

RESUME

PROF. SUKANYA LAL

Name : Prof. Sukanya Lal

Designation : Professor, Dept. of Zoology, Ramjas College, University of Delhi, Delhi - 110007

Date of Birth : 28-10-1957

Residential Address : 42/1, Ramjas College flats, Probyn Road, University of Delhi, Delhi-110007

Mobile no. : 9873877060

Academic Qualifications:

Degree	University	Sub/Fields	Year
B.Sc.	University of H.P., Shimla, India	Zoology, Bot., Chem.	1977
M.Sc.	University of Delhi, Delhi, India	Zoology	1979
Ph.D.	University of Delhi, Delhi, India	Cell and Mol. Biology	1986

A. PROJECTS COMPLETED AND STILL GOING ON:

- i. Coordinator: DBT Star College Project: Project sanctioned from DBT in 2011 ---28 Lakhs Ist year, followed by 8 Lakhs every year till date. Participating departments are Botany, Chemistry , Physics and Zoology. (completed).
- ii. Co-Investigator of the Project: “Indigenization and Genetic Manipulations of Rifamycin Production in *Amycolatopsis mediterranei* (*Nocardia mediterranei*)”, sponsored by Department of Biotechnology, Govt. of India (Project layout Rs. 35 lacs from Dec. 1992 to Nov. 1997). (Completed).
- iii. Coordinator of the DBT Star College Project sanctioned by DBT in the year 2011-12 to 2014 (for three years)
- iv. Principal Investigator: An innovation project no. RC-202: Comparative Codon and Amino Acid Usage Biasness within the Sequenced Genomes of Bacterial Phylum Firmicutes, Dr. Sukanya Lal, Dr. Devi Lal from Zoology department and Dr. Anand from Botany under the Mentorship of Prof. Rup Lal, University of Delhi) has been awarded on 26th Nov. 2013 for one year with a total grant of 4.5lakhs. 10 students will be working and each of them is getting Rs. 1000/month for one year. (Completed).
- v. Coordinator of the Star College Project sanctioned by DBT in the year 2017-18 to 2020
- vi. Principal Investigator: Dr. Charu Dogra Rawat ; **Co- Principal Investigator, Dr. Sukanya Lal** : Research Project: Remediation and Reclamation of Hexachlorocyclohexane (HCH) Dumpsite by using Microbial Bioremediation Technology: 28th March, 2018 to 27th Sept., sanctioned by DBT, GOI.

B. AWARD: Being awarded ‘Faculty Achievement Award’ in the academic year 2016-2017 in recognition of contribution to Academics by the Ramjas College.

C. VISITS ABROAD:

1. Visiting Scientist at the University of Bielefeld, Gentechnologic/Microbiologic, West Germany (Nov. 1988 to Sep. 1989).
2. Visiting Scientist at the University of Bielefeld, Gentechnologic/Microbiologic, West Germany. (May 1, 1990 to August 20, 1990).
3. Visiting Scientist at the Department of Genetics, University of Kaiserslautern, *Germany* from Nov 01-Dec 30, 2001 under DST-DAAD Academic exchange Programme in the project entitled, “ Genome Mapping of the chromosomes and development of a system for the generation of rifamycin analogs in *Amycolatopsis mediterranei*”
4. Attended a meeting of ISCB project in Switzerland from 20th July to 25th July 2002.
5. Visiting Scientist at the Department of Genetics, University of Kaiserslautern, Germany from June 1-June 30, 2003 under DST-DAAD Academic exchange Programme in the project entitled, “ Genome Mapping of the chromosomes and development of a system for the generation of rifamycin analogs in *Amycolatopsis mediterranei*”.
6. Visiting Scientist at the University of Bielefeld, Gentechnologie, Germany from June 1-July 30 on the project entitled genome sequence and analysis and annotations.
7. Short term visit under ISCB collaborative project to Lausanne (EPFL) and Zurich (EAWAG) from July 11 – 18, 2004
8. Visited as an External examiner for BSc. General courses in Bhutan in Nov. 2004.
9. Attended a Workshop in China entitled, ‘Workshop on Microbial Ecology and Bioinformatics analysis from 13.07.2016 to 16.07.2016.
10. Visited Murdoch University, Perth, Australia, Nov 7, 2018 to Feb 5, 2019 on Sabbatical leave and published a review article on Chicken gut microbiome (details in Publications).
11. Participated in the Chinese Association of Microbial Ecology, the 2019 Annual Conference, the 4th Youth Summit and the 1st International Forum for Advanced Microbial Ecology.

D. LIST OF PUBLICATIONS:

I. Books:

- i. Lal, R., Lal, S. Pesticides and Nitrogen Cycle, CRC Press, Florida, USA, 1988.
Vol. 1 Ecological and Methodological Aspects, 138 pp.
Vol. 2 Nitrogen Mineralization, 153 pp.
Vol. 3 Nitrogen Fixation, 170 pp.
- ii. Lal, R., Lal, S. Crop Improvement Utilizing Biotechnology, CRC Press, Florida, USA, pp. 359, 1989.
- iii. Lal, R., Lal, S. Genetic Engineering of Plants for Crop Improvement, CRC Press, Florida, USA. 225 pp., 1993.

II. Chapters contributed:

- a. In e-books of Animal Diversity I, published by NISCAIR in 2006-2007.
 - i. A chapter on Coelenterata.
 - ii. A chapter on Ctenophora .
- b. A chapter contributed in edited Volumes:
 - i. Lal, R., Lal S., Kumari Rekha. Cell Biology, In Text Book of Biotechnology (H.K.Das, Ed.) 1st edition John Wiley, 2004, 1-78.
 - ii. 2nd Edition published in July, 2005.
 - iii. 3rd Revised Edition published in June, 2007.
 - iv. 4th Edition published in May 2010.
 - v. 5th Edition published in 2017: Rup Lal, Sukanya Lal, Rekha Kumari & Charu Tripathi, 2017 Cell Biology in Text book of Biotechnology 5th Edition, June 2017, ISBN/ISSN: 978-81-265-6404-0

III. Practical protocols for undergraduate students published: Life Sciences Protocol Manual, Jan. 2018
DBT Star College Scheme, Published by Department of Biotechnology Block 2, 6th Floor, CGO Complex
Lodhi road, New Delhi-110003 Ministry of Science and Technology, Govt. of India, www.dbtindia.nic.in

- i. Dr. Sukanya Lal 2018, Study of Polyploidy in onion root tips. Unit 4. Genetics, 173-175, In Life Sciences Protocol Manual, DBT Star College Scheme compiled By Dr. P. Hemlatha Reddy and Dr. Suman Govil, Senior Advisor, DBT, published by Department of Biotechnology.
- ii. Dr. Madhu G. Tapadia, Dr. Bimlesh B. Nath, Dr. Sukanya Lal, 2018, Study of Squash polytene chromosome preparation Unit 4. Genetics, 177-183, In Life Sciences Protocol Manual, DBT Star College Scheme compiled By Dr. P. Hemlatha Reddy and Dr. Suman Govil, Senior Advisor, DBT, published by Department of Biotechnology.
- iii. Dr. Sukanya Lal 2018, Barr bodies in Neutrophils . Unit 4. Genetics, 185-188, In Life Sciences Protocol Manual, DBT Star College Scheme compiled By Dr. P. Hemlatha Reddy and Dr. Suman Govil, Senior Advisor, DBT, published by Department of Biotechnology.

E. SUBJECTS TAUGHT TO UNDERGRADUATE STUDENTS:

- i. Principles of Genetics
- ii. Developmental Biology
- iii. Cell Biology
- iv. Molecular Biology
- v. Non- chordates
- vi. Chordates

F. REVIEW ARTICLES AND RESEARCH PUBLICATIONS:

1. Lal, R., Shivaji, S., Lal, S. Use of Microbes for detoxification of pesticides, CRC Critical Reviews in Biotechnology, 3, 1–16, 1986, CRC Press, Florida, USA.
2. Lal S. Saxena, D.M., Lal, R. Effects of DDT, fenitrothion and chlorpyrifos on growth, photosynthesis, and nitrogen fixation in *Anabaena* (Arm 310) and *Aulosira fertilissima*, Agriculture Ecosystem and Environment, 19, 197–209, 1987, Elsevier Science Publishers. B.V., Amsterdam.
3. Lal, S. Saxena, D.M., Lal, R. Uptake, metabolism and effects of DDT, fenitrothion and chlorpyrifos on *Tetrahymena pyriformis*, Pesticide Science, 21, 181–193, 1987, Pesticide Science Society of Chemical Industry, London, England.
4. Lal, S. Microbial accumulation of insecticides, In Insecticide Microbiology (Lal, R., Ed.) Springer Verlag, Heidelberg, 1984, 61–82.
5. Lal, S., Effects of pesticides on symbiotic nitrogen fixation, In Pesticides and Nitrogen Cycle (Lal, R., Lal, S. Eds.) CRC Press, Florida, USA, Chapter 2, Vol. 3, 1988.
6. Lal, S., Effects of insecticides in algae, In Insecticide Microbiology (Lal, R. Ed.) Springer Verlag, Heidelberg, 1984, 203–235.
7. Lal, S., Saxena, D.M., Lal, R. Bioconcentration and metabolism of DDT, fenitrothion and chlorpyrifos in *Anabaena* and *Aulosira fertilissima*, Environmental Pollution, 46, 187–196, 1987. Elsevier Applied Science Publishers, England.
8. Lal, S., Lal, R. Bioaccumulation, metabolism and effects of DDT, fenitrothion and chlorpyrifos on *Saccharomyces cerevisiae*. Arch. Environ, Contam. Toxicol., 16, 753–757, 1987, Springer Verlag, New York.

9. Lal, R., Lal, S., Grund, E., Eichenlaub, R. Construction of hybrid plasmid capable of replicating in *Amycolatopsis mediterranei*. *Applied and Environmental Microbiology*, ASM, 57, 665–671, 1991 Publication Washington, D.C.
10. Lal, R., and Lal, S. Recent Trends in Rifamycin Research, *BioEssays*, 10, 1–6, 1994. The Company of Biological Limited, U.K.
11. Lal, R., Khanna, M., Kaur, H., Srivastva, N., Tripathi, K.K., and Lal, S., Rifamycins: Strain Improvement Programme, *CRC Critical Reviews in Microbiology* 21, 19–30, CRC press, Florida, USA, 1995.
12. Lal, R. Dhanaraj, P.S., Lal, S. and Saxena, D.M., Manipulations of Microorganisms for the degradation of pesticides. *Proc. National Symp. on Pesticides: Crop Protection & Environment*, S. Walia & B.S. Parmar, Eds. Oxford IBH Publishers, New Delhi, 263–279, 1995.
13. Lal, R., Lal, S., Dhanaraj, P.S. and Saxena, D.M. Manipulations of catabolic genes for degradation and detoxification of xenobiotics, *Advances Appl. Microbiology*, 41, 55–95, 1995. Academic Press, New York.
14. Lal, R., Richie, K., Kaur, H., Lal, S., Gartmann, K–H., and Eichenlaub, R., Ghosh, P.K. Engineering Antibiotics Producers to Overcome the Limitation of Classical Strain Improvement Programme. *CRC Critical Reviews in Microbiology*, 22, 201–255, 1996 CRC Press, Florida, USA.
15. Lal, R., Khanna, R., Dhingra, N., Lal, S. Development of cloning vector and improved transformation system for *Amycolatopsis mediterranei* *J. Antibiot.*, 51, 161- 169, 1998. Japanese Antibiotic Research Association, Tokyo.
16. Rekha Kumari, Sanjukta Subudhi, Mrutyunjay Suar, Gauri Dhingra, Vishakha Raina, Charu Dogra, Sukanya Lal, Jan Roelof van der Meer, Christof Holliger, and Rup Lal, Cloning and Characterization of lin Genes Responsible for the Degradation of Hexachlorocyclohexane Isomers by *Sphingomonas paucimobilis* Strain B90. *Applied and Environmental Microbiology*, 68. 6021-6028, 2002.
17. Dhingra, G., Kumari, R.M., Bala, S., Lal, S., Cullum, J. and Lal, R. 2003. Development of cloning vectors and transformation system for *Amycolatopsis*. *Journal of Industrial Microbiology and Biotechnology*. 30(4): 195-204, Springer Verlag Heidelberg, Germany.
18. Sood Utkarsh, Gupta Vipin, Kumar Roshan, Lal Sukanya, Fawcett Derek, Rattan Supriya, Poinern Jai Gerrard Eddy, Lal Rup 2019, Review article: Chicken gut Microbiome and Human Health: Past scenarios, current perspectives and futuristic applications. *Indian Journal of Microbiology*, pp 1-10. Published by Springer India. Online ISSN0973-7715, Print ISSN0046-8991.
19. Hira, P., Sood, U., Chokshet, S., Korpole, S., Lal, S., and Lal, R., 2021, *Mycoplana*, *Bergey's Manual of Systematics of Archaea and Bacteria (BMSAB)* (Eds M.E. Trujillo, S. Dedysh, P. DeVos, B. Hedlund, P. Kämpfer, F.A. Rainey and W.B. Whitman), pp 1-16, DOI: 10.1002/9781118960608.gbm00808.pub2.
20. Nirjara Singhvi, Priya Singh, Om Prakash, Vipin Gupta, Sukanya Lal, Andreas Bechthold, Yogendera Singh, Rakesh Kumar Singh, Rup Lal, 2021, Differential mass spectrometry-based proteome analysis unveil major regulatory hubs in rifamycin B production in *Amycolatopsis mediterranei*, *Journal of Proteomics*, Elsevier, Wiley online library, <https://doi.org/10.1007/s12088-021-00929-3>
21. Akshita Puri, Abhay Bajaj, Sukanya Lal, Yogendera Singh & Rup Lal, 2021, Phylogenomic Framework for Taxonomic Delineation of *Paracoccus* spp. and Exploration of Core-Pan Genome, *Indian J Microbiology*, <https://doi.org/10.1007/s12088-021-00929-3>
22. Gauri Garg Dhingra, Anjali Saxena, Aeshna Nigam, Princy Hira, Nirjara Singhvi, Shailly Anand, Jasvinder Kaur, Jaspreet Kaur, Ankita Dua, Vivek Negi, Vipin Gupta Utkarsh Sood, Roshan Kumar, Sukanya Lal, Helianthous Verma, Mansi Verma, Priya Singh, Charu Dogra Rawat, Charu Tripathi, Chandni Talwar, Shekhar Nagar, Nitish Kumar Mahato⁶ Om Prakash, Mona Singh, C. Kuhad, Yogendra Singh, Banwari Lal, Sunil Pabbi, Namita Singh, V. C. Kalia, Rup Lal, 2021, *Microbial World: Recent Developments in Health, Agriculture and Environmental Sciences*. An Annual Conference Organized by Association of Microbiologists of India and Indian Network for Soil Contamination Research, *Indian J Microbiol.*, 61(2), pp 111-115. DOI <https://doi.org/10.1007/s12088-021-00931-9>

23. Shailly Anand , Sukanya Lal , Utkarsh Sood, Vipin Gupta, Gauri Garg Dhingra, Renu Solanki, Jasvinder Kaur , Roshan Kumar , Anjali Saxena, Ankita Dua, Charu Tripathi, Chandni Talwar , Charu Dogra Rawat, Harpreet Kaur , Helianthous Verma , Jaspreet Kaur , Mansi Verma , Mona Singh , Princy Hira , Nirjara Singhvi , Nitish Kumar Mahato , Om Prakash , Jaya Malhotra , Rup Lal , Vipin Chandra Kalia 2021, The Alphabet of the Elementary Microbiology: Revisited, Indian J Microbiology, 61, pp:397-400, <https://doi.org/10.1007/s12088-021-00987-7>

G. POSTER PRESENTATIONS:

- i. **Lal, S.,** Lal, R., Effects of DDT, fenitrothion and chlorpyrifos on blue–green algae, presented at the International Conference of Pesticide Toxicity, Safety and Risk Assessment held at Lucknow (Oct. 27–31, 1985) India.
- ii. Saini, A., Reddy, B.V.P., **Lal, S.,** Saxena, D.M., Response of blue green alga *Anabaena* to organochlorine, organophosphorus and carbamate insecticides, presented at All India Cell Biology Conference held at Delhi (Dec. 25–27, 1982), India.
- iii. Lal, R., **Lal, S.,** Detoxification of pesticide residues utilizing microbial biotechnology, presented at National Symposium on role of Biotechnology in Crop Protection (Jan. 23–35, 1987), Bidhan Chandra Krishi Vishwavidyalaya, Kalyani, West Bengal, India.
- iv. Rekha Kumari, Sanjukta Subudhi, Mrutyunjay Suar, Gauri Dhingra, Vishakha Raina, Charu Dogra, **Sukanya Lal,** Jan Roelof van der Meer, Christof Holliger and Rup Lal. Cloning and Characterization of *lin* Genes responsible for the Degradation of Hexachlorocyclohexane Isomers in *Sphingomonas paucimobilis* strain B90 .Poster presented at the Mini- Symposium held in Department of Zoology, University of Delhi, Delhi, October 7- 8, 2002.
- v. Vishakha Raina, Charu Dogra, Rinku Pal, Mrutyunjay Suar, **Sukanya Lal,** Christof Holliger and Rup Lal. Bioremediation of pesticide contaminated soil using *Sphingomonas paucimobilis* B90: Studies on growth, degradation and carrier based inoculum. Poster presented at the Mini- Symposium held in Department of Zoology, University of Delhi, Delhi. October 7- 8, 2002.
- vi. Presented a poster in the INSCR International Conference – 2017 (IIC-2017)^[SEP] Theme: “Role of Microbe-Plant-Animal Interactions in Human Health” Dates: 26th -28th September 2017, Comparative Codon and Amino Acid Usage Bias among the sequenced Genomes of Bacterial Phylum Firmicutes. Priyakshi Gogoi, Sampreeti Tahbaldar, Priyanka Chaudhary, Vishal Vikram Singh, Taru Jain, Harsh Dhankar, Deepa Sethi, Vaishali Ahluwalia, Shristhi Nischal, Ankur Bhardwaj, Anand Pushker, **Sukanya Lal,** Rup Lal and Devi Lal.
- vii. Vohra S, Yadav S, Singh A, Thanduanlung K, Soni K, Verma H, Lal D, Rawat CD, **Lal S** “Comparative Genomic Analysis of Mycobacterium tuberculosis revealed their potential Total Drug Resistance (TDR) ability” poster presented at the IIC-2018 held at School of Biotechnology, KIIT University on 27th September, 2018.
- viii. Saxena A, Anushka, Gangwar A, Karn K, Pandey S, Verma H, Lal D, Rawat CD, **Lal S** “Isolation of Hexachlorocyclohexane (HCH) Degrading bacteria from HCH Contaminated Soil from an HCH Dumpsite” poster presented at the IIC-2018 held at School of Biotechnology, KIIT University on 27th September, 2018.
- ix. Shashank Gaurav, Awantika, Aanchal Singh, Kankshi Gupta, Rati Bhardwaj, Devi Lal, Dr. Helianthous Verma, Dr. Charu Dogra Rawat and **Sukanya Lal,** Managing COVID-19 crisis: Government Initiatives and innovation ideas.,’ Poster presented in International E-Conference And Hands on Workshop on “ Health and Research in Current Scenario: With special emphasis on COVID-19 Virus Genomics and Pathogenicity, July-14-17, 2020.

H. PARTICIPATIONS:

- i. Participated in a UGC sponsored workshop on, “Environmental assessment of water-borne diseases”. Oct 29, 1999, held at the Department of Environmental Biology and Microbiology, University of Delhi, South Campus, Benito Juarez Road. New Delhi-110021.
- ii. Participated in “Wild life conservation in Urban Environments” Sponsored by Deptt. of Environment Forests and Wild life. Govt. of NCT of Delhi on 6th Oct. 2000, organized by centre for Environmental Management of degraded Ecosystems; School of Environmental studies, University of Delhi., Delhi-110007.
- iii. Attended one day workshop on “How safe is safe Drinking Water”? On Feb 2, 2001 organized by Dept. of Environmental Biology, School of environmental studies, University of Delhi, Delhi-110007.
- iv. Participated in Indo Swiss Collaboration in Biotechnology (ISCB) inaugural symposium hold on 12th-13th Feb 2001 in India Habitat Centre. Lodhi Road.
- v. Participated in Eco-Club Teachers Training Programme held on 21st Feb. 2003 organized by Department of Environment, Govt. of NCT of Delhi and Ramjas College, University of Delhi, Delhi-110007.
- vi. Attended a workshop for practical training on Genetics, genomics and Biotechnology organized by Department of Zoology, University of Delhi, from August 10-12, 2006.
- vii. Attended AICBC 2007, 30th All India Cell Biology conference and Symposium on “Molecules to Compartments: Cross-Talks and Networks”, under the auspices of Indian Society Of Cell Biology organized by Department of Zoology, University of Delhi, February 2-4, 2007.
- viii. Participated in the International Symposium on Ciliate Biology, hosted by Sri Guru Tegh Bahadur Khalsa College, University of Delhi, Delhi, India, 6-7 February, 2007.
- ix. Participated in the 49th Annual Conference of the Association of Microbiologists of India: International Symposium on Microbial Biotechnology: Diversity, Genomics and Metagenomics hosted by Department of Zoology, North Campus and Department of Microbiology, South Campus, University of Delhi, Delhi, India, 18th -20th November, 2008.
- x. Attended a Computer workshop organized by ILL in the Ramjas College. 2009-2010.
- xi. Attended a workshop organized for teachers of B.Sc Honours and BSc. Life Sciences course, by Pearson’s publication held in Ramjas College for one day. 30.09.2010.
- xii. Attended a workshop in department of Zoology for 2days(13.11.2010 and 14.11.2010) on Drosophila genetics. 2010 conducted by Dr. Anju Srivastva and Dr. Namita Aggarwal.
- xiii. Attended a “*Microbial World: Recent Innovations and Future Trends*” SCIENTIFIC PROGRAM KIIT University, Convention center, Campus 6, Bhubaneswar, Odisha, India November 22-25, 2012.
- xiv. Attended one day workshop cum demonstration of Laser dissecting Microscope in DRDO, Timarpur on 23.01.2013, along with 2 students of BSc. Zoology Hons 4th semester named Akanksh Singh and Priya Saini.
- xv. Attended an ASM virtual Workshop on Scientific Writing and Publishing in Sri Venkateswara College, University of Delhi (South Campus), New Delhi, Delhi on 6th February, 2013.
- xxiii. Acted as Coordinator in Biochemistry Workshop on 12-14th March, 2014 organised by Department of Botany.
- xxiv. Attended ‘Digital Literacy Teacher Training’ organized under DBT Star College Project in Ramjas College from 9-10 June, 2015..
- xxv. Attended a lecture of Professor Eric Lander, the Professor of Biology at the Massachusetts Institute of Technology, former member of the Whitehead Institute, and founding director of the Broad Institute of MIT and Harvard organized by DBT at AIIMS on 23.02.2015 on the topic entitled "The Human Genome and Beyond. A 35-year Journey of Genomic Medicine" and took 50 students and 5 teachers from Ramjas College, Delhi.
- xxvi. Participated as coordinator in the workshop “Technique in Biology’ held n 12th, 19th and 28th September, 2015.
- xxvii. Participated in workshop-cum-camp on Foldscope, an origami microscope at Sri Venkateswara college on 16.12.2015.

- xxviii. Attended ‘ Global Biotechnology Summit- Celebrating Biotechnology destination India,’ on 5th-6th February, 2016 at Vigyan Bhawan, New Delhi.
- xxix. Attending a Workshop in China entitled, ‘Workshop on Microbial Ecology and Bioinformatics analysis from 13.07.2016 to 16.07.2016.
- xxx. Attended ‘ IPR workshop for College teachers: Training the Trainers on 10th-11th August, 2016 organized under the aegis of MHRD IPR CHAIR, Centre for Science Education & Communication & Ramjas College, Department of Botany.
- xxxi. Attended workshop on Microbial genomics and Metagenomics held on 22nd September, 2016 at the Department of Zoology, University of Delhi.
- xxxii. Coordinated and attended, Undergraduate Science Teachers’ Workshop on January 31st, 2017 organized jointly by India-Bioscience and DBT Star College, Department of Zoology, Ramjas College, University of Delhi, Delhi.
- xxxiii. Attended Coordinator’s meeting held at Jalandhar on 11th-12th, April, 2017 and presented 4 posters prepared by participating departments exhibiting the skill developing activities of the students under DBT Star College Project.
- xxxiv. Attended ‘DBT Technology Day Function’ on 11th May, 2017 at Vigyan Bhawan graced by the Hon’ble President of India, Hon’ble Minister for S&T & ES, Hon’ble MOS for S&T and ES.
- xxxv. Attended ‘National Conference on Technological empowerment of Women’s Day’ at Vigyan Bhawan, New Delhi on March 9th, 2018 organized by the National Academy of Sciences, India (NASI) .
- xxxvi. Organized a Workshop on “Promoting Intergenerational Bonding” in Ramjas College on 30 January 2018 in collaboration with AIWEFA (All India women’s Education Fund Association, Hannah Sen Cottage, Lady Irwin College, New Delhi.
- xxxvii. Attended one day ‘Workshop on RTI Act, 2005’ on 19th September, 2018 in Conference Centre, University of Delhi, North campus, opposite Department of Botany.
- xxxviii. Attended one day Orientation programme on ‘Modules of PFMS on 22nd September, 2018 organized by Sri Venkateswara College, South Campus, University of Delhi.
- xxxix. Attended and participated in a Workshop on Innovations and Good Practices in Institutional Governance at Higher education on 28th February to 2nd March, 2019 at NIEPA (National Institute of Educational Planning and Administration) , New Delhi.
- xl. Attended Workshop on ,’ Implementation of the UGC (Prevention, Prohibition and Redressal of Sexual Harassment of Women Employees and Students in Higher Educational Institutions) Regulations 2015, on 12th March, 2019 organized by Centre for Professional Development in Higher Education (CPDHE-UGC-HRDC), University of Delhi.
- xli. Co-Chair & participated in the National seminar on’ Recent trends of Research in Medicinal Plants and Applied Sciences, 27th March, 2019, organized by Department of Botany, Ramjas college.
- xlii. Attended and organized Workshop on Mental health on 16th Sept., 2019 by Wellness and counselling unit, Ramjas College and DBT Star College Project, Dept. of Zoology.
- xliii. Participated in the Chinese Association of Microbial Ecology, the 2019 Annual Conference, the 4th Youth Summit and the 1st International Forum for Advanced Microbial Ecology at Changsha, China on 28th to 31st Oct., 2019
- xliv. Participated in an on-line International Yoga Day National seminar on “ Yoga practices to ease corona virus fears-breathing and anxiety” on 21st June, 2020, Organized by Department of Physical Education and Sports Sciences, Ramjas College, Delhi
- xlv. Participated in International Conference on “ How to Build up Efficient Immunity against respiratory infections including Covid-19 issue.” On 28th June, 2020 Organized by at Kalindi College, University of Delhi
- xlvi. Participated in International e-Conference on “Health and Research in Current Scenario: with special emphasis on COVID-19 virus Genomics and pathogenicity, on 20th July, 2020, Organized by Sri Venkateswara College, DU and Phixgen Pvt. Ltd.

- xlvi. Participated in the webinar on “Immunological Perspectives on COVID-19 Pandemic: A Discussion” on 3rd August, 2020, Organized by Hindu College, DU under IQAC.
- xlviii. Member of Advisory Committee member of the National Level One Week Online Faculty Training program on “Pedagogical Training for Effective Teaching & Learning” held from 3rd August to 10th August, 2020, Organized by DDU, DU and K.T.H.M College, Nashik under IQAC and DBT star College Program
- xlix. Coordinated the organization of webinar: ‘How to read scientific literature & introduction to MANAV-the Human Atlas initiative on 3rd Oct., 2020, under DBT Star College Project, IQAC, Ramjas College & Indian Institute of Science Education & Research (IISER) Pune, India.
 - 1. An Advisor for the International E-Conference “ Neuroeunoia 2020: A Neuroscience Affair on 17th Oct., 2020 Organized by Gargi College under IQAC & Indian Academy of Neurosciences.
 - li. Attended two days online course for teachers of Universities and colleges on ‘Conservation Issues in India’ on 27th to 28th Jan., 2021 online, Organized by Central Academy for State forest Services (CASFOS), Govt. of India Ministry of environment Forest and Climate Change
 - lii. Chaired Session 5 on 4th Feb.,2021 and participated: AMI-INSCR Innovative Research (Faculty and students) of a 61st Annual International conference of the Association of Microbiologists of India and Indian Network for Soil Contamination research (INSCR) from 3rd Feb to 5th Feb 2021, organized by The Association of Microbiologists of India (AMI), Indian Network for Soil contamination Research (INSCR) in association with The Energy & Resources Institute (TERI), University of Delhi (DU) & Indian Agricultural Research Institute (IARI) and Indian National Science Academy (INSA).
 - liii. Participated in ‘Women in Science Event’: WISE, International Symposium on International Day for Women and Girls in Science 11th Feb., 2021, organized by Gargi College, University of Delhi.
 - liv. Session Chair on 26th Feb., 2022 in the International e-Conference on “Mitigating environmental issues by sustainable approaches (ICMCESA-2022) from Feb 22-28. 2022, On-line, Organized by IQAC Acharya Narendra Dev College, University of Delhi
 - lv. Participated as a Keynote session Chair in Health 2021 Virtual International Conference on “Cancer Biology: Advances & Challenges” on 12th Nov., 2021 organized by Dshbandhu College, Zoology Department under IQAC & DBT Star College Project.
 - lvi. Participated in Synergia’s Inaugural Lecture, ‘ Microbiome: Human Health, Environment and Society’ on 16th Feb., 2022 Organized by Dshbandhu College, University of Delhi
 - lvii. Attended the National Webinar entitled, ‘ Understanding Gender Discrimination & aiming for a Gender just World’.on 16th Feb., 2022 Organized by Department of Chemistry, Ramjas College
 - lviii. Attended an On-line workshop on ‘Empowering Women through Entrepreneurship’. On 8th March, 2022 online, Organized by the Women Development Committee (WDC) 2021-22 and IQAC Ramjas College

I. MEMBERSHIP OF ACADEMIC BODIES:

- i. Life member of the ‘Association of Microbiologists of India (AMI), Life membership no. 4211-2015.
- ii. Member of American Society of Microbiology (ASM), ASM Member ID 57051757-2012-2013
- iii. Life member of the Indian Network Soil Contamination Research, Life membership no. 2021-101.

J. REFRESHER COURSES ATTENDED:

- i. Attended a 3 weeks professional development programme in life sciences entitled “Refresher course in Molecular Biology” (Code LS-1) conducted at CPDHE, University of Delhi, Delhi from Feb. 20th 1995 to March 10th 1995.
- ii. Attended a 3 weeks professional development programme, Refresher course in Life Science entitled, “Microbial Biotechnology, conducted by the CPDHE, University of Delhi, from Dec. 23, 1998 to Jan 12th 1999.
- iii. Attended a 3 weeks refresher course entitled “Recent advances in Molecular Biology, conducted by the CPDHE, University of Delhi, Delhi from April 12, 2001 to May 2nd, 2001.

K. ORIENTATION PROGRAMME:

- i. Participated in an “orientation programme for Delhi University and College teachers on renewable energy Technologies and Environment held in Bakoli, Alipur, Delhi, from March 5th to March 7th 1998.

L. ADMINISTRATION RESPONSIBILITIES:

- (i) Time table in-charge in Zoology Department in the session 1996-97, 1997-98, 2003-2004
- (ii) Member of Purchase Committee of Zoology Department in 1996-97, 2000-2001
- (iii) Superintendent of the annual practical examination during the session 1997-1998.
- (iv) Convener of Library Committee during the academic session 1998-1999.
- (v) Admission in charge of Zoology Department during the academic session 1999-2000, 2005-2006
- (vi) Member of College Academic Standard Committee in the year 2001-2002.
- (vii) Member of College Executive Committee in the year 2002-2003.
- (viii) Superintendent of department mid term exam during 2002-2003.
- (ix) Convener of Purchase committee of Department 2002-2003 and 2003-2004.
- (x) Teacher In charge, Ramjas College in 2002-2003 and 2003-2004.
- (xi) Member BMPC (Building Maintenance and purchase committee) 2004-2005, 2005-2006, 2006-2007, 2007-2008.
- (xii) Member BMPC (Building Maintenance and purchase committee) 2004-2005, 2005-2006, 2006-2007, 2007-2008.
- (xiii) Member Monitoring committee 2006- 2007, 2007-2008
- (xiv) Member Hostel committee (for boys and girls) 2004-2005, 2005-2006 2006-2007.
- (xv) Secretary staff association of Ramjas college March 2007-March 2008.
- (xvi) Member Monitoring Committee March 2007-March 2008
- (xvii) Member of College Executive Committee in the year 2006-2007
- (xviii) Member of College Executive Committee in the year 2007-2008
- (xix) Member of College Academic Standard Committee in the year 2008-2009.
- (xx) Secretary staff association of Ramjas college March 2008- March 2009.
- (xxi) Member Monitoring Committee March 2008-March 2009
- (xxii) Member Courses committee of the Deptt of Zoology, University of Delhi.-2008-2009, 2009-2010, 2010-2011
- (xxiii) Ex-officio member(Secretary, Staff Association) in the Executive Committee of the Ramjas college. 2010-2011

- (xxiv) Convenor and member of the Hons. and BSc. Life Sciences (Cell and Molecular Biology, Genetics and Genomics and applied Biotechnology papers) Syllabus committee for the Semester system to be implemented in 2011 onwards in the colleges of University of Delhi. 2009-2010.
- (xxv) Ex-officio member(Secretary, Staff Association) in the Executive Committee of the Ramjas college. 2011-2012.
- (xxvi) Time-Table coordinator of Department of Zoology, Ramjas College(Semester 3, semester 4 and annual mode 3year: July 2010-2011, and January 2012.
- (xxvii) Bursar in Ramjas College: 4th May 2012 till 4th May 2014
- (xxviii) Member New building Committee, Ramjas College, 2012-2013, 2013-14
- (xxix) Member Finance Committee, 2013 ---2014
- (xxx) Superintendent, Practical examinations of Department of Zoology, 2013-2014
- (xxxi) Library committee: Departmental coordinator of library committee, 2014-2015
- (xxxii) Co- Convenor of College Admission Committee in the year 2015-2016
- (xxxiii) Convenor Zoology Admissions in the year 2015-2016
- (xxxiv) Appointed as the Co- Convenor of the College admission committee 2015-2016.
- (xxxv) Member of the Committee of Centennial celebrations of Ramjas College 2015-2016.
- (xxxvi) Member of Hostel committee of Ramjas College-2014, 2015 and 2016.
- (xxxvii) Member of the Garden committee of the Ramjas College from 2016-2017
- (xxxviii) Member of Internal Complaints Committee of the college in terms of section 4 (I) of sexual harassment of women at workplace Act, 2013 from 11th August, 2016 for a period of 3 years.
- (xxxix) Member of the Garden committee of the Ramjas College from 2017-2018
- (xl) Member of the BMPC committee of the Ramjas College from 2017-2018
- (xli) Appointed as an Additional Superintendent for College theory and Practical exams held in Nov/Dec 2018.
- (xlii) Teacher-in-charge, Department of Zoology, Ramjas College from 2nd Jan, 2018 to 1st Jan 2020 (two years).
- (xliii) Appointed as a Deputy Superintendent for College theory and Practical exams held in April-May 2018, Practical and Theory from 27.04.2018 to 19.05.2018
- (xliv) Member IQAC (Internal Quality Assurance Cell) committee of the Ramjas college (May 2018 onwards).
- (xlv) Appointed by the college as the PIO (Public Information Officer) from from 6th March 2017 for a period of two years till 14th May, 2019.
- (xlvi) Member of anti-ragging committee from 2nd Jan, 2018 to 1st Jan 2020 (being TIC).
- (xlvii) Member of the screening committee to scrutinize the applications for the permanent assistant professors in the college dated 24.01.2020.
- (xlviii) Time table Coordinator of the department in the year 2020
- (xlix) New teacher post committee member in the year 2020
- (l) Admissions Committee convenor of the Department in the year 2021

- (li) Academic Standard Committee member in the year 2021
- (lii) Help desk Committee Convenor, UG & PG Admissions in the year 2021
- (liii) Member Student Information system, 2022

M. SYLLABUS REVISION:

- (i) Coordinator for the revision of the course titled, 'Principles of Genetics' Course Code: 32231502 in the Undergraduate Curriculum Revision Committee-2019, University of Delhi.
- (ii) Coordinator for UGCF 2022 as per NEP guidelines for DSC paper of Zoology Hons., entitled, 'Principles of Genetics', May 2022

N. OUTREACH ACTIVITIES:

- i. Coordinated and attended BaSIC (Bani School Innovation camp organized by Prof. Rup Lal under the aegis of INSA Outreach program and University of Delhi in association with DBT Star College Project, Department of Zoology on December 23-24, 2016.
- ii. Coordinated and attended BaSIC-II (Bani School Innovation camp II organized by Prof. Rup Lal under the aegis of INSA Outreach program and University of Delhi in association with DBT Star College Project, Department of Zoology on Jan. 7, 2018.
- iii. Organized and participated in 'Bani School Innovation Camp II, 2017-2018', Dream school, 6th to 8th March 2018
- iv. Outreach activity: Bani School Innovation Camp III, 2018-2019, Dream School, Govt. School Bani, Hamirpur, Himachal Pradesh, 14th to 16th Oct., 2018 organized by
- vi. Organized and participated in Biar School , Himachal Pradesh, Outreach Programme, 21st Oct., 2019, organized by Ramjas College, ANDC, DDU, DU & INSA
- vii. Organized and participated in Bani School Outreach Programme, 22nd Oct., 2019, Ramjas College, ANDC, DDU, DU & INSA

- viii. Coordinator of Microsphere: An International Outreach Program on occasion of International Microorganism Day on 17th Sept., 2021, Organized by DDU, Gargi College, IIT Roorkee, KMC, Ramjas College, PG Dept Zoo, MU., & Phixgen Pvt. Ltd. Gurugram in association with ANDC, Maitreyi College, SV College & C.M.P College AU

O. ACTIVITIES OUTSIDE THE COLLEGE:

- i. Member of local managing committee of Kulachi Hansraj Model School, Ashok Vihar, Delhi. March 2008- March 2009.
- ii. Acted as a Chairperson in the board of appointment of school science teachers in Kendriya Vidyalaya Sansthan near JNU Delhi, 4th to 15th October, 2008.
- iii. Participated in the training programme of Indo- Afganistan collaboration. Took Cell biology practicals and theory classes.
- iv. Member of local managing committee of Kulachi Hansraj Model School, Ashok Vihar, Delhi. March 2009- March 2010.
- v. Member of the Departmental Research Committee, Department of Environmental Biology, University of Delhi. 2010-2011 and 2011-2012.
- vi. Participated in the Jury process of Department of Science & Technology (DST) sponsored INSPIRE AWARD, National level Exhibition & project competition (NLEPC)-2012 from 20th October to 22nd October, 2012.
- vii. Participated in the Jury process of Department of Science & Technology (DST) sponsored INSPIRE AWARD, National level Exhibition & project competition (NLEPC)-2013 from 8th October to 10th October, 2013

- viii. Acted as a subject expert for the appointment of TGT General Science in the Duzin Photang School, Zanskar, a branch school of CIBS, Leh- Ladakh on 15th February, 2013.
 - ix. Member Women's Association, University of Delhi, Delhi-110007, 2011-2014.
 - x. Co-Convener, Garden Committee, DUWA (Delhi University Women Association) 2011-2014.
 - xi. An expert in DBT- Biotech Industrial Training Programme (BITP) 2015-16, Selection Committee Meeting on 16.07.2015.
 - xii. An expert in DBT- Biotech Industrial Training Programme (BITP) 2016-17 Selection Committee Meeting on 22.07.2016.
 - xiii. An expert in DBT- Biotech Industrial Training Programme (BITP) 2017-18 Selection Committee Meetings 12th October, 2017.
 - xiv. An expert in DBT- Biotech Industrial Training Programme (BITP) Selection Committee Meeting on 17.08.2018.
 - xv. Jury member in the 'INSPIRE AWARDS MANAK' 7th NLEPC-reg. Million minds augmenting national aspiration and knowledge on 14th Feb., 2019 at Nalanda Ground, IIT Delhi.
 - xvi. An expert in DBT- Biotech Industrial Training Programme (BITP) 2019-20, Selection Committee Meeting on 24.10.2019.
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