

CURRICULUM VITAE



Dr. Sandhya Rai

PERSONAL DETAILS:

Name	: Sandhya Rai
Mother's name	: Vindhya Rai
Father's name	: Ram Rai
Date of Birth	: 19th Jan, 1982
Category	: General
Nationality	: Indian
Gender	: Female
Marital Status	: Married
Languages Known	: English, Hindi
Permanent Address	: House No. 68, Street No. 15; Khasra No. 122, Village Wazirabad, Delhi-110084.
Address For Correspondence:	House No. 68, Street No. 15; Khasra No. 122, Village Wazirabad, Delhi-110084.
Contact Telephone No.	: 9818474665
E-mail Address	: sandhyarai1901@gmail.com

TEACHING EXPERIENCE:

Ad-hoc Assistant Professorship:

- Working as Ad-hoc in Deshbandhu College, University of Delhi from 10-8-2013 till date (16 classes per week).
- Four months one week teaching experience in Zakir Husain College, University of Delhi from 07-08-2012 to 15-12-2012 (18 classes per week).

- One and a half year teaching experience in Gargi College, University of Delhi from 03-08-10 till 03-01-2012 (21 classes per week).
- Four months teaching experience in Zakir Husain College, University of Delhi from 01-08-2009 to 30-11-2009 (19 classes per week).

Guest lectureship:

- Three and a half months teaching experience in Ramjas College, University of Delhi from 09-01-2013 to 22-04-2013 (6 classes per week).
- Three months teaching experience in Sri Venkateswara College, University of Delhi from 22-01-2013 to 22-04-2013 (10 classes per week).

RESULT OF CSIR-UGC NET EXAMINATION:

- NET (lectureship) cleared in Dec 03.
- CSIR-JRF NET cleared in Dec 04.

ACADEMIC QUALIFICATIONS:

Examination passed	School/ Institution	Board/Univ.	Year
Ph. D. Zoology	Dept. of Zoology	University of Delhi	Submitted in 2010 Awarded in 2011
M.Phil. Zoology	Dept. of Zoology	University of Delhi	2005
M.Sc. Zoology	Kirori Mal College	University of Delhi	2004
B.Sc. Zoology(H)	Acharya Narendra Dev College	University of Delhi	2002
10+2 th	Vivekanand School, Delhi	C.B.S.E.	1999
10 th	Vivekanand School, Delhi	C.B.S.E.	1997

SPECIALIZATION:

- **Ph.D.-Molecular Biology**

Awarded Ph.D. degree in the Annual Convocation of University of Delhi in February 2011. The title of the thesis is “**Evaluation of *nifH* as biomarker for Nitrogen fixing potential in soil using metagenomics**”.

RESEARCH EXPERIENCE:

- Research work highlights on
 - Analysis of environmental DNA for specific gene pools (16SrDNA and *nifH* gene).
 - Soil microbial community diversity analysis using metagenomic approaches.
 - Analysis of the spatial and temporal dynamics of soil diazotrophic community structure.
 - To find the relationship between microbial community structure and ecosystem functioning.
 - Study of diversity of endosulfan degrading *ese* gene in the soil DNA.
 - Study and analysis of microbiome

- M.Phil. Dissertation entitled “**Bioefficacy of DiPel-8L (*Bacillus thuringiensis* var. *kurstaki*) on F₁ progeny of substerilised male moth, *Spodoptera litura* (Fabr.)**” submitted at Department of Zoology, University of Delhi.

PUBLICATIONS:

- 1) **Sandhya Rai**, Rai G. Kumar, A. (2022). **Eco-evolutionary impact of ultraviolet radiation (UVR) exposure on microorganisms, with a special focus on our skin microbiome. *Microbiological Research*, 260: 127044** (Impact Factor- 5.415; ISSN No. 0944-5013). <https://doi.org/10.1016/j.micres.2022.127044>

- 2) **Sandhya Rai** and Kumar, A. (2021). **Bacteriophage therapeutics to confront multidrug-resistant *Acinetobacter baumannii*-a global health menace. *Environmental Microbiology Reports*. (Impact Factor- 3.541; ISSN No. 1758-2229). DOI: [10.1111/1758-2229.12988](https://doi.org/10.1111/1758-2229.12988)**

- 3) **Sandhya Rai**, Singh, D.K. and Kumar, A. (2021). **Microbial, environmental and anthropogenic factors influencing the indoor microbiome of the built environment. *Journal of Basic Microbiology*, Volume 61, Issue 4, 267-292.** (Impact Factor- 2.281; ISSN No. 1521-4028). <https://doi.org/10.1002/jobm.202000575>

- 4) **Sandhya Rai**, Dileep K. Singh and K. Annapurna. (2015). **Dynamics of soil diazotrophic community structure, diversity and functioning during the cropping**

period of cotton (*Gossypium hirsutum*). Journal of Basic Microbiology, Volume 55, Issue 1, p-62-73. (Impact Factor- 2.281; ISSN No 1521-4028). DOI: [10.1002/jobm.201300867](https://doi.org/10.1002/jobm.201300867)

- 5) **Sandhya Rai**, Dileep K. Singh and K. Annapurna. (2014). **Evidence of diazotrophic community structure in cotton agroecosystem**. Indian Journal of Applied Research. Volume 4, Issue 2, p. 3-6. (Impact Factor- 6.03 (SJIF); ISSN No 2249 –555X).
- 6) **Sandhya Rai**, Dileep K. Singh and K. Annapurna. (2013). **Diazotrophic Community Structure and Functioning in the Soil of Crop Plants (Legumes Versus Non-Legumes) at Two Depths**. International Journal of Scientific Research. Volume 2, Issue 11, p. 511-514. (Impact Factor- 5.711 (SJIF); 0.3317; ISSN No 2277 – 8179)
- 7) **Sandhya Rai**, Dileep K Singh, K Annapurna. (2010). **Dynamics of soil microbial community structure and activity during the cropping period of cotton**. In: Gilkes RJ, Prakongkep N, editors. Proceedings of the 19th World Congress of Soil Science; Soil Solutions for a Changing World; **ISBN 978-0-646-53783-2**; Published on DVD; <http://www.iuss.org>; Symposium 4.1.1; Valuing the soil's natural capital; 2010 Aug 1-6. Brisbane, Australia: IUSS; 2010, pp. 5-8.

Chapters Written:

1. **Sandhya Rai**, Kumar, A., Singh, I. K. and Singh, A. 2020. Seed borne diseases and its management. In Tiwari A. K. (eds.), Advances in Seed production and Management. Springer, (eBook ISBN 978-981-15-4198-8; DOI: 10.1007/978-981-15-4198-8).
2. Developed E-lesson for post-graduate course entitled “Epigenetics” for NME-ICT (National Mission on Education Information Communication Technology) in Zoology under MHRD Project (2016).

Nucleotide sequences submitted to NCBI:

- ❖ 43 sequences are submitted to NCBI (National Center for Biotechnology Information) with Accession Numbers from HM063700 to HM063742.

Papers presented in International Conference:

- 1) **Role of microbiome in cancer immunotherapy.** S. Dutta, **Sandhya Rai**. HEALTH 2021 Virtual International Conference on “CANCER BIOLOGY: Advances & Challenges” organized by Deshbandhu College, University of Delhi, Delhi on November 11-13, 2021. OP: T6_O_16. P 89.
- 2) **Biomarkers of nano-toxicogenetics.** **Sandhya Rai**, Amod Kumar and Parimal Kumar Khan. International Conference via virtual platform on “Nano-medicine: Biomolecules for Human Health (NBHH 2021)” organized by Kirori Mal College, University of Delhi from September 27 to 28, 2021.
- 3) **Hypoxia: decoded at molecular level.** S. Sharma, **Sandhya Rai**, M. Sengar. International Conference on "Natural Products and Human Health (ICNPHH-2020)" organized by Deshbandhu College, University of Delhi, Delhi on February 27-29, 2020. OTH0039, P-120. ISBN: 9-788194-428237
- 4) **Birds of Delhi: ‘A lost cause’?** A. Dwivedi, **Sandhya Rai**, A. Chakraborty and K. Sarkar. International Conference on “Changing Environment: Understanding the Emerging Challenges and their Management Strategies (ICKC 2019)” organized by Kalindi College, University of Delhi, Delhi on April 11-12, 2019. PP 6.
- 5) **Leopards and humans: co-existence or conflict?** A. Chakraborty, **Sandhya Rai**, A. Dwivedi and K. Sarkar. International Conference on “Changing Environment: Understanding the Emerging Challenges and their Management Strategies (ICKC 2019)” organized by Kalindi College, University of Delhi, Delhi on April 11-12, 2019. PP 9.
- 6) **Dynamics of soil *nifH* community structure and function in the cotton rhizospheres.** **Sandhya Rai**, D.K. Singh, and K. Annapurna. INSCR International Conference (IIC-2017) on ‘Role of Microbe-Plant-Animal Interactions in Human Health’ held at University of Delhi, Delhi from September 26-28, 2017.
- 7) **Optimization of soil DNA extraction: a comparative study.** **Sandhya Rai**, Amod Kumar, D.K. Singh, and K. Annapurna. 49th Annual Conference, Association of Microbiologists of India: International symposium on ‘Microbial Biotechnology, Diversity, Genomics and Metagenomics’ held at University of Delhi from November 18-20, 2008. PP 6.
- 8) **Genetic diversity analysis of *nifH* gene pools in soils cultivated with different crop plants.** **Sandhya Rai**, D.K. Singh, and K. Annapurna. 49th Annual Conference, Association of Microbiologists of India: International symposium on ‘Microbial

Biotechnology, Diversity, Genomics and Metagenomics' held at University of Delhi from November 18-20, 2008. PP 20.

Papers presented in National Symposium:

- 1) "Environmental Economics and Carbon Footprinting: The Light at the End of the Tunnel". Aritra Chakraborty, **Sandhya Rai** in Fourth National Symposium on Environment: Green Technology for Environmental Sustainability organized at Deshbandhu College, University of Delhi on September 25, 2018. OP 25.
- 2) "Microorganisms: A promise in Cleaning Environment Arsenic Contamination". **Sandhya Rai** and Amod Kumar. Workshop on "Skill Development to Build a Clean India" organized by Deshbandhu College, University of Delhi in collaboration with CSR, Oil and Natural Gas Corporation Ltd. held on June 7-8, 2018. PP 25.
- 3) Paper presented with students "Lost Wings of Delhi". Kaushik Sarkar, **Sandhya Rai** and Nikhil Sharma in Third National Symposium on "Environment: Challenges *Generation Next*" organized at Deshbandhu College, University of Delhi on March 31, 2017. PP 5.
- 4) Oral Presentation with students "Man-Animal Conflict: A battle with the elephants". Kaushik Sarkar, Nikhil Sharma and **Sandhya Rai** in Third National Symposium on "Environment: Challenges *Generation Next*" organized at Deshbandhu College, University of Delhi on March 31, 2017. OP 11.
- 5) "Microwave assisted synthesis of potent metal complexes of Schiff bases derived from carbazole moiety: a green approach". Gajender Singh, Sanjay Kumar, **Sandhya Rai**, et al., (2016). National Conference on Emerging Trends and Future Challenges in Chemical Sciences, University of Delhi, 3-4 Feb. 2016. PP 32.

Resource person in student-related field-based study visits:

- Organized a field-based study visit to "Yamuna Biodiversity Park", Delhi for the undergraduate students on September 24, 2017
- Organized a field-based study visit to "Sultanpur National Park", Gurugram, Haryana for the undergraduate students on October 27, 2018
- Organized a field-based study visit to "Aravalli Biodiversity Park", Delhi for the undergraduate students on September 26, 2019

- Organized a Virtual field-based study visit to “The Hessaraghatta Grasslands, vanishing grasslands of Bengaluru” for undergraduate students on January 16, 2021
- Organized a Virtual field-based study visit to “Reefs and sea-shores; islands of Lakshadweep” for undergraduate students on February 05, 2022

Resource Person/ Mentor in Conference/Workshop

- Mentor in three days “Capacity Building Workshop” organized by Department of Biochemistry, Botany and Zoology, Deshbandhu College, University of Delhi under the aegis of IQAC & DBT Star College Scheme on December 22-24, 2021
- Resource person in "INSPIRE Internship Programme- 2019" organized by Deshbandhu College, University of Delhi held from December 17-21, 2019
- Resource person in INSPIRE Internship Programme- 2017 organized at Deshbandhu College, University of Delhi from December 18-22, 2017
- Resource person in INSPIRE Internship Programme- 2015 organized at Deshbandhu College, University of Delhi from December 14-18, 2015
- Resource person in INSPIRE Internship Programme- 2014 organized at Deshbandhu College, University of Delhi from October 8-12, 2014
- Resource person in INSPIRE Internship Programme, 2013 organized at Deshbandhu College, University of Delhi from December 16-20, 2013

Conference/Workshops/Webinars Organized:

- Convenor of the Webinar of "Wildlife Week Celebration: WILD-O-VIGUS (October 4-9, 2021)" organized by Deshbandhu College, University of Delhi, New Delhi, India on October 9, 2021
- Convenor of the Event "Zootopia"- An Inter-College Poster Making Competition as a part of "Wildlife Week Celebration: WILD-O-VIGUS (October 4-9, 2021)" organized

by Deshbandhu College, University of Delhi, New Delhi, India held on October 7, 2021

- Convenor of the Event "Relay the Gray"- An Inter-College Poster Making Competition as a part of "Wildlife Week Celebration: WILD-O-VIGUS (October 4-9, 2021)" organized by Deshbandhu College, University of Delhi, New Delhi, India held on October 8, 2021
- Convenor of the Event "Keyword Hunt"- An Inter-College Poster Making Competition as a part of "Wildlife Week Celebration: WILD-O-VIGUS (October 4-9, 2021)" organized by Deshbandhu College, University of Delhi, New Delhi, India held on October 6, 2021
- Convenor of the Event "MemeMania"- An Inter-College Poster Making Competition as a part of "Wildlife Week Celebration: WILD-O-VIGUS (October 4-9, 2021)" organized by Deshbandhu College, University of Delhi, New Delhi, India held on October 5, 2021
- Convenor of the Event "Create A Canvas"- An Inter-College Poster Making Competition as a part of "Wildlife Week Celebration: WILD-O-VIGUS (October 4-9, 2021)" organized by Deshbandhu College, University of Delhi, New Delhi, India held on October 4, 2021
- Convenor of the Event "Frame the Fauna"- An Inter-College Poster Making Competition as a part of "Wildlife Week Celebration: WILD-O-VIGUS (October 4-9, 2021)" organized by Deshbandhu College, University of Delhi, New Delhi, India held on October 4, 2021
- Convenor of the International Webinar on “World Ozone Day 2021 (International Day for the Preservation of the Ozone Layer)” organized by Department of Zoology, Deshbandhu College on 16th September, 2021
- Organizing member in Lecture-Cum-Virtual Lab Visit on “Synthetic Biology And Biotechnology- A Tool For Shaping Human Future” organized by Department of Zoology, Deshbandhu College, University of Delhi under the aegis of IQAC & DBT Star College Scheme on October 31, 2020
- Organizing member in e-National Symposium on “Food Safety and Health” organized by Deshbandhu College, University of Delhi on September 19, 2020

- Organizing member in the "International Conference on Natural Products and Human Health- 2020 (ICNPHH- 2010)", organized by Deshbandhu College held at University of Delhi, Delhi from February 27-29, 2020
- Organizing member in the National Conference on "Insect-Plant Biology in 21st Century", organized by Department of Zoology, Deshbandhu College held at Deshbandhu College, University of Delhi from November 4-5, 2019
- Organizing member in the Fourth National Symposium on "Environment: Green Technology for Environmental Sustainability", organized at Deshbandhu College, University of Delhi on September 25, 2018
- Convener, Poster Presentation Session in the Fourth National Symposium on "Environment: Green Technology for Environmental Sustainability", organized at Deshbandhu College, University of Delhi on September 25, 2018
- Organizing member in Third National Symposium on "Environment: Challenges *Generation Next*", organized at Deshbandhu College, University of Delhi on March 31, 2017
- Organizing member in Second National Symposium on "Environment: Greener Future and Awareness" organized at Deshbandhu College, University of Delhi on March 19, 2016
- Organizing Member in National Symposium on "Reproductive Health in India: Concerns and Awareness" organized at Deshbandhu College, University of Delhi on February 12, 2016
- Organizing Member in National Symposium on "Vector Biology and Vector Management" organized at Deshbandhu College, University of Delhi on February 12, 2015
- Organizing Member in the National Symposium on "Environment: Challenges and Awareness" organized at Deshbandhu College, University of Delhi on November 5, 2014
- Organizing member in "INSPIRE Internship Programme- 2019" organized by Deshbandhu College, University of Delhi held from December 17-21, 2019
- Organized one day workshop cum seminar on "immunodiagnostics and immunofluorescence" organized by Department of Zoology, Gargi College under Star College Programme on March 11, 2011

Conferences attended/participated:

- Participated in the international webinar on "Evolution: The Most Important Theory of Biology" by Prof. Douglas Futuyma, renowned Evolutionary Biologist organized by Sri Venkateswara Collge, University of Delhi on March, 4 2022
- Participated in "Lecture III : Integrated Approach for Molecular Imaging" organized by Department of Chemistry, Deshbandhu College, University of Delhi on the occasion of National Science Day on February 28, 2022
- Attended the webinar on "Use of the fruit fly (*Drosophila*) and zebra fish (*Danio rerio*) as model organisms for dissecting the aetiology of human diseases" organized by Department of Zoology, Deshbandhu College, University of Delhi on February 18, 2022
- Participated in Synergia's Inaugural Lecture 2021-22 on "Microbiome: Human Health, Environment and Society" organized by Life Sciences Society Synergia, Deshbandhu College, University of Delhi on February 16, 2022
- Participated in virtual visit to "Madras Crocodile Bank Trust, Centre for Herpetology organized by Department of Zoology, Deshbandhu College, University of Delhi on February 01, 2022
- Participated in International Symposium "Chemical Wisdom by Her" organized by Department of Chemistry, Deshbandhu College, University of Delhi through online mode on 31st January, 2022
- Participated in 6th Annual International Conference of INSCR (Indian Network for Soil Contamination Research) on "MICROBES IN SUSTAINABLE DEVELOPMENT" organized in association with the Department of Zoology (DU), Acharya Narendra Dev College (DU), Deen Dayal Upadhyaya College (DU), Gargi College (DU), Kirori Mal College (DU), PG Department of Zoology (MU), Maitreyi College (DU), Ramjas College (DU), Sri Venkateswara College (DU), C.M.P. College (AU), SGTB Khalsa College (DU), COCAS (PU) & PhiXgen Pvt. Ltd., Gurugram from November 15 to 18, 2021
- Participated in Lecture-Cum-Virtual Lab Visit on "Landfill: A Public and Environmental Health Perspective" organized by Department of Zoology, Deshbandhu College, University of Delhi on November 8, 2021

- Participated in three days 27th International Conference on “Recent Advances in Mathematics & Computational Optimizations (RAMCO-2021)” HELD ONLINE AT School of Computational and Integrative Sciences, Jawaharlal Nehru University, New Delhi from October 26 to 28, 2021
- Participated in Virtual Jungle Safari of “Dudhwa Tiger Reserve” organized by Department of Zoology, Deshbandhu College, University of Delhi on September 25, 2021
- Participated in Webinar on “Socio-economic Development of Rural India” organized by UBA cell, Deshbandhu College, University of Delhi on September 09, 2021
- Participated in National Level Webinar entitled 'Art of Academic Writing: A systematic approach' organized by Research & Innovation Cell, Shivaji College, University of Delhi, New Delhi on September 04, 2021
- Participated in Webinar “International Yoga Festival- Yog Mantrana 2021” organized by Department of Physical Education & Sports Sciences, Deshbandhu College under the aegis of IQAC on June 21, 2021
- Participated in Webinar “International Immunology Day” organized by Department of Zoology, Kirori Mal College, University of Delhi under the aegis of DBT Star College Scheme on April 29, 2021
- Participated in Invited Lecture on “Importance of Natural & Synthetic Compounds in Human Life” organized by Chemical Society, Department of Chemistry, Deshbandhu College on April 13, 2021
- Participated in International Webinar on “Infectious Diseases Preparedness: a special focus on COVID-19 Challenges and Opportunities” organized by Sikkim Manipal Institute of Medical Sciences, Research Unit Sikkim, India on November 20, 2020
- Participated in Lecture-Cum-Virtual Lab Visit on “Synthetic Biology And Biotechnology- A Tool For Shaping Human Future” organized by Department of Zoology, Deshbandhu College, University of Delhi under the aegis of IQAC & DBT Star College Scheme on October 31, 2020
- Participated in the Webinar on “Search, Research and Publication Ethics” organized by Deshbandhu College, University of Delhi on July 24, 2020.

- Attended the National Webinar on “World Environment Day” organized by Deshbandhu College, University of Delhi on June 6, 2020.
- Participated in *Science Setu* initiative of Transitional Health and Technology Institute (THSTI), Faridabad organized at Kirori Mal College, University of Delhi held on September 20, 2018.
- INSCR International Conference (IIC-2017) on ‘Role of Microbe-Plant-Animal Interactions in Human Health’ held at University of Delhi, Delhi from September 26-28, 2017.
- Participated in SYSCON 2016- “Recent Advances in Biomedical Research: Strategies and Innovation” at All India Institute of Medical Sciences on May 26-27, 2016.
- Participated in National Symposium on “Vector Biology and Vector Management” organized at Deshbandhu College, University of Delhi on February 12, 2015.
- Attended National Conference on “Recent Trends in Molecular Virology - 2014” organized at Centre for Interdisciplinary Research in Basic Sciences, Jamia Milia Islamia, New Delhi: November 17-19, 2014.
- Attended National Seminar “Teaching Redefined: Open Access to Education” organized at Acharya Narendra Dev College, University of Delhi on November 1, 2011.
- Indo-Swiss collaboration in Biotechnology (ISCB) International Conference “Recent trends in developing bioremediation strategies for Hexachlorocyclohexane (HCH) & other chlorinated contaminants”: February 9-11, 2011.
- Association of Microbiologists of India 49th Annual Conference “International symposium on Microbial Biotechnology, Diversity, Genomics and Metagenomics”: November 18-20, 2008.

Faculty Development Programmes completed:

1. Completed and secured Grade A in 5- day Online **Faculty Development Programme** on “Programming in Python” organized by Kirori Mal College, University of Delhi in collaboration with Mizoram University under the aegis of Pandit Madan Mohan Malviya National Mission on Teachers and Training (PMMMNMTT), Ministry of Education from December 06 to 10, 2021

2. Completed one week (online) **Faculty Development Programme** on “Computational Approach to Drug Discovery” organized by Deshbandhu College, University of Delhi and Center for Bioinformatics, Computational and Systems Biology in collaboration with Mahatma Hansraj Faculty Development Centre, Hansraj College, University of Delhi from August 02 to 07, 2021
3. Completed One-Week Online **Faculty Development Programme** on “Environmental Audit” organized by Kirori Mal College (DBT-star college scheme) in collaboration with Ministry of Human Resource Development Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching, Mizoram University, Aizwal from June 28 to July 2, 2021.
4. Completed and obtained Grade A in a 2-Week **Faculty Development Programme** on "Research Methodology" organized by Teaching Learning Centre, Ramanujan College, University of Delhi under the aegis of Ministry of Human Resource Development Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching from October 1- 15, 2020.
5. Completed One-Week Online **Faculty Development Programme** on “Development and Delivery of MOOCs and E-Content” jointly organized by Central University of Haryana, Mahendergarh under the aegis of Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) and IQAC, Deshbandhu College, University of Delhi, New Delhi from June 26 to July 1, 2020.

Workshops attended:

- Participated in the E-Workshop on “Development of Chick and Mouse Embryos: Experiments and Molecular Techniques” organized by Department of Zoology, Deshbandhu College, University of Delhi on March 12, 2022
- Participated in online training program on BSL-3 Laboratory Training and Handling Practices for Mycobacterium tuberculosis Biosafety level III Facility, Department of Biochemistry, University of Delhi South Campus, New Delhi on July 19-25, 2021
- Participated in Online Hands-on Workshop on “Research Methodology” organized by Deshbandhu College, University of Delhi from April 1-5, 2021

- Attended DBT sponsored National Workshop on “Molecular Docking in Drug Design” organized by Department of Microbiology, Ram Lal Anand College, University of Delhi from March 31 to April 1, 2021
- Attended Online Workshop on “Role of a Citizen in Biodiversity Conservation” organized by Deshbandhu College, University of Delhi on May 13, 2020
- Participated in DBT sponsored workshop on “The Foldscope” organized by Kalindi College, University of Delhi held at University of Delhi, Delhi on April 10, 2019
- Participated in workshop on “Skill Development to Build a Clean India” organized by Deshbandhu College, University of Delhi in collaboration with CSR, Oil and Natural Gas Corporation Ltd. held on June 7-8, 2018
- Participated in National Workshop “Technical Terminology in Science Teaching” of Commission for Scientific and Technical Terminology held at Deshbandhu College, University of Delhi from October 26-27, 2017
- Participated in the workshop on “Microbial Genomics and Metagenomics” held at Department of Zoology, University of Delhi on September 22, 2016
- Participated in the National workshop on “Recent Trends in Biochemistry and Biotechnology; NRTBB-2016” organized at Deshbandhu College, University of Delhi from April 21-22, 2016
- Participated in the workshop on “Science Setu: DNA Fingerprinting” held at Hindu College, University of Delhi on January 22, 2016
- Participated in the workshop on “Renovating bacterial Taxonomy with Bioinformatics” held at Department of Zoology, University of Delhi on May 14-15, 2015
- Participated in “Workshop on Data Acquisition and Analysis” organized at Department of Zoology, University of Delhi on September 15, 2014
- Participated in Indo-German Workshop on “Microbial Ecology and Application of Inoculants in Biocontrol” at Indian Agricultural Research Institute, New Delhi from April 7-9, 2014
- Certificate of Completion of ASM Virtual Workshop on “The Culture of Responsibility: Biosafety & Biosecurity” organized at Maitreyi College, University of Delhi on September 2, 2013

- Certificate of Appreciation as Staff Organizer of Workshop on Youth Connect; Life skills for adolescents organized at Ramjas College, University of Delhi on March 21, 2013
- Certificate of Completion of ASM Virtual Workshop on Scientific Writing and Publishing organized at Sri Venkateswara College, University of Delhi on February 6, 2013
- Participated in the two-day Hands-on Training on “Molecular Phylogenetics: Understanding Evolutionary Histories” organized at Acharya Narendra Dev College, university of Delhi on June 15-16, 2011
- Attended National Workshop on “Evolutionary perspectives in modern biological teaching and research” jointly organized by Institute of Life Long Learning and Acharya Narendra Dev College, University of Delhi on May 9-10, 2011
- Participated in the workshop cum seminar on “immunodiagnostics and immunofluorescence” organized by Department of Zoology, Gargi College under Star College Programme on March 11, 2011

Administrative Assignments of the College:

- Convenor, Biodiversity Club, Department of Zoology, Deshbandhu College (Year 2021- till date)
- Member, Department Report Compilation and Website Updating, DBT Star College Scheme, Deshbandhu College (Year 2021-till date)
- Member, Proctorial Committee, Deshbandhu College (Year 2022 onwards)
- Member, Prospectus Committee, Deshbandhu College (Year 2020-21)
- Staff Advisor, Chimaera Zoology Department Annual Festival, Deshbandhu College (Year 2015-16)
- Member, Admission Committee, Deshbandhu College (Year 2014 & 2015)

Research Project completed/ Ongoing:

- ❖ **Delhi University Innovation Project (2015-16) DBC-304:** “Microwave Assisted Synthesis of potent metal complexes of Schiff bases derived from carbazole

moiety: a Green Approach”. Gajendra Singh, Sandhya Rai and Sanjay Kumar, funded by University Grant Commission

- ❖ **To Predict the Knowledge, Attitude, Behaviour and Practice of Vitamin D and Sunlight among the students and Spread Awareness** (Minor project under DBT Star College Scheme, September 2019; Status: Ongoing)

Membership of learned body:

- Life membership of **Association of Microbiologists of India**
- Life membership of **Indian Network for Soil Contamination Research**
- Life membership of **Association of Teachers in Biological Sciences**

TECHNICAL EXPERTISE:

- Soil DNA extraction
- Bacterial genomic DNA and plasmid DNA isolation
- Agarose Gel electrophoresis & Polyacrylamide gel electrophoresis (PAGE)
- Polymerase Chain Reaction (PCR)
- Restriction Fragment Length Polymorphism (RFLP)
- Terminal restriction Length Polymorphism (T-RFLP)
- Denaturing gradient gel electrophoresis (DGGE)
- Molecular Cloning (preparation of competent cells, ligation and transformation)
- Bacteria culture and basic microbial techniques

Date: 07-05-2022

Place: Delhi

Signature:-----