ACADEMIC PROFILE

Dr. Sandeep Singh
Associate Professor
Dept. of Biochemistry,
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Higher Education & Research

- **B.Sc. (Botany, Chem, Zoology)**, Maharshi Dayanand University, Rohtak (July, 1992 – June, 1995)
- **M.Sc. (Biochemistry)**, Maharshi Dayanand University, Rohtak (India) (1st Division, 63.8% (July 1996 – Jun, 1998)
- **CSIR-NET** for Lecturship in Life Sciences in December'2000.
- **Ph.D.** Department of BioSciences (*erstwhile*), Maharshi Dayanand University, Rohtak, India (March, 1999 – January, 2003)

Positions Held

- **Lecturer-SFS**, Deptt. of Biochemistry, JC Bose Instt of Life Sciences, Jhansi (UP) from Feb' 2005 to 31st Oct' 2005.
- **Guest Faculty**, Department of Biochemistry, Maharshi Dayanand University, Rohtak -India (15th November, 2005 to 28/02/10).
- **Assistant Professor**, Department of Biochemistry, Maharshi Dayanand University, Rohtak -India (15th March, 2010 onwards)

Research Interests

- Abiotic stress induced changes in plant system; use of enzymes in biosensors; metallic phytonanoparticles production and applications

Research Guidance

Ph.D.- 3 (completed) and M.Sc. (Dissertations) – 35 + 7 ongoing

Conference/Workshop Organization

- **Joint-Secretary**, National Seminar on "Emerging Trends in Biochemistry" organized by Dept of Biochemistry, M. D. University, Rohtak (Haryana) (15th Sept' 2017-16th Sept' 2014).
- **Joint-Secretary**, National workshop on "Genomics and Proteomics" organized by Dept of Biochemistry, M.D. University, Rohtak (Haryana) (3rd March, 2014-5th March, 2014).

- **Member**, organizing committee of DST-INSPIRE PROGRAMME organized by Centre for Biotechnology, M. D. University, Rohtak (April 28-May 2, 2012).

Academic Achievements

- **Member**, PGBOS (Biochemistry) w.e.f. April'2012 for two years and w.e.f. April' 2016 for another 2 years
- **Member**, Faculty of Life Sciences appointed by the University (w.e.f. 29.05.2016 for one year)
- **First prize for poster** presented in International Conference on Nanomaterials in Mahatma Gandhi University, Kottayam (Kerala) during 10-12 Feb' 2017.

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Reviewer in peer-reviewed Journals

1. Scientia Iranica [UGC Journal No. 35588]
2. Indian Journal of Natural Products and Resources [UGC Journal No. 20819]
3. BioTechnologia [UGC Journal No. 14900]
4. Reviewer of paper submitted to Analytical Methods (RCS) [UGC Journal No. 15241]

Society Memberships

1. Life Member, Society of Plant Biochemistry and Biotechnology, Delhi
2. Life Member, Indian Science Congress Association, Kolkata.
3. Life Member, Society of Biological Chemists (India), IISc, Bengaluru

Publications:

1. **S Singh**, M Thakur, V Malik, L Goyal and CS Pundir (1998). Influence of NaCl stress on oxalate oxidase activity in germinating seeds of forage sorghum hybrid. *Indian J. Plant Physiol.*, **3**(4): 317-319.
2. CS Pundir, V Malik, AK Bhargava, M Thakur, V Kalia, **S Singh** and NK Kuchhal (1999). Studies on horseradish peroxidase immobilized onto arylamine and alkylamine glass. *J. Plant Biochem. Biotechnol.*, **8**:123-126.
3. L Goyal, **S Singh** and CS Pundir (2000). Immobilization of amaranthus leaf oxalate oxidase on arylamine glass. *Indian J. Chem. Technol.*, **7**: 1-4.
4. V Malik, **S Singh** and CS Pundir (2002). Cholesterol esterase and cholesterol oxidase immobilized onto arylamine glass beads. *Chin. J. Biotechnol.*, **18**(2): 155-161.
5. S Madanpotra, R Chaudhary, **S Singh** and CS Pundir (2004). Preparation of a reusable strip of barley oxalate oxidase for determination of urinary oxalate. *Indian J. Chem. Technol.*, **11**(4): 495-499.
6. **S Singh**, SN Mishra and CS Pundir (2006). Purification and properties of oxalate oxidase from NaCl stressed grain sorghum seedlings. *J. Plant Biochem. Biotech.*, **15**: 55-57.
7. **S Singh**, SN Mishra and CS Pundir (2006). A correlative analysis of oxalate degradation and early nitrate assimilation in grain sorghum under sodium chloride stress. *Indian J. Plant Physiol.*, **11**(3): 295-299.

8. A Sharma, D Sharma, **S Singh** and CS Pundir (2009). Effects of NaCl stress on oxalate oxidase and peroxidase of barley seedlings at early growth stage. *M.R. Int. J. Engg. Tech.*, **1**(1): 69-73.
9. CS Pundir, B Kumari, **S Singh** and J Narang (2010). Construction of an amperometric triglyceride biosensor using PVA membrane bound enzymes. *Clin. Biochem.*, 43: 467-472.
10. CS Pundir, R Devi, J Narang, **S Singh**, J Nehra and S Chaudhary (2012). Fabrication of an amperometric xanthine biosensor based on polyvinyl chloride membrane. *J. Food Biochem.*, 36: 21-27.
11. Chauhan N, Narang J, Pundir S, **Singh S** and CS Pundir (2013). Laboratory diagnosis of swine flu: A review. *Artif Cells Blood Subs Biotechnol*, 41(3): 189-95.
12. CS Pundir, Chauhan N, Narang J, Pundir S and **Singh S** (2013). Laboratory diagnosis of swine flu: A review. *Artif Cells Nanomed Biotechnol.* 41: 189-195. 2013-14 [IF=5.6]
13. Narang J, Malhotra N, Singh G, **Singh S** and Pundir CS (2015). Monitoring analgesic drug using sensing method based on nanocomposite. *RSC Adv*. 5: 2396-2404. [IF=3.108]
14. Narang J, Jain U, Malhotra N, **Singh S** and Chauhan C (2015). Development of lysine biosensor based on core shell magnetic nanoparticle and multiwalled carbon nanotube composite. *Adv. Mater. Lett.* 6: 407-413. [IF=1.46]
15. Narang J, Malhotra M, Chauhan N, **Singh S**, Singh G and Pundir CS (2015). Development and validation of biosensing method for acetaminophen drug monitoring. *Adv. Mater. Lett*. 6: 209-216. [IF=1.46]
16. Rathee K, Dhull R and **Singh S** (2015). Synthesis of zinc oxide nanorods on gold substrate & their characterization. *Der Pharmacia Lettre*. 7: 355-361. [IF=0.4]
17. Singh S, Kumari L and Govinda (2015). Effects of cadmium stress on antioxidant enzymes in *Vigna radiata* roots. *Int. J. Pharmaceu. Sci. Res*. 6: 2882-2885. [IF=0.34]
18. Rathee K, Dhull V, Dhull R and **Singh S** (2016). Biosensors based on electrochemical lactate detection. A comprehensive review. *Biochem Biophys Reports*. 5: 35-54. [IF=0.923]
19. Dhull R, Rathee, K and **Singh S** (2016). Synthesis of zinc oxide nanorods on platinum wire & fabrication of triglyceride biosensor. *Der Pharmacia Lettre*, 8(6), 170-181. [IF=0.4]
20. Govinda, Sharma, A. and **Singh S** (2017). Modulation of antioxidant enzymes systems by kinetin in salt stressed shoots of Zea mays. *Int Res J Pharmacy*, 8(2): 1-9. [IF=0.11]
21. Dhull R, Dhull V, Rathee K and **Singh S** (2017). A review on evolution in triglyceride determination. *Der Pharma Chemica*, 9(2), 30-36. [IF=0.38]
22. Rathee K, Dhull R, **Singh S** and Dhull V (2018). Fabrication of Biosensor for Determination of L-lactate using Elite Nanomaterials based LDH-cMWCNT-MB/ Chitosan/SWCNT-Au Electrode. *Anal Bioanal Electrochem*, 10(8), 1031-1052. [IF=0.807]
23. Malik A, Yadav P and **Singh S** (2022). Role polyamines in heavy metal stressed plants. *Plant Physiology Reports*. https://doi.org/10.1007/s40502-022-00657-w [IF=1.42]

24. Singh J, Phogat A, Prakash C, Chhikara SK, **Singh S**, Malik V, Kumar V (2022). N-Acetylcysteine Reverses Monocrotophos Exposure-Induced Hepatic Oxidative Damage via Mitigating Apoptosis, Inflammation and Structural Changes in Rats. *Antioxidants*. 11: 90. [IF=7.38]

25. Yadav A, Yadav SS, **Singh S**, Dabur R (2022). Natural products: Potential therapeutic agents to prevent skeletal muscle Atrophy. *European Journal of Pharmacology*. 925: 174995. [IF=4.956]

26. Yadav P, Sharma A and **Singh S** (2022). A review on regulatory control of chromium stress in plants. *Journal of Applied and Natural Sciences*. 14(4): 1204-24. [IF=0.26]

27. Yadav S, Kaushik S, Chhikara SK, **Singh S**, Yadav JP and Kaushik S (2022). *Terminalia arjuna (*Arjun Tree): A Sacred plant with high Medicinal and Therapeutic Potential. *Research Journal of Pharmacy and Technology*. 15(12): 5859-67.

28. Jha S, Rani R and **Singh S** (2023). Biogenic Zinc Oxide Nanoparticles and Their Biomedical Applications: A Review. *Journal of Inorganic and Organometallic Polymers and Materials*. 33: 1437–1452.

29. Boora S, Sharma V, Kaushik S, Bhupatiraju AV, **Singh S**, Kaushik S (2023). Hepatitis B virus-induced hepatocellular carcinoma: a persistent global problem. Brazilian Journal of Microbiology. 14: 1-1.

30. Boora S, Khan A, Sharma V, Kaushik S, Mehta PK, **Singh S** and Kaushik S (2023). RT-LAMP is a potential future molecular diagnostic tool for influenza A virus. *Future Virology*, *18*(3): 165-175.

31. Dahiya H, Sonia K, Boora S, Yadav S, Kaushik S, **Singh S**, Yadav JP and Kaushik S (2023). Trachyspermum ammi (Ajwain): A Sacred plant with High Medicinal and Therapeutic potential. *Research Journal of Pharmacy and Technology*, 16(7): 3285-3288.