

## **Somdutta Sinha Roy**

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### **Positions and Employment**

- **Feb. 2014 – Present:** Assistant Professor (Adhoc), Miranda House, University of Delhi, Delhi, India
- **2011-2012:** Post-Doctoral Research Associate, Breast Cancer program, Department of Oncology, Sidney Kimmel Comprehensive Cancer Centre at Johns Hopkins, Baltimore, MD, USA
- **2002- 2010:** Post-Doctoral Associate, Department of Cancer Biology and Biochemistry, Meharry Medical College, Nashville, TN, USA.
- **2000–2002:** Senior Associate in Centre for Environmental Management of Degraded Ecosystems, University of Delhi, Delhi, India.
- **1994-1995:** Research Associate in Centre for Environmental Management of Degraded Ecosystems, University of Delhi, Delhi, India.

### **PUBLICATIONS**

#### **Peer Reviewed Publications (Total 12)**

1. **Sinha Roy S**, Mukherjee S and Das SK (2017) Effects of intratracheal exposure of 2-chloroethyl ethyl sulfide (CEES) on the activation of CCAAT-enhancer-binding protein (C/EBP) and its protection by antioxidant liposome. *J. Biochem. Mol. Toxicol.* 31(5): 1-4. PMID 16292752 Impact factor 1.596. ISSN (print) 1095-6670 (online) 1099-0461
2. **Sinha Roy S**, Mukherjee S, Ballard BR and Das SK (2016) Protection against Dimethylbenz[a] Anthracene-induced breast cancer in female rats by  $\alpha$ -Lactalbumin. *International Journal of Cancer and Oncology* 3(1): 1-6. ISSN: 2377-0902.
3. Das SK, **Sinha Roy S**, Mukherjee S and Ong DE (2014) Lung retinoid metabolism and signaling in chronic obstructive pulmonary disease. *Indian Journal of Biochemistry and Biophysics* 51(6): 499-505. Impact factor 1.08. ISSN (print) 0301-128 (online) 0975-0959
4. Schäffer MW, **Sinha Roy S**, Mukherjee S, Das SK. (2013) Vitamin A, Vitamin E, Lutein and  $\beta$ -Carotene in Lung Tissues from Subjects with Chronic Obstructive Pulmonary Disease and Emphysema. *Open Journal of Respiratory Diseases* 3 (2): 44-51. doi: [10.4236/ojrd.2013.32008](https://doi.org/10.4236/ojrd.2013.32008) . ISSN (print) 2163-940X (online) 2163-9418
5. Schäffer MW, **Sinha Roy S**, Mukherjee S, Das SK. (2010) Uptake of all-trans retinoic acid-containing aerosol by inhalation to lungs in a guinea pig model system--a pilot study. *Experimental Lung Research* 36(10): 593-601. doi: [10.3109/01902141003790155](https://doi.org/10.3109/01902141003790155). Impact factor 1.528. ISSN (print) 0190-2148 (online) 1521-0499

6. Schäffer MW, **Sinha Roy S**, Mukherjee S, Das SK. (2010) Qualitative and quantitative analysis of retinol, retinyl esters, tocopherols and selected carotenoids out of various internal organs from different species by HPLC. *Analytical Methods* 2: 1320-1332. PMID 20976035. Impact factor 1.855. ISSN (print) 1759-9660 (online) 1759-9679
7. Schäffer MW, **Sinha Roy S**, Mukherjee S, Das SK.(2008) Identification of lutein, a dietary antioxidant carotenoid in guinea pig tissues. *Biochem Biophys Res Commun.* 374(2):378-381. doi: 10.1016/j.bbrc.2008.07.030. Impact factor 2.5. ISSN 0006-291X
8. **Sinha Roy S**, Mukhopadhyay S, Mukherjee S, Das SK. (2008) Breast cancer is associated with an increase in the activity and expression of cholinephosphotransferase in rats. *Life Sciences* 83: 661-665. doi: 10.1016/j.lfs.2008.09.013. Impact factor 2.704. ISSN 0024-3205
9. **Sinha Roy, S.**, Mukherjee, S., Kabir, S.M., Rajaratnam V., Smith, M., Das, S.K. (2005) Inhibition of Cholinephosphotransferase activity in lung injury induced by 2- chloroethyl ethyl sulfide (CEES), mustard analog. *J. Biochem. Mol. Toxicol.* 19: 289-297. PMID 16292752 Impact factor 1.596. ISSN (print) 1095-6670 (online) 1099-0461
10. Akech, J P, **Sinha Roy, S.**, Das, S.K. (2005) Modulation of Cholinephosphotransferase Activity in Breast cancer cell lines by Ro5-4864, a peripheral Benzodiazepine Receptor agonist. *Biochem. and Biophys. Res. Commun.* 333: 35-41. PMID 15936720. Impact factor 2.5. ISSN 0006-291X
11. **Sinha Roy, S.**, Mukherjee, S., Mukhopadhyay, S., Das, S.K. (2004) Differential effect of cadmium on Cholinephosphotransferase activity in normal, non-aggressive and aggressive cancerous human mammary epithelial cell lines. *Molecular Cancer Therapeutics*, 3: 199–204. PMID 14985460. Impact factor 5.599. ISSN (print) 1535-7163 (online) 1538-8514
12. **Sinha Roy, S.**, Mittra B, Sharma S, Das TK, Babu C.R. (2002). Detection of Root Mucilage Using an Anti-**fucose** Antibody. *Annals of Botany*, 89 (3): 293 – 299. PMID 12096741. Impact factor 4.051. ISSN (print) 0305-7364 (online) 1095-8290

### **Book Chapters (Total 2)**

1. Phospholipids as biomarkers for breast cancer, **Sinha Roy, S** and Das, SK. (2010) In: *Aggressive Breast Cancer*, Eds. Regina H. DeFrina. Nova Science Publishers, Inc. pp 159-171. ISBN: 978-1-61761-864-2
2. Moitra, S., Bahri, S. & **Sinha Roy, S.** (2018). My City, My Delhi- Biomedical Waste. In: *Environment and Sustainable Development A Geographical Appraisal.* (ed S. Sahdev and M. Kumar). Concept Publishing Company Pvt. Ltd., New Delhi, pp. 18-24. ISBN 13:978-93-5125-189-7.
3. Bahri, S and **Sinha Roy, S.** (2021). Copyright and its significance. In: *Intellectual Property Rights: Challenges and Prospects.* (ed. P. Baweja). Imperial Publications, New Delhi. pp. 31-35.

### **Peer Reviewed Abstracts (Total 18)**

1. Mukherjee S, Schäffer MW, Mitra, P, **Sinha Roy S**, and Das SK. (2015) Protection of Cigarette Smoke-Induced Lung Fibrosis in Guinea Pigs by Inhalation of Aerosolic All-Trans Retinoic Acid. Poster presented at 2013 Experimental Biology Meeting on March 28–April 1<sup>st</sup>, 2015, Boston, MA. FASEB J April 2015 29:775.2. Impact Factor 5.7. ISSN (print) 0892-6638 (online) 1530-6860
2. Mukherjee S, Schäffer MW, **Sinha Roy S**, and Das SK. (2013) Protection of Cigarette Smoke-Induced Lung Injury in Guinea Pigs by Inhalation of Aerosolic All-Trans Retinoic Acid. Poster presented at 2013 Experimental Biology Meeting on April 20–24<sup>th</sup>, 2013, Boston, MA. FASEB J April 9, 2013 27:793.6. Impact Factor 5.7. ISSN (print) 0892-6638 (online) 1530-6860
3. **Sinha Roy S**, Schäffer MW, Ong DE, and Das SK (2010) Retinoid metabolism and signaling in lung from COPD patients with different degree of emphysema. Poster presented at 2010 Experimental Biology Meeting on April 24–28<sup>th</sup>, 2010, Anaheim, CA. FASEB J April 6, 2010 24:893.6. Impact Factor 5.7. ISSN (print) 0892-6638 (online) 1530-6860
4. Schäffer MW, **Sinha Roy S**, Das SK (2010) Vitamin A and vitamin E levels in lung from subjects with chronic obstructive pulmonary disease with different degree of severity of emphysema. Poster presented at 2010 Experimental Biology Meeting on April 24–28<sup>th</sup>, 2010, Anaheim, CA. FASEB J April 6, 2010 24:889.5. Impact Factor 5.7. ISSN (print) 0892-6638 (online) 1530-6860
5. **Sinha Roy S**, Schäffer MW, Mukherjee S, and Das SK (2009) Control of breast cancer by dietary alpha-lactalbumin is mediated by regulation of retinoid metabolism and signaling. Poster presented at 2009 Experimental Biology Meeting on April 18–22<sup>th</sup>, 2009, New Orleans, LA. FASEB J April 22, 2009 23:524.18. Impact Factor 5.7. ISSN (print) 0892-6638 (online) 1530-6860
6. **Sinha Roy S**, Schäffer MW, Mukherjee S, and Das SK. (2008) Mustard Gas-Induced Alteration of Retinoid Metabolism/Signaling in Guinea Pig Lung. Poster presented at 2008 Experimental Biology Meeting on April 5–9<sup>th</sup>, 2008, San Diego, CA. FASEB J April 5, 2008 22:646.4. Impact Factor 5.7. ISSN (print) 0892-6638 (online) 1530-6860
7. Schäffer MW, **Sinha Roy S**, Mukherjee S, and Das SK. (2008) Improved High-Performance Liquid Chromatography Method with Diode Array Detection for simultaneous Analysis of Retinoic Acid Isomers, Retinol, Retinyl esters, Vitamin E, and Selected Carotenoids in Guinea Pig Tissues. Poster presented at 2008 Experimental Biology Meeting on April 5–9<sup>th</sup>, 2008, San Diego, CA. FASEB J April 5, 2008 22:621.3. Impact Factor 5.7. ISSN (print) 0892-6638 (online) 1530-6860
8. Gadsden J L, Mukhopadhyay S, Schäffer MW, **Sinha Roy S**, Mukherjee S, and Das SK (2008) **Effects of 2-Chloroethyl Ethyl Sulfide (CEES), a Mustard Gas Analog, on Serotonin/Dopamine Signaling in Guinea Pig Brain.** Poster presented at 2008 Experimental Biology Meeting on April 5–9<sup>th</sup>, 2008, San Diego, CA. FASEB J April 5, 2008 22:646.5. Impact Factor 5.7. ISSN (print) 0892-6638 (online) 1530-6860
9. **Sinha Roy S**, Mukherjee S, and Das SK. (2007) Beneficial Effect of Whey Protein on Dimethylbenz[a]anthracene-Induced Breast Cancer in Female Rats. Poster presented at 2007

Experimental Biology Meeting on April 28 – May 2, 2007, Washington, DC. FASEB J April 18, 2007 21:A247. Impact Factor 5.7. ISSN (print) 0892-6638 (online) 1530-6860

10. Schaffer MW, **Sinha Roy S**, Mukherjee S and Das SK. (2007) Comparative Assessment of Vitamin A in Lung Tissues Reveals Differences between Rodent Species. Poster presented at 2007 Experimental Biology Meeting on April 28 – May 2, 2007, Washington, DC. FASEB J April 18, 2007 21:A666. Impact Factor 5.7. ISSN (print) 0892-6638 (online) 1530-6860.
11. **Sinha Roy S**, Schäffer MW, Mukherjee S, and Das SK. (2007) Modulation of Lung Retinoid Metabolism and Signaling in a Guinea Pig Lung Injury Model Induced by 2- Chloroethyl Ethyl Sulfide (CEES), a Mustard Analog. EHHSTRP Colloquium “Translating Environmental Health Research into Public Policy and Practice in Atlanta, GA. September 9 – 11, 2007.
12. **Sinha Roy S**, Schaeffer M, Mukherjee S and Das SK. (2006) Modulation of Lung Retinoid Metabolism and Signaling by Smoking in a Guinea Pig Model. Poster presented at 2006 Experimental Biology Meeting on April 1-5, 2006, San Francisco, CA. FASEB J October 28, 2006 20:A973. Impact Factor 5.7. ISSN (print) 0892-6638 (online) 1530-6860.
13. Schaeffer MW, **Sinha Roy S.**, Mukherjee S and Das SK. (2006) A Possible Therapy for Smoke-Induced Lung Injuries by Inhalation of All-Trans Retinoic Acid in a Guinea Pig Model System. Poster presented at 2006 Experimental Biology Meeting on April 1-5, 2006, San Francisco, CA. FASEB J October 28, 2006 20:A973. Impact Factor 5.7. ISSN (print) 0892-6638 (online) 1530-6860
14. Miller LR, Mukherjee S., **Sinha Roy S.**, Schaeffer MW, Ansah T., and Das S. K. (2006) The Effect of Mainstream and Sidestream Smoking on Locomotor Activity in the Adult Male Guinea Pig: Role of Retinoic Acid. Poster presented at 2006 Experimental Biology Meeting on April 1-5, 2006, San Francisco, CA. FASEB J October 28, 2006 20:A1356. Impact Factor 5.7. ISSN (print) 0892-6638 (online) 1530-6860
15. Rice LJ, Schaeffer MW, **Sinha Roy S** and Das SK. (2006) The Effects of Mainstream and Sidestream Cigarette Smoke on Sperm Production: Role of Retinoic Acid. Poster presented at 2006 Experimental Biology Meeting on April 1-5, 2006, San Francisco, CA. FASEB J October 28, 2006 20:A973. Impact Factor 5.7. ISSN (print) 0892-6638 (online) 1530-6860
16. **Sinha Roy S**, Mukhopadhyay S, Mukherjee S, Das, SK. (2005) Modulation of Cholinephosphotransferase activity in a breast cancer model. Poster presented at 2005 Experimental Biology Meeting on April 6–12<sup>th</sup>, 2005, San Diego, CA.
17. **Sinha Roy S**, Mukherjee S, Kabir SM, Rajaratnam V, Das SK. (2004) Inhibition of Cholinephosphotransferase activity in lung injury induced by 2- chloroethyl ethyl sulfide (CEES), mustard analog. Poster presented at 2004 ASBMB/IUBMB Meeting on June 8–13<sup>th</sup>, 2004, Boston, MA.
18. **Sinha Roy S**, Mukhopadhyay S, Mukherjee S, Das SK. (2003) Differential effect of cadmium on Cholinephosphotransferase activity in normal, non-aggressive and aggressive cancerous human mammary epithelial cell lines. Poster presented at 2003 Experimental Biology Meeting on April 10–15<sup>th</sup>, 2003, San Diego, CA.

## Posters:

1. Bahri, S Divya Jaitak, Neeraj Kumari, Pooja Sheoran, Swati Nayak, Vankudothu Swathi, **Sinha Roy, S** 2019. "Traditional knowledge: of the people, for the people and by the people". Poster presented in the National Conference on "Intellectual Property Rights (IPR): Challenges and Prospects", Maitreyi College, University of Delhi, 22-23 October 2019.
2. **Sinha Roy, S**, Jyoti, Mamta, Muskaan Johnson, Saifali Dhyani, Bahri, S 2019. "Protection of plant varieties". Poster presented in the National Conference on "Intellectual Property Rights (IPR): Challenges and Prospects", Maitreyi College, University of Delhi, 22-23 October 2019. (Poster was awarded third prize)
3. Bahri, S., **Sinha Roy, S**, Pallapothula Devi Akilandeshwari and Anu Deepthi Marni 2019. "Medicinal Plants for Cancer Treatment" Poster presented in 1<sup>st</sup> International Conference on Integrative Chemistry, Biology and Translational Medicine (ICBTM-2019) organized by Centre for Global Health, Hansraj College, University of Delhi and Loyola University Chicago Stritch School of medicine, USA on 25 and 26 February, 2019
4. Bahri, S., **Sinha Roy, S.** and Moitra, S. 2017. *Trigonella foenum-graceum* L-an important medicinal herb. Poster presented in the National Conference on Pharmacognosy Scope of Phytochemically Unexplored Medicinal Plants organized Zakir Husain Delhi College, University of Delhi, 12 January 2017, pp. 61-62.
5. **Sinha Roy, S.**, Bahri, S. and Moitra, S. 2017. Presented a poster on Water sources of Delhi: How safe are they? in the International Conference and Outreach Programme on "Environment & Ecology: Sustainability and Challenges (ECON 2017) organized by Sri Venkateswara College, University of Delhi, 04-06 January, 2017
6. **Sinha Roy, S.**, Bahri, S., Moitra, S., Verma, H. & Yadav, S. 2017. Phytoremediation: a biotechnological approach. In: Abstracts National Conference on Biotechnology & Environment, p. 88, Department of Biotechnology, Jamia Millia Islamia, 10-11 April 2017 (poster presentation).
7. Bahri, S., **Sinha Roy, S.** & Moitra, S. 2017. Newly discovered valuable plants. In: Souvenir and Abstracts XXVII Annual Conference of Indian Angiosperm Taxonomy & International Symposium on Plant Systematics: Priorities and Challenges, pp. 157-158, Delhi University Botanical Society, Department of Botany, University of Delhi, Delhi, 10-12 November 2017 (poster presentation).
8. **Sinha Roy, S.**, Bahri, S. & Moitra, S. 2017. Key transcription factors in heavy metal tolerance in higher plants. In: Souvenir and Abstracts XXVII Annual Conference of Indian Angiosperm Taxonomy & International Symposium on Plant Systematics: Priorities and Challenges, p. 189, Delhi University Botanical Society, Department of Botany, University of Delhi, Delhi, 10-12 November 2017 (poster presentation).
9. Bahri, S., **Sinha Roy, S.** & Moitra, S. 2017. Anticancerous compounds in *Mentha* species. In: Abstracts One-Day Indo- Hungarian Symposium on Recent Advances in Chemistry and Biology (INHCAB-2017), p. 43, 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 (poster presentation).

10. **Sinha Roy, S.**, Bahri, S. & Moitra, S. 2017. Glucosinolates: A potential target for metabolic engineering in plants. In: Abstracts One-Day Indo-Hungarian Symposium on Recent Advances in Chemistry and Biology (INH CAB-2017), p. 46, 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 (poster presentation).
11. Bahri, S., **Sinha Roy, S.** and Moitra, S. 2016. Presented a poster on Do Cosmetics and Personal Care Products Threaten Water Quality in the National Conference on Combating Industrial Pollution for Sustainable Environment A Fusion of Industrial and Scientific Efforts (CIPSE-2016) held at Gargi College, University of Delhi. Delhi on September 22-23, 2016.
12. **Sinha Roy, S.**, Bahri, S. & Moitra, S. 2016. Presented a poster on “Ground Water : The Hidden Resource” in National Seminar on Water and Air Quality in Urban Ecosystems organized by Shivaji College, University of Delhi on 22 March 2016.
13. **Sinha Roy, S.**, Bahri, S. & Moitra, S. 2016. Oral presentation on “Plants as agents of inducing male sterility” in National Symposium on Reproductive Health in India: Concerns and Awareness organized by Deshbandhu College, University of Delhi on February 12, 2016.

#### **Other Activities (Undertaken at Miranda House, 2014 -2020):**

##### **A. Details of curricular resource material prepared:**

1. Moitra, S., **Sinha Roy, S.** And Kumar, L. 2014. Naming the Trees of the Core Campus. Project of Gandhi Bhawan, University of Delhi. Developed e-content.  
[www.du.ac.in/du/uploads/amenities/gandhi%20bhawan/20032015\\_namingtrees\\_gandhibhawan.pdf](http://www.du.ac.in/du/uploads/amenities/gandhi%20bhawan/20032015_namingtrees_gandhibhawan.pdf)
2. Sehegal, A and **Sinha Roy, S.** 2015. *Riccia*. NMEICT MHRD Project of ILLL, University of Delhi, Delhi, developed e-content.
3. Sehegal, A and **Sinha Roy, S.** 2015. *Marchantia*. NMEICT MHRD Project of ILLL, University of Delhi, Delhi, developed e-content.
4. Bahri, S. and **Sinha Roy, S.** 2015. Mitosis: looking into how living beings grow. In: Manual of the workshop “The Cell: Life’s Playground, INSPIRE Internship Programme” (Resource Person).
5. **Sinha Roy, S.** 2015. Preparation of Buffers. In: Lab Manual of the Bridge Course on Basic Laboratory Techniques for B.Sc. (H) Botany 1st Year, Organized by D.S. Kothari Centre for research and innovation in Science education and Department of Botany, Miranda House (Resource Person).
6. **Sinha Roy, S.** 2017. Establishment of Rhizosphere: colonization by beneficial associative bacteria. In: Manual for the workshop on Biofertilizers for B.Sc (Life sciences) and B.Sc.(H) Zoology, organized by Department of Botany, Miranda House under DBT star college scheme (Resource Person).

7. Bahri, S. & **Sinha Roy, S.** 2017. Root Nodules. In: Manual of Workshop The Cell: Life's Playground, INSPIRE Internship Programme, pp. 08-11, D.S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, Delhi, 18-22 December 2017 (Resource Person).
8. **Sinha Roy, S.** & Bahri, S. 2017. Rhizosphere: The Action Zone of the Root. In: Manual of Workshop The Cell: Life's Playground, INSPIRE Internship Programme, pp. 12-15, D.S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, Delhi, 18-22 December 2017 (Resource Person).

**B. Details of participation in Workshops. Refresher or Orientations Courses:**

1. Resource person for "Tissue culture: A workshop for science students" organized by Department of Botany, Miranda House on 12-13 March, 2014.
2. National Workshop on Computational Biology in Plant Sciences, organized by the BTIS-NET Sub-Distributed Information Centre, NIPGR, New Delhi, 13-14 November, 2014.
3. Symposium on "Proteomics", organized by Sri Venkateshwara College, University of Delhi, 16 March, 2015.
4. Participated in the Workshop "Training the Trainers: IPR workshop" held at Miranda House, University of Delhi, 15 January, 2016.
5. Participated in a Workshop on "Environmental Pollution and Health in Urban Ecosystems (EPHUE-2016)" organized by Department of Botany and Zoology, Shivaji College, University of Delhi in Collaboration with Department of Environmental Studies, University of Delhi, 23 June, 2016.
6. Faculty Development Workshop on "Ecology: Modern Perspectives" organized by IQAC and Department of Botany, Hansraj College, University of Delhi, 12<sup>th</sup> and 13<sup>th</sup> December, 2016.
7. International conference and outreach program on "Environment and Ecology: Sustainability and challenges", organized by Sri Venkateshwara College, University of Delhi, 4-6<sup>th</sup> January, 2017.
8. Participated in the Workshop on Active Learning as a Transformational Tool for the University Classroom, conducted by Dr. Shiladitya Raj Choudhury, University of South Alabama, USA, organized by D.S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, Delhi, 15 May 2017.
9. XXVII Annual Conference of Indian Association for Angiosperm Taxonomy and International symposium on "Plant Systematics: Priorities and Challenges" held at Department of Botany, University of Delhi, Delhi, India from 10-12<sup>th</sup> November, 2017.
10. Completed a coursework on "R Analytics" at Department of Botany, University of Delhi, from 27<sup>th</sup>-29<sup>th</sup> November, 2017.

11. Participated in “Science Conclave: Research on the Frontiers” organized by D.S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, Delhi, 10-12 January 2018.
12. Participated in “The Bonsai Workshop” organized by Department of Botany, Miranda House on 22 March, 2018
13. Participated in a Conclave on “Biodiversity for Everyone’s life” organized by Miranda House, University of Delhi on 31 August, 2018.
14. Participated in a two-day Workshop on “Introductory Evolutionary and Phylogenetic Biology” organized by Department of Botany, University of Delhi on 4 and 5 January, 2019.
15. Completed a 2-week online Faculty Development Programme on Advanced Concepts for Developing MOOCs organized by the Teaching Learning Centre of Ramanujan College, University of Delhi, 02-17 July 2020.
16. Participated in National One Week Online Faculty Training Program Pedagogical Training for Effective Online Teaching & Learning organized by Deen Dayal Upadhyaya College, University of Delhi in association with K.T.H.M. College, Nashik, Maharashtra, from 03 to 10 August 2020.
17. Completed a 2-week Faculty Development Programme on Managing Online Classes and Co-creating MOOCs 3.0 organized by Teaching Learning Centre, Ramanujan College, University of Delhi under the MHRD Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching, from 25 July to 10 August 2020.

**C. Details of Research Guidance/ Professional Consultancy (at Miranda House 2014-2020):**

1. Facilitator and mentor for six undergraduate students in their Summer research project titled “Nanoparticles: Effects on Seedling Biology” in Summer Experimental Workshop for Undergraduate Science Students, D.S.Kothari Centre for Innovation and Science Education, Miranda House, University of Delhi. 2014.
2. Facilitator and mentor for six undergraduate students in their Summer research project titled “How Pure Are Juices? Microbial analysis of fresh juices around Delhi university campus” in Summer Experimental Workshop for Undergraduate Science Students, D.S.Kothari Centre for Innovation and Science Education, Miranda House, University of Delhi. 2015.
3. Facilitator and mentor for two undergraduate students in their Summer research project titled “Herbaceous flora of Miranda House and their medicinal properties” in Summer Experimental Workshop for Undergraduate Science Students, D.S.Kothari Centre for Innovation and Science Education, Miranda House, University of Delhi. 2016.
4. Co-PI in the Delhi University Innovation Project “Phytoremediation of Heavy Metals Contamination and extraction of Nanoparticles. (MH-311)” Date of completion August 2016.



5. Facilitator and mentor for four undergraduate students in their Summer research project titled "Purification of grey water by *Alternanthera phyloxeroides* (Mart.) Griseb" in Summer Experimental Workshop for Undergraduate Science Students, D.S.Kothari Centre for Innovation and Science Education, Miranda House, University of Delhi.2017.
6. Facilitator and mentor for undergraduate students in their Summer research project titled "Analysis of Drinking Water Quality" and "Study of Anthocyanin" in Summer Experimental Workshop for Undergraduate Science Students, D.S.Kothari Centre for Innovation and Science Education, Miranda House, University of Delhi.2018.
7. Identification of plant species suitable for mitigating air pollution in Delhi University Campus (Supervisor- Dr. Saloni Bahri and Dr. Somdutta Sinha Roy). A Project under DBT Star college scheme.2020.
8. Facilitator and mentor for undergraduate students in their summer research projects (Mostly review work) titled (i) A review on plant species identified for mitigating particulate matter. (ii) Effect of carbohydrates on pollen of *Catharanthus roseus* in vitro-A review. (iii) Plant species resistant to Sulphur dioxide pollution-A review. (iv) Review on *Selaginella bryopteris*- the Sanjeevani Booti in Summer Experimental Workshop for Undergraduate Science Students, D.S.Kothari Centre for Innovation and Science Education, Miranda House, University of Delhi.2020.

#### **D. Other Responsibilities at Miranda House**

1. Staff advisor for Botanical Society of Miranda House, 'Antheia' for the academic years 2014-16; 2021-present.
2. Member, Garden Committee, Miranda House. 2014 to Present
3. Bahri, S. & **Sinha Roy, S.** were the coordinators for Baseline Science Test for Biology from Department of Botany, Miranda House, University of Delhi, Delhi, 2017.
4. Staff advisor for NSS-Miranda House, 2018-2021.
5. Staff advisor for MH-Vatavaran, the environment society of Miranda.2021-present.
6. Member of the Organizing committee in Workshop on "Evolving face of microscopy: Magnifying lens to Nanoscope" organized by Department of Botany, Miranda House in Association with Department of Botany, University of Delhi on 11-12 December, 2019.
7. Co-Convenor for Workshop on "Air pollution mitigation: species to communities" organized by Department of Botany, Miranda House on 17 February, 2020.
8. Member of the Organizing committee in National Webinar on "Tinkering with plant genomes" organized by Department of Botany, Miranda House, University of Delhi on 6 July 2020.
9. Co-Convenor for the short-term online course on "Understanding our Environment" for undergraduate science students of the University of Delhi, 10-25 July 2020.

## **Professional Memberships**

**2005-present:** Associate Member of American Society for Biochemistry and Molecular Biology.

## **Honors**

1. **2008:** Post-Doctoral Travel Award for Experimental Biology Meeting on 4–9<sup>th</sup> April, San Diego, CA.
2. **2005:** Post-Doctoral Travel Award for Experimental Biology Meeting on 6–12<sup>th</sup> April, San Diego, CA.
3. **2004:** Post-Doctoral Travel Award for ASBMB/IUBMB Meeting on 8–13<sup>th</sup> June, Boston, MA.
4. **2003:** Post-Doctoral Travel Award for Experimental Biology Meeting on 10–15<sup>th</sup> April, San Diego, CA.
5. **1995-2000:** Senior and Junior Research Fellowship award from CSIR/UGC, India for Ph.D work.

## **Education**

- **Doctor of Philosophy**  
Dissertation Title: Diversity in Root Mucilages of Some Graminaceous Taxa and its Biological and Ecological Significance in Root-Soil Interface.  
University of Delhi, India.2003 (Awarded 2004)
- **Master of Science, Botany**  
University of Delhi, India.1994
- **Bachelor of Science, Botany**  
Gargi College, University of Delhi, India.1992