# Dr. Nihar Ranjan Singh

## Designation: Professor of Botany
## Qualification: M.Sc., Ph.D.

**Office**: Academic Block-1, First Floor, Room no. 1, Door no. 3, Department of Botany
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### Professional Experience:

2010-Contd. – Faculty of Botany at Ravenshaw University, Cuttack

2009-2010 – Postdoctoral Researcher in Physiological Sciences, Stellenbosch University, South Africa

### Education:

1998-2001 – Bachelor in Science, Christ College, Cuttack under Utkal University

2001-2003 – Master degree in Science in Botany, Specialization in Biochemistry Ravenshaw Autonomous College, Cuttack

2004-2005 – Post Graduate Diploma in Bioinformatics and Applied Biotechnology, Institute of Bioinformatics and Applied Biotechnology, India

2005-2008 – PhD in Moléculaire Biologie, Laboratoire de Biochimie et Génétique Moléculaire, Faculté des Sciences et de Technologie, Université de la Réunion, France

PhD Thesis Title: “Glycoxidative stress and cellular pathophysiology in the framework of diabetes/obesity: Identification of physiological pathways alterations in human cell cultures treated with advanced glycation products”.

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| Research Publications: | 49 Papers |
| Book Published: | 03 Books |
| Book Chapters/ Proceedings (National & International): | 10 Chapters |
| H-Index | 18 |
| i10 index | 15 |
| Total Citations | 2273 |

### Students Guided:

M.Phil - 07 Students
Ph.D. - 07 Students

### Honours and Fellowships:

1. Received Young Scientist Award at International conference on Biodiversity and Sustainable Development: Future perspectives at NC College, Jajpur, Odisha
2. Awarded in recognition of excellence in poster presentation at 7th International Conference of the Society for Free Radical Research-Africa, 14-17 July 2008, Mauritius
3. Awarded Government of France sponsored Réunion regional counsel fellowship for doctoral studies at Université de la Réunion, France

### Membership in Professional Bodies:

1. Orissa Botanical Society – Life Member
2. Indian Science Congress – Life Member
3. Orissa Bigyan Academy – Life Member
4. Proteomics Society of India – Life Member

## Selected Publications:


1. **Singh, N.R.,** Rondeau, P., Hoareau, L., Bourdon, E. (2007) "Identification of preferential protein targets for carbonylation in human mature adipocytes treated with glycated albumin" Free Radic Res. 41(10):1078-88.
2. Roche, M., Rondeau, P., **Singh, N.R.,** Tarnus, E., Bourdon, E. (2008) "The antioxidant properties of serum albumin" FEBS Lett. 582(13):1783-7.
3. **Singh, N.R.,** Rondeau, P., Bourdon, E. (2009) "Identification of up-regulated low molecular weight proteins in human adipocytes treated with glycoxidized albumin" The Open Obesity Journal, 2(1)
4. Rondeau, P., **Singh, N.R**., Caillens, H., Bourdon, E. (2008) "Oxidative stresses induced by glycated human or bovine serum albumin on Human monocytes" Free Radic Biol Med 45:799-812.
5. Mohapatra, P.K., **Singh, N.R.** (2014) "Teaching the Z-Scheme of Electron Transport in Photosynthesis by Govindjee" Photosynthesis Research, Volume 123, Issue 1, pp 105–114
6. Mohanty, R., Das, S. K., **Singh, N. R.,** Patri, M. (2016). *Withania somnifera* leaf extract ameliorates benzo[a]pyrene-induced behavioral and neuromorphological alterations by improving brain antioxidant status in zebrafish (*Danio rerio*). Zebrafish, 13(3), 188-196.
7. Pradhan, S.K., **Singh, N.R**., Rath, B.P., & Thatoi, H (2016) "Bacterial chromate reduction: A review of important genomic, proteomic, and bioinformatic analysis", Critical Reviews in Environmental Science and Technology, vol. 0, no. 0, 1–45
8. Swain, C. K., Nayak, A.K., Bhattacharyya, P., Chatterjee, D., Chatterjee, S., Tripathi, R., **Singh, N.R.,** and Dhal, B (2018) "Greenhouse gas emissions and energy exchange in wet and dry season rice: eddy covariance-based approach" Environmental Monitoring and Assessment, 190:423, 1-17
9. Pradhan, S. K., Kumar, U., **Singh, N. R.,** & Thatoi, H. (2019) "Functional diversity and metabolic profile of microbial community of mine soils with different levels of chromium contamination" International Journal of Environmental Health Research, 1-13.
10. Das, M.K., Das, P.K., Kumar, S., **Singh, N. R.** (2020) "Flora of Khandagiri and Udayagiri: An urban heritage of Odisha" Indian Forester, 146 (6) 509-518.
11. Das, S.K., Pradhan, S, K., Samal, K.C., and **Singh, N.R.** (2022) "*In silico* allergenicity evaluation of cry proteins of Bacillus thuringiensis expressed in Bt-Brinjal (*Solanum melongena* L.)." International Journal of Current Microbiology and Applied Science 11(11): 103-112.
12. Sahoo, U., Biswal, M., Nayak, L., Kumar, R., Tiwari, R. K., Lal, M. K., Bagchi, T. B., Sah, R. P., **Singh, N. R.,** & Sharma, S. (2024). "Rice with lower amylose content could have reduced starch digestibility due to crystallized resistant starch synthesized by linearized amylopectin." Journal of the Science of Food and Agriculture.


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