Dr. Subha Narayan Das
Assistant Professor
Department of Botany
Indira Gandhi National Tribal University (IGNTU)
Lalpur, Amarkantak - 484887, Madhya Pradesh, India
Mob: +91-8886195594
E-mail – subha.bunu@igntu.ac.in ; subha.bunu@gmail.com
ORCID iD: https://orcid.org/0000-0003-3387-4751 , Vidwan-iD: 183848
Google Scholar: https://scholar.google.co.in/citations?user=UcSXZPwAAAAJ&hl=en

Research Interest

Plant-microbe interactions, Enzymology for biomass utilization and Agricultural biotechnology

Professional and Academic details

- Assistant Professor (June 2017 – Present)
- Post-doctoral Research Associate (2016 – 2017) in a European Union sponsored project, University of Hyderabad
- Ph.D. in Plant Sciences (2010 – 2016), University of Hyderabad (Supervisor – Prof. Appa Rao Podile; Co-supervisor – Prof. Bruno M. Moerschbacher, University of Muenster, Germany)
- M.Sc. in Plant Sciences, University of Hyderabad
- UGC-CSIR NET, CSIR-SRF, ICAR-NET
- Research Projects: 01 (UGC-BSR) – Ongoing
- Total no. of publications: 18

Awards/Honors/Fellowships

- **Marshall Award** for contribution in the area of "Application of Chitin and Chitosan in Biotechnology/Enzymology/Agriculture Application" at 11th Asia Pacific Chitin and Chitosan Symposium 2016
- **Best Ph.D. thesis award** for the year 2016 by the Department of Plant Sciences, University of Hyderabad
- Travel award from DST-SERB (2015) for attending 12th International Conference of the European Chitin Society/13th International Conference on Chitin and Chitosan (EUCHIS/ICCC 2015) held at Muenster, Germany
- DFG fellowship for research stay at University of Muenster, Germany (Aug–Dec, 2014)
- DFG fellowship for research stay at University of Muenster, Germany (Aug–Dec, 2013)

Selected Publications

1. Basu A, Prasad P, **Das SN**, Kalam S, Sayyed RZ, Reddy MS, El Enshasy H (2021). Plant Growth Promoting Rhizobacteria (PGPR) as Green Bioinoculants: Recent Developments, Constraints, and Prospects. ***Sustainability***, 13(3), 1140. https://doi.org/10.3390/su13031140. IF-2.6
2. Mansoori A, Singh N, Dubey SK, Thakur TK, Alkan N, **Das SN**, Kumar A (2020). Phytochemical characterization and assessment of crude extracts from *Lantana camara* L. for antioxidant and antimicrobial activity. ***Frontiers in Agronomy***, doi.org/10.3389/fagro.2020.582268.
3. Kumar A, Kumar R, Sengupta D, **Das SN**, Pandey MK, Bohra A, Sharma NK, Sinha P, Masood HS, Ghazi IA, Laha GS, Sundaram RM (2020). Deployment of genetic and genomic tools towards gaining a better understanding of Rice-Xanthomonas oryzae pv. oryzae interactions for development of durable bacterial blight resistant rice. Frontiers Plant Sciences. ***Frontiers in Plant Science***, doi.org/10.3389/fpls.2020.01152. IF-4.4
4. Sivaramakrishna D, Bhuvanachandra B, Mallakuntla MK, **Das SN**, Ramakrishna B, Podile AR (2020). Pretreatment with KOH and KOH-urea enhanced hydrolysis of α-chitin by an endo-chitinase from *Enterobacter cloacae* subsp. cloacae. ***Carbohydrate Polymers,*** 8:115952, doi.org/10.1016/j.carbpol.2020.115952. IF-7.1
5. Basa S, Nampally M, Honorato T, **Das SN**, Podile AR, El Gueddari NE, Moerschbacher BM (2020). The pattern of acetylation defines the priming activity of chitosan tetramers. ***Journal of American Chemical Society (JACS),*** 142, 4: 1975-1986. doi.org/10.1021/jacs.9b11466**.** IF-14.7
6. Vaikuntapu PR, Mallakuntla MK, **Das SN**, Bhoopal B, Bellamkonda R, Nadendla SR, Podile AR (2018). Applicability of endochitinase of *Flavobacterium johnsoniae* with transglycosylation activity in generating long-chain chitooligosaccharides. ***International Journal of Biological Macromolecules***, 117: 62-71. doi.org/10.1016/j.ijbiomac.2018.05.129**.** IF-5.1
7. Mohan Krishna M, Papa Rao V, Bhuvanachandra B, **Das SN**, Podile AR (2017). Bioconversion of chitinous substrates to long chain chitooligosaccharides by a transglycosylating chitinase from *Enterobacter cloacae* sub sp. *cloacae*. ***Scientific Reports,*** Doi: 10.1038/s41598-017-05140-3. IF-3.9
8. **Das SN**, Wagenknecht M, Nareddy PK, Bhuvanachandra B, Niddana R, Balamurugan R, Swamy MJ, Moerschbacher BM, Podile AR (2016). Amino groups of chitosan are crucial for binding to a family 32 carbohydrate binding module of a chitosanase from *Paenibacillus elgii*. ***Journal of Biological Chemistry***, 291:18977-18990. Doi: 10.1074/jbc.M116.721332. IF-4.2
9. **Das SN**, Madhuprakash J, Sarma PVSRN, Purushotham P, Suma K, Manjeet K, Rambabu S, El Gueddari NE, Moerschbacher BM, Podile AR (2015). Biotechnological approaches for field applications of chitooligosaccharides (COS) to induce innate immunity in plants. ***Critical Reviews in Biotechnology,*** 35: 29-43. DOI: 10.3109/07388551.2013.798255. IF-8.1
10. **Das SN**, Sarma PVSRN, Neeraja Ch, Malati N, Podile AR (2010) Members of *Gammaproteobacteria* and *Bacilli* represent the culturable diversity of chitinolytic bacteria from chitin-enriched soils. ***World Journal of Microbiology and Biotechnology***, 26: 1875-1881. doi.org/10.1007/s11274-010-0369-8. IF-2.4
11. **Das SN**, Dutta S, Anil K, Neeraja Ch, Sarma PVSRN, Srinivas V, Podile AR (2010). Plant growth promoting chitinolytic *Paenibacillus elgii* responds positively to the tobacco root exudates. ***Journal of Plant Growth Regulation,*** 29: 409-418. doi.org/10.1007/s00344-010-9152-1. IF-2.6