

Department of Microbiology (Mikrobiologika Society)

Session 2022-23

After a gap of two years due to COVID, Mikrobiologika-the Microbiology department of Ram Lal Anand College entered the session 2022-23 with new zeal and enthusiasm. There were a lot of events planned in the department which are briefly included below:

On 9th June 2022, a visit to Bharat Biotech Start-up Expo 2022 organised by Department of Biotechnology India was arranged by the Department of Microbiology, Ram Lal Anand College, University of Delhi. The expo had on display a large no of start-ups that aimed to make the daily life of individuals easy among which some of the interest to students were; Serigen, an innovation driven tissue regeneration Product Company; Mediseva, a health care starter focusing on telemedicine; Catheters reprocessing system or CRS-an automatic computer aid angioplasty and angiography caterer cleaning machine with inbuilt self-testing. In addition to it, students were fascinated by Navam India- first variable fetal movement tracker and K-cat Enzymatic system which works towards reduction in carbon footprint for sustainability and a green and environment. More than 37 students of B.Sc (Hons) Microbiology, semester II attended the expo along with 2 teachers.

COVID-19 pandemic has affected all levels of the education system particularly lab training of undergraduate students. Most of the practical courses were done in online mode through virtual labs, videos and assignments; therefore a one week Hands-on Summer Training workshop “Exploring and Identifying Microbial diversity” was conducted by the department from 13 July 2022- 17 July 2022, 9:00 am to 5.00 pm under DBT Star College Scheme. The workshop was aimed to provide opportunities to undergraduate students to learn basic microbiology techniques such as microscopy, staining and 16S rRNA sequencing (bacterial and fungal diversity). 25 students of B.Sc. H Microbiology 4th semester got the completion certificate at the end of the workshop.

Then, at the beginning of academic session 2022-23 a demonstration of the digital microscope (CILIKA Health and Life Sciences) was held on 27th July in which 30 students and 6 teachers participated.

Online elections were held on 17th August 2022 for electing the office bearers for Mikrobiologika, the Microbiology Society of RLA college. 84 students of the Department of Microbiology cast their votes in these online elections. Sandeep Patra and Dhanajay Singh were elected to the posts of President and Secretary, respectively, while Nandini Tomar and Deepansha Raina were elected unopposed as Vice-President and Treasurer, Mikrobiologika.



On 22nd August 2022, THSTI (Translational Health Science and Technology Institute) organised a workshop on IPR. The aim of the workshop was to create awareness in college students and faculty about the importance of IPY, its types and Protection of idea in the current research scenario. The participants were introduced about IP clinic and the section 3 of Indian constitution and gave a very brief and yet the most detailed information about IPR and patenting. This was followed by a visit to the BIONEST incubator at RCB. Students were

welcomed warmly at RCB and were given the opportunity to explore the labs. Facilities like AKTA protein purification system, HPLC, ultracentrifuges, animal cell culturing, ELISA reader and many more were observed and explained to the participants. Pilot scale fermenter was also shown. The coordinator also gave a brief introduction about incubation programs being supported at the centre. No of Participants: 4 faculty and 35 students

MICRO MARATHON, the first interactive offline event was held on 16th September 2022 from 10:00 am to 2:00 pm on the occasion of World Microorganism Day. It comprised various fun events and competitions related to the microbiology theme- like treasure hunt, puzzle-it, droplet on slide and way8. We saw an enthusiastic participation from the students of various departments of the college with unique team names like Team ASK, Team Epsilon and so on. There were in total 8 teams with 4 members each. The 1st prize winners were from BSc Hons. Microbiology 5th Semester (Depanjan Sarkar, Pratham Bhat, Shagun Siwach, Ananya Singh) and the 2nd prize winning team was from B.Sc.(H) Microbiology 3rd Sem (Devansh, Dhruv Tangri, Azra Fayaz, Rakhi Kumari). No of participants: 56 students and 6 teachers



An industrial visit was organised for the students of B.Sc. (H) Microbiology 4th Semester for 2 days from 6-7th September 2022. On the first day, students and faculty visited the BIONEST at Punjab University where they were welcomed warmly and were given the introduction about the labs and projects at the centre. Facilities like HPLC, animal cell culturing, preservation of animal cells in liquid nitrogen, fermenters and many more were shown and explained to the participants. The most interesting facility included 5-6 fermenters with a single controlling unit. The day ended with a visit to Sukhna Lake, in Chandigarh. On the next day, a visit to Verka Milk Plant, Chandigarh was planned followed by the Verka Milk Plant Mohali. The dairy plants gave a practical viewpoint of various processes to the students like homogenization, pasteurization, processing of milk before ice cream and lassi preparation. The instruments used for storage and packaging of milk, ice creams and lassi, and cold storage facilities for ice cream were also shown. The purpose of imparting practical knowledge in students and making them more interested in the subject was fulfilled. No of participants: 42 students and 6 teachers



Mikrobiologika hosted an alumni interaction session on 22nd September 2022 with Varsha Dwivedi (Batch of 2015), an early -stage researcher, Vienna,

Austria (Pediatric Allergo -Immunology) in which she guided students about career options in India and abroad. No of participants: 32 students and 6 teachers



Another alumni interaction and career counselling session was organised on 9th November 2022 with our departmental alumni Gagandeep Singh who is now working as Assistant Research Officer (Biotechnology) at Central Ayurveda Research Institute, Jhansi, CCRAS, Under Ministry of Ayush, Govt. of India. He patiently answered to all the queries about the scholarships for research careers. Students from all three semesters (I, III and V) participated in the session.



An online alumni interaction and career counselling session was held on 17th February 2023 with Perna Vij (alumni batch 2008), Paralegal (Borden Ladner Gervais LLP, Vancouver) Canada. The title of the talk was “Intellectual Property Rights: A Plethora of Opportunities”

An outreach workshop titled “Journey to the Microbial Realm” was conducted for class 8th students of Apeejay school students on 9 September, 2022 by Department of Microbiology, Ram Lal Anand College, University of Delhi under DBT Star scheme. The school students were introduced to the microbial world and the various methods to grow them. They were shown several temporary as well as permanent mounts of bacteria, fungi, algae and protozoa. There were total of 5 teachers and 4 students who had participated in the workshop as mentors and volunteers respectively who guided more than 120 students were part of this workshop.

Another outreach workshop titled “How Microorganism Look, Grow and Replicate” was conducted for class 11th students of Ramjas International School on 11th October, 2022 by our department under DBT Star scheme. It included 20 students and one biology teacher Mrs. Sonia Varghese. The major microbiological techniques covered in the whole workshop included different types of bacterial and fungal staining, measurement of microbial growth using spectrophotometer, visualization of DNA on agarose gel electrophoresis and functioning of gel doc. There were total of 5 teachers and 4 students who had participated in the workshop as mentor and volunteers respectively.



On similar lines an outreach workshop titled “How Microorganism Look, Grow and Replicate” was conducted for class 12th students of Darbari Lal DAV School on 02 November, 2022 by our department under DBT Star College Scheme in which 33 students and one teacher participated. The major microbiological techniques covered in the whole workshop included different types of bacterial and fungal staining, difference between inoculated and un-inoculated nutrient broth, disk diffusion method for antibiotic sensitivity, visualization of DNA using agarose gel electrophoresis and functioning of gel doc. There were total of 5 teachers and 4 students who had participated in the workshop as mentor and volunteers respectively.



On 2nd November 2022, a departmental orientation program was organized for the newly admitted first year students in order to convey necessary information to them and acquaint them with the functioning of our department. Participants: 25 students, 7 teachers, 5 lab staff

A one week Hands-on workshop in association with Centre for Innovation in Infectious Disease Research, Education and Training (CIIDRET) and Delhi School for Skill Enhancement and Entrepreneurship Development (DSSEED) under the theme of 100 days training and skill enhancement festival was organized on “Basic Techniques in Microbiology” from 17th December 2022 – 23rd December 2022. We had 27 registered participants including B.Sc, M.Sc, B.tech and research scholars from JMU, NTU, JNVU, DTU and several colleges affiliated to University of Delhi. . There were total of 7 teachers and 9 students who had participated in the workshop as mentor and volunteers respectively.

On 17th January, 2023 a group of 19 students visited our department from St. Edmund College, Shillong, Meghalaya accompanied by two teachers of the department of Biochemistry. They were shown small scale fermenter, streak plate technique, colony counter and anaerobic gas Pak System at microbiology lab. Then they visited geology lab and fascinated with the crystal structures seen under microscope and rock specimens in geology

lab. Also, they were given a whole tour of the college campus wherein they interacted with students as well as college faculty. They were shown the recently built community radio facility in the media lab at the department of Hindi Journalism. We also arranged their interaction as well as lab visit to CIIDRET and BIONEST incubator at South Campus University of Delhi where they were really excited to visit to sequencing facility, real Time PCR and large scale fermenters etc.



In the month of January, we conducted an exploration session for the students of B.Sc (Hons) Microbiology II year and III year to IIT Delhi’s Research Park with an aim to help students explore the area of innovation and experiment on 30th January 2023. The representative of the Organization began by giving the students a basic idea about the working and history of FIIT, ATAL INCUBATION CENTER in Sonipat, start-ups incubated at FIIT. Information was also provided on the various programs run by FIIT Delhi like the Meity Samridhi, NIDHI, Startup Residency programs. Students were made aware of the levels at which FIIT Delhi facility cater to a particular idea and the ways in which these benefit an individual. Students visited the mechanical lab of the Incubation center. Students and faculty also interacted with the CEO of DRONE ADDA which basically is a drone parts manufacturing company. No of participants: 47 students and 3 teachers

It was a moment of pride for the department when Abhilash Jeas George was ranked no 1 in the merit list of B.Sc. (Honors) Microbiology and he will be awarded Gold medal in convocation to be held on 25th February 2023.

Another feather in the cap was the “Best Teacher Award” bestowed on Prof. Perna Diwan, a state level award conferred by Microbiologists Society, India, for the academic session 2021-22.



Mikrovitae'23: The Annual Departmental Fest of Department of Microbiology, Ram Lal Anand College, was conducted from 12th-13th April 2023.

On 12th April 2023, a Symposium on the “Role of Probiotics in Neonatal and Child health” was organized in association with the Probiotics Association of India. The objective was to create awareness about gut microbiome dysbiosis in children and the potential application of probiotics to improve neonatal health and the health of young children below the age of 5 years. Dr. Bhabatosh Das, Associate Professor, Translational Health Science & Technology Institute (THSTI) delivered a talk on the topic 'Probiotics: Current understanding and future prospects'. Another talk on 'How to plan and conduct a preclinical/clinical study involving consumable probiotic preparations in children' was presented by Dr. Sucheta Banerjee Kurundkar, Head, Clinical Development Services Agency (CDSA), THSTI. A total of around 100 students from various colleges including Ram Lal Anand College attended the symposiums.



A poster presentation session on this theme was also organized as part of this symposium. The winners of the poster presentation were a team of 2 students (Urvi Singh and Shreya Taluja from Sri Venkateswara College, University of Delhi bagged a cash prize of Rs. 5000/-.

A host of intercollege competitions were organized to orient students towards the fundamentals of biological sciences as a part of this Annual Fest (Idea presentation, Rangoli making in AMR/Probiotics theme, Quiz competition, Debate competition). In addition, 2 intra-college competitions were also part of Mikrovitae'23; Agar art competition and Dumb charades. The details of the winners are given below:

Rangoli Making Competition on the theme probiotics:

I: Team of 3 students (Shikha, Jyoti, N Venkatesh), Ram Lal Anand College

II: Team of 3 students (Himangi, Bhavani, Anantika), Shaheed Rajguru College of Applied Sciences for Women

Idea Presentation on the theme probiotics:

Winners: Ankush Kumar and Shivansh Saxena (Ram Lal Anand College)

Inter College Debate competition:

I: Rakhi Mishra (Sri Venkateswara College)

II: Priyanka Sharma (Ram Lal Anand College)

Best Interjector was awarded to Ankita (Gargi College).

Agar Art competition (Intracollege):

I: Azra and Rakhi (Ram Lal Anand College)

II: Nikki and Tanya (Ram Lal Anand College)

Inter college Quiz competition:

The questions were based on the theme of AMR, Probiotic, Current Affairs and Life Sciences. Shreyas, Nikki, Tanya (Ram Lal Anand College) secured the 1st spot while Simran, Eksha, Akshita, Vidhi (Shaheed Rajguru College of Applied Sciences for Women) secured the second spot.



Glimpses of Microviate'23



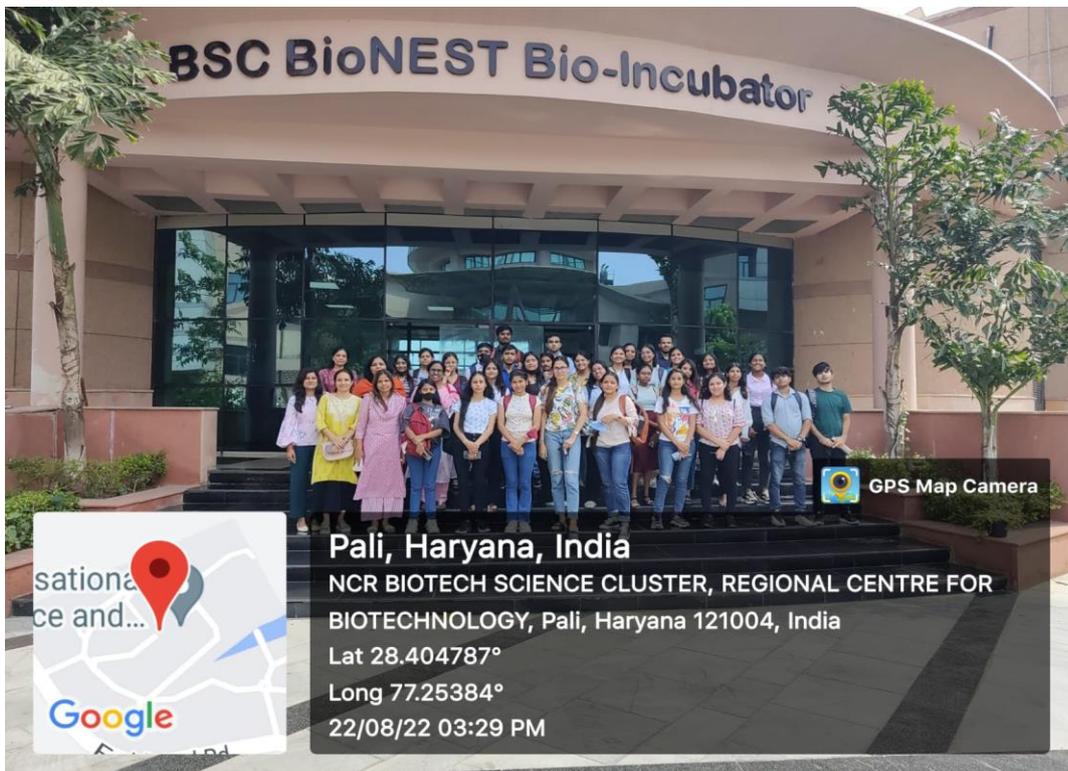
Visit to Bharat Biotech Start-up Expo on 9th June 2022



Summer workshop for the students of B.Sc Hons Microbiology 4th Semester



Teachers Day Celebration in the Department of Microbiology





Students enjoying ice-cream at Verka Milk Plant, Chandigarh



Students enjoying ice-cream at Verka Milk Plant, Mohali



Students enjoying at Sukhna Lake, Chandigarh



Outreach workshop Apeejay school, New Delhi on 9 September, 2022



Dr. Salome John showing bacterial culture to students at the Outreach workshop Apeejay school, New Delhi on 9 September, 2022



Students of St. Edmund College, Shillong, Meghalaya visiting our department on 17.1.2023



Students of St. Edmund College, Shillong, Meghalaya at CIIDRET, DU



Visit to Research Park, IIT Delhi on 31st January 2023

Sunila

Dr. Sunila Hooda,
Convener Mikrobiologika

Prena Diwan

Prof. Prena Diwan
Teacher-In-Charge