Biodata

PROF. RAM NARAIAN

Summary

Dr. Ram Naraian is Professor of Biotechnology in the Department of Biotechnology, Faculty of Science, Beer Bahadur Singh Purvanchal University, Jaunpur (UP), India. Additionally he is Coordinator of Mushroom Training & Research Centre (MTRC), Beer Bahadur Singh Purvanchal University, Jaunpur-222003 (UP), India. He did his Doctoral work in Microbiology and was awarded Ph.D. degree in the year 2003 from Dr. Ram Manohar Lohia Avadh University, Faizabad (UP), India. During his doctoral work he has been transferred advanced mushroom cultivation technology to many hundred farmers and rural persons for improvement of their economic status. Then he worked in Environmental Microbiology Section, Indian Toxicology Research Centre, Lucknow, India. Later he joined as Lecturer of Microbiology in the Department of Microbiology, Institute of Bioscience & Biotechnology, Chhatrapati Sahu Ji Mahraj University University, Kanpur, India and have broad research & teaching experience. At present Dr. Naraian is member of various academic and scientific bodies including; American Society for Microbiology, Association of Microbiologist of India, Indian National Science Congress, International Society of Biotechnology, Society for Environmental Sustainability, Prof H.S. Srivastava foundation for Science and Society and Fellow member of International Society of Biotechnology (FISBT). Currently he is actively engaged in teaching and research and he is project leader of research projects funded by University Grants Commission, India & Department of Science & Technology, Ministry of Science & Technology, Govt. of India. In addition he is member editorial board/expert/reviewer of various national & international journals of reputed publications e.g., Elsevier, Springer, Willey Inter Science etc. He had broad area of research interest viz., Bioremediation & biodegradation, Microbial enzyme technology and Mushroom technology. Dr. Naraian published several research papers, articles, reviews, book chapters and conference proceedings in peer reviewed publications.

Professor
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PERSONAL

Date of Birth: 25th July 1973 *Nationality*: Indian

Marital status: Married *Sex*: Male

Religion: Hindu

EDUCATION

2003 **Ph.D** **Microbiology**
Supervisor: Prof. S. K. Garg
University: Dr. Ram Manohar Lohia Avadh University, Faizabad- 224001.
Dissertation: Effect of Nitrogen Supplementation on the Yield of Fruitbodies and Changes in Enzyme Profile of *Pleurotus florida.*
Achievements: Highest 40.33, 58.38 and 20.8% biodegradation of lignin, hemicellulose and cellulose respectively during solid substrate fermentation (SSF) of corn cob and maximum 93.75 % fruit body yield of Oyster mushroom *Pleurotus florida.* Additionally, highest enzyme activities (CMCase, Xylanase, β-glucosidase, β-xylosidase) were obtained by the addition of 2% (w/w) cotton seed cake during SSF of corn cob.

1996 **M.Sc.** **Microbiology**
University: Dr. Ram Manohar Lohia Avadh University, Faizabad-224001.
Dissertation: Study on Effect of Fly-ash on Symbiotic Nitrogen Fixing Bacterium *Rhizobium leguminosarum* bv. *Phaseoli.*
Supervisor: Prof. D. P. Singh (now in B.B.A.University, Lucknow)

1994 **B.Sc.** **Botany, Zoology and Chemistry**
University: Dr. Ram Manohar Lohia Avadh University, Faizabad-224001.

1990 **Intermediate: Hindi, English, Physics, Chemistry and Biology**
Board: Uttar Pradesh Intermediate Education Council, Allahabad.

1988 **High School: Hindi, English, Social Science, Math-2, Science-2 and Biology**
Board: Uttar Pradesh Intermediate Education Council, Allahabad.

RESEARCH EXPERIENCE

Dec 2016– Present ***Professor*** *Department of Biotechnology, Faculty of Science, Veer Bahadur Singh Purvanchal University, Jaunpur-222003(U.P.)*

Dec 2013– Nov 2016 ***Associate Professor*** *Department of Biotechnology, Faculty of Science, Veer Bahadur Singh Purvanchal University, Jaunpur-222003(U.P.)*

Dec 2010– Nov 2013 ***Reader*** *Department of Biotechnology,*
Faculty of Science,
Veer Bahadur Singh Purvanchal University,
Jaunpur-222003(U.P.)

- Determination of laccase gene expression in *Pleurotus* spp.
- Isolation and characterization of mushroom growth promoting bacteria.

July 2005– Nov 2010 ***Lecturer*** *Department. of Microbiology*
Institute of Bioscience & Biotechnology,
C.S.J.M.University, Kanpur

- Biodegradation of various lignocellulusic wastes by using *Pleurotus* spp. fungi.
- Isolation and characterization of mushroom growth promoting bacteria.
- Bioremediation of heavy metals from different industrial effluents.
- Production of lignolytic enzymes by using various oil seed cakes during submerged and solid state fermentation of different lignocellulosic materials.
- Isolation and characterization of multidrug resistant bacteria from different tannery effluents.

May 2004 – 2005 ***Senior Research Fellow*** *(MEF) Environ. Microbiology Division*
Industrial Toxicology Research Centre
(now Indian Institute of Toxicology Research)
(CSIR), Lucknow (UP)

- Microbial decolorization of distillery effluent/ pulp paper industry effluent.
- Characterization of distillery effluent decolorizing bacteria isolated from sludge.

May 1997- May 2001 ***Junior Research fellow*** *(DBT)*
Dr. R. M. L. Avadh University,
Faizabad-224001

- Cultivation and demonstration of different mushrooms (*Agaricus* spp, *Pleurotus* spp. & *Volvariella* sp.) at commercial level.
- Enhancement of oyster mushroom yield by the supplementation of nitrogen rich substances.
- Enhancement of enzyme profile of *Pleurotus* spp. by the supplementation of nitrogen rich chemical and biological substances.
- Improvement of lignocellulosic biodegradation.

TEACHING EXPERIENCE

> 13 years

As Professor (V. B. S. Purvanchal University, Jaunpur)

M.Sc. Biotechnology	Plant Tissue culture General Microbiology Industrial Microbiology

As Associate Professor/Reader(V. B. S. Purvanchal University, Jaunpur)

M.Sc. Biotechnology	Plant Tissue culture General Microbiology Industrial Microbiology

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As Assistant Professor/Lecturer (C. S. J. M. University, Kanpur)

M.Sc. Microbiology	General Microbiology Analytical Techniques Recombinant DNA Technology Food Microbiology
B.Sc. Biotechnology	Cell Biology Basic Microbiology

ADMINISTRATIVE EXPERIENCE

- Coordinator, Mushroom Training & Research Centre (MTRC), Faculty of Science, V. B. S. Purvanchal University, Jaunpur.
- Coordinator, SC/ST Cell, V.B.S.Purvanchal University, Jaunpur
- Member Secretary SC/ST Advisory committee, V.B.S.Purvanchal University, Jaunpur
- Head, Department of Biochemistry, V.B.S.Purvanchal University, Jaunpur
- Coordinator' Purvanchal University Combined Admission Test-2012 (PUCAT-2012) conducting for admission in different campus courses (at V. B. S. Purvanchal University, Jaunpur).
- Coordinator', UGC-Coaching Cell (Sponsored by UGC, New Delhi) at V. B. S. P. University, Jaunpur.
- Assistant Proctor', V. B. S. Purvanchal University, Jaunpur.
- Centre Superintendent' of entrance examinations (B.Ed., M.Ed., M.Phil., M.Sc., B.Sc. at C. S. J. M. University, Kanpur).
- Centre Superintendent' of semester examinations (at V. B. S. Purvanchal University, Jaunpur).
- Centre Observer of CPMT and B.Ed. entrance examinations (C. S. J. M. U.).
- Centre Representative of CPMT and B.Ed. entrance examinations (C. S. J. M. U.).

- Member of disciplinary committee (C. S. J. M. U.).
- Centre Superintendent of B.Ed. counseling (C. S. J. M. U.).

MEMBER OF REGULATORY BODIES/COMMITTEES

- Member Honabl'e Court, V. B. S. Purvanchal University, Jaunpur.
- Member Executive Council (EC), V. B. S. Purvanchal University, Jaunpur (4 Times; 2011, 2013, 2016-2018)
- Member Academic Council (AC), V. B. S. Purvanchal University, Jaunpur (2014, 2016-2018).
- Member Examination Committee, V. B. S. Purvanchal University, Jaunpur.
- Member Admission Committee-PUCAT-2018, V. B. S. Purvanchal University, Jaunpur.
- Member Sports Council, V. B. S. Purvanchal University, Jaunpur (2014, 2016-2018).
- Convenor, Board of Studies (Biotechnology) V. B. S. Purvanchal University, Jaunpur.

EXPERIMENTAL EXPERITISE

- Determination and quantification of Laccase/ peroxidase gene expressions.
- Molecular determination of pathogenic bacteria through PCR technique.
- Extraction and estimation of various enzymes *viz*., CMCase, xylanase, β-xylosidase, β- glucosidase, peroxidase and laccase etc.
- Estimation of various compounds like cellulose, hemicellulose, lignin and crude protein.
- Cultivation and demonstration of edible mushrooms.
- Determination of ions and heavy metals.

PUBLICATIONS

Recent research paper

1. **Naraian, R**., Kumari, S., Gautam, R.L. (2018) Biodecolorization of brilliant green carpet industry dye using three distinct *Pleurotus* spp. *Environmental Sustainability*, 1:141–148. (ISSN: 2523-8922)

2. Sagar, S.S., **Naraian, R.**, Kumar. R. and Kaistha, S.D. (2018) Reversal of

antibiotic resistance by phage resistant *Pseudomonas aeruginosa* PA01 *Bioengineering and Bioscience* 6 (1): 11-15. (ISSN: 2332-0028)

3. **Naraian, R.** and Dixit, B. (2017) Nutritional value of three different Oyster mushrooms grown on Cattail weed substrate. *Archives of Biotechnology and Biomedicine*, 1: 061-066. (ISSN: 2639-6777)

4. **Naraian, R.**, Singh, M. P. (2016) Improved yield of ligno-cellulolytic enzymes on oyster shell powder added *Typha* weed substrate by *Pleurotus florida*. *Cellular & Molecular Biology*, 62: 143. (ISSN: 1165-158X).

5. Kumari, S. and **Naraian, R.** (2016) Decolorization of synthetic brilliant green carpet industry dye through fungal co-culture technology. *Journal of Environmental Management,* 180:172-179 (ISSN: 0301-4797).

6. **Naraian, R.** (2016) Antibiotic and chromium resistant *Escherichia coli* isolated from the tannery effluent. *International Journal for Scientific Research & Development*, 4 (7): 319-322 (ISSN: 2321-0613).

7. **Naraian, R.**, Singh, M. P. and Ram, S. (2016) Supplementation of basal substrate to boost up substrate strength and oyster mushroom yield: An overview of substrates and supplements. *International Journal of Current Microbiology and Applied Sciences, 5*(5): 543-553 (ISSN: 2319-7706).

8. **Naraian, R.** (2016) Enzymatic hydrolysis of groundnut husk using three different *Pleurotus* spp. *International Journal for Scientific Research & Development*, 4(7): 569-572 (ISSN: 2321-0613).

9. **Naraian, R.**, Narayan, O.P., and Srivastava, J. (2014) Differential response of oyster shell powder on enzyme profile and nutritional value of oyster mushroom *Pleurotus florida* PF05. BioMed Research International, Article ID 386265, http://dx.doi.org/10.1155/2014/386265 (E ISSN: 2314-6141).

10. Srivastava, J. **Naraian, R.** Kalra, S. J. S. and Chandra H. (2014) Advances in microbial bioremediation and the factors influencing the process. *International J. of Environmental Science and Technology.* 11:1787-1800. (P-ISSN: 1735-1472, E-ISSN: 1735-2630)

11. Srivastava, J., Kalra, S. J. S. and **Naraian, R.** (2014) Environmental perspectives of *Phragmites australis* (Cav.) Trin. Ex. Steudel. *Appllied Water Science,* 4: 193-202. (P-ISSN:2190-5487, E-ISSN: 2190-5495)

12. Patel, Y., **Naraian, R.** Sunita, K., Abbasi, P. and Singh, V. K. (2013) A new antibiotic resistant mutant of *Pleurotus sajor-caju* with improved expression of malate dehydrogenase enzyme. *Int. J. of Advanced Life Sciences.* 6 (1): 36-43. (E-ISSN: 2277-758X, P-ISSN:2320-1827)

13. Patel, Y., **Naraian, R.** and Singh, V. K. (2012) Medicinal Properties of *Pleurotus* Species (Oyster Mushroom): A Review. *World J. of Fungal and Plant Biology*. 3 (1): 01-12. (E-ISSN: 2221-3724, P-ISSN: 2219-4312).

14. **Naraian, R.**, Ram, S., Kaistha, S.D. and Srivastava, J. (2012) Occurrence of plasmid linked multiple drug resistance in bacterial isolates of tannery effluent. *Cellular and Molecular Biology,* 58 (1): 134-141.(E-ISSN 1165-158X)

15. **Naraian R.**, Srivastava J and Garg S. K. (2011) Influence of dairy spent wash (DSW) on different cultivation phases and yield response of two *Pleurotus* mushrooms. *Annals of Microbiology*. 61:853–862. (P-ISSN: 1590-4261 , E-ISSN: 1869-2044)

16. **Naraian R.,** Ram S., Srivastava J., Kumar J., Singh K.P. and Garg S.K. (2010) Influence of metal ions on growth and enzyme profile of white-rot fungus *Pleurotus florida* ITCC 3308. *Research in Environment & Life Science.* 3(2): 61-66. (P- ISSN: 0974-4908)

17. **Naraian R.** Singh D. Verma A. and Garg S. K. (2010) Studies on *in vitro* degradability of mixed crude enzyme extracts produced from *Pleurotus* spp. *Journal of Environmental Biology,* 31, 945-951. (P-ISSN:0254-8704)

18. Srivastava J., Shukla D., Chand V., **Naraian R.**, Chandra H. and Nautiyal A.R. (2010) Mycorrhizal colonization affects the survival of *Vetiveria zizanioides* (L.) Nash grown in water containing As (III). *CLEAN-Soil, Air, Water,* 38 (8), 771– 774. (P-ISSN: 1863-0650, E-ISSN: 1863-0669)

19. **Naraian R.,** Sahu R.K., Kumar S., Garg S.K., Singh C.S and Kanaujia R.S. (2009) Influence of different nitrogen rich supplements during cultivation of *Pleurotus florida* on corn cob substrate. *The Environmentalist (now Environment System & Decisions)* 29:1–7. (P-ISSN: 2194-5403, E-ISSN: 2194-5411)

20. **Naraian R.,** Arora N.K., and Garg S.K. (2009) Improved submerged fermentation of corn cob with mechanically broken oil seed cakes and decolorization of textile dyes by enzyme extract of *Pleurotus florida* PF05. *Research in Environment & Life Science,* 2(2): 83-90. (P- ISSN: 0974-4908)

21. Arora N. K., Khare E., **Naraian R.** and Maheshwari D.K. (2008). Sawdust as a superior carrier for the production of multipurpose bioinoculant using PGP Rhizobial and Pseudomonad strains and their impact on productivity of *Trifolium repense. Current Science* 95: 90-94. (ISSN: 0011-3891)

22. Srivastava J.,Chandra H.,Tripathi K., **Naraian R.** and Sahu R.K. (2008)

Removal of chromium through biosorption by the *Pseodomonas* spp. Isolated from tannery effluent. *Journal of Basic Microbiology*. 48, 135-139. (P-ISSN:0233-111X, E-ISSN:1521-4028)

23. Sahu R.K., **Naraian R.** and Chandra V. (2007) Accumulation of metals in naturally grown weeds (Aquatic macrophytes) grown on the industrial effluent channel, *CLEAN-Soil, Air, Water* 35(3), 261-265. (P-ISSN: 1863-0650, E-ISSN: 1863-0669)

Recent book chapters/articles

1. Arvind Kumar and **Ram Naraian** (2018) Differential Expression of the Microbial β-1,4-Xylanase, and β-1,4-Endoglucanase Genes in New and Future Developments in Microbial Biotechnology and Bioengineering Microbial Genes Biochemistry and Applications *(Eds. H.B.Singh, V.K.Gupta and S.Jogaih) Elsevier, pp.95-109*.

2. **Ram Naraian** and Roshan L. Gautam (2017) Enzyme System from *Penicillium* in Saccharification of Lignocellulosic Feedstocks. *(Ed. V.K.Gupta) Elsevier, pp.121-136*.

3. Sadhna S. Sagar and **Ram Naraian** (2017) Biosynthesis of Nanoparticles by *Penicillium* and its Medical Applications *(Ed. V.K.Gupta) Elsevier, pp*

3. **Ram Naraian** and Simpal Kumari (2015) Bioremediation of Environmental Contaminants Using Broad Family of Microorganisms: An Advanced Approach *(Eds. D.P. Singh and J.S. Singh), Studium, USA, pp. 206-224*.

4. **Ram Naraian** and Simpal Kumari (2015) Microbial Production of Organic Acids: Extensive Applications in Microbial Functional Foods and Nutraceuticals, *(Eds. V. K. Gupta), Wiley-Blackwell*

5. **Ram Naraian** and Simpal Kumari (2014) *Pleurotus* an Exclusive Bio-Tool: Its Multitude of Usage In Microbes for Health, Industry and Environment, *(Eds. V. K. Gupta, M. G. Tuohy, G. D. Sharma), CABI Publishers, Wallingford, UK. pp. 140-158.*

6. Siya Ram and **Ram Naraian** (2013) Real-Time Quantitative Polymerase Chain Reaction: A potential Tool for Pathogen Detection in Recent Advances in Microbiology Volume 2 *(Eds. S.P.Tiwari, R. Sharma, R. Gaur), NOVA Science Publishers, NY, USA*. (ISBN: 978-1-62808-628-7).

7. **Ram Naraian**, Rajanish Kumar Pandey, Yashvant Patel and V. K. Singh (2012) Variable Expression and Regulation of Genes Encoding Peroxidase:

Multiple Applications In Applications of Microbial Genes in Enzyme Technology *(Eds. V. K. Gupta, M. G. Tuohy, G. D. Sharma), NOVA Science Publishers, NY, USA. pp. 269-286* (ISBN: 978-1-62417-808-5).

Abstracts/papers presented at National and International Conferences:

1. Kumari, S., Ram S. and **Naraian, R.** (2017) Response of bacterial population in cultivation beds on the yields of oyster mushroom *Pleurotus florida*. *58th Annual Conference of AMI* and *International Symposium on Microbes for Sustainable Development: Scope and Applications (AMI-MSDSA-2017) held at B.B.A. University, Lucknow, India, Nov. 16-19, 2017.*

2. Patel, Y., **Naraian, R.,** Chaubey, P. and Singh, V.K. (2017) Evaluation of genetic diversity and many other bio-potentialities of genus *Pleurotus* from Northern India. *58th Annual Conference of AMI* and *International Symposium on Microbes for Sustainable Development: Scope and Applications (AMI-MSDSA-2017) held at B.B.A. University, Lucknow, India, Nov. 16-19, 2017.*

3. Kumar, S., Ram S. and **Naraian, R.** (2017) Response of substrate on cultivation phases and yield of oyster mushroom *Pleurotus florida*. *58th Annual Conference of AMI* and *International Symposium on Microbes for Sustainable Development: Scope and Applications (AMI-MSDSA-2017) held at B.B.A. University, Lucknow, India, Nov. 16-19, 2017.*

4. Chaudhary, R. K., Kuma, N., **Naraian, R.** and Ram S. (2017) Culture-free detection of Shiga toxin producing *E. coli* by a microfluidic device coupled with qPCR technique. *58th Annual Conference of AMI* and *International Symposium on Microbes for Sustainable Development: Scope and Applications (AMI-MSDSA-2017) held at B.B.A. University, Lucknow, India, Nov. 16-19, 2017.*

5. **Naraian, R.** and Kumari, S. (2016) Bioconversion of Typha waste into valuable fruitbodies of edible oyster mushroom *Pleurotus florida, National seminar on conservation of natural resources and its management at M.M.P.G. College, Bhatpar Rani, Deoria, India. Held on 25-26th Oct, 2016.*

6. **Naraian, R.** and Ram, S. (2016) Removal of carpet industry Blue BS reactive dye by enzymatic treatments, *57th Annual Conference of AMI and International Symposium on Microbes and Biosphere: What's New and What's Next, Gauhati University, India held on November 24-27, 2016.*

7. Chaudhary, R.K., **Naraian, R.**, Ram, S. (2016) Culture free detection of *Salmonella* spp. in various food matrices using molecular beacon based real-time PCR assay, *57th Annual Conference of AMI and International Symposium on*

Microbes and Biosphere: What's New and What's Next, Guwahati University, India held on November 24-27, 2016.

8. Chaudhary, R.K., **Naraian, R.**, Singh, G., Kumar, A., Ram, S. (2016) The role of toxin-antitoxin systems in the survival of multidrug tolerant pathogens and designing of new approaches to treat them, *17th International Congress on Infectious Diseases at/ International Journal of Infectious Diseases, Hyderabad, India, held on March 4, 2016, 1–477*.

9. Naraian, R. and Singh, M.P. (2016) Enhanced production of lignocellulolytic enzymes through fungal co-cultivation technology during submerged cultivation. *National seminar on Recent trends and advances in Biotechnology (BIOKUMBH-2016) at Centre of Biotechnology, Allahabad University Feb 20-21, 2016*

10. Chaudhary, R.K., **Naraian, R.**, Kumar, A., Ram, S. (2015) Culture free detection of *Escherichia coli* O157 by using milk protein coated activated charcoal (MP-CAC) based pathogen concentrator and qPCR. *56th Annual Conference organized by Association of Microbiologists of India at Jawaharlal Nehru Univ., New Delhi, India Dec 7-10, 2015.*

11. Chaudhary, R.K., **Naraian, R.**, Kumar, A., Ram, S. (2015) Functional Study of toxin-antitoxin pairs parDE, relBE and higBE systems in Pseudomonas aeruginosa. *56th Annual Conference organized by Association of Microbiologists of India at Jawaharlal Nehru Univ., New Delhi, India Dec 7-10, 2015.*

12.Naraian, R., Kumari, S., and Ram S. (2014) Cattail weed (*Typha latifolia*) waste for production of lignolytic enzymes by white-rot fungus *Pleurotus florida* PF05. *55th Annual Conference of AMI (AMI-EMMT-2014) held at Tamil Nadu Agriculture University, Coimbatore, Tamil Nadu, India, Nov 12-14, 2014.*

13. Kumari, S., **Naraian, R.** and Ram S. (2014) Characterization of mushroom growth promoting bacteria isolated from rhizospheric soil of mint plant. *55th Annual Conference of AMI (AMI-EMMT-2014) held at Tamil Nadu Agriculture University, Coimbatore, Tamil Nadu, India, Nov 12-14, 2014.*

14. Kumari, S. and **Naraian, R.** (2014) Mushroom Growth Promoting Bacteria (MGPB) Isolated from Rhizospheric Soil of Sugar Beet Plant. *International Symposium on Advances in Biological Sciences & Material Sciences (ISABMS-2014). Held at University of Lucknow. July 15, 2014.*

15. Naraian, R. and Patel, Y. (2013) Differential response of oyster shell powder on nutritional value and enzyme profile during different cultivation phases of oyster mushroom *Pleurotus florida*PF05. *International Conference on Health, Environment and Industrial Biotechnology (BioSangam 2013) held in MNIT, Allahabad from November 21-23, 2013.*

16. **Naraian, R.** and Patel, Y. (2013) Studies on two new pink and peculiar edible oyster mushroom from Eastern Uttar Pradesh. *International Conference on Health, Environment and Industrial Biotechnology (BioSangam 2013) held in MNIT, Allahabad from November 21-23, 2013.*

17. **Naraian, R.** Patel, Y. and Ram, S. (2013) Response of nitrogen rich oil seed cakes on growth kinetics and laccase production in oyster mushroom *Pleurotus florida*PF05. *54th* A*nnual Conference of AMI of India, &* Platinum Jubilee Celebrations & *International Symposium* on '*Frontier Discoveries and innovations in Microbiology and its Interdisciplinary relevance' (FDMIR-2013) held at MDU, Rohtak, Haryana, India. 17-20 Nov., 2013.*

18. **Naraian, R.** Pandey, R. K. and Singh M. P. (2013) Oyster shell powder stimulating enzyme yield during SSF by Oyster fungus *Pleurotus florida* PF05. *Symposium on Recent Advances in Biochemistry & Biotechnology: Applications in Health, Agriculture & Environment. Held at University of Lucknow. Oct 29-31, 2013.*

19. Patel, Y., **Naraian, R.** and V.K. Singh (2012) Improved expression of malate dehydrogenase in a new and antibiotic resistant mutant of *Pleurotus sajor-caju, International Conference on Mycology and Plant Pathology Biotechnological Approaches held at the Centre of Advanced Study in Botany, BHU, Varanasi, 27th to 29th February 2012, pp.199-200.*

20. **Naraian, R.**, Ram, S. and Kaistha, S.D. (2011). Occurrence of plasmid linked multiple drug resistance in bacterial isolates of tannery effluent. *National Conference on "Frontiers in Biological Sciences" at V. B. S. Purvanchal University, Jaunpur, India. December 4-5, 2011.*

21. **Naraian R.,** Mishra P. and Chandra V. (2010) Accumulation of different heavy metals by white-rot fungus (mushroom) *Pleurotus elangitipes. National seminar on global perspective of biological researches in the present scenario, held at DGPGC, Kanpur (U.P.). 7th & 8th December 2010.*

22. **Naraian R.**, Goswami S., Yadav K. L., and Gupta M. K. (2010) Color removal of textile dyes by crude enzyme extract from spent substrate of Oyster mushroom *Pleurotus florida* PF05. *51th annual conference of association of microbiologists (AMI) of India, held at BIT, Mesra, Ranchi, Jharkhand, India. 14-17 December 2010.*

23. Singh P., **Naraian R.**, Pandey R. and Kapil D. (2009) Biodegradation of various lignocelluloses and determination of enzyme activities during submerged and solid submerged fermentation by *Pleurotus florida. 50th annual conference of association of microbiologists of India (AMI 2009) held at NCL, Pune, India. 15-18 December 2009.*

24. Pandey R.K., **Naraian R.** and Singh K.P. (2009) Decolorization of different textile dyes using white-rot fungus *Pleurotus florida* and its enzyme extract. *National conference on "Emerging Paradigms in Biochemical Engineering: held at BHU, Varanasi, India, 9-10 October 2009.*

25. Singh P., **Naraian R.**, Pandey R. and Deo K. (2009) Biodegradation of various lignocellulosics and determination of enzyme activities during submerged and solid substrate fermentation by *Pleurotus florida*. *50th Annual Conference Association of Microbiologists of India-AMI 2009: held at National chemical laboratory, Pune, India, 15-18 December, 2009.*

26. Singh A. and **Naraian R.** (2007) Influence of various nitrogen rich oil seed cakes on submerged fermentation and production of laccase and peroxidase by *Pleurotus florida*. *National conference on "SAMAE-NHT" at CSJMUniversity, Kanpur, India.19th-21st Feb.2007.*

27. Singh A.; Kashyap P. and **Naraian R.** (2007) Effect of oil seed cakes on biodegradability and peroxidase production by *Rhizopus* sp. and *Pleurotus florida* during solid substrate fermentation of corn cob. *National conference on "SAMAE-NHT" at CSJMUniversity, Kanpur, India.19th-21st Feb.2007.*

28. Bajpai S., Pandey M., Verma, S.K. and **Naraian R.** (2007) Study on antibiotic and chlorine resistant bacteria from municipal water of Kanpur city. *National conference on "SAMAE-NHT" at CSJMUniversity, Kanpur, India.19th-21st Feb.2007.*

29. Sahu R.K.; Katiyar S. and **Naraian R.** (2006) Impact of loamy drain water and its impact on plant and soil with particular emphasis of heavy metal toxicity, *National symposia on issues and challenges for environmental and environmental management vision 2005 at BBA University, Lucknow.*

30. **Naraian R**.; Singh R.and Arora N.K. (2005) Effect of nitrogen supplements on decolorization of pulp paper mill effluent. *Toxicity International, international conference on toxicity environmental and occupational health: held at ITRC, Lucknow. India, 14-15 November, 2005*

Neucleotide sequence published:

1. ***Azospirillum brasilense:***
   Azospirillum brasilense gene for 16S ribosomal RNA, partialsequence, strain: RN20150121. (ACCESSION:LC020657)
   http://www.ncbi.nlm.nih.gov/nuccore/LC020657.1

2. ***Bacillus vallismortis:***
   Bacillus vallismortis gene for 16S ribosomal RNA, partial sequence, strain: CG141107.(ACCESSION: LC010220)
   http://www.ncbi.nlm.nih.gov/nuccore/LC010220.1

WORKSHOP/ TRAINING JOINED:

1. National Workshop on growth of science and technology in the campus of Purvanchal University: *organized by V.B.S.P.University, Jaunpur, U.P. Sep. 08-10, 2017.*

2. Author Workshop on Scholoraly writing articles and research papers*: Jointly organized by Springer Nature and V.B.S.P.University, Jaunpur, U.P. Dec. 01, 2017.*

3. Numerical Computation Using MATLAB, Department of Computer Science & Engineering, Faculty of Engineering & Technology, *V.B.S. Purvanchal University, Jaunpur, Uttar Pradesh. India. 26-30th Nov. 2015*.

4. American Society for Microbiology (ASM) Virtual Workshop on the Art of Science Communication. *54th* A*nnual Conference of Association of Microbiologists of India (AMI) held at MDUniversity, Rohtak, Haryana, India. 17-20 Nov., 2013.*

5. Continuing education courses (CEC-01: Toxicogenomics and metagonomics, CEC-03: Biomarkers of toxicology & Disease progression) *Iinternational conference on toxicity environmental and occupational health: held at ITRC, Lucknow. India, 14-15 November, 2005.*

6. *Workshop on Methodology of Assesment and Accrediation. Held at Internal Quality Assurance Cell, V. B. S. Purvanchal University, Jaunpur, India. January 29, 2013.*

7. Workshop on Methodology of Assesment and Accrediation. *Held at Internal Quality Assurance Cell, V. B. S. Purvanchal University, Jaunpur, India. December 13, 2011*.

LECTURE DELIVERED:

1. *Multi drug resistant microorganisms: Department of Microbiology, R.R.P.G College, Amethi, U.P. March 11, 2018*

2. *Basics of industrial microbiology:* Workshop on Techniques in Molecular Biology: Learn the Basic Technique in Molecular Biology, Hands–On, *held at Dept of Biotechnology, M.H.P.G. College, Jaunpur, U.P , Jan 04 to 10, 2017.*

3. Removal of carpet industry Blue BS reactive dye by enzymatic treatments, *57th Annual Conference of AMI and International Symposium on Microbes and Biosphere: What's New and What's Next, Gauhati University, India held on November 24-27, 2016.*

4. Bioconversion of Typha waste into valuable fruitbodies of edible oyster mushroom *Pleurotus florida, National seminar on conservation of natural resources and its management at M.M.P.G. College, Bhatpar Rani, Deoria, India. Held on 25-26th Oct, 2016.*

5. Multi-drug resistant bacteria & health risks: *International symposium on innovations in educational, environmental & health research" at BHU, Varanasi, India, Feb 23-24, 2015.*

6. Multiple drug, chromate and salinity resistant bacterial isolates from tannery effluents: *National Conference on "Frontiers in Biological Sciences" at V. B. S. Purvanchal University, Jaunpur, India. December 4-5, 2011.*

7. Effect of Indian climate change on mushroom growth: *National conference on impact of global warming and climate change on diversity-The challenge of conservation of flora and fauna. at R. H. S. Post Graduate College, Singramau, Jaunpur, India. February 21-22, 2012.*

8. Prevention of water from contamination: *National seminar on monitoring of water quality contaminated by pesticides and associated health impact, at R.S.K.D. Post Graduate College, Jaunpur, India. February 25-26, 2012.*

9. Technical management of mushroom cultivation: *National seminar on advances in management practices, at V. B. S. Purvanchal University, Jaunpur, India. September 19-20, 2013.*

Supervising Ph.D. Students (Registered)

1. **Simpal Kumari**
   Title: *Screening and molecular identification of yield promotory bacteria for oyster mushroom.* (VBSPUniversity, Jaunpur, India)

2. **Shweta Singh**
   Title: *Selection and molecular characterization of potent bacterial strain degrading textile dye reactive green 12*. (VBSPUniversity, Jaunpur, India)

3. **Roshan Lal Gautam**
   Title: *Studies on expression of different lignocellulolytic genes during cultivation phases of Oyster mushroom Pleurotus florida.* (VBSPUniversity, Jaunpur, India)

Supervision/Guidence of M.Sc. & M.Phil. thesis/ dissertation/ project:

S.No.	Name of scholar	Title of dissertation/ date	University
1.	Sangeeta	Decolorization of direct chlorazol LF red 4BLL textile dye using bacterial and fungal co-culture (2017)	VBSPUniv.
2.	Fatima Khan	Color removal of two carpet industry dyes under solid and aqueous condition by three *Pleurotus* spp. (2016)	VBSPUniv.
3.	Sanddep Kr. Yadav	Evaluation of textile dye decolorization using mono and co-culture of fungus and bacteria (2016)	VBSPUniv.
3.	Pavan Kumar	Color removal of orange RL and blue BS reactive dyes by white-rot fungus *Pleurotus florida* (2016)	VBSPUniv.
4.	Ranjeet Kumar	Decolorization of orange RL and yellow 2GLN carpet industry dyes by white-rot fungus *Pleurotus florida* (2016)	VBSPUniv.
5.	Mukesh Kumar	Decolorization of sandolan red brown textile dye using white-rot fungus *Pleurotus florida* (2016)	VBSPUniv.
6.	Roshan Lal Gautam	Characterization of laccase produced by white-rot fungus (WRF) *Pleurotusflorida.* (2015)	VBSPUniv.
7.	Arti Gautam	Decolorization of different Textile dyes by white-rot fungus *Pleurotusflorida.* (2014)	Amity Univ. Gr. Noida
8.	Janhavi Dutt	Microbial analysis of surface water distributed by municipal channel of Jaunpur city. (2014)	VBSPUniv.
9.	Shubhra Goshwami	Decolorization of different textile dyes	CSJMUniv.

		by enzyme extract of *Pleurotusflorida*PF05. (2010)	
10.	Kusum Lata Yadav	Studies on laccase and peroxidase profile of basidiomycete fungus *Pleurotus florida* and isolation of fungal growth promontory rhizobacteria. (2010)	CSJMUniv.
11.	Priyanka Mishra	Studies on accumulation of heavy metals by white-rot fungus *Pleurotusflorida.* (2009)	CSJMUniv.
12.	Sonika Pandey	Isolation and biochemical characterization of mushroom growth promontory rhizobacteria. (2009)	CSJMUniv.
13.	Rajnish Kr. Pandey	Decolorization of textile dyes by white rot fungus *Pleurotusflorida*. (2008)	CSJMUniv.
14.	Kapil Deo	Biodegradation of various lignocelluloses and determination of enzyme activities during submerged and solid submerged fermentation by *Pleurotusflorida.* (2008)	CSJMUniv.
15.	Anuradha Singh	Effect of oil seed cakes on biodegradability and peroxidase production by *Pleurotusflorida* during SSF of lignocellulosic substrate. (2007)	CSJMUniv.
16.	Pooja Kashyap	Effect of chemical nitrogen supplementation on biodegradability and peroxidase production by *Pleurotusflorida*. (2007)	CSJMUniv.
17.	Avinash Kumar Singh	Influence of various nitrogen rich oil seed cakes on submerged fermentation for laccase and peroxidase production by *Pleurotus florida.* (2007)	CSJMUniv.
18.	Swati Bajpai	Study on antibiotic and chlorine resistant bacteria from municipal water of Kanpur city. (2007)	CSJMUniv.
19.	Mallika Pandey	Study on antibiotic and chlorine	CSJMUniv.

		resistant bacteria from sangam water during festival. (2007)	
20.	Richa Agarwal	Fungal biodegradation of congress grass sticks by chop stick method. (2006)	CSJMUniv.
21.	Sandeep Kumar Verma	Isolation and characterization of pathogenic bacteria from municipal water distribution of Kanpur city. (2006)	CSJMUniv.
22.	Kanchan Kashyap	Fungal biodegradation of bamboo sticks by chop stick method. (2006)	CSJMUniv.
23.	Santosh Kumar Tiwari	Fungal biodegradation of patsan stem sticks by chop stick method. (2006)	CSJMUniv.
24.	Shanti Prajapati	Fungal biodegradation of sahjan stem sticks by chop stick method. (2006)	CSJMUniv.
25.	Abhishek Mishra	Microbial decolorization of distillery effluent. (2006)	CSJMUniv.

MEMBERSHIP OF LEARNED BODIES/SOCIETIES

- Life Member, Association of Indian Science Congress
- Life Member, Association of Microbiologists of India (AMI).
- Ex-Member, American Society of Microbiology (ASM), USA.
- Life member Society for Environmental Sustainability
- Life Member, International Society of Biotechnology (ISBT)
- Life Member, Prof. H. S. Srivastava Foundation for Science and Society
- Life Member, Society for Science and Nature

EDITOR/ MEMBER OF EDITORIAL BOARD

- Associate Editor, Environmental Sustainability (Springer Nature)
  (ISSN: 2523-8922)
- Bioengineering and Bioscience (San Jose, CA, USA)

(ISSN: 2332-001X)

- Plant Archives (India)
  (ISSN: 0972-5210)

- Journal of Microbiology and Biomedical Research (India)
  (ISSN: 2395-5678)

- Aperito Journal of Cellular and Molecular Biology (Campbell, CA, USA)
  (ISSN: 2470-1114)

FELLOW MEMBER OF ACADEMIC BODIES

- Fellow Member International Society of Biotechnology (FISBT)

REVIEWER/ REFEREE OF REPUTED JOURNALS

1. Environmental Monitoring and Assessment (Springer)
2. Environmental Sustainability (Springer)
3. Folia Microbiologia (Springer)
4. Physiology and Molecular Biology of Plants (Springer)
5. Ecotoxicology and Environmental Safety (Elsevier)
6. Journal of Environmental Management (Elsevier)
7. CLEAN-Soil, Air and Water (Willey Inter Scince)
8. Journal of Environmental Biology
9. Research in Environment and Life Sciences

CONFERENCE/SEMINARS ORGANIZED

- *National Seminar on "Indian Constitution: Democracy and success" on 29 November, 2015 organized by Veer Bahadur Singh Purvanchal University, Jaunpur*

- *National Conference on "Frontiers in Biological Sciences" at Department of Biotechnology, Faculty of Science V. B. S. Purvanchal University, Jaunpur (UP), India. December 4-5, 2011. The conference was funded by UGC, New Delhi.*

- *National conference on "'Scope and Application of Microbes in Agriculture and Environment–New Horizons and Technologies (SAMAE-NHT)" at Department of Microbiology, Institute of Bioscience and Biotechnology, C. S. J. M. University, Kanpur, India.19th-21st Feb.2007. The conference was funded by UGC, DBT, DST and CSIR, New Delhi.*

RESEARCH PROJECT

- Evaluation of laccase gene expression with response to various supplements during fermentation of corn cob by white rot fungus *Pleurotus florida*.
  Funding Agency – University Grants Commission (UGC), New Delhi
  Total Cost – 10.35 lakhs
  Duration – 2012-2015

- Purification and molecular characterization of mushroom growth promoting bacteria for development of bioinoculants.
  Funding Agency – Department of Science & Technology (DST), GOI, New Delhi
  Total Cost – 12.00 lakhs
  Duration – 2013-2015

ADDITIONAL INFORMATION

- Transferred mushroom cultivation technology to poor rural persons of more than15 nearby villages in Faizabad & Barabanki (UP) districts to improve their economic status.

(Prof . RAM NARAIAN**)**