

CURRICULUM VITAE

Name : Vandana Rai
Father's Name : Shri Shanker Dutt Rai
Designation : Professor
Department : Biotechnology
Address : Former Dean, Faculty of Science
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Academic Qualification:

- Ph. D. in Zoology (Cytogenetics) from University of Allahabad, Allahabad. Thesis Title: 'Cytogenetics of Sarcophagidae', Supervisor: Prof. Dipika Kaul
- M. Sc. in Zoology from University of Allahabad, Allahabad.
- B.Sc., CBZ from Lucknow University, Lucknow

Subject Specialization:

Biotechnology, Human Molecular Genetics, Zoology

Scopus Id: **35079308600**

Google Scholar Id: **Ddw5sAAAAJ&hl=en**

Orcid Id :**orcid.org/0000-0001-8590-9675**

Researcher Id: **H-1463-2017**

Vidwan-ID: **47988**

Teaching Experience:

24 Years (Twenty Four Years (M. Sc. Program))

Syllabus Development:

Developed **Common Minimum Syllabus for all UP State Universities and Colleges** for First Three Years of Higher Education of **Subject–Biotechnology** (for three subject pattern) under **National Education Policy-2020.**

NAAC Peer Team member:

Visited several institutes as member/ member coordinator of NAAC Peer Team.

Financial Assistance received from different funding Agencies, Govt of India:

- **UGC** sponsored Major Research Project entitled "Population study of C677T mutation of MTHFR gene as maternal risk factor for some genetic defects" for period of two years, amount Rs.5,28,000/- from 1-4-2007 to 31-3-2009 (Completed).
- **DBT** sponsored Major Research Project entitled "Demographic study of maternal A66G allele as risk factor for Down syndrome and other mental disorder" for period of three years, amount Rs. 15,26,000/- from 10-12-2007 to 9-12-2010 (Completed)

- **DST** sponsored Major Research Project entitled “Molecular studies of Fragile X syndrome” for period of three years, amount Rs. 20,22,400/- from 1-4-2009 to 31-3-2012(Completed)
- **CSIR** sponsored Major Research Project entitled “Molecular epidemiological study of genetic modifiers of Thalassemia in eastern UP population” for period of three years, amount Rs. 17,00,000/- from 1-4-2009 to 31-3-2012 (Completed).
- **UGC** sponsored Major Research Project entitled “Molecular study of ACE gene I/D mutation as risk factor for cardiovascular disease in eastern UP population ” for period of three years, amount Rs. 9,25,000/- from 1-10-2012 to 30-9-2015(Completed).
- **Higher Education Council UP Govt.** sponsored Major Research Project entitled “Molecular Screening of Vitamin D Receptor Polymorphisms (FokI and BsmI) and Bone Mineral Density in Rural Population of Eastern Uttar Pradesh” for period of two years, amount Rs. 11,33,000/- from 1-01-2022 to 31-12-2023.
- **Higher Education Council UP Govt.** sponsored Centre of Excellence project entitled, “Molecular study of non-communicable diseases (NCDs) in Eastern Uttar Pradesh population” amount Rs. 4,17,500 from 1-4-2022.
- **ICMR**, New Delhi has awarded SRF to Mr Upendra Yadav on title “MTHFR polymorphism and prostate cancer risk" for a period of three year (2012-2015) under my supervision(Letter No.3/2/2/70/2011/NCD-III).
- **ICMR**, New Delhi has awarded SRF to Mr Sushil Kumar Yadav on title "Molecular study of fragile X syndrome in UP population" for a period of three year (2012-2015) under my supervision (Letter No. F. No. 45/6/2012-HUM-BMS.)
- **ICMR**-Financial assistance for organizing Conference on “Biotechnology and Human Welfare: New Vistas” held on 21-22 March, 2015 at VBS Purvanchal University, Jaunpur (No.7/896/14-Seminars (HRD)).
- **DST**-Financial assistance for organizing Conference on “Biotechnology and Human Welfare: New Vistas” held on 21-22 March, 2015 at VBS Purvanchal University, Jaunpur (SERB/F/7184/2014-2015, dated 27-1-2015).

Research Articles Published in Journals (Since 2011): Total publications- Ninety Nine (108)

1. Singh PP, Rai S, Chaubey G, Serosurveillance Consortium .Estimation of real COVID-19 cases in India during the first wave. *IJID Regions* 6 (2023) 80–83.
2. Rai, V., **Kumar, P.** Relation between Methylenetetrahydrofolate Reductase Polymorphisms (C677T and A1298C) and Migraine Susceptibility. *Ind J Clin Biochem.* 2022; 37: 3–17. ISSN: 0974-0422. <https://doi.org/10.1007/s12291-021-01000-0>
3. Rai V., Jamal F. and **Kumar P.** Brain derived Neurotrophic Factor (BDNF) Val66Met Polymorphism is not risk factor for Bipolar Disorder *IJBI.* 2022; 4(1): 16-28. E-ISSN: 2582-1032 <https://doi.org/10.46505/IJBI.2022.4102>.
4. Rai V, Yadav U and Kumar P. Molecular Screening of Hemoglobin E Variant in Anemia Patients of Eastern UP Population, India. *Austin Hematol.* 2021; 6(3): 1042.

5. Yadav U, Kumar P, Rai V. Interleukin-10 (IL-10) gene polymorphisms and prostate cancer susceptibility: Evidence from a meta-analysis. *Gene Reports* 2021; 25: 101377.
6. Yadav U, Kumar P, Rai V. FokI polymorphism of the vitamin D receptor (VDR) gene and susceptibility to tuberculosis: Evidence through a meta-analysis. *Infect. Genet. Evol.* 2021. 92:104871. ISSN: 1567-1348. <https://doi.org/10.1016/j.meegid.2021.104871>.
7. Rai V, Yadav U and Kumar P. Molecular Screening of Hemoglobin S Variant in Anemia Patients of Eastern UP Population. *J Blood Disord.* 2021; 8(1): 1064.
8. Singh PP, Srivastava AK, Upadhyay SK, Singh A, Upadhyay S, Kumar P, Rai V, Shrivastava P, Chaubey G, Serosurveillance Consortium . The association of ABO blood group with the asymptomatic COVID-19 cases in India. *Transfusion and Apheresis Science* 60 (2021) 103224.
9. Rai V, Yadav U, Kumar P, Mishra OP. Molecular Screening of Hemoglobin D Variant in Anemia Patients of Eastern UP Population, India. *Ann Hematol Oncol.* 2021; 8(2): 1330.
10. Yadav U, Kumar P, Rai V. Vitamin D receptor (VDR) gene FokI, BsmI, ApaI, and TaqI polymorphisms and osteoporosis risk: a meta-analysis. *Egypt J Med Hum Genet.* 2020; 21:15. ISSN: 2090-2441.
11. Rai V. Methylenetetrahydrofolate Reductase (MTHFR) A1298C Polymorphism and Risk of Lung Cancer. *Austin Hepatol.* 2020; 5(1): 1011.
12. Kumar P, Rai V. Catechol-O-methyltransferase gene Val158Met polymorphism and obsessive compulsive disorder susceptibility: a meta-analysis. *Metab. Brain Dis.* 2020; 35:242-251. ISSN 0885-7490.
13. Kumar P and Rai V. 2020. Catechol-O-Methyltransferase Gene Val158Met Polymorphism and Prostate Cancer Susceptibility. *Biomed Research and Health Advances*, 2,21-27. ISSN 2691-5707.
14. Yadav U, Kumar P, Rai V. Distribution of Methionine Synthase Reductase (MTRR) Gene A66G Polymorphism in Indian Population. 2019. *Ind J Clin Biochem.* ISSN: 0974-0422. ISSN: 0974-0422.
15. Rai V. 2020. Methylenetetrahydrofolate Reductase (MTHFR) A1298C Polymorphism and Risk of Lung Cancer. *Austin Hepatol.* 5(1): 1011.
16. Kumar P, Singh G, Rai V. 2018. Evaluation of COMT Gene rs4680 Polymorphism as a Risk Factor for Endometrial Cancer. *Ind J Clin Biochem.* ISSN: 0974-0422. <https://doi.org/10.1007/s12291-018-0799-x>
17. Rai V, Kumar P. 2018. Methylenetetrahydrofolate reductase C677T polymorphism and susceptibility to epilepsy. *Neurol Sci.* 10.1007/s10072-018-3583-z.
18. Kumar P, Rai V. 2018. Methylenetetrahydrofolate reductase C677T polymorphism and risk of esophageal cancer: An updated meta-analysis. *Egypt J Med Hum Genet*; 19(4): 273-284.
19. Rai V, Kumar P. 2018. Methylenetetrahydrofolate reductase A1298C Polymorphism and Autism susceptibility. *Austin J Autism & Related Disabilities*, 4: 1048-1053.
20. Yadav U, Kumar P, Rai V. 2018. NQO1 Gene C609T Polymorphism (dbSNP: rs1800566) and Digestive Tract Cancer Risk: A Meta-Analysis. *Nutr Cancer.* 70(4): 557-568.
21. Rai V, Kumar P. 2018. Fetal MTHFR C677T polymorphism confers no susceptibility to Down Syndrome: evidence from meta-analysis. *Egyptian J Med Hum Genet.* 19: 53-58.
22. Kumar P, Rai V. 2018. Catechol-O-Methyltransferase Val158Met polymorphism and susceptibility to Uterine Leiomyoma. *Jacobs Journal of Gynecology and Obstetrics*, 5(1): 043.
23. Rai V, Yadav U, Kumar P, Yadav SK, Gupta S. 2017. Methylenetetrahydrofolate Reductase A1298C Genetic Variant and Risk of Schizophrenia: an updated meta-analysis. *Indian J Med Res.* 145(4):437-447.

24. Rai V. 2017. Association of C677T polymorphism (rs1801133) in MTHFR gene with depression. *Cell Mol Biol.* 63(6):60-67.
25. Kumar P, Yadav U, Rai V. 2017. Prevalence of COMT Val158Met polymorphism in Eastern UP population. *Cell Mol Biol.* 63(6):21-24
26. Rai V. 2018. Strong association of C677T polymorphism of methylenetetrahydrofolate reductase gene with nosyndromic cleft lip/palate (nsCL/P). *Ind J Clin Biochem*, 33(1):5-15.
27. Rai V. 2017. Methylenetetrahydrofolate Reductase (MTHFR) C677T Polymorphism and Alzheimer Disease Risk: a Meta-Analysis. *Mol Neurobio*, 54:1173-1186.
28. Rai V, Yadav U, Kumar P. 2017. Impact of Catechol-O-Methyltransferase Val 158Met (rs4680) Polymorphism on Breast Cancer Susceptibility in Asian Population. *Asian Pac J Cancer Prev.* 18 (5), 1243-1250.
29. Rai V, Kumar P. 2017. Methylenetetrahydrofolate reductase C677T polymorphism and risk of male infertility in Asian population. *Ind J Clin Biochem.* 32(3):253-260.
30. Rai V, Yadva U, Kumar P. 2017. Null association of maternal MTHFR A1298C polymorphism with Down syndrome pregnancy: An updated meta-analysis. *Egypt J Med Hum Genet.* 18:9-18.
31. Yadav U, Kumar P, Gupta S, Rai V. 2017. Distribution of MTHFR C677T Gene Polymorphism in Healthy North Indian Population and an Updated Meta-analysis. *Ind J Clin Biochem.* 32(4):399-410.
32. Rai V. 2016. Association of methylenetetrahydrofolate reductase (MTHFR) gene C677T polymorphism with autism: evidence of genetic susceptibility. *Metab Brain Dis.* 31:727-35.
33. Kumar P, Yadav U, Rai V. 2016. Prevalence of glucose-6-phosphate dehydrogenase deficiency in India: an updated meta-analysis. *Egypt J Med Hum Genet*, 17, 295–302.
34. Rai V. 2016. Methylenetetrahydrofolate reductase C677T polymorphism and recurrent pregnancy loss risk in Asian population: a meta-analysis. *Indian J Clin Biochem*, 31: 402-13.
35. Rai V. 2016. Methylenetetrahydrofolate Reductase Gene C677T Polymorphism and Its Association with Ovary Cancer. *J Health Med Informat* 7:3
36. Yadav U, Kumar P, Gupta S, Rai V. 2016. Role of MTHFR C677T gene polymorphism in the susceptibility of schizophrenia: An updated meta-analysis. *Asian J Psychiatry*, 2016; 20: 41–51
37. Rai V. 2016. The MTHFR C677T Polymorphism and Hyperuricemia Risk: a Meta-analysis of 558 Cases and 912 Controls. *Metabolomics* 6: 166.
38. Yadav U, Kumar P, Rai V. 2016. Role of MTHFR A1298C gene polymorphism in the etiology of prostate cancer: A systematic review and updated meta-analysis. *Egyptian J Med Hum Genet*, 17:141-148.
39. Rai V. 2016. Evaluation of the MTHFR C677T Polymorphism as a Risk Factor for Colorectal Cancer in Asian Populations. *Asian Pac J Cancer Prev*, 16 (18): 8093-8100 .
40. Rai V. 2016. Folate pathway gene methylenetetrahydrofolate reductase C677T polymorphism and Alzheimer disease risk in Asian population. *Indian J Clin Biochem*, 31: 245-52.
41. Yadav U, Kumar P, Yadav SK, Mishra OP, Rai V. 2015. Polymorphisms in folate metabolism genes as maternal risk factor for neural tube defects: an updated meta-analysis. *Metab Brain Dis.* 30:7–24.

42. Kumar P, Yadav U, Rai V. 2015. Methylenetetrahydrofolate reductase gene C677T polymorphism and breast cancer risk: Evidence for genetic susceptibility. *MetaGene*. 6 : 72–84.
43. Kumar P, Rai V. 2015. Distribution of ABO blood groups in the malaria patients belonging to OBC population of Uttar Pradesh. *J Exp Zoology*, 18:Supp 1.
44. Rai V, Yadav U, Kumar P, Yadav S K, Mishra OP. 2014. Maternal methylenetetrahydrofolate reductase C677T polymorphism and Down syndrome risk: A meta-analysis from 34 studies. *Plos one*,9 (9):e108552.
45. Rai V.2014. Methylenetetrahydrofolate reductase A1298C polymorphism and breast cancer risk: a meta-analysis of 33 studies. *Annals of Medical and Health Sciences Research*, 4 (6): 841-851.
46. Rai V. 2014. Folate Pathway Gene MTHFR C677T Polymorphism and Risk of Lung Cancer in Asian Populations. *Asian Pac J Cancer Prev*. 15 (21), 9259-9264.
47. Rai V. 2014. Genetic polymorphisms of methylenetetrahydrofolate reductase (MTHFR) gene and susceptibility to depression in Asian population: a systematic meta-analysis. *Cell Mol Biol*. 60 (3): 29-36.
48. Rai V, Yadav U, Kumar P, Yadav SK. 2014. Methylenetetrahydrofolate reductase polymorphism is not risk factor for Down syndrome in North India. *Indian J Hum Genet*. 20(2):142-146.
49. Rai V. 2014. Maternal methylenetetrahydrofolate reductase (MTHFR) gene A1298C polymorphism and risk of nonsyndromic Cleft lip and/or Palate (NSCL/P) in offspring: A meta-analysis. *Asian J Med Sci*. 6 (1):16- 21.
50. Rai V. 2014. Methylenetetrahydrofolate reductase (MTHFR) C677T polymorphism and breast cancer risk in Asian population. *Asian Pac J Cancer Prev*, 15 (14), 5853-5860.
51. Rai V.2014. Meta-analysis of methylenetetrahydrofolate reductase (MTHFR) A1298C polymorphism and risk of orofacial cleft. *J Med Genet Genom*, 6:19-26.
52. Rai V. 2014. Methylenetetrahydrofolate reductase gene A1298C polymorphism and susceptibility to recurrent pregnancy loss: a meta-analysis. *Cell Mol Biol* 2014; 60 (2): 27-34.
53. Rai V and Kumar P. 2014. Glucose 6-phosphate dehydrogenase deficiency in Muslim community settled in Jaunpur district. *Indian J Hum Genet*. 20(1):96-7
54. Rai V, Yadav U, Kumar P, Yadav SK. 2013. Analysis of methionine synthase reductase polymorphism (A66G) in Indian Muslim Population. *Indian J Hum Genet*. 19(2): 183-187.
55. Rai V, Yadav U, Kumar P. 2012. Genotype Prevalence and Allele Frequencies of 5, 10-Methylenetetrahydrofolate Reductase (MTHFR) C677T Mutation in two Caste Groups of India. *Cell Mol Biol*. 58: OL1695- 701.
56. Kumar P and Rai, V. 2012. Malaria and Glucose 6- phosphate Dehydrogenase Deficiency. *Res. Environ. Life Sci*. 5(4):211-212.
57. Rai, V. 2012. Effect of environmental factors on frequency of birth defects. *Res. Environ. Life Sci*. 5(4):173-177.
58. Rai, V. and Kumar P. 2012. Epidemiological Study of Glucose-6-phosphate Dehydrogenase Deficiency in Scheduled Caste Population of India. *J Anthropol*. 1-5.
59. Rai V, Yadav U, Kumar P.2012. MTRR A66G polymorphism in two caste groups pf Uttar Pradesh (India). *Indian J Med Sci*. 66(5-6):136-40.

60. Rai V, Yadav U, Kumar P. 2012. Prevalence of methylene tetrahydrofolate reductase C677T polymorphism in Eastern Uttar Pradesh. *Indian J Hum Genet.* 18(1): 43-46.
61. Yadav U, Kumar P, Rai V. 2011. Docking study of MTHFR with FAD by Hex. *J. Computational Intelligence in Bioinformatics.* 4(1): 171-178.
62. Rai V. 2011. Autism Genetics: Recent Advances in Candidate Gene Search. *International J Genetic Engineering and Biotechnology,* 2 (1): 47-66.
63. Kumar P, Rai V. 2012. Red Blood Cell Antigen Distribution in Scheduled Caste Population of Uttar Pradesh. *Asian J Microbiol. Biotech. Env. Sci.* 14(2):217-222.
64. Rai V. 2011. Polymorphism in folate metabolic pathway gene as maternal risk factor for Down syndrome. *Int J Biol Med Res.,* 2(4): 1055-1060.
65. Rai V, Yadav U and Kumar P. 2011. Prevalence of Methylenetetrahydrofolate Reductase C677T Polymorphism in Eastern Uttar Pradesh. *IJIB.* 11(3): 153-154.
66. Rai V. 2011. Evaluation of Methylenetetrahydrofolate Reductase Gene Variant (C677T) as Risk Factor for Bipolar Disorder. *Cell. Mol. Biol,* 57:1558- 1566.
67. Rai V, Yadav U, Kumar P, Gupta S. 2011. Methionine Synthase Reductase (MTRR) A66G Polymorphism in Rural Population of Uttar Pradesh (India). *Biotechnology,*10(2):220-223.
68. Rai V. 2011. Autism Genetics and Cytogenetic Abnormalities. *Trends in Molecular Sciences,*3(1): 1-13.

Conference Proceedings:

1. Rai V. MTHFR gene A1298C polymorphism and Alzheimer's disease susceptibility. *Proceedings of the International Conference on Ultrasonics and Materials Science for Advanced Technology (ICUMSAT-2019).* 2019; 234-238. ISBN 978-81-8487-703-8.
2. Kumar P, Rai V. Therapeutic siRNA Delivery for Cancer Therapy Using Nanoparticles. *Proceedings of the International Conference on Ultrasonics and Materials Science for Advanced Technology (ICUMSAT-2019).* 2019; 234-238. ISBN 978-81-8487-703-8.
3. Chaudhary A, Yadav U, Kumar P, Rai V. DRD2 Taq1 A Polymorphism in Eastern Uttar Pradesh Population. *Proceedings of the International Conference on Ultrasonics and Materials Science for Advanced Technology (ICUMSAT-2019).* 2019; 105-109. ISBN 978-81-8487-703-8.
4. Singh V, Yadav U, Rai V, Kumar P. A Study of Association of ABO Blood Group types with Cancer Risk. *Proceedings of the International Conference on Ultrasonics and Materials Science for Advanced Technology (ICUMSAT-2019).* 2019; 401-405. ISBN 978-81-8487-703-8.
5. Yadav U, Kumar P, Rai V. Efficacy and Safety of Nab-paclitaxel in Breast Cancer: A meta Analysis. *Proceedings of the International Conference on Ultrasonics and Materials Science for Advanced Technology (ICUMSAT-2019).* 2019; 212-217. ISBN 978-81-8487-703-8.
6. Yadav SK, Verma A, Kumar P, Rai V. Molecular screening of FRAXE syndrome in MR cases of eastern Uttar Pradesh. *Proceedings of International Conference on Health, Environment and Industrial Biotechnology ICHEIB (Biosangam 2013).* 2013. 195-7. ISBN-10:9-33-290137-6.
7. Rai V. 2010. Methylenetetrahydrofolate reductase A1298C polymorphism and risk for male infertility: a meta-analysis. *Emerging trends in Biomedical Research, Proceeding pp* 270-285. ISBN 975-81-908886-1-5.

8. Rai,V.:2004: DAPI fluorescent telomeric heterochromatin in *Parasarcophaga ruficornis* (Sarcophagidae: Diptera). Proc All Ind. Cong. of Genet and Cell Biol 11:163-165, Eds: Manna GL and Roy SC, AICCG Publisher.
9. Rai V: 2004: Q- banding of polytene chromosomes of *Parasarcophaga hirtipes*. Proc All Ind. Cong. of Genet and Cell Biol 11:159-162. Eds: Manna GL and Roy SC, AICCG Publisher.

Papers cited in Policy and Wikipedia:

1. "Methylenetetrahydrofolate reductase gene C677T polymorphism and breast cancer risk: evidence for genetic susceptibility. MetaGene. 2015; 6: 72-84." was **cited in Policy Document - Updated recommendations on folic acid by Scientific Advisory Committee on Nutrition (SACN)** of UK which recommended fortification of flour with folic acid in UK.
2. "Methylenetetrahydrofolate reductase A1298C polymorphism and breast cancer risk: a meta-analysis of 33 studies. Annals of Medical and Health Sciences Research, 4 (6): 841-851" was **cited in Policy Document - Updated recommendations on folic acid by Scientific Advisory Committee on Nutrition (SACN)** of UK which recommended fortification of flour with folic acid in UK.
3. "Methylenetetrahydrofolate reductase (MTHFR) C677T polymorphism and breast cancer risk in Asian population. Asian Pac J Cancer Prev, 15 (14), 5853-5860." was **cited in Policy Document - Updated recommendations on folic acid by Scientific Advisory Committee on Nutrition (SACN)** of UK which recommended fortification of flour with folic acid in UK.
4. "Evaluation of the MTHFR C677T Polymorphism as a Risk Factor for Colorectal Cancer in Asian Populations. Asian Pac J Cancer Prev, 16 (18): 8093-8100." was **cited in Policy Document - Updated recommendations on folic acid by Scientific Advisory Committee on Nutrition (SACN)** of UK which recommended fortification of flour with folic acid in UK.
5. **Kumar P, Yadav U, Rai V.** 2015. Methylenetetrahydrofolate reductase gene C677T polymorphism and breast cancer risk: evidence for genetic susceptibility. MetaGene. 6: 72-84.
6. "Rai V, Yadav U, Kumar P (January 2017). "Null association of maternal MTHFR A1298C polymorphism with Down syndrome pregnancy: An updated meta-analysis". *Egyptian Journal of Medical Human Genetics*. **18** (1):9–18. doi:10.1016/j.ejmhg.2016.04.003." is **cited in Wikipedia**.

Books Edited/Published : 04

- "Cancer: A Cytogenetic and Molecular Approach" Publisher- Bioved Research Society, Allahabad. ISBN 81-85722-62-5. NLM ID: 101316945.
- "Recent Advances in Biotechnology, Volume 1", Publisher- Shree Publishers & Distributors, New Delhi-110002.
- "Recent Advances in Biotechnology, Volume 2", Publisher- Shree Publishers & Distributors, New Delhi-110002.
- "Recent Advances in Biotechnology, Volume 3", Publisher- Shree Publishers & Distributors, New Delhi-110002

Chapters/Articles in Books: 12

- Rai V, Kumar P. 2005. Monoclonal antibodies. In: Recent Advances in Biotechnology. Eds N.C. Gautam and M.P. Singh. Pub: Shree Publishers, New Delhi, pp 207-230.
- Rai V.2005. Molecular genetics of cancer. In: Cancer-A Cytogenetic and Molecular Approach. Ed: V. Rai, Pub: BRS Allahabad, pp. 1-28.
- Rai V.2005. Gene Therapy of Cancer. In; Cancer a Cytogenetic and Molecular Approach. Ed: V. Rai, Pub: BRS Allahabad, pp 195-212.

- Kumar P, Rai V. 2005. Biotechnology and Entrepreneurship. In: WTO and Entrepreneurship development. Ed: M Pandey. Pub: Shree Publishers and distributors, pp 160-172.
- Rai V.2007. Pharmacogenomics. In: Biotechnology current perspectives and applications and potential applications. Ed. By P C Trivedi. Pub Avishkar publishers. Jaipur, pp-192-209.
- Rai V. 2008. Proteomics: An overview. In: Biotechnology Tissue culture to proteomics. Pub. Pointer Publishers, Jaipur, pp. 262-277. ISBN: 978-81-7132-577-1.
- Rai V. 2009. DNA vaccine: The new millennium vaccine. In: Applications of Microbiology. Pub. Avishkar Publishers, Distributors, Jaipur.
- Kumar P, Rai V.2011. Stress and Diseases. Editor Sigh AP. In: Stress and Health, Emerging Trends and Challenges. Pub. Alfa publications, pp 40-68.
- Rai V, Kumar P.2017. Stem cell and application. in Recent Advances in Biotechnology, Volume 1, Publisher- Shree Publishers & Distributors, New Delhi-110002.
- Rai V, Kumar P.2017. Biotechnology and its different fields. In Recent Advances in Biotechnology, Volume 2, Publisher- Shree Publishers & Distributors, New Delhi-110002.
- Rai V, Kumar P. 2017. RNA interference mechanisms and applications. In Recent Advances in Biotechnology, Volume 3, Publisher- Shree Publishers & Distributors, New Delhi-110002,
- Kumar P, Rai V. 2018. Nanotechnology in detection of pathogenic microorganism. Recent Advances in Microbiology volume 3 Ed. N C Gautum, S P Tiwari, Rajesh Sharma. Nova Biomedical. Nova Publishers, USA, pp.

Fellowship:

- Society of Life Science (FSLSc.-2019)
- Asian Biological Research Foundation (FABRF-2019)
- Glocal Environmental & Social Association (FGESA-2020)
- Environment and Social Welfare Society (FESWS-2022)
- Zoological Society of India (FZSI-2022)

Awards:

- i. **Certificate of Excellence for outstanding contribution in the field of Biotechnology by Vice Chancellor , V B S Purvanchal University, Jaunpur**
- ii. **Shikshak Shree award** for excellence in research and teaching from Directorate of Higher Education, Government of Uttar Pradesh 2021
- iii. **Women Leadership Award**, Nari Tu Narayani National Award, March 14, 2021
- iv. **Bharat Shiksha Puruskar for Outstanding contribution to Indian Education, 2021.**
- v. **Women Scientist Award (Biotechnology)** in International Conference in Novel Aspects in Applied organized by DNA Labs, A Centre for Medicines, Applied Sciences and Technologies for Developing ERA (Namaste-2020), held on 10-12th September, 2020, Dehradun
- vi. **"Best Scientist Award"** in 2019 ,conferred by Society of Life Science.
- vii. **"Dr. Sarvepalli Radhakrishnan Life Time Achievement National Award"** for the outstanding excellence and remarkable achievements in the field of Teaching, Research and Publications, conferred by Prestigious IRDP Award 2019, on August 24, 2019.
- viii. **"Life Time Achievement in Science (Area- Biotechnology)-2019"** conferred by Venus International Foundation on 4-3-2019

- ix. **"Distinguished Research Award -2018"**, conferred by International Institute of Organized Award (IIOR) for remarkable contribution in the field of Human Molecular Genetics.
- x. **"IARDO Award for Life Time Achievement-2018"**, conferred by International Association of Research and Development Organization (IARDO), on October 28,2018 at The International Centre Goa, Panjim, Goa
- xi. **"Women Researcher Award-2018 "** conferred by International Organization of Scientific Research and Development (IOSRD), on November 2-3,2018 at Pune
- xii. **"Best Researcher "** conferred by DK International Research Foundation, Dec 2018.
- xiii. **"Best Poster Award"** at National Seminar on Biotechnology & Health: Prospects & Perspective in 21st Century at ITM, Universe, Gwalior. March 19-20, 2010.
- xiv. **"Shikshak Samman"** conferred by Lions Club , Jaunpur,2009

In addition my papers (as corresponding author (coauthor)) received awards, presented by my students:

- "Catechol-O-Methyltransferase Val158Met polymorphism and Lung Cancer risk" in International Conference on Recent Advances in Life Sciences for Betterment of Environment and Human Health (ICRABEH-2019) and 8th Annual Session of Society of Life Science, December 14-15,2019 at Govt Holkar Science College Indore, received best paper presentation award, presented by my student Pradeep Kumar.
- "Prevalence of *MTRR* A66G gene polymorphism: A meta-analysis of population based studies", in National conference on Biotechnology and Human Welfare: New Vistas, Jaunpur, March 21-22, 2015, received best poster award, presented by **my student** Upendra Yadav.
- "Distribution of ABO blood groups in the malaria patients belonging to OBC population of Uttar Pradesh", in National Seminar On Current Trends In Biological Sciences: Advances And Challenges 13-14th December 2014,received 2nd best oral award presented by my student Pradeep Kumar.
- "Molecular diagnosis of Fragile-X mental retardation in Jaunpur population", received Young Scientist Award by my student Mr Sushil Kumar Yadav, in International seminar on New Frontiers in Biotechnology: Functional Genomics & Proteomics. Organized by Invertis University, Bareilly, September 27-28, 2014.
- "Red Cell Enzyme Variation among the Scheduled Caste Population of Jaunpur district", received third award in oral presentation presented by my student Pradeep Kumar in International seminar on New Frontiers in Biotechnology: Functional Genomics & Proteomics, Organized by Invertis University, Bareilly, September 27-28, 2014.
- "Screening of UP population for Glucose-6-phosphate dehydrogenase deficiency", in National Seminar on Current Trends in Biological Sciences: Advances and Challenges, Janta College, Bakewar, Etawah, December 13-14,2014 , received second prize in Oral presentation, presented by my student Pradeep Kumar.

- "Red Cell Enzymes Polymorphism in Yadav population of Uttar Pradesh" received second prize for oral presentation at National Conference on Biolife: The Amalgamation of Multidisciplinary Life Sciences NCBL-2013. Organized by Bio-EGICORE(dept. of Life Sciences, EGICORE, Lucknow, March 9-10, 2013 presented by my student Pradeep Kumar.

Seminar/ Conference/Workshop organized:

1. **Convener**, Seminar on Zoonotic Diseases of Public Health Importance organized by Research and Development Cell and Department of Biotechnology, VBS Purvanchal University, Jaunpur on 21-04-2022.
2. **Convener**, 10 Days (30 Hours) Workshop on Life skills organized by Research and Development cell, Office of the international affairs and Internal Quality Assurance cell, VBS Purvanchal University, Jaunpur from 25 to 29-10-2021 and 15 to 22 -11-2021
3. **Convener**, 10 Days(30 Hours) Workshop on Life skills organized by Research and Development cell, Office of the international affairs and Internal Quality Assurance cell, VBS Purvanchal University, Jaunpur from 23-11-2021 to 02-12-2021
4. Organized "East Zone Students Convention- Anveshan 2017" on February 20-21, 2017, sponsored by Association of Indian Universities, New Delhi (as East Zone Coordinator) (as organizing secretary).
5. Organized "University Level- Anveshan 2017" on February 17-18,2017, sponsored by VBS Purvanchal University, Jaunpur (as organizing secretary).
6. Organized seminar on "Role of CST,UP in Promotion of Science & Technology & Facilitation of IPR Protection" on December 8-9,2016,sponsored by Council of Science & technology, Uttar Pradesh(as co-organizing secretary).
7. Organized three days workshop on "Research Methodology and Computer Application-Workshop-I" for Ph D students of MBE,HRD,MBA, Commerce, Applied Psychology, Economics, Psychology, Sociology departments, on June 21-23,2016, VBS Purvanchal University, Jaunpur (as organizing secretary).
8. Organized three days workshop on "Research Methodology and Computer Application Workshop-II" for Ph D students of Biotechnology, Mathematics, Military Science, Physics, Chemistry, Botany, Zoology departments on June 22-24,2016, VBS Purvanchal University, Jaunpur (as organizing secretary).
9. Organized three days workshop on "Research Methodology and Computer Application Workshop-III " for Ph D students of Education(Faculty of Education), Philosophy, Education (Faculty of Arts), Geography departments on June 23-25,2016, VBS Purvanchal University, Jaunpur (as organizing secretary).
10. Organized three days workshop on "Research Methodology and Computer Application Workshop-IV " for Ph D students of English, Urdu, Hindi, Sanskrit, History, Ancient History, Political Science departments on June 24-26,2016, VBS Purvanchal University, Jaunpur (as organizing secretary) .
11. Organized one day seminar on "Prevention and Prohibition of Gender Bias and Sexual Harassment in Educational Institutions "March 10, 2016, VBS Purvanchal University, Jaunpur (as Convener).
12. Organized two days National Conference on "Biotechnology and Human welfare: New Vistas" March 21-22, 2015, VBS Purvanchal University, Jaunpur (as organizing secretary).
13. Organized on day seminar on "Issues on Gender Bias and Sexual Harassment on University/ College Campuses" May 13, 2014, VBS Purvanchal University, Jaunpur (as convener).
14. "Hands on training in Cell and Molecular Biology techniques for college teachers" Department of Biotechnology, VBS Purvanchal University, December 21, 2009 to January 2,2009 (as member of organizing committee).

International Scientific Committee Member

- **ICACGM** International Conference on cytogenetics and gene mapping, Paris France , January 25-26, 2018
- **ICDAC 2018:** 20th International Conference on domestic animals and cytogenetics, Paris France December 27-28,2018
- **ICNPM 2018 :** 19th International Conference on Neonatal and Perinatal Medicine, Sydney, Australia, December 4-5, 2018
- **ICNPM 2017 :** 19th International Conference on Neonatal and Perinatal Medicine, Sydney, Australia, December 3-4, 2017

Conferences/Seminar Attended: Forty five (45)

International-22

National- 23

Abstracts Published in souvenir: Ninety only (90)

Popular Articles:

- Srivastava D, Rai V, Kumar P. 2018. Quantum dots: applications in biological sciences, in Souvenir National Science day Celebration Feb 26-27, pp27.
- Singh G, Rai V, Kumar P. 2018. Silver nanoparticles: properties and applications in Souvenir National Science day Celebration Feb 26-27, pp32.
- Rai V and Kumar P: Genetic analysis of ABO and Rh blood groups in Brahmin population of Uttar Pradesh, India. 2011. Nature Preceedings: hdl:10101/npre.2011.5931.1: Posted 30 Apr 2011.
- Rai V. 2011. Burdon of Birth defects/Congenital malformations in India. Souvenir National Science day Celebration Feb 28-10, pp36.
- Rai V. 2000. Cloning. Abhivvyakti. University magazine.VBS Purvanchal University, Jaunpur.

Paper Presented in Seminar/Conferences: Thirty one (31)

1. "Association of dopamine receptor 2 gene Ser311Gln polymorphism with schizophrenia susceptibility: genetic evidence" in 44th Annual Conference of the Indian Society of Human Genetics Genomics for Health and Precision medicine, Kalyani University, January 30- August 1, 2019.
2. "Association between MTHFR C677T, A1298C and MTRR A66A gene polymorphisms and neural tube defects risk" in 44th Annual Conference of the Indian Society of Human Genetics Genomics for Health and Precision medicine, Kalyani University, January 30- August 1, 2019.
3. "Brain derived neurotrophic factor gene Val66Met polymorphism and susceptibility for Alzheimers disease" in Biosangam, an International Conference on Innovations and Translational Dimensions: Food, Health and Environmental Biotechnology, MNNIT, Allahabad, March 9-11, 2018.
4. "Maternal MTHFR C667T polymorphism and risk of neural tube defects and cleft lip and/or palate ", in International Conference on Functional Biology and Molecular Interactions: Applications in Health and Agriculture, University of Lucknow, Lucknow, December 20-22, 2017.
5. "Folate pathway gene MTHFR C677T polymorphism as risk factor for birth defects", Abs in 5th International Biochemistry and Molecular Biology Conference, Songkhla, Thailand, May 26-27,2016.

6. "Association between depression and methylenetetrahydrofolate reductase gene polymorphism", Abs in International Conference on Translational Biotechnology (BioSangam 2016), organized by department of Biotechnology, MNNIT, Allahabad, February 4-6, 2016.
7. "Cystathionine b-synthase gene 844Ins68 polymorphism screening in Down syndrome cases", Abs in National conference on Biotechnology and Human Welfare: New Vistas, Jaunpur, March 21-22, 2015.
8. "*MTR* A2756G gene polymorphisms analysis in Down syndrome patients of Eastern UP", Abs in National conference on Biotechnology and Human Welfare: New Vistas, Jaunpur, March 21-22, 2015.
9. "Association between *MTHFR* C677T polymorphism and Migraine risk: a meta-analysis", Abs in International Symposium on "Genomics in Health and Disease" & 40th Annual Conference of Indian Society of Human Genetics organized by National Institute of Immunohaematology (ICMR). January 28-30, 2015.
10. "Evaluation of *MTHFR* C677T polymorphism as risk factor for nonsyndromic cleft lip/palate", Abs in National Seminar on Current Trends in Biological Sciences: Advances and Challenges, Janta College, Bakewar, Etawah, December 13-14, 2014.
11. Maternal *MTHFR* C677T polymorphism as risk factor for congenital defects (NTD, OFC and DS) ", Abs in International conference on Biotechnology and Bioengineering ICBB-2014 at Birla Institute of Technology and Science, Pilani, Dubai Campus, October 29-30, 2014.
12. "Association of methylenetetrahydrofolate reductase (*MTHFR*) gene rs1801133 polymorphism with Autism: meta- analysis", Abs in 1st Global Conference of Biological Psychiatry, New Delhi, India, 2014.
13. "Prostate cancer , genetic susceptibility and counselling" in national seminar on emerging trends in Applied Psychology, February 11-12, 2014, Department of Applied Psychology, VBS Purvanchal University, Jaunpur.
14. "Maternal methylenetetrahydrofolate reductase (*MTHFR*) A1298C polymorphism and susceptibility to Down syndrome: a meta-analysis" in International Conference on Human Genetics & 39th Annual Meeting of Indian Society of Human Genetics, January 22-25, 2014, Ahmedabad.
15. "Beta globin gene haplotypes in rural population of Eastern Uttar Pradesh" International Symposium on Developmental and Genetic Disorders & 38th Annual conference of the Indian Society of Human Genetics: Genomics and Community Health at BHU, Varanasi. December 9-11, 2012.
16. "Molecular Screening of Beta thalassemia mutation and its genetic modifiers in eastern Uttar Pradesh" International Symposium on Developmental and Genetic Disorders & 38th Annual conference of the Indian Society of Human Genetics: Genomics and Community Health at BHU, Varanasi. December 9-11, 2012.
17. "Assessment of *MTHFR* and *MTRR* Gene polymorphism as risk factor for Schizophrenia". International Symposium on Developmental and Genetic Disorders & 38th Annual conference of the Indian Society of Human Genetics: Genomics and Community Health at BHU, Varanasi. December 9-11, 2012.
18. "Red Cell Enzymes Polymorphism in Muslim Population of Uttar Pradesh". International Symposium on Developmental and Genetic Disorders & 38th Annual conference of the Indian Society of Human Genetics: Genomics and Community Health at BHU, Varanasi. December 9-11, 2012.
19. "C677T and A66G polymorphisms analysis in Down Syndrome patients" in International Conference on Genes, genetics & Genomics: Today & Tomorrow- Human Concerns and XXXVII Annual Conference of Human Genetics, March 3-5, 2012, Panjab University, Chandigarh (Section: Medical & Clinical Genetics).

20. "Folate pathway gene polymorphism study in nonfragile X syndrome mental retardation cases" in International Conference on Genes, genetics & Genomics: Today & Tomorrow- Human Concerns and XXXVII Annual Conference of Human Genetics, March 3-5,2012, Panjab University, Chandigarh (Section: Medical & Clinical Genetics).
21. "Genetic polymorphism of red cell enzymes in five population of eastern Uttar Pradesh" in International Conference on Genes, Genetics & Genomics: Today & Tomorrow- Human Concerns and XXXVII Annual Conference of Human Genetics, March 3-5,2012, Panjab University, Chandigarh.
22. Role of genetic awareness and counselling in prevention of genetic disorders in eastern UP India. International Meet on Collaboration with American Universities and International conference on counselling and community Psychology, VBS Purvanchal University, Jaunpur, December 17-19, 2011.
23. Climate Change and Human Health: "Effect of environmental factors on frequency of birth defects". National Conference on Impact of Global Warming and Climate Change on Diversity: The Challenge of Conservation of Flora and Fauna" RHSPG College Sigrma mau, Jaunpur. February 21-22, 2012.
24. "MTHFR A1298C Polymorphism Risk for Recurrent Spontaneous Abortion: A Meta-analysis" in 1st IFIP International Conference of Bioinformatics, March 25-28,2010, Sardar Vallabhbhaipatel Institute of Technology Surat.
25. "Screening of MTRR A66G polymorphism in Eastern UP Population" in National Seminar on Biotechnology & Health: Prospects & perspectives in 21st Century, March 19-20,2010,ITM Universe, Gwalior.
26. "MTHFR C677T polymorphism screening in Eastern UP population" in International Symposium on Role of Genomics in Clinical Practice & 35th Annual Conference of the Indian Society of Human Genetics, March,6-8,2010 Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow (Section – Genetic Epidemiology).
27. "Screening of Glucose 6 Phosphate Dehydrogenase Deficiency in Eastern U. P." International Symposium on Role of genomics in Clinical Practice & 3^{5th} Annual Conference of the Indian Society of Human Genetics(ISHG 2010) at SGPGI Lucknow, India, March 6-8,2010.
28. " Role of Medicinal plants in the treatment of psychiatric disorders" in National Seminar on Medicinal plants of Eastern Uttar Pradesh: Ethno Botanical perspectives, march 30-31,2006, department of Mass Communication , VBS Purvanchal University.
29. "Indian Women Scientists in the New Millennium" in Seminar on Women Leadership and Global Challenges, September,26-27,2006, HRD department, VBS Purvanchal University, Jaunpur.
30. "Role of NGOs in Disease Management in Rural Area" in NGO Conference & Seminar on Rural Development, December,22-23,2004, Department of Applied Psychology, VBS Purvanchal University, Jaunpur.
31. "Schizophrenia: The mystery and mechanism. National Seminar on New Directions in Applied Psychology. VBS Purvanchal University, Jaunpur. March 8-9, 2003.

Invited Lectures in Conference/Workshop:

1. "Methylenetetrahydrofolate reductase gene C677T polymorphism and its clinical implications" Ind Sci Congress 2023, Nagpur.
2. "Folic Acid and Women Health" presented during the 5 Days National Workshop on "Life Science Interface: The Key To Sustainability" conducted by the School of Sciences, GNC & VBSPU, from 25/06/2022 to 29/06/2022.

3. "COVID-19 and Our Environment" in International Web conference on COVID -19 Second Wave: Challenges for Sustainable Development (CCSD 2021), held on 13-15 September, 2021
4. "MTHFR polymorphism and human diseases", Science Popularizing Lectures organized by Department of Botany and Zoology, SS Khanna Prayagraj, March 20-26, 2021.
5. "NEP 2020:Research and Innovation", in Seven Days Refresher Course on National Education Policy (NEP-2020), (Higher education Department, Uttar Pradesh Government Letter No.464/Sattar-3-2021-08(35)/2020, Dated 10 February, 2021 order). Organized by VBS Purvanchal University Jaunpur, from 08-03-2021 to 14-03-2021.
6. "Covid 19 and Host Genetics", in National Webinar Impact of COVID-19 in Human life and Environment, jointly organized by National Academy of Sciences Bhopal Chapter and Deptt of Botany Govt Autonomous PG College, Satna, MP, held on July29 ,2020.
7. "Safe Water, Sanitation and Hygiene for Health" in International Web Conference (IWC) organized jointly by Nepal Aquaculture Society, ABRF –Prayagraj, GESA-New Delhi and Government Degree College, Doda, J & K, held on 9-12 November, 2020
8. "MTHFR Gene Polymorphism and Neurological Disorders", in lecture series in Biotechnology, held on July 18, 2020, organized by Deptt. of Biotechnology, Awadhesh Pratap Singh University, Rewa, MP.
9. "Covid-19 Severity: Pollution and Genetic Factors", in Pandemic COVID -19: Global Impact on Environment and Sustainable Development (PESD 2020) Global Web Conference, held on June 5-6, 2020, organized by Internal Quality Assurance Cell, DDU Govt PG College, Prayagraj in association with Glocal Environment and Social Association, Delhi.
10. "Novel Corona Virus Pandemic", held on May 31,2020, organized by Govt V Y T PG Autonomous College , Durg, Chhattisgarh.
11. "Neurodegenerative disorders and MTHFR polymorphism", in International Conference on Environment and Society (ICES 2019) on December 22-23,2019 at Harcourt Butler Technical University, Kanpur.
12. "MTHFR C677T polymorphism and cancer susceptibility " in International Conference on Recent Advances in Life Sciences for Betterment of Environment and Human Health (ICRABEH-2019) and 8th Annual Session of Society of Life Science, December 14-15,2019 at Govt Holkar Science College Indore.
13. "MTHFR gene A1298C polymorphism and Alzheimer's disease susceptibility",ICUMSAT-2019, held at V B S Purvanchal University, November, 15 to 17,2019.
14. "Clinical Implications of MTHFR C677T Polymorphism", pre-convocation lecture at Department of Biotechnology, RML Awadh University, Faizabad, UP, 2019.
15. "Effect of environmental factors on frequency of birth defects" in National Conference on Impact of Global Warming and Climate Change on Diversity, organized by RHSPG College Sigraamau, Janupur on February 22,2012.
16. "Challenges in Biotechnology Projects", in Entrepreneurship Skill Development Program for Biotechnology, Organized by MSME Govt of India on April 2, 2008.

Orientation Programme/ Refresher Course/ Workshops/ Summer Schools attended:

- 63rd Orientation course (2002) organized by Academic Staff College, University of Allahabad, Allahabad.

- Refresher course (2005) in Biotechnology organized by Academic Staff College, JNU, New Delhi.
- CIMAP Winter School (CWS-2001) on “Recent Techniques in Gene Cloning, Sequencing and DNA profiling” 1-10Dec’2001, at CIMAP, Lucknow.
- Refresher Course in Molecular and Developmental Genetics”, July 2-14 2003 sponsored by Academy of Sciences held at Cytogenetics Laboratory, Department of Zoology, BHU, Varanasi.
- ‘Entrepreneurship Skill Development Programme for Biotechnology’, March, 27-April24, 2008, sponsored by Ministry of Micro, Small and Medium Enterprises, Govt. Of India.
- Refresher course (2009) in Environmental Awareness organized by UGC-Academic Staff College, Himachal Pradesh University, Shimla.
- 17th DBT sponsored training course on “Bioinformatics; A practical approach” conducted by Bioinformatics Center North- Eastern Hill University, Shillong April 19-24, 2010.
- “Workshop on Development of Concept in Modern Biology” sponsored by UGC at School of Life Sciences, JNU, New Delhi, Dec 10-16,2010.
- SAM workshop sponsored by UGC at Baba Bhim Rao Ambedkar Central Univeristy, Lucknow April 4-8, 2011.
- “Workshop on Recent Trends in Structural Bioinformatics and Drug Designing” October 12-13,2012, held at Bioinformatics Infrastructure facility (BIF), Centre of Excellence in Bioinformatics (COEBI), University of Lucknow, Lucknow.
- Workshop on “Methodology of Assessment and Accreditation” on January 29,2013 organized by Internal Quality Assurance Cell, VBS Purvanchal University, Jaunpur.
- International Workshop on Counseling Skills in Health Profession and Schools, Jaunpur, October 23-2, 2013.
- Training Programme on the “Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013”, May16-17, 2014.
- One day workshop on "Revisit of Guidelines & Modalities for Ph. D. Programme" held on May 8, 2015, organized by VBS Purvanchal University.
- “Author Workshop”, held on October 31, 2015, organized by Springer India and Vivekanand Central Library, VBS Purvanchal University, Jaunpur.
- One week workshop on numerical computation using MATLAB. Organized by Department of Mathematics and Computer Science and Engineering, Faculty of Engineering and Technology, VBS Purvanchal University, Jaunpur-222003(UP) from November 26-30, 2015.
- "Workshop on Writing Research Paper", held on November 30, 2015 organized by Vivekanand Central Library and Sage Publication India Pvt Ltd.
- One day workshop on "User Awareness on Access for e-Resources”, held on August 29, 2016, organized by Vivekanand Central Library and Pearson India Education.
- “Faculty Development Programme on Goods and Service Tax”, on April 25,2017 organized by V B S Purvanchal University, Jaunpur in association with ICA Edu Skills Pvt. Ltd.
- "How to Write and Publish Articles and Manuscripts-Author Workshop" held on March 21, 2017, organized by VBS Purvanchal University and Springer Nature.
- "Training Programme on Academic Leadership", organized by Centre of Academic Leadership and Education Management and Aligarh Muslim University under the scheme of Pandit Madan Mohan Malviya National Mission on Teachers and Teaching (PMMMNTT), MHRD, Govt. of India from January 31 to February 03, 2018.
- FDP on IPR and Plagiarism”, organized by Uma Nath Singh Institute of Engineering & Technology, V B S Purvanchal University, Jaunpur during Sept 20-23, 2018.

- Training Programme on Academic Leadership, organized by VBS Purvanchal University, Jaunpur and Centre of Academic Leadership and Education Management, Aligarh Muslim University, Aligarh, Under the Scheme of Pandit Madan Mohan Malviya National Mission on Teachers and Teaching (PMMMNTT), MHRD, Govt. of India, from March 26 to 29, 2019.
- Training Programme on Academic Leadership, organized by VBS Purvanchal University, Jaunpur and Centre of Academic Leadership and Education Management, Aligarh Muslim University, Aligarh, Under the Scheme of Pandit Madan Mohan Malviya National Mission on Teachers and Teaching (PMMMNTT), MHRD, Govt. of India, from April 23 to 29, 2019.
- Biofuel: The future moving world, organized by Department of Biotechnology, APS University, Satna, held on September 14-15, 2020.
- Anusandhan Anandshala, organized by Akhil Bhartiya Anusandhan Prakoshth of Bhartiya Shikshan Mandal BSM, Nagpur held on September 19, 2020.
- E-Refresher Course on 21st Century: The Era of Biotechnology-To Innovate by Biotechnology Learning, organized by Department of Biotechnology, AKS University, Satna, MP, held from 3rd September to 28th October 2020.

Research Students

(a) Ph. D. students supervised:

1. Dr Pradeep Kumar (23-08-2013): Title: "Genetic Polymorphism of Red Blood Cell Enzyme and Antigens in U P Population"
2. Dr Vivek Srivastava (5-10-2013) Title: "Elucidating the function of CHK2 mediated phosphorylation on BLM helicase"
3. Dr Upendra Yadav (4-6-16) Title: "Study of MTHFR and MTRR polymorphism in Eastern UP population"
4. Dr Sushil Kumar Yadav (17-3-2017) Title: "Molecular Study of Fragile X syndrome in UP population"

(b) Ph. D. students enrolled: 1

(c) Post Graduate (M.Sc.) Project Supervision: Thirty (30)

(d) Summer Training (M. Sc. and B. Tech.) : Ten (10)

(e) Mentor of 60 students from across different Institutes/Universities/Colleges of India in CSIR Summer Research Training Programme (Online-2020) : Sixty students

Faculty Development Program attended (FDP):

- "Emerging Trends in Teaching Technology", from 16th May to 20th May, 2020, organized by Sri Guru Tegh Bahadur Khalsa College, Jabalpur, MP.
- "How to be an effective online teacher", on 25th May, 2020, organized by Sri Sri University,
- "Evolution From Offline to Online Teaching", from 30th May to 3rd June 2020, organized by Microsoft, Deptt. of Information Technology- University of Mumbai and Satish Pradhan Dnyasandhana College, Thane, Maharashtra
- "Role of Bioinformatics, Biotechnology and Molecular Biology on Drug Discovery" organized by Department of biotechnology, Bansal Institute of Engineering and Technology, December 17-22, 2020.

Webinars Attended

1. WCBNP-2020, Webinar on Chemistry and Biology of Natural Products held during July 24-25, 2020 at CSIR- NEIST, Jorhat, Assam, India.
2. Webinar in the series of Advances in Biotechnology for Health, Food and Nutrition to Encounter Covid-19, attended and learnt about Food and Nutrition, Immunomodulation to fight COVID-19, pathogenesis of SARS-CoV-2, Molecular Diagnostics and Immunodiagnostics for COVID-19 and Vaccine Designing to encounter the COVID-19 Disease. Organized by AKS University Satna, May 22-23, 2020.
3. International Webinar on “COVID-19: Changing Research Scenario” organized by IQAC and Department of Science, Swantanrata Sangram Senani Vishram Singh Government PG College, Chunar, Mirzapur, May 15, 2020.
4. International Webinar on “Post COVID-19 World and the Pivotal Role of Science and Technology” in outbreak of COVID-19 pandemic: Challenges and the Road Ahead International webinar series organized by Faculty of Science and IQAC, Government Raza PG College Rampur, May 17, 2020.
5. International Web Conference on “Indian intellectual and cultural traditions in present context” jointly organized by Department of Sanskrit and Botany, SGN Govt. PG College Muhammadabad Gohna, Mau, May 16-17, 2020.

Member Editorial Board of Journals:

- International Journal of Life Science and Pharma Review
- Asian journal of Medical Sciences
- International Journal of Pharmaceutical and Chemical Sciences
- American Journal of Biomedical Research
- International Biological and Biomedical Journal
- Aperito Journal of Biotechnology and Biomaterials: Recent Trends
- Journal of Congenital Disorders
- SM Autism and Epilepsy
- Journal of Women Health and Safety Research
- International Journal of Neurology and Neurosurgery
- Letters in Health & Biological Sciences
- Food and Nutrition Report
- eSciRes
- Journal of Women’s Health & Safety Research

Reviewer of Journals:

- Molecular Biology Reports ;Genetic Testing and Molecular Biomarkers ;Notulae Scientia Biologicae ;Indian Journal of Biochemistry and Biophysics; Indian Journal of Medical Research ; Metagene ; Neuroscience Letter; Plos one; Journal of Assisted Reproduction and Genetics; International Journal of Genetics and Molecular Biology; International Journal of Applied and Basic Medical Research; The Journal of Obstetrics and Gynecology; Indian Journal of Clinical biochemistry

Memberships of professional bodies:

- Indian Academy of Neurosciences (IAN)
- Biotech Research Society of India (BRSI)
- Indian Society of Human Genetics (ISHG)

- Indian Women Scientists Association (ISWA)
- Indian Science Congress Association (ISCA)
- Indian Society of Cell Biology (ISCB)
- Bioved Research Society of India (BRSI)
- Bioinformatics Institute of India (BII)
- All India Congress of Cell Biology and Genetics (AICCG)
- Indian Association of Cancer Research (IACR)
- International Society of Applied Biology (ISAB)
- Society of Life Science (SLSc)
- Asian Biological Research Foundation -(MABRF)(84/2019)
- Glocal Environmental & Social Association (164/2019)
- Environmental and Social Welfare Society, Khajuraho
- International Society for Noni Science (LM-074-21)
- Zoological Society of India (V-36)

Administrative Experience:

- **Coordinator**, Research and Development Cell, V B S Purvanchal University, Jaunpur (2021-2020)
- **Dean**, Faculty of Science, VBS Purvanchal University, Jaunpur (3-3-2017 to 2-3-2020)
- **Head**, Department of Biotechnology, VBS Purvanchal University, Jaunpur (3-3-2017 to 2-3-2020)
- **Head**, Department of Microbiology, VBS Purvanchal University, Jaunpur (3-3-2017 to 2-3-2020)
- **Head**, Department of Biochemistry, VBS Purvanchal University, Jaunpur (3-3-2017 to 2-3-2020)
- **Head**, Department of Environmental Sciences, VBS Purvanchal University, Jaunpur (3-3-2017 to 2-3-2020)
- **Chairperson**, Internal Complaint Committee, VBS Purvanchal University, Jaunpur
- **Chairperson**, Women Cell, VBS Purvanchal University, Jaunpur (2013-2016; 2016-2022)
- **Convener**, Central Women Flying Squad, VBS Purvanchal University (2013)
- **Chief Warden**, Girls Hostel (2019-2020), VBS Purvanchal University, Jaunpur
- **Assistant Dean Student's Welfare (ADSW)**, VBS Purvanchal University, Jaunpur (2011-2014; 2014-2017; 2017-2020)
- **Member, Central Purchase Committee (CPC)**, VBS Purvanchal University, Jaunpur (2020-2023)
- **Member**, Internal Quality Assurance Cell (IQAC,2017)
- **Member**, Admission Committee (2017,2018)
- **Member**, Examination Committee (2017,2018)
- **Member**, Ph D Admission Committee (2015,2016)
- **Assistant Proctor**, V B S Purvanchal University, Jaunpur (2008, 2009, 2010, 2012)
- **Convener**, Anti Ragging Squad (Women), V B S Purvanchal University, Jaunpur (2008)
- **Member**, Women Cell, V B S Purvanchal University, Jaunpur (2006-2012)
- **Member**, Anti-ragging cell (2009)
- **Library in-charge**, Department of Biotechnology, VBS Purvanchal University (2000-2018).
- **Warden**, Girls Hostel, from 2001-2002, V B S Purvanchal University Jaunpur

Member of Academic Bodies:

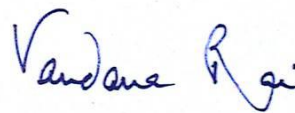
- **Member, Executive Council**, VBS Purvanchal University Jaunpur (2017)

- **Member, Academic Council**, VBS Purvanchal University Jaunpur (2012-2014; 2017-2019)
- **Member, Examination Committee**, VBS Purvanchal University Jaunpur (2017)
- **Chairperson**, Purvanchal University Combined Admission Test (PUCAT)-2021,2022
- **Member**, Admission Committee, VBS Purvanchal University Jaunpur
- **Member**, Library Committee, VBS Purvanchal University Jaunpur
- **Member**, NSS Salahkar Samiti, VBS Purvanchal University Jaunpur (2018)
- **Convener**, Departmental Research Committee, Department of Biotechnology, VBS Purvanchal University, Jaunpur (2017-2018)
- **Convener**, Departmental Research Committee, Department of Microbiology, VBS Purvanchal University, Jaunpur (2017-2018)
- **Convener**, Departmental Research Committee, Department of Environmental Science, VBS Purvanchal University, Jaunpur (2017-2018)
- **Convener**, Board of Studies (BOS), Department of Microbiology (2017-2018), V B S Purvanchal University, Jaunpur
- **Convener**, Board of Studies (BOS), Department of Biochemistry (2017-2018), V B S Purvanchal University, Jaunpur
- **Convener**, Board of Studies (BOS), Department of Environmental Sciences (2017-2018), V B S Purvanchal University, Jaunpur
- **Convener**, Board of Studies (BOS), Department of Biotechnology (2015-2017), V B S Purvanchal University, Jaunpur
- **Member**, Board of Studies (BOS), Department of Biotechnology (2009-2013; 2020-2023)
- **Member**, Board of Studies (BOS), Department of Pharmacy (2017, 2015,2014,2009)
- **Member**, Examination Committee

General Awareness Program Conducted:

- Participated in one day health check up camp on October 24, 2009, organized by Lions Club, Jaunpur
- Health Awareness Campaign in Rural Women of Jaunpur district: Special emphasis on Genetic Disorder on April, 27,2009.
- Participated in one day health check up camp on October 24, 2009, organized by Lions Club, Jaunpur. Laboratory visit of PG students of Purvanchal University to introduce techniques and protocols for the identification of MTHFR and MTRR polymorphism on November 3,2009.
- Genetic disorder awareness campaign in Purvanchal University for women students on December, 2,2009.
- Genetic disorder awareness campaign in Government Inter College, Jasopur, Jaunpur on January 20, 2010.
- Genetic disorder awareness campaign in Jaunpur district on February, 20, 2010
- Awareness program for congenital and genetic defects in Rural women in Jasopur village, Jaunpur on May 11,2010.
- Genetic Awareness Campaign: Role of Folate and MTHFR, MTRR in Genetic Disorders on August 14,2010.
- Genetic disorder awareness campaign for rural women of Devkali village, Jaunpur on November 2,2010.
- Genetic disorder awareness campaign for women in Jaunpur: screening for MTHFR C677T allelic variant on November 28, 2010.
- Participated in Cancer Awareness program among Youth on December 4, 2010.
- Organized blood group-testing camp on National Science Day Celebration, 2011.

- "Sensitization /Awareness Program for Women Teachers and Employees of VBS Purvanchal University against Gender Bias and Sexual Harassment", held on October 1,2014.
- Ozone day celebration-2016 for awareness for ozone layer conservation, September 16,2016, organized by Department of Environmental Sciences, VBS Purvanchal university, Jaunpur.



Date: 11-4-2023

Place: Jaunpur

Dr Vandana Rai

Department of Biotechnology
V B S Purvanchal University
Jaunpur-222003, UP