Dr. NEHA SINGH
(CURRCULAM VITAE)

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NET-Qualification: Qualified LS/NET from CSIR June 2014

EDUCATION

Year	Institution	Examination/Course	Division
2012-2017	Department of Botany, Delhi University	Ph.D.	-
2010-12	Department of Botany, Delhi University	M.Sc. (Botany)	1st (69.79%)
2007-10	Gargi College, Delhi University	B.Sc. Botany (Hons.)	1st (75.6%)
2006-07	Govt. Girls Sr. Sec. School (Sri Niwaspuri, New Delhi)	CBSE, Class XII	1st (77.2%)

DETAILS OF EMPLOYMENT

Assistant Professor (Ad-hoc) in Department of Botany, Gargi College, University of Delhi, w.e.f. 2nd August 2019.

Awards and Honours

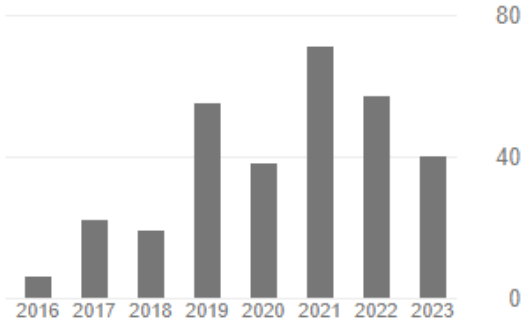
- 2023, Resource person in meditation session on the topic "**Connect I with God**" organized by Zenith Association, Gargi College, University of Delhi.
- 2019, Awarded **"Augmenting Writing Skills for Articulating Research (AWSAR)"** award from **Department of Science and Technology** in the **Post-doc** category.
- 2015, Awarded **First Prize** for **Oral Paper Presentation "**National Seminar on New Frontiers in Plant Sciences and Biotechnology**"** held at Goa University.
- 2015, Participated in 2nd National workshop on **"**Citation Analysis, Impact Factor, Patent and Copyrights for Maximizing Research Impact**"** held at New Delhi.

- 2012, Received the **Best Speaker award** in Professor B.M. Johri Shield Paper Presentation Competition 2011-2012, held at Department of Botany, University of Delhi, Delhi.

RESEARCH PUBLICATIONS: (Total impact factor: 44.339 as on July, 2023)

Cited by

	All	Since 2018
Citations	314	281
h-index	7	7
i10-index	7	7



S. No.	Title	Impact factor
14.	Soni R, **Singh N**, Singh G and Raj S. "Significance of Plants in Vedic Astrology, Their Socio-Religious Beliefs, Conservational and Therapeutic Aspects." **Ecology, Environment and Conservation. (2023); 29 (1): 273-297.** http://doi.org/10.53550/EEC.2023.v29i01.043 ISSN 0971–765X	
13.	**Singh N** and Bhatla SC. Heme oxygenase-nitric oxide crosstalk-mediated iron homeostasis in plants under oxidative stress. **Free Radical Biology and Medicine (2022); 182: 192-205.** doi.org/10.1016/j.freeradbiomed.2022.02.034 ISSN No. 0891-5849	7.4
12.	**Singh N,** Jain P, Gupta S, Khurana JM and Bhatla SC. *N*-Nitrosomelatonin, an efficient nitric oxide donor and transporter in Arabidopsis seedlings. **Nitric Oxide. (2021); 113-114, 50-56.** https://doi.org/10.1016/j.niox.2021.05.001 ISSN No. 1089-8603	**3.9**
11.	Bhatla SC, Gogna M, Jain P, **Singh N**, Mukherjee S and Kalra G. Signaling mechanisms and biochemical pathways regulating pollen-stigma interaction, seed development and seedling growth in sunflower under salt stress. **Plant Signaling and Behavior. (2021); 16(11):1958129, 1-15** https://doi.org/10.1080/15592324.2021.1958129. ISSN No. 1559-2316	**2.734**
10.	Shakya R, **Singh N** and Bhatla SC. Iron homeostasis regulates maturation of tomato (climacteric) and capsicum (non-climacteric) fruits. **Journal of Plant Biochemistry and Biotechnology. (2021); 30, 392–395.** doi 10.1007/s13562-020-00611-7. ISSN No. 0974-1275	**1.525**
9.	**Singh N** and Bhatla SC. Hemoglobin as a probe for estimation of nitric oxide emission from plant tissues. **Plant Methods. (2019); 15:39, 1-8** ISSN No. 17464811	**5.781**
8.	**Singh N**, Bhatla SC and Demidchik V. Plants and human beings engage similar molecular crosstalk with nitric oxide under stress conditions. **Functional Plant Biology. (2019); 46(8) 695-701** doi.org/10.1071/FP19018 ISSN No.1445-4408.	**3**
7.	Keisham M, Jain P, **Singh N**, Toerne CV, Bhatla SC, Lindermayr C. Deciphering the nitric oxide, cyanide and iron-mediated actions of sodium nitroprusside in cotyledons of salt stressed sunflower seedlings. **Nitric Oxide. (2019) 88: 10-26.**	**3.9**

	ISSN No. 1089-8603	
6.	**Singh N** and Bhatla SC. Nitric oxide regulates lateral root formation through modulation of ACC oxidase activity in sunflower seedlings under salt stress. **Plant Signaling and Behavior. (2018**); 13(5):e1473683:1-7 doi.org/10.1080/15592324.2018.1473683. ISSN No 1559-2316	**2.734**
5.	Arora D, **Singh N** and Bhatla SC. Electrophoretic detection and confocal microscopic imaging of tyrosine nitrated proteins in plant tissue. **Methods Mol Biol (2018); 1747:171-182.** doi: 10.1007/978-1-4939-7695-9_14	**1.167**
4.	**Singh N** and Bhatla SC. Signaling through reactive oxygen and nitrogen species is differentially modulated in sunflower seedling root and cotyledon in response to various nitric oxide donors and scavengers. **Plant Signaling and Behavior. (2017); 12(9): e1365214: 1-14** doi.org/10.1080/15592324.2017.1365214. ISSN No. 1559-2316	**2.734**
3.	**Singh N** and Bhatla SC. Nitric oxide and iron modulate heme oxygenase activity as a long distance signaling response to salt stress in sunflower seedling cotyledons. **Nitric Oxide. (2016); 53: 54-64.** doi: 10.1016/j.niox.2016.01.003. ISSN No. 1089-8603	**3.9**
2.	**Singh N**, Kaur H, Yadav S and Bhatla SC. Does *N*-nitrosomelatonin compete with *S*-nitrosothiols as a long-distance nitric oxide carrier in plants? **Biochemistry Analytical Biochemistry. (2016); 5:1 doi:** 10.4172/2161-1009.1000262. ISSN No. 2161-1009	**1.27**
1.	Arora D, Jain P, **Singh N**, Kaur H and Bhatla SC. Mechanisms of nitric oxide crosstalk with reactive oxygen species scavenging enzymes during abiotic stress tolerance in plants. **Free Radical Research. (2016); 50: 291-303.** doi: 10.3109/10715762.2015.1118473. ISSN No. 1029-2470	**4.288**

CO-CURRICULAR AND EXTRA-CURRICULAR ACTIVITIES

Participation in International Symposia

- 2020, presented poster in "International E-conference entitled NeuroEunoia 2020: A Neuroscience Affair" hosted by Gargi College, University of Delhi, Delhi.
- 2017, presented poster in **"**International Symposium on Plant Signaling and Behavior**"** held at Matsue, Japan.
- 2016, presented poster in **"**International Symposium on Plant Signaling and Behavior**"** held at St. Petersburg, Russia.
- 2014, Awarded **first prize** for best poster presentation in **"**International Symposium on Plant Signaling and Behavior**"** held at Department of Botany, University of Delhi.

Participation in National Symposia

- 2022, Participated in 3 Day Faculty Development Program on "Stress Management" held at Gargi College, University of Delhi, Delhi.
- 2020, Participated in National level online training programme on "Positive Work Culture" held at Harish Chandra Mathur, Rajasthan State Institute of Public

Administration Udaipur, Rajasthan.

- 2015, Participated in **"**National Seminar on New Frontiers in Plant Sciences and Biotechnology**"** held at Goa University.
- 2015, Participated in 2nd National workshop on **"**Citation Analysis, Impact Factor, Patent and Copyrights for Maximizing Research Impact**"** held at New Delhi.

TEACHING EXPERIENCE

1 Guest lecturer: July, 2017- March, 2019: Assistant Professor (guest) in Department of Botany in Miranda House and Acharya Narendra Dev College, University of Delhi

2. Ad-hoc: August, 2019-till date: Assistant Professor (Ad-hoc) in Department of Botany, Gargi College, University of Delhi, w.e.f. 2nd August 2019

RESEARCH EXPERIENCE

Doctoral and Post-doctoral Training

Title of Ph.D. Thesis**:** Nitric Oxide-Heme oxygenase crosstalk and modulation of redox homeostasis during seedling growth in sunflower (*Helianthus annuus* L.)

Post-doctoral work**:** Indo-Israel Project entitled "Calcium and auxin signaling during root and adventitious root development and analysis of possible nitric oxide crosstalk" (2017-2019) Department of Botany, University of Delhi.

ADDITIONAL PROFESSIONAL/ADMINISTRATIVE ROLES

Worked as an organizing member/faculty adviser

- October' 2022-April' 2023, Organizing member in "Inter College Online Add-On Course: Advances in Plant Sciences" organized by the Department of Botany, Gargi College, University of Delhi.
- 2021-2023, Faculty Adviser in "TARU" Gargi College Botanical Society of Gargi College.
- 2021-2023, Faculty Adviser in "AVNI: The Eco Club" of Gargi College.
- 2021-2023, Organizing member in "Garden Committee" of Gargi College.
- 2020-2023, Faculty Adviser in "Zenith" Gargi College Life Science Association.
- 2023, Technical Assistant in Two- day International Multidimensional Conference on Revisiting Wellbeing: Perspectives, Challenges, And The Road Ahead February 1-2, organized by the Gargi College, university of Delhi.
- 2021, Organizing member in virtual "Alumni Meet 2021" and "Alumni Interaction session with B.Sc. (H) Botany 2020 Batch" organized by the Department of Botany, Gargi College, University of Delhi.
- 2021, Organizing member in "Alumni Lecture Series 2021-2022" organized by the Department of Botany, Gargi College, University of Delhi.

- 2020, Organizing member in National webinar on Virtual classes Tools: Google classroom, Google meet and you tube organized by the Department of Botany, Gargi College, University of Delhi.
- 2020, Organizing member in National level virtual short-term course on "Plant Systematics: Classical to Molecular Approach" organized by the Department of Botany, Gargi College, University of Delhi.
- 2019, Organizing member in an Intercollege Workshop on "Laboratory Methods and Techniques" organized by the Department of Botany, Gargi College, University of Delhi.
- 2014, **Organizing Secretary** at the **"**International Symposium on Plant Signaling and Behavior" held on March 7-10th, 2014 at the Department of Botany, University of Delhi.
- 2009, **President** in the Gargi College Botanical Society "GCBS-TARU" from July 2009-March 2010 in the Department of Botany, Gargi College, University of Delhi.

PROFESSIONAL TRAINING

1. Enzymes/Biomolecules analyzed

Heme oxygenase
Ethylene biosynthetic enzymes: ACC oxidase
Melatonin biosynthetic enzymes: *N*-acetylserotonin-*O*-methyltransferase (HIOMT)

Biliverdin	Hemoglobin
Melatonin	Reactive oxygen species
Nitric oxide	Cyanide
Iron	Reactive nitrogen species ($ONOO^-$)
Tyrosine nitrated proteins	Reactive oxygen species (H_2O_2 and $O_2^{\bullet-}$)

2. Sub-cellular detection analyses using fluorescence imaging by confocal laser scanning microscopy (CLSM)

- Plastids/Chloroplast
- Mitochondria
- Nucleus
- Secretory canals

3. Tools and Techniques (expertise in)

Spectrofluorometric analysis	Confocal Laser Scanning Microscopy
Spectrophotometric analysis	Fluorescence Microscopy
2-Dimentional electrophoresis	Zymographic analysis of enzymes
SDS-PAGE analysis	Western Blotting of proteins
Gas-Chromatography	High-Performance Liquid Chromatography
Iso-electric focusing	Immunolocalization by confocal microscopy

LANGUAGE

- English
- Hindi