

## Curriculum - Vitae

# ISHWAR SINGH

**AREA OF SPECIALIZATION:** Microbiology

**OFFICIAL ADDRESS:**

Department of Botany  
Hansraj College  
University of Delhi  
Delhi- 110 007, India  
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**ACADEMIC QUALIFICATIONS:**

*Degrees*

- Ph. D.** (2002) University of Delhi Biological control of *Aspergillus flavus* and aflatoxins: A comparative study of toxigenic and non- toxigenic strains  
**M. Sc.** (1997) University of Delhi Botany (First division)  
**B. Sc. (H)** (1995) University of Delhi Botany (First division)

*Diploma/ Tests*

**Post-graduate diploma in Bioinformatics** (2005) BII, Noida  
**CSIR- UGC- NET (National Eligibility Test)** (1997) CSIR, New Delhi  
**GATE (Graduate Aptitude Test in Engineering)** (1997) IIT, Chennai

**EMPLOYMENT:**

1. PROFESSOR, Department of Botany, Hansraj College, July 2018- till date
2. ASSOCIATE PROFESSOR, Department of Botany, Hansraj College, April 2013- July 2018
3. ASSISTANT PROFESSOR, Department of Botany, Hansraj College, July 2009 – April 2013
4. SENIOR LECTURER, Department of Botany, M. B. (PG) College, April 2005 – July 2009.
5. LECTURER, Department of Botany, M. B. (PG) College, April 2001 – April 2005.

**TECHNICAL SKILLS:** Microscopy, centrifugation, chromatography (column and thin layer chromatography), spectroscopy (UV, visible light and atomic absorption), electrophoresis (native and page), tissue culture, Molecular techniques and microbial techniques.

**COMPUTER SKILLS:** MS Office (Word, Excel, PowerPoint)

### **PROFESSIONAL MEMBERSHIPS:**

1. Life Member, Delhi University Botanical Society (DUBS), Delhi.
2. Life Member, International society of plant morphologists, Delhi.
3. Life Member, Youth Hostel Association of India (YHAI), New Delhi.

### **HONORS AND AWARDS:**

1. Stood first in order of merit in the college during B. Sc. (H) course (1992 -95).
2. Awarded National Fellowship for M. Sc. Course (1995-1997).
3. Awarded Junior Research Fellowship (JRF) for Ph. D. (1997-1999).
4. Awarded Senior Research Fellowship (SRF) for Ph. D. (2000-2001).
5. UGC Research Award (2013)
6. Raman Research Fellowship (2014-15)

### **RESEARCH PROJECT:**

1. Minor research project on Morphological characterization of aflatoxin-producing and non-producing strains of *Aspergillus flavus* funded by UGC, New Delhi (2007-09).
2. Research Project under Raman Fellowship Grant on Identifying species in the genus *Microcyclosporella*: A key step toward better management of the sooty blotch and flyspeck fungal disease complex of apple in US and India funded by UGC, New Delhi (2014-15).
3. Research Project on Study of germicidal properties of fumes generated in havan (Yagya) in order to assess potentiality of havan in curing some infectious and air borne diseases funded by Research Council, University of Delhi, Delhi (2015-16)

### **CONFERENCE ORGANIZED:**

1. Organizing Secretary, UGC-sponsored National Conference on Relevance of Nanotechnology in Biology, March 1, 2013, Hans Raj College, University of Delhi, Delhi.
2. Member, Organising Committee, Ethnobotany workshop 2016 from September 16th to 17th, 2016.
3. Member, Organising Committee, Indo-Portuguese Workshop on Emerging Trends of Nanotechnology in Chemistry and Biology, organized by Department of Chemistry, Hans Raj College and Deshbandhu College, University of Delhi in association with Centro de Química da Madeira University da Madeira, PORTUGAL, from February 12th to 13th, 2016.

### **PUBLICATIONS:**

#### ***Papers***

1. Singh VP, Gupta S, **Singh I**, Gupta R (1998) Prevention, elimination and detoxification of aflatoxins - an overview. Ind J Aerobiol 11:6-15 (ISSN No. 0971-1546)

2. **Singh I**, Singh VP (2000) Antifungal properties of aqueous and organic solution extracts of seed plants in *Aspergillus flavus* and *A. niger*. *Phytomorphology* 50:151-157 (ISSN No. 0031-9449)
3. **Singh I**, Singh VP (2002) Comparative studies on growth patterns and metabolic status of aflatoxin-producing and non-producing strains of *Aspergillus flavus*. *Curr Sci* 82:1425-1426 (ISSN No. 0011-3891)
4. **Singh I**, Singh VP (2003) A report on Strain- specific and toxigenicity-associated blastospore formation in *Aspergillus flavus*. *Phytomorphology* 53: 331-333. (ISSN No. 0031-9449)
5. **Singh I**, Singh VP (2005) Effects of plant extracts on mycelial growth and aflatoxin production by *Aspergillus flavus*. *Indian J microbiol* 45: 139-142. (ISSN No. 0046-8991)
6. Kumar R, **Singh I**, Singh VP (2005) Degradation of aflatoxins by peroxidase isoenzymes of toxigenic and non-toxigenic strains of *Aspergillus flavus* at different temperatures. *Phytomorphology* 55:289-295. (ISSN No. 0031-9449)
7. **Singh I**, Singh VP (2007) Phosphatases in aflatoxin- producing and non-producing strains of *Aspergillus flavus* Link. *Curr Sci* 93: 1362-1363. (ISSN No. 0011-3891)
8. **Singh I**, Singh VP (2012) Blastospore/chlamyospore as a potential character in identification of aflatoxin producing and non producing isolates of *Aspergillus flavus* *VEGETOS* 25: 361-366. (ISSN No. 0970-4078)
9. Singh VP, Kumar R, **Singh I** and Srivastava S (2013) Microsome technology as a potential bioremediation option for health and environmental protection. *J Environ Res Develop* 8: 27-32. (ISSN No. 0973-6921)
10. **Singh I** (2016) Nanotechnology: applications and risks in human-health sector. *J Mat NanoSci* 3(1): 17-19. (ISSN No. 2394-0867)
11. **Singh I** (2017) Antimicrobials in higher plants: classification, mode of action and bioactivities. *Chem. Bio. Lett.* 4(1): 48-62. (ISSN No. 2347-9825)
12. Koul M, **Singh I** (2021) Rastriya shiksha niti 2020 and uchch shiksha: Aik vichar. *Samsamayik Srajan* April-June: 405-407.

### **Articles**

1. **Dedha IS** (2001) Plight of education. *Gyan Jyoti* 2: 78-80.
2. **Dedha IS** (2002) A report on the mangrove forest of Pichavaram, Tamil Nadu. *Gyan Jyoti* 3: 37-39.
3. **Singh I** (2003-05) National integration: A holistic approach. *Gyan Jyoti* 4-5: 44-47.
4. **Singh I** (2006) The challenging prions. *Gyan Jyoti* 6: 37-38.
5. **Singh I** (2007) Blindness and its major causes in India. *Gyan Jyoti* 7: 19-21.
6. **Singh I** (2008) Role of higher education in India, present scenario. *Gyan Jyoti* 8-9: 21-25.
7. **Dedha IS** (2010) Yuva varg ki duvidha. *Yuva Pravaha* 1: 15-16.
8. **Singh I** (2017) Botany for those who love nature, research. *Hindustan Times* June 7
9. **Singh I** (2017) Bhartya privesh mein gaya ka mahatva *Padamgandhya*: 55-57.

## Chapters

1. Singh VP, Singh L, **Singh I**, Kumar R (2006) Microbial degradation of hazardous dyes In: *Current Concepts in Botany* eds. Mukerji KG, Manhorachary C, I K International Publishing House, New Delhi, p. 273-285. (ISBN No. 81-88237-34-7)
2. **Singh I**, Singh VP (2006) An update on mycotoxins: Methods of detection and management. In: *Biotechnology and Biology of Plants*. ed. Trivedi PC, Aavishkar Publishers, Jaipur, p. 280-304.( ISBN No. 8179101568)
3. **Singh I** (2013) Organic evolution. E-lesson in Botany under FYUP. University of Delhi. Delhi [https://docs.google.com/file/d/0B0Izh6GcIA\\_DWUFMQkg3Vng1ZUU/edit?pli=1](https://docs.google.com/file/d/0B0Izh6GcIA_DWUFMQkg3Vng1ZUU/edit?pli=1) (ISBN No. 978-81-931455-6-2)
4. **Singh I** (2013) Biological classification. E-lesson in Botany under FYUP. University of Delhi. Delhi [https://docs.google.com/file/d/0B0Izh6GcIA\\_Dc2dyV1VKbXpwd1U/edit?pli=1](https://docs.google.com/file/d/0B0Izh6GcIA_Dc2dyV1VKbXpwd1U/edit?pli=1) (ISBN No. 978-81-931455-6-2)
5. **Singh I** (2016) Crude extract preparation and its screening for various groups of phytochemicals. Workshop Manual on Ethnobotany, Hansraj College, September 16-17. Pp. 14-24. [http://vle.du.ac.in/file.php/548/Ethnobotany\\_Manual\\_14th\\_September\\_2016.pdf](http://vle.du.ac.in/file.php/548/Ethnobotany_Manual_14th_September_2016.pdf)
6. Thakur P, **Singh I** (2017) An overview of various threats to biotic-pollination in flowering plants. In: *Advances in Life Sciences*. eds. Dutt S, Tyagi A, Bhati HP, Singh H, SR Scientific Publications, Agra, p.240-255. (ISBN No. 978-93-83774-28-9)
7. **Singh I**, Giri B (2017) Arbuscular mycorrhiza mediated control of plant pathogens. In: *Mycorrhiza - Nutrient Uptake, Biocontrol, Ecorestoration*. eds. Verma A *et al.* Springer International Publishing AG 2017 p- 131-160.
8. Thakur P, **Singh I** (2018) Biocontrol of soilborne root pathogens: an overview. In: *Root Biology, Soil Biology*. Springer pp. 181-220. [https://doi.org/10.1007/978-3-319-75910-4\\_7](https://doi.org/10.1007/978-3-319-75910-4_7)
9. Thomas L, **Singh I** (2019) Microbial Biofertilizers: Types and Applications In: *Biofertilizers for Sustainable Agriculture and Environment, Soil Biology*. Springer. [https://doi.org/10.1007/978-3-030-18933-4\\_1](https://doi.org/10.1007/978-3-030-18933-4_1)
10. Thomas L, **Singh I** (2020) Microbe-Mediated Biotic Stress Signaling and Resistance Mechanisms in Plants. In: *Plant Stress Biology*. Springer. [https://doi.org/10.1007/978-981-15-9380-2\\_10](https://doi.org/10.1007/978-981-15-9380-2_10)
11. Thomas L, **Singh I** (2022) Intermicrobial Interactions in the Pedosphere and Their Importance. In: *Structure and Functions of Pedosphere*. Springer. [https://doi.org/10.1007/978-981-16-8770-9\\_2](https://doi.org/10.1007/978-981-16-8770-9_2)

12. **Singh I**, Thakur P (2023) Impact of Fungi on the World Economy and its Sustainability: Current Status and Potentials. In: Fungal Resources for Sustainable Economy, Current Status and Future Perspectives. Springer. [https://doi.org/ 10.1007/978-981-19-9103-5](https://doi.org/10.1007/978-981-19-9103-5)

#### **CONFERENCES/SEMINARS/SYMPOSIA/WORKSHOPS ATTENDED:**

1. National symposium on microbes in plant improvement and environmental protection. Department of Botany, University of Delhi, December 23-24, 1997.
2. National symposium on sustainable aquaculture. New Delhi, Feb 20-21, 1998.
3. National symposium on recent advances in respiratory mycoses. VP chest institute, University of Delhi, October 29-30, 1998
4. Golden jubilee symposium on biotechnological innovation in conservation and analysis of plant diversity. Department of Botany, University of Delhi, February 7 – 9, 2001.
5. 45<sup>th</sup> Annual Conference of Association of Microbiologists of India (AMI). NDRI, Karnal, November 23-25, 2004.
6. National seminar on genetically modified organisms – Safety aspects. INSA, New Delhi, March 10-11, 2005.
7. International conference of microbial diversity: current perspectives and potential applications. New Delhi, April 16-18, 2005.
8. National symposium on biology in the service of mankind in post- genomic era. Meerut, November 18, 2005.
9. Conference on new developments in rapeseed- mustard, University of Delhi, Delhi, January 21, 2006.
10. Training programme on web management & Linux applications in Bioinformatics. Biotech Park, Lucknow, February 8-9, 2006.
11. An international conference on challenging and emerging dimensions in medicinal/herbal plants and their products: A global perspective. Chennai Trade Centre, Chennai, November 26-28, 2010.
12. Workshop on evaluation methodology. CPDHE, University of Delhi, Delhi, November 8-10, 2012.
13. Workshop on role of technical terminology in higher education, organized by Commission for Scientific and Technical Terminology, MHRD, New Delhi, Hansraj College, University of Delhi, Delhi, July 23-24, 2015.
14. Workshop on DNA fingerprinting. Hindu College, University of Delhi, Delhi, January 22, 2016.
15. Indo-Portuguese workshop on emerging trends of nanotechnology in chemistry and biology, University of Delhi, Delhi, February 12-13, 2016.
16. National Conference on Technological Empowerment of Women, organized by The National Academy of Sciences, India (NASI), Vigyan Bhavan, New Delhi, March 8-9, 2018.

17. International Summit on Women in STEM “Visualizing the future: New Skylines” India Habitat Centre, Delhi, January 23-24, 2020.

**Dr Ishwar Singh**