY

Dr. A.K. Dewan

Director, Surgical Oncology

(Rajiv Gandhi Cancer Institute and Research Centre)

Monday, 22nd March 2021 from 12:30-1:30pm

Along with an Introduction to

UDISHA: An HPV Vaccination Initiative

by the members of the Dept. of Microbiology, Ram Lal Anand College, New Delhi, who are conducting a survey cum awareness campaign about HPV and cancers caused by it in order to assess the awareness level and to create awareness and encourage people to proactively take the timely vaccination and safeguard against these cancers.

Register here: <https://forms.gle/Q6PVkRd8TCatwh557>

Zoom link for talk: <https://zoom.us/j/93166904808?pwd=WmlobFZlYUdjYUdjbWszOTUwNTNWcjhYZz09>

(Participation certificates to be provided)

Student Co-ordinators
Anurag Singh (President) - 9471158656
Poorvi Saini (Vice-President) - 8800257195
Abhilash - 9599456214

Patron
R. K. Gupta
Principal

Organizers:
Dr. Kusum R. Gupta
Dr. Prema Diwan
Dr. Sunila Hooda
Dr. Vandana Gupta

PREVENT CANCER

- Avoid using indiscriminate estrogen (Menopause)
- Hold onto one partner
- Avoid preserved (nitrites + nitrates) and cured meats. Limit junk food. ROLE OF ORGANIC FOOD.
- Avoid color additives
- Wash insecticides off all fresh fruits and vegetables

- **REDUCE RISK BY 35% WITHOUT TOBACCO**
- **REDUCE RISK BY 15% WITH PROPER DIET**
- **REDUCE RISK BY 15% WITH WT REDUCTION**
- **EAT RIGHT, BREATH RIGHT, WEIGH RIGHT, LIVE RIGHT**

Rajiv Gandhi Cancer Institute

SCREENING

HISTORY, EXAMINATION

<p><u>MALE</u></p> <p>CBS, P.S</p> <p>SPUTUM</p> <p>CXR/Low dose CT</p> <p>US ABDOMEN</p> <p>PSA</p> <p>STOOL.OCC.BLOOD</p> <hr/> <p><i>OTHER – DM, CARDIAC</i></p>	<p><u>FEMALE</u></p> <p>CBS, P.S</p> <p>PAP'S SMEAR</p> <p>Low dose CT,CXR</p> <p>US ABDOMEN</p> <p>MAMOGRAPHY</p> <p>STOOL-OCC-BLOOD</p> <hr/> <p><i>OTHER- DM, CARDIAC, GYN</i></p>
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Rajiv Gandhi Cancer Institute