CURRICULUM VITAE

Name: Dr. Nirmalendu Da

Date of Birth: 20. 04. 197

Qualification:

M.Sc. (University of Kalyani in 1992)

Ph.D. (Jadavpur University; Worked at Indian Institute of Chemical Biology

Jadavpur, Kolkata, India 1998)

Title of Ph.D. Thesis: Studies of Laccase Enzymes from *Pleurotus florida*

Date of joining as lecturer in WBES: 03.09.1997

As Lecturer (S.S): 03.09. 2001

As Reader: 03.09. 2006

As Associate Professor: 03.09.2009 till date

Place of Posting:

Durgapur Govt. College: Sept. 1997-Sept. 2006.

A.B.N. Seal College: Sept. 2006-Jan. 2011.

Barasat Govt. College: Jan. 2011-Till date.

Teaching Experience: Undergraduate: More than 23 years; Postgraduate: More than 10 years

Research Interest: Microbial Biotechnology (Mushroom biotechnology, Enzymology, Microbial degradation of Pesticides, Biological Control & Plant Growth Promotion)

Research publications :

1. Bandopadhyay, A., Roy, T. and **Das, N.** 2021. Impact of pesticide tolerant soil bacteria on disease control, plant growth promotion and systemic resistance in cowpea. **J. Environ Engg and Landscape Management.** (Accepted).
2. Bandopadhyay, A., Bhattacharya, SK. and **Das, N**. 2019. Biocontrol, and growth promoting potential of eight PGPFs on jute and sunhemp. **J Soil and Crops**. 29: 243-250.
3. Paul, C, Maitra, M and **Das, N.** 2019. Comparative study of three *Pleurotus* spp. cultivated on two different substrates with special reference to their biochemical and antibacterial activities. **Mushroom Research**.28:39-46.

4. Roy, T., Bandopadhyay, A., Sonawane, PJ., Majumdar, S., Mahapatra, NR., Alam, S and **Das, N.** 2018. Bio-effective disease control and plant growth promotion in lentil by two pesticide degrading strains of *Bacillus* sp. ***Biological Control***. 127: 55-63.ISSN 1049-9644. **(Impact factor 2.112**).
5. Bandopadhyay, A., Roy, T and **Das, N.** 2018. Isolation of some soil bacteria showing potentiality for disease control, growth enhancement and pesticide degradation in *Vigna unguiculata* L. ***Plant Archives***, 18:79-88. ISSN 0972-5210.
6. Roy, T and **Das, N.** 2017. Isolation, characterization and identification of two methomyl-degrading bacteria from a pesticide-treated crop field in West Bengal, India. ***Microbiology*** (Moscow). 86 (6):753-764. ISSN: 0026 2617 (Impact factor **0.856**].
7. **Das, N.,** Aktar, R., Paul, C., Roy, T and Mishra, S. 2017. Comparative studies of some *Pleurotus* spp. with special reference to their biochemical, antioxidant and antimicrobial activities. ***Int J Engg. Sci Math***. 6(7): 86-96. ISSN 2320-0294.
8. Paul, C., Roy, T and **Das, N.** 2017. Potentiality of Oyster mushroom (*Pleurotus* spp) in medicine-A review. ISSN: 2573 1033. ***Annals of Food Processing & Preservation.*** 2(2) 1014.
9. Bandopadhyay, A and **Das, N.** 2017. Plant growth promoting microbial consortial formulations mediated biological control of stem and root rot disease of jute caused by *Macrophomona phaseolina* (Tassi.) Goid. ***Int. J. Curr. Sci***. 20(1):1-15.
10. **Das, N**., Mishra, S and Ghosh, S. 2016. Isolation and culture optimization of extracellular laccase enzymes of *Pleurotus pulmonarius* in submerged fermentation. ***Int. J. Curr. Res***. 8 (6): 32278-32284 (ISSN: 0975-833X).
11. **Das, N**., Mishra, S., Chowdhury, P., Roy, T and Alam, S. 2016. Comparative study of fruiting body production of some oyster mushroom in two different temperatures. ***Vegetos.*** 29 (1) :16-21. (**ISSN** 0970-4078) (Impact factor-0.042).
12. **Das, N**., Mishra, S., Biswas, L and Karmakar, N.C. 2015. Comparative study of five *Pleurotus* species cultivated in warm temperature on non-sterilized rice straw. ***Emir. J. Food Agril.*** 27 (10): 749-755. **(Impact factor- 1.008).**

13. **Das, N.,** Dey, D and Mishra, S. 2015 Isolation and physico-chemical characterization of extracellular lingo-cellulolytic enzymes of *Pleurotus pulmonarius* in submerged fermentation. ***Int. J Appl. Biol. Pharma Technol***. 6 (3):15-23.
14. Saha, T., Sasmal, S., Alam, S and **Das, N**. 2014. Tamarind Kernel Powder: A novel agro-residue for the production of cellobiose dehydrogenase under submerged fermentation by *Termitomyces clypeatus*. ***J. Agric. Food Chem.*** 62: 3438-3445. (**Impact Factor-3.107**)
15. Das, A.K and **Das, N.** 2014. Diversity of mycoflora in conifer forests of Munsiary and its adjoining areas of Uttarakhand, India. ***Int. J Plant Animal Environ. Sci***. 4(4): 21-24.
16. **Das, N.,** Sharma, P., Dey, D., Pal, S., Das, A., Mandal, B and Karmakar, NC. 2014. Isolation and characterization of some drug resistant bacteria from drinking water samples in Barasat, West Bengal. ***J. Biol. Chem. Res***. 31(2) : 861-868.
17. Chowdhury, P., Hari, R., Chakraborty, B., Mandal, B., Naskar, S and **Das, N. 2014.** Isolation, Culture Optimization and Physico-chemical Characterization of Laccase Enzyme from *Pleurotus Fossulatus.* ***Pakistan J. Biol Sci***. 17(2): 173-181. (ISSN 1028-8880)
18. Pramanick, S and **Das, N**. 2013. Isolation and Characterization of two multidrug resistant bacteria from drinking water samples at Barasat Govt. College. ***Acad. J. Aureole***. 4: 70-76 (ISSN 0976-9625).
19. **Das, N.,** Pasman, B., Mishra, S., Bhattacharya, B and Sengupta, C. **2012.** Comparative Studies of Antibacterial Properties of Three *Pleurotus* Species (Oyster Mushroom). ***Nat Sci.*** 10 (10) :178-183. (ISSN: 1545-0740).
20. Ray, S., **Das, N** and Bishayi **,** B. **2012.** Development of a Simple Method for a New Immuno- conjugate Utilizing Laccase. ***Res J. Immunology.*** 5 :1-16. (ISSN- 1994-7909).
21. **Das, N.,** Chowdhury, P., Pasman, B. Adhikari, D. and Naskar, S., **2011.** Concomitant Production of Sporeless Fruiting Bodies and Laccase Release During Submerged Fermentation Practice of *Pleurotus Fossulatus*. ***New York Science Journal.*** 4 (8):27-32. (ISSN: 1554-0200).

22. Das, N., Naskar, S., Chowdhury, P., Pasman, B. and Adhikari, D. **2011**. Experimental evidence for presence of a growth regulating extracellular laccase insome *Pleurotus* species. ***Res. J. Microbiol***. 6(5),496-502. (ISSN: 1816-4935).

23. **Das, N.,** Chowdhury, P. and Pasman, B. **2010**. Cultivation practice of *Pleurotus fossulatus* on rice straw. ***Journal of Life Sciences***. 4(5), 20-24. (ISSN: 1934-7391).

24. Ray, S., Chowdhury, P., **Das, N** and Bishayi, B. **2010.** Development of an efficient and simple method for conjugation of laccase to immunoglobulin and its characterization by enzyme-immunoassay. ***J. Immunoassay & Immunochemistry.*** 31:3,217-232**. (Impact factor-0.727).**

25. Adhikari, D., and **Das, N**. 2010. Fungal Karyomorphology: a deep insight through high throughput devices**.** ***B. N. Seal J. Sc***. III, 46-53. (ISSN: 0975-5624).

26. **Das, N.,** Adhikari, D and Naskar, S. 2010. Effect of 2,4- dichlorophenol on mycelia growth and extracellular enzyme production by *Pleurotus spp*. ***B. N. Seal J. Sc.*** III, 80-84. **(ISSN: 0975-5624).**

27. Pasman, B., Chowdhury, P., and **Das, N.** 2009. Role of different cultural conditions on laccase production of *Pleurotus ostreatus* . ***B. N. Seal J. Sc***. II, 25-33. (ISSN: 0975-5624).

28. D**as, N**. 2008. Inhibition of browning of potato by potato extracts. ***B. N. Seal J. Sc.*** I, 31-35.

29. **Das, N** and Mukherjee, M. 2007. Cultivation of *Pleurotus ostreatus* on weed plants. ***Bioresource Technology.*** 98, 2723-2726. . **(Impact Factor-7.539).**

30. Saha, T., Chakraborty, T.K, Saha, R., **Das, N** and Mukherjee, M. 2005. Interference of laccase in determination of cellobiose dehydrogenase activity of *Pleurotus ostreatus* (Florida) using dichlorophenol indophenol as electron acceptor**.** ***J. Basic Microbiology.*** 45(2), 142-146. **(Impact Factor-1.822)**

31. Chakraborty, T.K, Basu, D., **Das, N.**, Sengupta, S and Mukherjee, M. 2004. The mannitol cycle in *Pleurotus ostreatus* (Florida). ***FEMS Microbiol. Letters***. 236, 307-311. . **(Impact Factor 2.723)**

32. Chakraborty, T.K., **Das, N** and Mukherjee, M. 2003. Evidences of high carbon catabolic enzyme activities during sporulation of *Pleurotus ostreatus* (Florida). ***J. Basic Microbiol***. 43(6) :462-467. **(Impact Factor-1.822)**
33. D**as, N.,** Chakraborty, T.K and Mukherjee, M. 2001. Purification and Characterization of a growth regulating laccase from *Pleurotus florida.* ***J. Basic Microbiology*****.** 41(5):261-267. **(Impact Factor-1.822)**
34. Chakraborty, T.K., **Das, N**., Sengupta, S and Mukherjee, M. 2000. Accumulation of a natural substrate of laccase in the gill tissue of *Pleurotus florida* during sporulation. ***Current Microbiology***. 41:167-171. **(Impact Factor-1.359)**
35. **Das, N**., Chakraborty, T.K and Mukherjee, M. 2000. Purification and Characterization of Laccase-1 from *Pleurotus florida*. ***Folia Microbiol***. 45(5):447-451. **(Impact Factor-1.145)**
36. **Das, N**., Chakraborty, T.K and Mukherjee, M. 1999. Role of potato extract in extracellular laccase production of *Pleurotus flori**da***. ***J. Basic Microbiology***. 39(5-6) : 299-303. **(Impact Factor-1.822)**
37. **Das, N.**, Sengupta, S and Mukherjee, M. 1997. Importance of laccase in vegetative growth of *Pleurotus florida*. ***Applied and Environmental Microbiology***. 63(10) : 4120 - 4122. **(Impact Factor-3.952)**
38. **Das, N** and Mukherjee, M. 1996. Preparation and regeneration of mycelia protoplasts of *Pleurotus florida* and *P. ostreatus*. ***Folia Microbiologica***. 41 (2) : 208-210. **(Impact Factor-1.145)**
39. **Das, N** and Mukherjee, M. 1995. Conditions for isolation of regenerating protoplasts from *Pleurotus sajorcaju*. ***J. Basic Microbiology***. 35(3) :157-161. **(Impact Factor-1.822)**

Books/Chapter

1. Roy T., **Das, N.** and Majumdar, S. 2020. Pesticide tolerant rhizobacteria:Paradigm of disease management and plant growth promotion. In: Plant Microbe Symbiosis. A. Verma., S. Tripathi. and ram Prasad (editors). Springer Nature Switzerland AG 2020. Pp. 221-239. ISBN: 978-3-030-36247-8.

2. Paul, C, Maitra, M and **Das, N.** 2020. Fungal lignocellulolytic enzymes - physiological roles and biotechnological applications. In: Research Advances in the Fungal World: Culture, Isolation, Identification, Classification, Characterization, Properties and Kinetic. PK Chaurasia SL Bharati (editors) Nova Science Publishers, Inc., New York. Pp. 321-371. ISBN: 978-1-53617-197-6

3. Adhikari, D., **Das, N.** and Naskar, S. 2013. Novel Fungal Enzymes in Environmental Remediation in ***Environmental Biotechnology and Application***. Ed. P. Kumar 'Bharti' & Avanish chauhan. :ISBN: 978-93-5056-262-8.

4. Das, P.K., Das, A.K. and **Das, N.** 2011. ***Emerging Trends in Plant Science.*** U.N. Dhur & Sons (P) Ltd. Kolkata. ISBN: 978-93-80673-52-3.

5. Mukherjee, M. and **Das, N**. 2009. Fungal laccase: a biotechnologically potential Enzyme. In ***Biotechnology Applications*** ed. C.S.K. Mishra I.K.International**,** New Delhi, Bangalore, 70-108**.** (ISBN: 978-93-80026-29-9).

Conference paper in full:

1. Roy, T., Bandopadhyay, A., Majumdar, S., and **Das, N.** 2020. Comparative analysis of pesticide degradation and heavy metal tolerance in two *Bacillus* species isolated from agricultural field of West Bengal, India. In: Slovak Environment Agency. International Conference Contaminated Sites 2020. Conference papers. Bradiakova E and Paluchova K. (Eds) Banska Bystrica, 140-145. ISBN:978-80-8213-030-3.

2. Roy T and **Das, N.** 2016. Isolation, characterization and identification of two pesticide degrading bacteria from rhizospheric soil. In ***Proceedings of 'Biodidiversity'-prospects and threats present scenario***. UGC sponsored national Seminar at Toofanganj Mahavidyalaya, Toofanganj , W.B.:161-176. (ISBN: 978-93-80673-52-3).

Sanctioned Project:

1. **Isolation and characterization of pesticide degrading bacteria from the agricultural field of West Bengal.** Sponsored by Department of Science and Technology (W.B.) (757 (Sanc.)/ST/P/S&T/1G-15/2014 dated 17.12.2015) for three years. Amount sanctioned **20.359 lakh** [Revised; 112 (Sanc)/ST/P/S&T/1G-15/2014 dated 26.09.2018].
2. **Comparative studies of *Pleurotus fossulatus* and other commercially cultivated oyster mushrooms (*Pleurotus* spp.) with special reference to their yield, antioxidant and antimicrobial properties.** Sponsored by University Grants Commission, Govt. of India (PSW-144/13-14 dated 18.03.2014) for two years. Amount **3.7 lakh**
3. **Highly efficient and simple methods for the preparation of active laccase antibody conjugates for enzyme-immunoassay and immunoblots** sponsored by **Department of Biotechnology,** Govt. of India (No.BT/PR9769/GBD/27/66/2007 dated 30.10.2007) for three years with Dr. B. Bishayi of Dept. of Human Physiology, University of Calcutta, Kolkata. Amount: **14.43 lakh.**
4. **Browning of fruits & vegetables - a biological remedy** sponsored by University Grants Commission, Govt. of India (PSW-006/044 - 05 dated 13.03.2005) for two years. Amount Sanctioned **0.9 lakh.**
5. **Role of laccase in improvement and assessment of fruitbody production in oyster mushroom *(Pleurotus* spp.)** funded by Deptt. of Science & Technology, Govt. of India (SR/FTP/LS-48/2000) dated 21.05.2001 for three years. Amount Sanctioned **4.3 Lakh**
6. **Possibilities of oyster mushroom (*Pleurotus* spp) cultivation on weeds funded by** University Grants Commission, Govt. of India (PSW-036/99-00 dated 08.02.2000 for two years. Amount sanctioned **0.27 Lakh.**

Other Achievement: One student (Ms. Tina Roy) has been awarded Ph.D from University of Gour Banga in August 2020. The Title of the Thesis is "Potentiality of Some Pesticide Degrading PGPR in Growth Promotion and Disease Suppression in Lentil (*LENS CULINARIS* MEDIK)".