Biodata

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Academic Qualifications:

Degree	University /College	Year of passing	Subject
Ph. D.	Kurukshetra University, Kurukshetra, Haryana	2007	Botany (Plant Biotechnology)
M. Sc.	Kurukshetra University, Kurukshetra, Haryana	2001	Botany (Plant Biotechnology)
B. Sc.	Kurukshetra University, Kurukshetra, Haryana	1999	Botany, Zoology, Chemistry

List of Publications

Santal, A.R., Bisla, I., Rani, R., **Singh, N.P.** (2022). Probiotic potential and antimicrobial activity of bacteria isolated from fermented foods. *Research Journal of Biotechnology 17* (3), 13-19.

Sharma, J. K., Sihmar, M., Santal, A. R., Prager, L., Carbonero, F., & **Singh, N. P.** (2021). Barley melanoidins: key dietary compounds with potential health benefits. *Frontiers in Nutrition*, *8*, 708194. https://doi.org/10.3389/fnut.2021.708194

IF: 6.576

Rani, R., Rathee, J., Kumari, P., **Singh, N.P.**, & Santal, A.R. (2021). Biodegradation and detoxification of low-density polyethylene by an indigenous strain *Bacillus licheniformis* SARR1. *Journal of Applied Biology & Biotechnology*, *10*(1), 9–21.

Rani, R., Jitender, **Singh, N. P.**, & Santal, A. R. (2021). Isolation, characterization and optimization of bacterial isolate SARR1 for biodegradation of pretreated low density polyethylene. *Journal of Applied and Natural Science*, *13*(2), 561–570.

Sharma, J. K., Sihmar, M., Santal, A. R., & **Singh, N. P.** (2021). Seed storage protein variation in Indian barley using 2-D diagonal gel electrophoresis approach. *Research Square*. https://doi.org/10.21203/rs.3.rs-816544/v1

Sharma, J. K., Sihmar, M., Santal, A. R., & **Singh, N. P.** (2021). Physiological and biochemical responses of seedlings of six contrasting barley (*Hordeum vulgare* L.) cultivars grown under salt-stressed conditions. *Journal of Applied and Natural Science*, *13*(3), 1020–1031.

Yadav, R., Santal, A.R., & **Singh, N.P.** (2021). Proteomic analysis of some salt responsive biological processes in wheat (*Triticum aestivum* L.) under salt stress. *Annals of Biology*, *37*(2), 140–147.

Yadav, R., Santal, A. R., & **Singh, N. P.** (2021). Comparative root proteome analysis of two contrasting wheat genotypes Kharchia-65 (highly salt-tolerant) and PBW-373 (salt-sensitive) for salinity tolerance using LC–MS/MS approach. *Vegetos*. https://doi.org/10.1007/s42535-021-00292-0.

Sihmar, M., Sharma, J. K., Santal, A. R., & **Singh, N. P.** (2020). Seed storage protein phylogenetics of Indian wheat genotypes belong to *Triticum aestivum*, *T. dicoccum* and *T. durum*. *Indian Journal of Biotechnology*, *19*(1), 17–27. **IF: 0.414**

Yadav, R., **Singh, N. P.**, & Santal, A. R. (2020). Evaluation of physiological and biochemical parameters of some wheat (*Triticum aestivum*) genotypes under salinity stress. *Indian Journal of Agricultural Research*, 55:137-143

Sihmar, M., Sharma, J., Santal, A., & **Singh, N.P.** (2020). Electrophoretic evaluation of major seed storage protein fraction, gliadins and glutenins of eighty-six indian wheat genotypes. *Agricultural Science Digest*, *40*(2), 115–121.

Sharma, J. K., Sihmar, M., Santal, A. R., & **Singh, N. P.** (2019). Impact assessment of major abiotic stresses on the proteome profiling of some important crop plants: a current update. *Biotechnology and Genetic Engineering Reviews*, *35*(2), 126–160. https://doi.org/10.1080/02648725.2019.1657682 **IF: 4.238**

Santal, A. R., **Singh, N. P.**, & Singha, T. K. (2019). Characterization of extracellular polymeric substance producing isolates from wastewaters and their antibacterial prospective. *Journal of Applied Biology and Biotechnology*, *7*(6), 56–62. https://doi.org/10.7324/JABB.2019.70609

Santal, A. R., **Singh, N. P.**, & Saharan, B. S. (2016). A novel application of *Paracoccus pantotrophus* for the decolorization of melanoidins from distillery effluent under static conditions. *Journal of Environmental Management*, *169*, 78–83. https://doi.org/10.1016/j.jenvman.2015.12.016 **IF: 6.789**

Singh, N. P., & Matta, N. K. (2016). Phylogenetic relationship and germplasm evaluation of different taxa of the genus *Cucurbita* using seed storage protein profiling. *Plant Biosystems*, *150*(6), 1200–1207. **IF:** 2.842

Singh, N. P., Sharma, J. K., & Santal, A. R. (2016). Biotechnological approaches to remediate soil and water using plant-microbe interactions. *Phytoremediation: Management of Environmental Contaminants, Volume 4*, 131–152.

Singh, N. P., & Santal, A. R. (2015). Phytoremediation of heavy metals: The use of green approaches to clean the environment. *Phytoremediation: Management of Environmental Contaminants, Volume 2*, 115–129. https://doi.org/10.1007/978-3-319-10969-5_10

Santal, A. R., & **Singh, N. P.** (2013). Biodegradation of melanoidin from distillery effluent: role of microbes and their potential enzymes. In R. Chamy & F. Rosenkranz (Eds.), *Biodegradation of Hazardous and Special Products*. IntechOpen. https://doi.org/10.5772/56252

Jha, B., Singh, N. P., & Mishra, A. (2012). Proteome profiling of seed storage proteins reveals the nutritional potential of *Salicornia brachiata* Roxb., an extreme halophyte. *Journal of Agricultural and Food Chemistry*, *60*(17), 4320–4326. **IF: 5.279**

Santal, A. R., **Singh, N. P.**, & Saharan, B. S. (2011). Biodegradation and detoxification of melanoidin from distillery effluent using an aerobic bacterial strain SAG 5 of

Alcaligenes faecalis. *Journal of Hazardous Materials*, *193*, 319–324. https://doi.org/10.1016/j.jhazmat.2011.07.068 **IF: 10.588**

Singh, N. P., & Matta, N. K. (2010). Levels of seed proteins in *Citrullus* and *Praecitrullus* accessions. *Plant Systematics and Evolution*, *290*(1), 47–56. https://doi.org/10.1007/s00606-010-0347-5 **IF: 1.631**

Singh, N. P., & Matta, N. K. (2008). Variation studies on seed storage proteins and phylogenetics of the genus *Cucumis*. *Plant Systematics and Evolution*, *275*(3–4), 209–218. https://doi.org/10.1007/s00606-008-0063-6 **IF: 1.631**

Sequences Submitted in the NCBI GeneBank

MT299809.1, OK094930.1, OK087333.1, OK037614.1, MZ672108.1, MZ672042.1, MT974150.1, GQ422441.1, GQ422442.1, GQ422443.1, GQ422444.1

Awards/fellowships.

i. 2010: Awarded with Dr. D. S. Kothari Postdoctoral Fellowship by UGC, New Delhi.
ii. 2002: Awarded with University Research Scholarship for Ph.D. degree from Kurukshetra University, Kurukshetra, Haryana.

List of Major Research Projects Completed

Sr. No.	Title of the project	Funding agency	Duration
1.	Impact Assessment of High Temperature Stress on Seed Protein Quality of Wheat.	UGC, New Delhi	2012-15
2.	Proteome mining of wheat for drought and salt stress induced proteins from Indian wheat lines.	DST-SERB, New Delhi	2014-17
3.	Proteome mining of barley: search for the salt and drought stress tolerant proteins.	DST-SERB, New Delhi	2016-18