



Miranda House

UNIVERSITY OF DELHI

Name: DR. JANAKI SUBRAMANYAN

Department: Botany

Current Designation: Associate Professor

Email id: janaki.subramanyan@mirandahouse.ac.in

Academic Qualifications (reverse chronological order):

- Ph.D. Botany, Department of Botany, University of Delhi, Delhi (1987)
- M.Phil. Botany, Department of Botany, University of Delhi, Delhi (1981)
- M.Sc. Botany, Department of Botany, University of Delhi, Delhi (1980)
- B.Sc. (Honours) Botany, Daulat Ram College, University of Delhi, Delhi (1978)

Research Degree(s) (reverse chronological order):

- Ph.D. Botany, Department of Botany, University of Delhi, Delhi (1987)
- M.Phil. Botany, Department of Botany, University of Delhi, Delhi (1981)

Field of Specialization under the Subject/Discipline:

- Research: Physiology of reproduction in seed plants
- Courses Taught: Cell biology, cell and molecular biology, biology, genetics and biotechnology, analytical techniques in plant sciences plant physiology, plant metabolism.

Total Teaching Experience: Over 30 years

Teaching at Miranda House since: 15 November 1991

List of Publications (reverse chronological order): (Articles in referred/peer-reviewed/UGC Care journals/ Books/Book Chapters)

In Journals

- Sella, N., Manchanda, D., Gupta, I., Bundela, P., Bansal, S., Aggarwal, S., Roy, B., Verma, M., Jolly, P. & Subramanyan, J. 2018. Use of the smartphone as a handy colorimeter. *DU Journal of Undergraduate Research and Innovation* **3** (2): 56-63.
- Subramanyan, J. 2017. Purslane – a precious medicinal weed. *Journal of Agricultural Engineering and Food Technology (JAEFT)* **4** (1): 89-90.
- Rangaswamy, N.S., Subramanyan, J., Tandon, R. & Bhuskute, S.R. 2001. Microspore tetrad analysis—can either type of microsporogenesis engender tetrads of all



Miranda House

UNIVERSITY OF DELHI

configurations? Phytomorphology: Golden Jubilee Issue 2001: 573-586.

- Subramanyan, J. & Rangaswamy, N.S. 1999. Effects of dichlobenil on two tip growth systems—pollen tube and root hair. *National Academy Science Letters* **22**: 113-118.
- Rangaswamy, N.S. & Subramanyan, J. 1988. Gossypol affects plant sperms also. *Current Science* **57**: 442-444.
- Subramanyan, J. & Rangaswamy, N.S. 1985. Effects of caffeine and dichlobenil on a pollen system. *Indian Journal of Experimental Biology* **23**: 281-284.
- Subramanyan, J. 1985. Dichlobenil arrests root hair growth in radish. *Current Science* **54**: 354-356.
- Rangaswamy, N.S. & Subramanyan, J. 1983. Application of antimetotics in angiosperm embryology. *Current Science* **52**: 458-467.

Chapters in Books

- Bahri, S., Subramanyan, J., Akilandeshwari, P. A., Devi, K., Kashiv, P., Jha, P., Yadav, S. & Chandra Sekhar, J.S.D.A. 2018. Morphogenetic studies on cowpea cotyledons. In: *Introduction to Challenges and Strategies to Improve Crop Productivity in Changing Environment*, Ansari, M.W., Kumar, S., Kaula, B. C. & Wattal, R. K. (ed), Enriched Publications Pvt. Ltd, Delhi, pp.161-168 (ISBN No. 978-81-934634-9-9).
- Subramanyan, J. & Rangaswamy, N.S. 2000. Theobromine effects on opium poppy pollen germination and pollen tube growth. In: *The Changing Scenario in Plant Sciences: Professor H.Y. Mohan Ram Commemoration Volume*, V.S. Jaiswal, A.K. Rai, Uma Jaiswal & J.S. Singh (ed), Allied Publishers Limited, New Delhi, pp. 81-87.

In Conference Proceedings

- Subramanyan, J., Jolly, P., Manchanda, D. & Sella, N. 2016. Health sensors and smart medical devices. In: *Proceedings of the International Conference on Public Health: Issues, Challenges, Opportunities, Prevention, Awareness (Public Health 2016)*, Vol. II, Daulat Ram College, University of Delhi, Delhi, and Krishi Sanskriti, New Delhi, 15-16 January 2016, pp.189-190 (ISBN 978-93-85822-10-10).
Poster with the same title was awarded the III position.
- Subramanyan, J., Arlene, Gupta, D., Nagar, N., Yadav, N. & Bharti, S. 2015. Protease activity in pineapple fruits. In: *Proceedings of the National Conference on Climate Change: Impacts, Adaptation, Mitigation Scenario and Future Challenges in Indian Perspective*, S. N. Tripathi, R. S. Devi, S. Kumar & V. Jolli (ed), Department of Botany, Deen Dayal Upadhyaya College, University of Delhi, New Delhi, 02-03 March 2015, pp. 56-60 (ISBN: 978-93-5235-335-4).
- Subramanyan, J., Ila, Deb, K., Fauzdar, M. & Prakash, R. 2014. A study of catalase activity in potato tubers. In: *Proceedings of the National Conference Striving & Thriving*



Miranda House UNIVERSITY OF DELHI

Towards Diffusion of Student-driven Research in Science and Technology for Inspired Learning, Maharaja Agrasen College, University of Delhi, Delhi, Authorpress, New Delhi, 16-17 October 2014, pp. 108-113 (ISBN: 978-81-7273-958-4).

- Rangaswamy, N.S. & Subramanyan, J. 1992. Computer graphics to infer microspore tetrad configurations. In: Proceedings of the XI International Symposium on Embryology and Seed Reproduction, Academy of Sciences of Russia, Komarov Botanical Institute, Leningrad, USSR, 03-07 July 1990, pp. 451-452.

In Abstracts of Conferences, Symposia and Seminars

- Subramanyan, J., Bahri, S., Sinha Roy, S., Pragati, Middha, A., Soni, A., Bhardwaj, S., Yadav, M., Rathore, S & Ahuja, B. 2018. Health benefits of anthocyanins. In: Abstracts of the Indo-US Colloquium on Recent Developments in Interdisciplinary Research, Hansraj College, University of Delhi, Delhi, India, and Loyola University Stritch School of Medicine, Maywood, IL, USA, 02 July 2018 (poster presentation).
- Subramanyan, J., Bahri, S., Singh, M., Bushra, Prabha, Rashmi & Singh, R. 2018. A study on the pollen grains of *Hymenocallis littoralis*. In: Abstracts of the National Student Conclave & Seminar on Science, Technology and Innovation, Amity Institute of Applied Sciences, Amity University, Uttar Pradesh, 18-19 January 2018, p.20 (poster presentation).
- Bahri, S., Subramanyan, J., Akilandeshwari, P. D., Devi, K., Kashiv, P., Jha, P., Yadav, S. & Chandra Sekhar, V.J.S.D.A. 2018. Morphogenetic studies on cowpea cotyledons. In: Abstracts of the National Conference on Challenges and Strategies to Improve Crop Productivity in Changing Environment: An Integrated Approach, Department of Botany, Zakir Husain Delhi College, University of Delhi, Delhi, 12 January 2018, p. 54 (poster presentation).
- Subramanyan, J. & Chaudhary, N. 2017. Food enzymes. In: Abstracts of the One-Day Indo- Hungarian Symposium on Recent Advances in Chemistry and Biology (INHCAB-2017), Department of Chemistry, Miranda House, University of Delhi, in association with Department of Pharmaceutical Chemistry, University of Debrecen, Debrecen, Hungary, organized at Miranda House, 11 December 2017, p.36 (poster presentation).
- Subramanyan, J. & Chaudhary, N. 2017. Salt-tolerant plants in remediation of hostile soils. In: Souvenir and Abstracts of the XXVII Annual Conference of Indian Angiosperm Taxonomy & International Symposium on Plant Systematics: Priorities and Challenges, Delhi University Botanical Society, Department of Botany, University of Delhi, Delhi, 10-12 November 2017, p. 50 (poster presentation).
- Subramanyan, J. 2016. Remediation of heavy metal polluted soils. In: Abstract Book of the National Conference on Combating Industrial Pollution for Sustainable Development – a Fusion of Industrial and Scientific Efforts (CIPSE – 2016), Department of Chemistry,



Miranda House

UNIVERSITY OF DELHI

Commemoration of Golden Jubilee Year of Gargi College, University of Delhi, Delhi, 22-23 September 2016, p. 89 (poster presentation).

- Subramanyan, J. & Sethi, M. 2016. Algae in food security. In: Abstracts of the National Conference on Plant Science Research: Looking Beyond 21st Century for Environmental and Agricultural Revolution, Society of Plant Research (Vegetos) & Department of Botany, University of Delhi, Delhi, 05-07 February 2016, p. 23 (ISSN 0970-4078, online ISSN 2229-4473) (oral presentation).
- Subramanyan, J., Dave, A. K., Ali, A. A., Kanwa, N., Yadav, S., Sameera & Meena, S. 2012. Monitoring urease activity in decoated pigeonpea seeds. In: International Symposium on Green Chemistry and Sustainable Development, Miranda House, University of Delhi, Delhi, 30-31 March 2012 (poster presentation).
Received certificate of appreciation.
- Subramanyan, J., Sehgal, A., Rathi, D., Tripathi, K., Meenakshi, Priyanka & Danda, S. 2011. Comparison of certain properties of soils and manures using sensors. In: Abstracts of the International Conference on Science, Spirituality and Humanity Transcending Discipline Barriers, Shivaji College Golden Jubilee Celebrations, Conference Hall, University of Delhi, Delhi, 17-19 February 2011, p. 126 (poster presentation).
- Chaudhary, E., Jahan, I., Medha, Bahri, S. and Subramanyan, J. 2010. Conductivity probe to understand limitations on cell size--surface area: volume ratio. In: Souvenir of the National Symposium on Chemistry in Biology: The Future of Life Sciences, Acharya Narendra Dev College, University of Delhi, Delhi, 12-13 February 2010, p. 69 (poster presentation).
- Jahan, I., Chaudhary, E., Medha, Subramanyan, J. and Bahri, S. 2010. Measurement of catalase activity using a gas pressure sensor. In: Souvenir of the National Symposium on Chemistry in Biology: The Future of Life Sciences, Acharya Narendra Dev College, University of Delhi, Delhi, 12-13 February 2010, p. 68 (poster presentation).
- Subramanyan, J. 2007. Actinorhizal plants for soil amelioration. In: Abstracts of the National Symposium on Science of Life: The New Horizon, Miranda House, University of Delhi, Delhi, 21-23 November 2007, p. 60 (poster presentation).
- Subramanyan, J. & Rangaswamy, N.S. 1997. Effects of dichlobenil on two tip growth systems—pollen tube and root hair. In: Abstracts of the 67th Annual Convention, Section of Biological Sciences, NASI (National Academy of Sciences, India) & Symposium on Science and Technology for Sustainable Development, Utkal University, Bhubaneswar, 24-26 October 1997, p. 34 (poster presentation).
- Subramanyan, J. & Rangaswamy, N.S. 1995. Theobromine effects on opium poppy pollen germination and pollen tube growth. In: Abstracts of the National Seminar on the



Miranda House

UNIVERSITY OF DELHI

Changing Scenario of Plant Sciences, J.P. Gaur, Uma Jaiswal & V.S. Jaiswal (ed), Banaras Hindu University, Varanasi, 13-15 October 1995, p. 46.

- Rangaswamy, N.S. & Subramanyan, J. 1990. Computer graphics to infer microspore tetrad configurations. In: Abstracts of the XI International Symposium on Embryology and Seed Reproduction, Academy of Sciences of Russia, Komarov Botanical Institute, Leningrad, USSR, 03-07 July 1990, p. 134.
- Rangaswamy, N.S. & Subramanyan, J. 1981. Experimental approach to some queries in angiosperm embryology, with special reference to use of antimetabolites. In: Abstracts of the National Symposium on Biology of Reproduction in Plants, R.N. Kapil, N.S. Rangaswamy, S.P. Bhatnagar & V.P. Singh (ed), UGC Centre of Advanced Study in Botany, Department of Botany, University of Delhi, Delhi, 01-05 December 1981, pp. 111-113.

Poster Presentation Only

- Bahri, S., Bhardwaj, S., Marni, A.D. & Subramanyan, J. 2019. Edible vaccines. Poster presented at the DBT-Biotechnology Popularization Programme under the CTEP Programme of DBT, Government of India, Miranda House, University of Delhi, Delhi, 02 August 2019.
- Jolly, P., Subramanyan, J., Kumari, A., Khan, B. & Yadav V. 2016. A study on seed germination. Poster presented at Innovation Conclave – 2016, Nurturing Research at the UG Level, Acharya Narendra Dev College, University of Delhi, Rajatotsav (Silver Jubilee Celebrations), 25-26 October 2016.
- Nagpal, M., Pant, M., Gupta, N., Bansal, S., Gupta, I., Bundela, P., Suri, N., Pfuze, P., Manchanda, D., Sella, N., Aggarwal, S., Subramanyan, J., Roy, B., Verma, M. & Jolly, P. 2016. Mobile! MyLab. Poster presented at Innovation Conclave – 2016, Nurturing Research at the UG Level, Acharya Narendra Dev College, University of Delhi, Rajatotsav (Silver Jubilee Celebrations), 25-26 October 2016.

Book Reviews

- *Pollen Biology: A Laboratory Manual* 1992. Shivanna, K.R. & Rangaswamy, N.S. Springer-Verlag, Berlin, Heidelberg, New York, xi + 119 pp. Book review in *The Botanica: Magazine of the Delhi University Botanical Society* **42**: 88-89.
- *Tuber Crops* 1988. Ghosh, S.P., Ramanujam, T., Jos, J.S., Moorthy, S.N. & Nair, R.G. Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi, x + 403 pp. Book review in *Indian Journal of Agricultural Sciences* **60**: 372.

Popular Articles

- Subramanyan, J. 2016. Algae in forensic investigations. *The Botanica: magazine of the Delhi University Botanical Society* **66**: 107-110.



Miranda House

UNIVERSITY OF DELHI

- Subramanyan, J. 2002. Biodegradable plastics. *The Botanica: magazine of the Delhi University Botanical Society* **52**: 31-36.
- Subramanyan, J. 1992. Cytochalasins. *The Botanica: magazine of the Delhi University Botanical Society* **42**: 02-04.
- Subramanyan, J. 1990. Mycoplasma—the enigma of the microbial world. *Invention Intelligence* **25**: 262-267.
- Subramanyan, J. & Rangaswamy, N.S. 1990. Calcium ionophores. *The Botanica: magazine of the Delhi University Botanical Society* **40**: 16-18.
- Subramanyan, J. 1989. Chlorofluorocarbons and ozone depletion. Translated into Hindi by Krishak Parivar **7** (11): 62-64.
- Subramanyan, J. 1986. Pollen allergy. *The Botanica: magazine of the Delhi University Botanical Society* **36**: 12-15.

Educational Resource Material Developed (reverse chronological order):

For DBT Star College Scheme Workshops

For the Workshops on Biofertilizers

- Subramanyan, J. 2019. Actinorhizal plants. In: Manual of the Workshop on Biofertilizers for B.Sc. Life Science II Year students, DBT Star College Scheme, Department of Botany, Miranda House, University of Delhi, Delhi, 28 August 2019, pp. 04-05.
- Subramanyan, J. 2019. Actinorhizal plants. In: Manual of the Workshop on Biofertilizers for B.Sc. Life Science II Year students, DBT Star College Scheme, Department of Botany, Miranda House, University of Delhi, Delhi, 13 March 2019, pp. 04-05.
- Subramanyan, J. 2018. Actinorhizal plants. In: Manual of the Workshop on Biofertilizers for B.Sc. (Hons) Zoology I Year students, DBT Star College Scheme, Department of Botany, Miranda House, University of Delhi, Delhi, 02 November 2018, pp. 05-06..
- Subramanyan, J. 2017. Actinorhizal plants. In: Manual of the Workshop on Biofertilizers for B.Sc. (Hons) Zoology II Year students, DBT Star College Scheme, Department of Botany, Miranda House, University of Delhi, Delhi, 08 November 2017, pp. 06-07.
- Subramanyan, J. 2017. Actinorhizal plants. In: Manual of the Workshop on Biofertilizers for B.Sc. Life Science III Year students, DBT Star College Scheme, Department of Botany, Miranda House, University of Delhi, Delhi, 04 September 2017, pp. 06-07.
Was a Coordinator and Resource Person for the Workshops.

Others

- Subramanyan, J. 2014. Pollen culture. In: Manual of the Workshop Tissue Culture, Miranda House, University of Delhi, Delhi, 12-13 March 2014, pp. 16-25.
Was the Resource Person.



Miranda House

UNIVERSITY OF DELHI

- Subramanyan, J. 2013. A study of certain enzymes in coconut water; Workshop: Nature at Work: Studying Biomolecules, 25 September 2013, 10 pp. Was the Resource Person.
- Subramanyan, J. 2013. A study of enzymes in potato tubers; Workshop: Mimicking Nature: Using Plant and Animal Extracts for Chemical Reaction, 05 March 2013, 05 pp. Was the Resource Person.

For Bridge Courses

- Subramanyan, J. 2019. Safety measures in the laboratory. In: Lab Manual of the Bridge Course on Basic Laboratory Techniques for B.Sc. (Honours) Botany I Year Students, 05-06 August 2019; for B.Sc. Life Science I Year students, 08-09 August 2019, Department of Botany & D.S. Kothari Central Inter-disciplinary Research Facility, Miranda House, University of Delhi, Delhi, pp.01-06. My sessions were on 05 and 08 August 2019.
- Subramanyan, J. 2018. Safety measures in the laboratory. In: Lab Manual of the Bridge Course on Basic Laboratory Techniques for B.Sc. (Honours) Botany I Year Students, 27-29 August 2018; for B.Sc. Life Science I Year students, 06-07 September 2018, D.S. Kothari Centre for Research and Innovation in Science Education & Department of Botany, Miranda House, University of Delhi, Delhi, pp.01-06.. My sessions were on 27 August and 06 September 2018.
- Subramanyan, J. 2017. Safety measures in the laboratory. In: Lab Manual of the Bridge Course on Basic Laboratory Techniques for B.Sc. (Honours) Botany I Year Students, 05-06 September 2017; for B.Sc. Life Science I Year students, 07-08 September 2017, D.S. Kothari Centre for Research and Innovation in Science Education & Department of Botany, Miranda House, University of Delhi, Delhi, pp.01-06. My sessions were on 05 and 07 September 2017.
- Subramanyan, J. 2016. Safety measures in the laboratory. In: Lab Manual of the Bridge Course on Basic Laboratory Techniques for B.Sc. (Honours) Botany I Year Students, 05-06 September 2016; for B.Sc. Life Science I Year students, 07-08 September 2016, D.S. Kothari Centre for Research and Innovation in Science Education & Department of Botany, Miranda House, University of Delhi, Delhi, pp. 01-06. My sessions were on 05 and 07 September 2016.
- Subramanyan, J. 2015. Safety measures in the laboratory. In: Lab Manual of the Bridge Course on Basic Laboratory Techniques for B.Sc. (Honours) Botany I Year Students, 12-16 October 2015; for B.Sc. Life Science I Year students, 26-30 October 2015, D.S. Kothari Centre for Research and Innovation in Science Education & Department of Botany, Miranda House, University of Delhi, Delhi, pp. 01-06. My sessions were on 12 and 26 October 2015.
Was a Resource Person for the Bridge Courses.



Miranda House

UNIVERSITY OF DELHI

For the INSPIRE Internship Programme, an initiative of the Department of Science and Technology, Government of India, held at Miranda House, for the Workshop The Cell: Life's Playground

- Subramanyan, J. & Chaudhary, N. 2017. Plant pigments. In: Manual of the Workshop The Cell: Life's Playground, INSPIRE Internship Programme, D.S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, Delhi, 18-22 December 2017, pp. 01-06.
Was a member, Organizing committee, and a Mentor (Resource Person).
- Subramanyan, J. 2015. Chloroplast pigments and anthocyanins. In: Manual of the Workshop The Cell: Life's Playground, INSPIRE Internship Programme, D. S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, Delhi, 13-17 July 2015, pp. 01-07.
Was the Resource Person.
- Subramanyan, J. 2013. The onion lab; a study of certain enzymes in coconut water. In: Manual of the Workshop The Cell: Life's Playground, INSPIRE Internship Programme, D.S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, Delhi, 15-20 December 2013 (two exercises), pp.01-14; 22-30.
Was the Resource Person.
- Subramanyan, J. 2012. Testing the viability of seeds and pollen grains; demonstration of protease activity in pineapple fruit. In: Manual of the Workshop, INSPIRE Internship Programme, D.S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, Delhi, 16-20 July 2012 (two exercises), pp. 07-10; 11-13.
Was the Resource Person.
- Subramanyan, J. 2011. To demonstrate the activity of the enzyme amylase; to demonstrate cytoplasmic streaming. In: Manual of the Workshop The Cell: Life's Playground, INSPIRE Internship Programme, D.S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, Delhi, 11-15 July 2011 (two exercises), pp.01-04; 05-06.
Was the Resource Person.
- Subramanyan, J. 2010. To demonstrate the activity of the enzyme catalase; to germinate seeds. In: Manual of the Workshop The Cell: Life's Playground, INSPIRE Internship Programme, D.S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, Delhi, 12-16 July 2010 (two exercises), pp.02-05; 15-18.
Was the Resource Person.



Miranda House

UNIVERSITY OF DELHI

For ASELL (Advancing Science by Enhancing Learning in the Laboratory), National Science Workshop, University of Sydney, Australia

- Subramanyan, J. & Bahri, S. 2013. To test the viability of seeds and pollen grains, ASELL National Science Workshop Experiments Manual, University of Sydney, Sydney, Australia, 02-05 April 2013, pp. 59-67.
Was the Resource Person.
- Bahri, S. & Subramanyan, J. 2013. To study bacteria by Gram staining technique, ASELL National Science Workshop Experiments Manual, University of Sydney, Sydney, Australia, 02-05 April 2013, pp. 03-13.

For Other Workshops

- Subramanyan, J. 2011. Certain basic concepts in biology with reference to plants. In: Manual of the Workshop for Senior Secondary School Teachers on Building Concepts in Science with Hands-on Activities, D.S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, Delhi, 25-27 May 2011, pp. 01-14.
Was the Resource Person.
- Subramanyan, J. 2008. Study of the effect of temperature on the semipermeable nature of membranes; to study the effect of an organic solvent on the semipermeable nature of membranes; demonstration of dialysis; study of plasmolysis and deplasmolysis. In: Manual of the Workshop Biology Laboratory Course (LS 206), B.Sc. Programme I Yr, Institute of Lifelong Learning & D.S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, Delhi, 24-26 September 2008 (four exercises), pp. 60-64; 66-69; 71-74; 76-79.
Was a member of the Organizing Committee.
- Contributed multiple choice questions for online quizzes for the B.Sc. Programme I Year paper BY 105 at the Workshop on Development of Online Quizzes in Life Sciences, Institute of Lifelong Learning, University of Delhi, Delhi, 13 April 2009.

Research Guidance (reverse chronological order):

Undergraduate Research Projects

DSKC (D.S. Kothari Central Inter-disciplinary Research Facility; formerly D.S. Kothari Centre for Research and Innovation in Science Education), Miranda House, University of Delhi, Delhi, at the Summer Workshops Flavor of Research

- Programmed Cell Death in Plants (jointly); 2021
- RUBISCO and PEP Carboxylase (jointly); 2021
- Bt Cotton in India (jointly); 2020



Miranda House UNIVERSITY OF DELHI

- Management of Insect Pests of Pulse Crops in India (jointly); 2020
- A Study on the Effect of Sodium Chloride on Seed Germination (jointly); 2019
- A Study on the Effect of Kinetin on Senescence (jointly); 2019
- Flower and Fruit Senescence (jointly); 2019
- A Study on Anthocyanins (jointly); 2018
- Morphogenetic Studies on Cowpea Seeds (jointly); 2017
- A Study on Pollen Grains (jointly); 2016
- A Study of Plant Cell Structure with Emphasis on Mitochondria (sole); 2013
- A Study of Enzymatic Activity in Pineapple Fruit (sole); 2012
- A Study of the Effect of Radish Extract on Starch (sole); 2011
- Visualizing Ovules (sole); 2011
- A Comprehensive Study of Urease Activity (sole); 2010
- Effects of Certain Factors on Catalase Activity (sole); 2010
- Comparison of the Physical and Chemical Properties of Soils and Manures (jointly); 2009
- Use of Sensors in Biology (jointly); 2008

DBT Star College Scheme

- Pollen as a System to Study the Effects of Insecticides (jointly); 2020

Research Projects (reverse chronological order):

- As a faculty member for the Star Innovation Project Eureka! MyLab Developing Resources and Hands-on Science Activities and an Adaptation Accessible for Visually Impaired (Project Code MH 01), University of Delhi, from 2016-2019.
- As a faculty member for the Innovation Project Award for Colleges of the University of Delhi, Mobile! MyLab Anytime Anywhere (Project Code MH 305), from 01 September 2015- October 2016.
- As a faculty member for the Innovation Project Award for Colleges of the University of Delhi, Eureka! MyLab (Project Code MH 207), from 15 November 2013-31 Mar 2015.
- As a faculty member for the Innovation Project Award for Colleges of the University of Delhi, Miles on the Yamuna (Team B, Project Code MH-104), 15 May 2012--15 July 2013.
- Facilitator and mentor, D.S. Kothari Central Inter-disciplinary Research Facility (formerly D.S. Kothari Centre for Research and Innovation in Science Education), Miranda House, University of Delhi, Delhi, at the Summer Workshops.

Membership of Professional Bodies (reverse chronological order):



Miranda House

UNIVERSITY OF DELHI

- Life Member, International Society for Plant Morphologists, Department of Botany, University of Delhi, Delhi
- Life Member, Delhi University Botanical Society (DUBS), Delhi
- Life Member, Indian Science Congress Association (ISCA), Kolkata

Administrative Responsibilities (reverse chronological order):

- A Coordinator/ Nodal Officer (National Assessment and Accreditation Council, NAAC), Department of Botany; and Member, Steering Committee NAAC: 2021 ongoing
- Bursar, Miranda House: 29 November 2017 to 01 August 2021
- A Coordinator, Department of Botany, DBT Star College Scheme: 2017- 2020
- NSS
 - Staff Advisor: 2017-18
 - NSS Programme Officer and Incharge, NSS Unit: 1996-99
- Member, Departmental Screening Committee
 - Screening the applications of two Assistant Professors for their promotion, May 2016
 - Screening of applications received for posts of Assistant Professors, May-June 2015
- Member, Garden Committee: Ongoing since 2015; 2006-2008, 1993-1995
- NAAC Report 2016, 2017
 - A Department Coordinator, Department of Botany;
 - Member, preparation of Self Study Report (SSR);
 - A Convenor, Editorial Team, Department Evaluative Reports
- B.Sc. (Programme) Life Science
 - Coordinator: 2015 to 2017
 - Staff Advisor: 2006-2008
- A Deputy Superintendent of Theory Examinations of the College: May-June 2016
- Extended Admission Committee
 - B.Sc. (H) Botany, M.Sc. Botany: 2013, 2012, 2011, 2002, 2001, 2000, 1994, 1993, 1992
 - B.Sc. General Group B, B.Sc. Life Science: 2016, 2015, 2007, 2006, 1997, 1996
- Member, Department of Botany, Anti-ragging Committee: 2014-2015
- Teacher-in-Charge, Department of Botany: 2012 to 2014, 2000 to 2002
- Member, PRO and Proctorial Committee: 2009 to 2011
- Member, MH Vataran, MH Environment Society: 2006 -2010
- Member, Golden Jubilee Awards Committee: 2004-2006
- A Staff Advisor, Botanical Society: 2003-2004, 1999-2001, 1992-1994
- A Member, Department of Botany, College Time Table Committee: 1995-1997
- Selection Committees for selection of Ad Hoc and Guest Teachers
 - Principal's Nominee: Nine times



Miranda House

UNIVERSITY OF DELHI

Subject Expert: Six times

- Member, Screening-cum-evaluation Committee: Three times

Invited Talks/Session Chair/Resource Person (reverse chronological order):

Invited Talk: Enzymes. In: Short term online course for undergraduate science students: Understanding our Environment, Department of Botany, Miranda House, University of Delhi, Delhi, 10 to 25 July 2020. My talk was on 24 July 2020.

Invited as a Resource Person: Conducted a session on Enzymes. In: Plant Physiology Workshop for B.Sc. (H) III Year students, Department of Botany, Shivaji College, University of Delhi, Delhi, 24 September 2019.

Resource Person:

- Subramanyan, J. 2018. Lab safety. Workshop for Laboratory Staff: Laboratory Techniques & Instrumentation, Internal Quality Assurance Cell (IQAC), Miranda House, University of Delhi, Delhi, 31 January and 07 February 2018. My session was on 31 January 2018.
Was a Resource Person.
- Workshop on the Application of Culture Techniques in Plant, Animal and Bacterial Systems, D.S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, Delhi, 01-14 Jul 2009.
Was the Resource Person for a session on Pollen Culture Technique on 09 July 2009.
- Workshop on ICT in School Science Education, D.S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, and Amsterdam Mathematics, Science and Technology Education Laboratory (AMSTEL), University of Amsterdam, The Netherlands, 08-10 May 2008.
Was a Resource Person.

For details of Resource Person in DBT Star College Scheme workshops, bridge courses, INSPIRE Internship programmes, ASELL, and other workshops, ***please see*** under Educational Resource Materials Developed.

Conferences Organized (reverse chronological order):

Conferences Organized

- DST INSPIRE Scholars Science Conclave 2019: Research on the Frontiers, Department of Technology, Government of India, and D.S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, Delhi, 16-18



Miranda House UNIVERSITY OF DELHI

January 2019.

Was a Co-convenor

- Biodiversity Conclave: Biodiversity for Everyone's Life, Miranda House, University of Delhi, Delhi, and Institute of Bioresources and Sustainable Development (IBSD), Manipur, 31 August 2018.
Was a Member, Organizing Committee.
- Science Conclave: Research on the Frontiers, D.S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, Delhi, 10-12 January 2018.
Was a Co-convenor.

Workshops/ Symposia/ Webinars Organized

- Webinar on Discover Your Calling..., under the lecture series Career Counselling: Way Forward, organized by The Internal Quality Assurance Cell (IQAC), Miranda House, in collaboration with Antheia, The Botanical Society of Miranda House, University of Delhi, 19 July 2021.
Was a Member, Organizing Committee,
- National Webinar Tinkering with Plant Genomes by Professor Akhilesh K. Tyagi, Department of Plant Molecular Biology, University of Delhi South Campus, New Delhi, organized by Department of Botany, Miranda House, University of Delhi, Delhi, 06 July 2020.
Was a Member, Organizing Committee
- Air Pollution Mitigation: Species to Communities, Workshop for Undergraduate Students, organized by Miranda House, University of Delhi, Delhi, under the aegis of DBT Star College Scheme, 17 February 2020.
Was a Member, Organizing Committee.
- Workshop on Herbarium Techniques for B.Sc.(H) Botany students organized by Miranda House, University of Delhi, Delhi, under the aegis of DBT Star College Scheme, 20 January 2020.
Was a Convenor.
- Evolving Face of Microscopy: Magnifying Lens to Nanoscope. Workshop for Teachers of Botany organized by Department of Botany, Miranda House, under the aegis of DBT Star College Scheme in collaboration with Department of Botany, University of Delhi, Delhi, 11-12 December 2019.
Was a Member, Organizing Committee.
- Workshop on Managing the Society's Funds, for Student Office bearers of Societies, Internal Quality Assurance Cell (IQAC), Miranda House, University of Delhi, Delhi, 16 September 2019.



Miranda House

UNIVERSITY OF DELHI

Was the Coordinator.

- Workshops on Biofertilizers, DBT Star College Scheme, Department of Botany, Miranda House, University of Delhi, Delhi.
 - For B.Sc. Life Science II Year students: 28 August 2019
 - For B.Sc. Life Science II Year students: 13 March 2019
 - For B.Sc. (Honours) Zoology I Year students: 02 November 2018
 - For B.Sc. (Honours) Zoology II Year students: 08 November 2017
 - For B.Sc. Life Science III Year students: 04 September 2017

Was a Coordinator and a Resource Person.

- Department of Biotechnology (DBT)-Biotechnology Popularization Programme under the CTEP Programme of DBT, Miranda House, University of Delhi, Delhi, 02 August 2019.

Was a Member, Organizing Committee.

- Symposium on Empowering Women in Chemistry: A Global Networking Event, IUPAC Centenary Celebration, D.S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, Delhi, 12 February 2019.

Was a Member, Organizing Committee.

- The Bonsai Workshop, Department of Botany, Miranda House, University of Delhi, Delhi, under the aegis of DBT Star College Scheme in collaboration with Indian Bonsai Association, 22 March 2018..

Was a Member, Organizing Committee.

- INSPIRE Internship Programme, an initiative of the Department of Science and Technology, Government of India, organized by D.S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, Delhi, 18-22 December 2017.

Was a Member, Organizing Committee, and a Mentor (Resource Person).

- INSEF (Indian Science and Engineering Fair), Miranda House, University of Delhi, Delhi, 13 October 2017.

Was a Member, Organizing Committee.

- Workshop on Tissue Culture, DBT Star College Project, Miranda House, University of Delhi, Delhi, 12-13 March 2014.

Was a Coordinator and a Resource Person.

- Workshop for Senior Secondary School Teachers on Building Concepts in Science with Hands-on Activities, D.S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, Delhi, 25-27 May 2011.

Was a Convener and a Resource Person.

- National Workshop on Art and Science of Paper Recycling, Miranda House, University of Delhi, Delhi, 22-23 January 2010.

Was a member of the Organizing Committee.



Miranda House UNIVERSITY OF DELHI

- National Symposium on Science of Life: The New Horizon, Miranda House, University of Delhi, Delhi, 21-23 November 2007.
Was a Member, Organizing Committee.

Other Activities Organized

- P. Sheel Memorial Award Lecture of The National Academy of Sciences, India (NASI), by Dr. Shelly Praveen, Head, Division of Biochemistry, IARI, on 04 November 2016, in the college.
Was a Member, Organizing Team.
- Societal Research Fellowship (SoRF) for Women Scientists & Technologists under the Programme Disha of the DST, Science for Equity, Empowerment & Development (SEED) Division, 07 March 2014.
Was a Member, Organizing Team.
- A Member, Department of Botany, for Baseline Test: 2015, 2014.
- Flag Off Ceremony of Vigyan Jyot, 99th Indian Science Congress Association, organized at Miranda House, University of Delhi, Delhi, 16 December 2011.
Was a Member, Organizing Team.
- Science Festival Vigyan Vichitra, 20-22 November 1997.
Was a Member, Organizing Team.

Seminars/Workshops/Conferences Attended (reverse chronological order):

Seminars/Webinars Attended

- Online Launch of DU eLibrary and Orientation of the DU eLibrary (Web and Mobile App), organized by Delhi University Library System, 03 December 2021.
- Webinar Power Your Research with Scopus, organized by Delhi University Library System, 23 November 2021.
- National Webinar entitled Teacher's e-Kit: A Four Quadrant Approach for Development of OERs for Higher Education, organized by Guru Angad Dev Teaching Learning Centre, SGTB Khalsa College, University of Delhi, under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) of Ministry of Education, 09 September 2021.
- Popular Science Webinar Lecture Engineering Microbiome for Human Gut and Plant Root Health, organized jointly by the Departments of Zoology and Biosciences, Union Christian College, Aluva, 14 August 2021.
- International Webinar the Science of Viticulture and Enology, Department of Botany under the aegis of IQAC, Sri Aurobindo College, University of Delhi, Delhi, 12 July 2021.
- Virtual talk on From Mycorrhizosphere to Rhizosphere Microbiome: The Beautiful Journey, organized by Tarumitra, the Botanical Society of Acharya Narendra Dev College, University of Delhi, under the aegis of DBT Star College Scheme, 23 June 2021.



Miranda House

UNIVERSITY OF DELHI

- Webinar on OBE Evaluation Modalities by Dr. Ruchika Ramakrishnan, OBE Evaluation Coordinator, Dean Examination Office, and Associate Professor, Shyam Lal College, University of Delhi, IQAC, Miranda House, University of Delhi, 09 June 2021.
- Webinar on We're Part of the Solution, organized by Delhi Biodiversity Parks of DDA, on International Day for Biological Diversity, 22 May 2021.
- Earth Hour Special International Webinar on Empowering Women for Conserving Forests, organized by Biodiversity Conservation Foundation (BCF), India, on 27 March 2021.
- International Webinar on Water Conservation: Nature Based Solutions to Climate Change, organized by Biodiversity Conservation Foundation (BCF), India, on World Water Day, 22 March 2021.
- International Webinar on Natural Resource Management in India: Past and Present, organized by Biodiversity Conservation Foundation (BCF), India, on International Day of Forests, 21 March 2021.
- Redefining Gardening from Hobby to Enterprise: Urban Gardening: Series 4 (Mushroom Farming and Introduction to Commercial Vertical Hydroponics Farming), Garden Committee, Daulat Ram College, University of Delhi, Delhi, 25 November 2020.
- NASI Science and Society Webinar Series Poshan Awareness Program Ionizing Radiation: Transforming Agriculture, Food and Supply Chains, The National Academy of Sciences, India (NASI) Delhi Chapter Inter University Accelerator Centre (IUAC), 17 November 2020.
- National Webinar on Cyber Hygiene for Virtual Teaching Platforms, Department of Botany under the aegis of Internal Quality Assurance Cell (IQAC), Maitreyi College, University of Delhi, Delhi, 03 October 2020.
- National Webinar Learnings from the Corona Pandemic, organized by Department of Chemistry, Miranda House, 24-25 September 2020.
- Webinar Role and Relevance of Alternative Medicine and Ayurveda in Context of Contemporary Times, MH Vatavaran and Department of Political Science, Miranda House, 28 August 2020.
- Webinar Colours in Nature, DBT Star College Scheme, Department of Botany, Kirori Mal College, University of Delhi, Delhi, 22 August 2020.
- Webinar Transforming and Repackaging Library Services during Covid 19 Pandemic, SpringerNature in association with Delhi University Librarians Forum, 14 August 2020.
- Webinar on Floriculture & Terrace Gardening, Mahatma Gandhi Institute for Combating Climate Change (Govt. of NCT of Delhi), Bakoli, Delhi, 07 August 2020.
- National Webinar Legume Diversity in India by Dr. M. Sanjappa, organized by the Society for Ecological Research and Natural Resources Management (SERNRM), 30 June 2020



Miranda House

UNIVERSITY OF DELHI

- National Webinar Cyber Security by Dr. Neel Viswakarma, Shaheed Bhagat Singh College, University of Delhi, 26 June 2020.
- Webinar Mathematics for Artificial Intelligence by Dr. Revathy Sundararajan, Student Chapter of Computer Society of India of Don Bosco Institute of Technology, Mumbai, 25 June 2020.
- Webinar Medicinal Plants: Eternal Source of Health and Wellness by Professor A. K. Tripathi, Professor of Biotechnology and Director, Institute of Science, Banaras Hindu University, organized by Department of Botany, Swami Shraddhanand College, University of Delhi, Delhi, 17 June 2020.
- Webinar Role of Chromosome in Plant Taxonomy by Dr. Manoj M. Lekhak, Centre for Education, Learning & Research Training in Angiosperm Taxonomy, Shivaji University, Kolhapur, organized by Department of Botany, VIVA College of Arts, Commerce and Science, Virar, District Palghar, Maharashtra, under the aegis of Internal Quality Assurance Cell (IQAC), 15 June 2020.
- International Webinar on COVID19: Myths and Truths by Dr. Muneeb A. Faiq, New York University Grossman School of Medicine, New York, USA, Internal Quality assurance Cell (IQAC), Acharya Narendra Dev College, University of Delhi, Delhi, 09 June 2020.
- National Webinar on Biodiversity & Conservation, Internal Quality Assurance Cell (IQAC), Daulat Ram College, University of Delhi, Delhi, 08 June 2020.
- Webinar on Biodiversity and Man, by Professor S.R. Yadav, INSA Senior Scientist, Department of Botany, Shivaji University, Kolhapur, organized by Department of Botany, Dyal Singh College, University of Delhi, and Society for Ecological Research and Natural Resource Management (SERNRM), 05 June 2020.
- Webinar on Online Teaching & Learning Technology, Atma Ram Sanatan Dharma College, University of Delhi, Delhi, 27 April 2020.
- EduTECHAsia Webinar: Using Technology to Deliver Lessons in a Crisis, 09 April 2020.
- Webinar on Fostering Social Responsibility by Higher Education: Covid 19 and Beyond, co-convened by Association of Indian Universities (AIU) and PRIA (Participatory Research in Asia) International Academy (PIA), 08 April 2020.
- Seminar on Environmental Issues of Delhi organized on the World Environment Day, Department of Environment, Government of NCT of Delhi, 05 June 2007.
- National Seminar on Genetically modified Organisms - Biosafety Aspects, Delhi University Botanical Society, Department of Botany, University of Delhi, Delhi, 10-11 March 2005.
- National Seminar on Biotechnology Challenges, Opportunities and Promises, IILM, Lodhi Institutional Area, New Delhi, 06 November 2004.



Miranda House

UNIVERSITY OF DELHI

- National Seminar on Climate Change in India and Its Impact on Plant Diversity and Productivity, Delhi University Botanical Society, Department of Botany, University of Delhi, Delhi, 22-23 December 2003.
- Seminar on Industry-University Partnership in Science Education, India Habitat Centre, New Delhi, 03 May 2000.
- Seminar, "Make Yourself Heard", on Youth & Its Preoccupations, sponsored by Rotary Club of Delhi Regency & National Aids Control Organization (NACO), Miranda House, University of Delhi, Delhi, 26 November 1999.
- Seminar on Emerging Trends in Biotechnology, Department of Botany, Gargi College, University of Delhi, Delhi, 03-04 November 1999.
- Seminar on Biodiversity & Environmental Management, Silver Jubilee Festival of the Department of Botany, Kirori Mal College, University of Delhi, Delhi, 02-04 December 1998.
- Colloquium on Biotechnology for Women: A Vision for 21st Century, organized by Department of Biotechnology, Ministry of Science and Technology, National Institute of Immunology, Delhi, 07 November 1998.
- National Seminar on Literacy Movement in India, Pragati Maidan, 19 April 1997.
- Seminar on Hazardous Waste - A Major Threat to Life, Indian Council for Enviro-Legal Action, New Delhi, 23 March 1996.

Workshops Attended

- Three-day Online Training Programme on the Theme Enhancing the Preparedness against Omicron Variant of Covid, Department of Geography, Miranda House, in collaboration with National Institute of Disaster Management (NIDM), 13-15 January 2022.
- Virtual Workshop on NAAC Accreditation: a Changed Perspective, Internal Quality Assurance Cell (IQAC) initiative in association with IQAC Cluster India, Miranda House, University of Delhi, 01 to 03 July 2021.
- Three-day National Virtual Workshop Create Your Own Garden, Gargi College, University of Delhi, Delhi (presented by Mrs. Archana Gupta, All India Kitchen Garden Association), 05-07 November 2020.
- One-day Online Workshop on Usage of Google Conferencing Tools, Internal Quality Assurance Cell (IQAC), Acharya Narendra Dev College, University of Delhi, Delhi, 12 June 2020.
- An interactive Workshop on college faculty roster, college faculty seniority list, financial rules and promotions, Internal Quality Assurance Cell, Miranda House, University of Delhi, 28 August 2019.
- Understanding one of the Major Healthcare Challenges of Today, Biotechnology Popularization Programme, DBT Star College Scheme, Miranda House, University of Delhi, Delhi, in collaboration with CRI, France, & CSIR-IMTECH, India, 03 June 2019.



Miranda House

UNIVERSITY OF DELHI

- Training-cum-workshop (regarding online verification of application forms in r/o various scholarship schemes on e-district portal of GNCTD for the year 2017-18, conducted for Nodal Officers of DU and its affiliated colleges/ institutes, Directorate of Higher Education, RPVV, Civil Lines, Delhi, 09 February 2018.
- Biotechnology Industry Research Assistance Council (BIRAC) celebrating National Entrepreneurship Day Workshop on Catalyzing a Cultural Shift in Youth Entrepreneurship, BIRAC in association with D.S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, 09 November 2017.
- One-day WhatsApp course on Computational Thinking, Conducted by Professor M.M. Pant. Resource persons: Dr. Anupam Kaushik and Dr. Bimlesh Wadhwa, 03 June 2017.
- Workshop by Dr. Shiladitya Raj Choudhoury, University of South Alabama, USA, on Active Learning as a transformational Tool for the University Classroom, D.S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, 15 May 2017.
- Half-Day Faculty Empowerment Workshop on Presentation Tools for Modern Age Educators, Guru Angad Dev Teaching Learning Centre of MHRD, SGTB Khalsa College, University of Delhi, 26 November 2016.
- Web OPAC Training Workshop, Miranda House Library, Miranda House, 16 September 2016.
- Training the Trainers: IPR Workshop, DBT Star College Project, Miranda House, in collaboration with MHRD IPR Chair (Technical), University of Delhi, Delhi, 15 January 2016.
- Workshop on Applications of Flow Cytometry, D.S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, and the DBT Star College Project, Miranda House, 20 March 2015.
- Australian Leadership Awards Fellowship (ALAF): Participated as a team member in a three-week short-term leadership and professional development programme entitled Building Leadership Capacity in Undergraduate Science Teaching in India hosted by the University of Sydney from 02 to 17 April 2013. As an ALA Fellow, participated in three Advancing Science by Enhancing Learning in the Laboratory (ASELL) National Science Workshops entitled Cells and Tissues, Photosynthesis, and Western Blotting for Dystrophin Protein Expression, 02-05 April 2013.
- Workshop on Microscopy: Techniques and Applications, DBT Star College Project, Miranda House, University of Delhi, Delhi, 27-28 September 2011.
- National Workshop on Evolutionary Perspectives in Modern Biological Teaching and Research, Organized by the Institute of Life Long Learning, Centre for Science



Miranda House

UNIVERSITY OF DELHI

Education and Communication & Acharya Narendra Dev College, University of Delhi, Delhi, 09-10 May 2011.

- ICT Workshop for Capacity Building of Delhi University Faculty, ILLI Workshop Tier II, University of Delhi, Delhi, 19-24 April 2010.
- Workshop on the Fascinating World of e-Resources for Teaching Biology to Undergraduate Students, Daulat Ram College, University of Delhi, Delhi, and Pearson Education India, 08 March 2010.
- Workshop on Solid Waste Management, PHD Chamber of Commerce and Industry, and Indian Centre for Plastics in the Environment (ICPE), PHD House, New Delhi, 05-06 June 2009.
- Collaborative Workshop for College Science Teachers on Active Learning with Computer-based Experiments in Multidisciplinary Context, D.S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, Delhi, 16-21 April 2009.
- Workshop on the Use of E-Resources and WWW in Teaching and Research, Ramjas College and Delhi University Library System, University of Delhi, Delhi, 27 January 2009.
- Workshop for Teachers of the Biology Laboratory Course (Course Code BY 106), Institute of Lifelong Learning and Daulat Ram College, University of Delhi, Delhi, 02-04 September 2008.
- Workshop on Genetics, Molecular Biology and Biotechnology, Department of Botany, University of Delhi, Delhi, 14-16 January 2006.
- Workshop on The New Botany Syllabus – Challenges Ahead, Centre for Science Education and Communication, University of Delhi, Delhi, 29 March-08 April 2004.
- Workshop on Analytical Techniques and Instrumentation for Biological Sciences, conducted by the University Science Instrumentation Centre (USIC), Jawaharlal Nehru University (JNU), and Western Regional Instrumentation Centre (WRIC), Mumbai, at USIC, JNU, 07-12 February 2000.
- Workshop on Restructuring the Botany Syllabus at Undergraduate Level: B.Sc. (Honours), Kirori Mal College, University of Delhi, Delhi, 20-22 December 1994.

Conferences Attended

- National Conference on Technological Empowerment of Women Commemorating the International Women's Day, National Academy of Sciences, India (NASI), Vigyan Bhavan, New Delhi, 08-09 March 2018.
- XXVII Annual Conference of Indian Angiosperm Taxonomy & International Symposium on Plant Systematics: Priorities and Challenges, Delhi University Botanical Society, Department of Botany, University of Delhi, Delhi, 10 -12 November 2017.
- International Conference Recent Research in Biomedical Engineering, Biochemistry,



Miranda House

UNIVERSITY OF DELHI

Bioethics, Bioinformatics, Cancer Biology, Stem Cells and Applied Biotechnology (Biotech 2017), Dr. G.C. Mishra Educational Foundation, Jawaharlal Nehru University, New Delhi, 20 May 2017.

- National Conference on Combating Industrial Pollution for Sustainable Development – a Fusion of Industrial and Scientific Efforts (CIPSE – 2016), Department of Chemistry, Commemoration of Golden Jubilee Year of Gargi College, University of Delhi, Delhi, 22-23 September 2016.
- National Conference on Plant Science Research: Looking Beyond 21st Century for Environmental and Agricultural Revolution, Society of Plant Research (Vegetos) & Department of Botany, University of Delhi, Delhi, 05-07 February 2016.
- National Conference on Climate Change: Impacts, Adaptation, Mitigation Scenario and Future Challenges in Indian Perspective, Department of Botany, Deen Dayal Upadhyaya College, University of Delhi, New Delhi, 02-03 March 2015.
- National Conference Striving & Thriving Towards Diffusion of Student-driven Research in Science and Technology for Inspired Learning, Maharaja Agrasen College, University of Delhi, Delhi, 16-17 October 2014.
- The Northern Regional Science Congress, Science for Shaping the Future of India, Indian Science Congress Association (Delhi Chapter), Delhi, 26-27 November 2012.
- The Academic Congress, Enabling the Young: Redefining Education, University of Delhi, Delhi, 06-07 September 2012.
- International Conference on Science, Spirituality and Humanity Transcending Discipline Barriers, Shivaji College Golden Jubilee Celebrations, Shivaji College, University of Delhi, Delhi, 17-19 February 2011.
- National Conference on Biodiversity Related International Conventions: Role of Indian Scientific Community, Delhi University Botanical Society, Department of Botany, Delhi 08-10 March 2006.
Conference on Mustard Oil Crisis Why, How and What Next, Mustard Research & Promotion Consortium, New Delhi, and Eco-transformation Centre, New Delhi, Indian National Science Academy, Delhi, 21 April 1999.
- 84th Indian Science Congress, University of Delhi, Delhi, 03-07 January 1997.

Symposia Attended

- Two-day International Online Symposium on Reproductive Health and Physical Fitness, on the occasion of National Women's Health and Fitness Day 2021, under the aegis of IQAC, DBT Star College Program and DDUC-NASI initiative, Deen Dayal Upadhyaya College, University of Delhi, Delhi, 28-29 September 2021.
- One-Day Indo- Hungarian Symposium on Recent Advances in Chemistry and Biology (INHCAB-2017), Department of Chemistry, Miranda House, University of Delhi, in



Miranda House

UNIVERSITY OF DELHI

association with Department of Pharmaceutical Chemistry, University of Debrecen, Debrecen, Hungary, 11 December 2017.

- Symposium on Proteomics. Department of Biochemistry, Sri Venkateswara College, University of Delhi, Delhi, 16 March 2015.
- National Symposium Catenanes on Molecular Cell Biology Shivaji College, University of Delhi, Delhi, 24-25 November 2009.
- Symposium on Indian Science and the Global Context, INSA Platinum Jubilee Celebration, held at IIT, Delhi, 10 January 2009.
- National Symposium on Biotechnology, Energy & Environment in the New Millennium - Indian Scenario, Department of Botany, Daulat Ram College, University of Delhi, Delhi, 08--09 December 1999.
- National Symposium on Microbes in Plant Improvement and Environmental Protection, Department of Botany, University of Delhi, Delhi, 23-24 December 1997.
- 67th Annual Convention of NASI (National Academy of Sciences, India) & Symposium on Science and Technology for Sustainable Development, Utkal University, Bhubaneswar, 24-26 October 1997.
- National Symposium on Evolution of Life, Department of Biophysics, University of Delhi South Campus, New Delhi, 05-06 April 1996.

Training Courses Attended

Refresher Courses

- In Life Sciences - Microbial Biotechnology, Centre for Professional Development in Higher Education (CPDHE), University of Delhi, Delhi, 23 December 1998-12 January 1999.
- In Biotechnology, Academic Staff College, Jawaharlal Nehru University, New Delhi, 20 April -15 May 1998.
- In Life Sciences - Current Trends in Microbiology, Centre for Professional Development in Higher Education (CPDHE), University of Delhi South Campus, Delhi, 28 March-18 April 1996.

Orientation Courses

- Orientation Course on the National Service Scheme, Department of Social Work, University of Delhi, Delhi, 04-13 August 1997.
- Orientation Course (OR – 27), Centre for Professional Development in Higher Education, University of Delhi, Delhi, 19 May-15 June 1995.

Faculty Development Programmes



Miranda House

UNIVERSITY OF DELHI

- Online Faculty Development Program on MOOCs and e-learning in context of National Education Policy organized by Delhi School of Public Policy and Governance, Institution of Eminence, University of Delhi, in collaboration with National Law University and Judicial Academy, Assam, and Bharatiya Shikshan Mandal and National Institute of Open Schooling, Ministry of Education, Government of India, 18-24 October 2021.
- Two weeks Faculty Development Programme on Advanced Concepts on Developing MOOCs, Pandit Madan Mohan Malviya National Mission on Teachers and Teaching, MHRD, Teaching Learning Centre, Ramanujan College, University of Delhi, 02-17 July 2020.
- Faculty Development Programme, Presentation Skills - Level I, College of Vocational Studies, Sheikh Sarai II, University of Delhi, in association with ICT Academy, Chennai, 27-28 September 2018.

Other Courses

- Training Course on Window 95, MS Word, PowerPoint, Delhi University Computer Centre, University of Delhi, Delhi, 08-22 May 2000.
- Training Course on Window 95, INTERNET Concepts & E-Mail, Delhi University Computer Centre, University of Delhi, Delhi, 24-28 April 2000.
- Training Course on Introduction to PCs and Related Software, Delhi University Computer Centre, University of Delhi, Delhi, 19-30 August 1996.

Awareness Programmes Attended

- Intellectual Property Awareness Programme (under National IP Awareness Mission NIPAM), Office of the Controller General of Patents, Designs and Trademarks, Ministry of Commerce & Industry, Government of India, organized by Ramjas College, University of Delhi, Delhi, 19 January 2022.
- Online Awareness Programme on Access to e-Resources under N-LIST for Punjab, Haryana, Himachal Pradesh, Delhi, Jammu & Kashmir and Ladakh, organized by NLIST Team, INFLIBNET Centre (An IUC of UGC), Gandhinagar, 21 September 2020.
- Annual Eco Club Meet, Department of Environment, Government of NCT of Delhi, National Bal Bhavan, 12-15 January 2010.
- Awareness Programme, Eco Teachers Meet, Indian Centre for Plastics in the Environment (ICPE), Plastindia Foundation, 06 February 2009.
- Annual Eco Club Meet, Department of Environment, Government of NCT of Delhi, Pragati Maidan, 14-17 December 2008.
- Annual Eco Club Meet, Department of Environment, Government of NCT of Delhi, National Bal Bhavan, 20-21 December 2007.
- PACCIFY (Programme for Awareness on Climate Change Issues Featuring the Youth), The Energy and Resources Institute (TERI), 2005-06.



Miranda House

UNIVERSITY OF DELHI

- Solar Cooker Promotion Camp, Delhi University Energy & Environment Group, Centre for Science Education & Communication, University of Delhi, Delhi, 26 April 1997.

Synergy (work with other organizations outside the college):

- University Flower Show Committee, University of Delhi: Special Invitee in 2021 and 2020; Member in 2019, 2018, and from 2008 to 2015.
- Jury Member, Level I, at INSPIRE 7th National Level Exhibition & Project Competition (NLEPC), for INSPIRE Awards – Manak, organized by Department of Science & Technology and National Innovation Foundation – India, 14 February 2019, IIT Delhi.
- Jury Member, Junior Levels I and II, at INSPIRE 4th, 5th and 6th National Level Exhibition and Project Competition (NLEPC), for INSPIRE Awards in October 2014, December 2015, and December 2016, respectively.
- As an NSS Programme Officer of the college NSS Unit from 1996-99 involved in organizing activities for students in association with the Indian Red Cross Society, Palna, St. Mary's Home for the Aged, HelpAge India, CRY, and Muskaan.

Honours and Awards

- Participated as a team member in a short-term leadership and professional development programme in Australia entitled Building Leadership Capacity in Undergraduate Science Teaching in India hosted by the University of Sydney from 02 to 17 April 2013. The programme was supported by AusAID under the Australian Leadership Awards Fellowships (ALAF). As an ALA Fellow participated in Advancing Science by Enhancing Learning in the Laboratory (ASELL) National Science Workshops at the University of Sydney, Sydney.
- Junior and Senior Research Fellowships from the CSIR during 01 February 1981 to 31 January 1986.
- P-G UGC National Scholarship during 1978-80.