

Anchal Singh, Ph. D.

Professor

Dept. of Biochemistry,
Institute of Science
Banaras Hindu University
Varanasi-221005
E-mail: anchalsingh@bhu.ac.in,

Present Employment and Duties

Presently, I am working as Professor in Dept. of Biochemistry, Inst. of Science, BHU, Varanasi. I am involved in teaching courses to post graduate students of biochemistry and sharing several additional responsibilities of the Department and University.

Research Experience

More than 18 years of research experience in various fields such as Parasite Immuno- biology, Immunodiagnosics, metabolomics and proteomics.

Expertise in Animal cell culture, Protein Purification, Enzymology, Proteomics, High resolution accurate mass spectrometry (HRAMS), Immunoblotting, FACS, ELISA, qRT-PCR *etc.*

Positions Held

2024-ongoing	Professor	Dept. of Bioch., Inst. of Science, BHU
2021- 2024	Associate professor	Dept. of Bioch., Inst. of Science, BHU
2015-2021	Assistant Professor	Dept. of Bioch., Inst. of Science, BHU
2011- 2015	Assistant Professor	Amity University Uttar Pradesh, NOIDA
2010-2011	Post-Doctoral Investigator	A.T. Still University, Kirksville, USA
2007-2010	Lecturer	AIB, Amity University Uttar Pradesh, NOIDA
2007-2007	Lecturer	Agrasen Postgraduate College, Varanasi

Awards

CSIR-UGC Junior Research Fellowship 2001.

Selected for Shyama Prasad Mukherjee Fellowship Examination 2001.

Qualified GATE 2001 with 95.06 percentile.

MHFRSW Innovative Scientist Award, 2018

Bharat Ratna Dr. Abdul Kalam Gold Medal Award 2019

MHFRSW Fellow of Society Award 2021

AKS Global Faculty Award 2023

MHFRSW Distinguished Scientist Award 2023

Projects and Funding

Comprehensive sero-profiling post Ivermectin, Diethylcarbamazine and Albendazole (IDA) administration: Designing endpoints for Lymphatic Filariasis elimination, 15.56 Lakhs, UP-CST, Lucknow, India

Selenium Glutathione peroxidase as novel filarial Immunodiagnostic antigen, SERC-Fast Track proposal for Young Scientists, 25 Lakhs, SERB-DST, New Delhi, India.

Regulation of DNA methylation in Parkinson's disease through *Mucuna pruriens*, 46 lakhs, ICMR, New Delhi, India

Development and efficacy assessment of an innovative multi-epitope cocktail vaccine for the prevention of Lymphatic Filariasis. DST-INSPIRE JRF project, 30 lakhs, India

Incentive grant under IoE BHU, 10 lakhs, India.

Seed support for innovative project UGC-UPE, BHU grant, 10 Lakh, India.

Memberships

Life Member, Association of Microbiologist of India

Life Member, Society of Biological Chemists, India

Life Member, International AIDS society, India

Life member, Indian Society of parasitology, India

Reviewer for the journals

The Journal of Infectious diseases ((Infectious Diseases Society of America), RSC advances (Royal society of Chemistry), Molecular diversity (Springer-Nature), Parasite Immunology (Wiley-Blackwell Publishing), Immunity Inflammation and diseases (Wiley-Blackwell Publishing) Frontiers in Bioengineering and Biotechnology (Frontiers), Frontiers in Medical technology (Frontiers), PLOS NTD (PLOS), Mini reviews in Medicinal Chemistry (Bentham Science Publishers), Current pharmaceutical design (Bentham Science Publishers), Current bioinformatics (Bentham Science Publishers) etc.

Conferences/Workshops/Orientation courses organized

Treasurer of “National Symposium on HIV and AIDS: Biology to Bedside” held at Amity University Uttar Pradesh, NOIDA on March 15-16, 2012.

Treasurer of “International Symposium on Frontiers in Cancer Research: Prevention to therapeutics” held at Amity University Uttar Pradesh, NOIDA on November 15-16, 2013.

Treasurer of “26th National Congress of Parasitology” held at Dept. of Biochemistry, IOS, BHU, Varanasi on January 21-23, 2016.

Member, organizing committee ‘International conference on Trends in Biochemical and Biomedical Research’ held at Dept. of Biochemistry, IOS, BHU, Varanasi on February 13-15, 2018.

Co-course coordinator of 82nd Orientation course held at UGC-HRDC, BHU, Varanasi on August 5-24, 2019.

Co-course coordinator of 83rd Orientation course held at UGC-HRDC, BHU, Varanasi on August 5-24, 2019.

Member, organizing committee IBRO-APRC School on ‘Molecular Basis of Neuro-inflammation Mediated Neurodegeneration’ held at Dept. of Biochemistry, IOS, BHU from September 01-14, 2019.

Member, organizing committee ‘International Translational Cancer Research Conference’ held at Dept. of Biochemistry, IOS, BHU, Varanasi on February 13-16, 2020.

Member, organizing committee IBRO-APRC School on ‘Neuroprotective Potential of Medicinal

Plants and Phytochemicals in Neurodegenerative Disorders’ held at Dept. of Biochemistry, IOS, BHU September 12-18, 2022.

Member, organizing committee 7 days Karyashala/Hands-on Training on ‘Flow Cytometry for a Comprehensive Understanding of its Usefulness in Basic, Applied & Clinical Research’ held at Dept. of Biochemistry, IOS, BHU December 21-27, 2022.

Administrative responsibilities

Warden of Maitreyi girls’ hostel 2017-2021.

Admin Warden of Gargi Hostel since 2021-2024.

Admin Warden of Maitreyi Hostel since 2024-ongoing.

Participation in University/Institute/Department

Member, Students Advisor committee, 2024 onwards

Swayam Co-ordinator, Dept. of Biochemistry, 2022 onwards.

Member of seating committee in University Convocation 2022-2025

Member of University Wi-Fi committee, 2023-2024

Venue Co-ordinator Spandan-2025 onwards

Member of Open Book examination committee 2020-2021.

Member of Women’s Grievance committee 2017-ongoing.

Member of FAC, Dept. of Biochemistry 2018-2022.

Member of Board of studies, Dept. of Biochemistry 2018-2022

Associate Coordinator UG back paper examinations 2018-2019

Chairman, Department beautification Committee 2022 onwards.

Chairman, Waste disposal committee 2020-2022

Nodal person, Space audit committee 2022 onwards

Education

2007	Ph.D.	B.H.U., Varanasi.	Biochemistry	
2001	M.Sc.	B.H.U., Varanasi.	Biochemistry	75% (Aggregate distinction)
1999	B.Sc.	B.H.U., Varanasi.	Chemistry (Hons.)	78% (Aggregate distinction)

Patents

NOC from BHU has been obtained for 2 patents and filling is in process.

The patents are for developing novel diagnostic markers of Lymphatic Filariasis

List of Publications

1. **Anchal Singh** and S. Rathaur; Identification and characterization of a Selenium dependent Glutathione Peroxidase in Setaria cervi. Biochemical and Biophysical Research Communication 2005, 331: 1069-1074.
2. S. Gupta, **Anchal Singh**, M. Yadav, K. Singh and S. Rathaur; MALDI mass sequencing and characterization of filarial Glutathione - S – transferase. Biochemical and Biophysical Research Communication 2007, 356: 381-385.
3. **Anchal Singh**, S. Kamal and S. Rathaur; Filarial selenium glutathione peroxidase: a probable

- immunodiagnostic marker for lymphatic filariasis. Transactions of Royal Society of Tropical Medicine and Hygiene 2010, 104: 524-528.
4. A.S. Verma, U.P. Singh, P.D. Dwivedi and **Anchal Singh**. Contribution of CNS cells in NeuroAIDS. Journal of Pharmacy and Bioallied Sciences, 2010, 2 (4): 300-306.
 5. A.S. Verma, U.P. Singh, and **Anchal Singh**. NeuroAIDS: A Real Concern. IIOAB Journal 2010, 1: 28-31.
 6. A.S. Verma and **Anchal Singh**: NeuroAIDS: A Worrisome Issue. Chronicles of Young Scientist 2010, 1(4):33-35.
 7. A.S. Verma and **Anchal Singh**. Can HIV be cured? *IIOAB Journal* 2011, 2 (5):25-26.
 8. **Anchal Singh**, U.P. Singh, A. Varma, and A.S. Verma: Cure for HIV: New Possibility on Horizon. Journal of Pharmacy and Bioallied Sciences 2011, 3(3): 462-463.
 9. A.S. Verma, S. Agrahari, S. Rastogi, and **Anchal Singh**: Biotechnology: In the Realm of History. Journal of Pharmacy and Bioallied Sciences 2011, 3 (3): 321-323.
 10. V.K. Singh, M. Syring, Anchal Singh, K. Singhal, A. Dalecki and T. Johansson. An insight of the significance of DnaK heat shock system in *Staphylococcus aureus*. International Journal of Medical Microbiology, 302, 2012, 242-252.
 11. A.S. Verma, S.M. Bhatt, **Anchal Singh** and P.D. Dwivedi. HIV: An Introduction (In:Textbook on Molecular Biotechnology, eds. Chauhan A.K. and Varma A.) I.K. International Publishing House, New Delhi {978-93-80026-37-4}, 2009.
 12. A.S. Verma, **Anchal Singh**, U.P. Singh and P.D. Dwivedi. NeuroAIDS in Indian Scenario. (In Recent Trends in Biotechnology and Microbiology, eds. Gaur R.K. et al) Nova Science Publishers Inc, USA, {978-1-60876-666-6}, 2010.
 13. A.S. Verma, U.P. Singh, P. Mallick, **Anchal Singh** and P.D. Dwivedi. NeuroAIDS and Omicsof HIV *vpr* (In: The OMICS: Implications for Science, Health and Society, ed: Barh et. al.) CRC press, {978-1-4398-5008-4}, 2012.
 14. A.S. Verma, S. Das, and **Anchal Singh**. Bacteriophages, Mycobacteria and Ganges Water: Religion to Science (In: Environment and Biotechnology), Lambert Academic Publishing A G and Co. Germany, {978-3-659-15457-7}, 2012.
 15. A.S. Verma, S. Saran and **Anchal Singh**. NeuroAIDS: A Health Concern. (In: Microbial, Plant and Animal Research), Nova Scientific Publishers, USA {978-1-62618-593-7}, 2013.
 16. A.S. Verma, S. Rastogi, S. Agrahari, and **Anchal Singh**. HIV as we know. (In: Advances in Biochemistry and Biotechnology) (Vol-2), Astral International Pvt. Ltd, India, {978- 93-5124-312-0}, 2014.
 17. **Anchal Singh** and A.S. Verma. Antibodies: Monoclonal and Polyclonal (In: Animal Biotechnology: Models in Discovery and Translation), 2014, Academic Press, USA {978-0-12416-0026}, 2014.
 18. A.S. Verma and **Anchal Singh**. HIV and Anti-retroviral treatment (In: Animal Biotechnology: Models in Discovery and Translation), Academic Press, USA {978-0-12416-0026}, 2014.
 19. **Anchal Singh**, A. Verma and A.S. Verma. Animal Biotechnology. (In: *In vitro* approaches Biotechnology- Progress and Prospects, eds. Khurana SMP and Singh M}, {162699- 059X}, 2015.
 20. **Anchal Singh**. HIV and Anti-retroviral treatment (In: Animal Biotechnology: Models in

Discovery and Translation), Academic Press, USA {978-0-12416-0026}, 2014.

21. **Anchal Singh**. Nutraceuticals in Health and Diseases (In: Agricultural, Allied Sciences & Biotechnology for Sustainability of Agriculture, Nutrition & Food Security) MRFSW, India {978-81-926935-8-3}, 2017.
22. **Anchal Singh**. Nanoparticles for treatment of parasitic diseases. (In: Impact of Climate Change and Abiotic Stresses on Agriculture and Management Strategies) MRFSW, India {978-81-926935-9-0}, 2018.
23. A. S. Verma, **Anchal Singh**, P. Mallick, P. D. Dwivedi. Cysteine supplementation mitigates the toxicity associated with antitumor therapy of Ehrlich's ascites fluid adsorbed over protein-a containing *Staphylococcus aureus* cowan I. Journal of Pharmacy and Bioallied Sciences, 2019, 11, 1, 23-32.
24. A. S. Verma, P. Mallick, P. D. Dwivedi, **Anchal Singh**. Exogenous supplementation of N-acetylcysteine can reduce hepatotoxicity induced by ascites fluid (cell-free) adsorbed over protein-a-containing *Staphylococcus aureus* cowan-I without compromising its antitumor effect. Journal of Pharmacy and Bioallied Sciences. 2019, 11, 3, 205-215.
25. **Anchal Singh**, A.S. Verma V. Kumar. HIV and Anti-retroviral treatment (In: Animal Biotechnology: Models in Discovery and Translation), 2nd edition, Academic Press, USA {978 -0-12-811710-1} 2019.
26. **Anchal Singh**, A. Mishra, A. Verma. Antibodies: Monoclonal and Polyclonal (In: Animal Biotechnology: Models in Discovery and Translation), 2nd edition, Academic Press, USA {978 -0-12-811710-1} 2019.
27. **Anchal Singh**, M. Verma, A. Verma. Animal tissue culture principles and applications (In: Animal Biotechnology: Models in Discovery and Translation), 2nd edition, Academic Press, USA {978 -0-12-811710-1} 2019.
28. M. Chaudhary, **Anchal Singh**, S. Dubey. Role of cytogenetics and molecular genetics in human health and medicine. (In: Animal Biotechnology: Models in Discovery and Translation), 2nd edition, Academic Press, USA {978 -0-12-811710-1}, 2019.
29. A. S. Verma, V. Kumar, M. K. Saha, S. Datta, **Anchal Singh**. HIV biology to treatment. (In: NanoBiomedicine), (eds.) Saxena SK, Khurana SMP, Springer-Nature, USA, {978-981-32-9900-9}, 2019.
30. **Anchal Singh**, A. Mishra, R. Chaudhary, V. Kumar. Role of Herbal Plants in Prevention and Treatment of Parasitic Diseases, Journal of Scientific Research, 64, 1, 2020, 50-58.
31. S. Sharma, F. Ahmad, **Anchal Singh**, S. Rathaur. Role of antifilarial drugs in inducing ER stress mediated signaling in bovine filarial parasitosis *S. cervi*. Veterinary parasitology 290, 2021, 109357.
32. V. Kumar, A. Mishra, Yadav A.K, Rathaur S, **Anchal Singh**. Lymphatic filarial serum proteome profiling for identification and characterization of diagnostic biomarkers, PLoS ONE. 2022, 17(7): e0270635. <https://doi.org/10.1371/journal.pone.0270635>.
33. V. Kumar, A. Mishra, **Anchal Singh**. Identification of promising nutraceuticals against filarial immune-modulatory proteins: Insights from *in silico* and *ex vivo* studies. RSC Advances, 2022, 12, 22542-22554.
34. S. Sharma, F. Ahmad, **Anchal Singh**, S. Rathaur. Identification of glucose regulated protein 94

- (GRP94) in filarial parasite *S. cervi* and its expression under ER stress. *Comparative Biochemistry and Physiology, Part B: Biochemistry and molecular biology*, 258, 2022, 110683.
35. V. Kumar, A. Mishra, V.K. Singh, **Anchal Singh**. Targeting the HIV-1 Tat and Human Tat protein complex through natural products: An *in silico* docking and Molecular Dynamics Simulation Approach. *Letters in drug design and discovery*, 2022, 19, 11.
 36. A. Mishra, V. Kumar, **Anchal Singh**. Deciphering the anti-filarial potential of bioactive compounds from *Ocimum sanctum*: a combined experimental and computational study, *Pharmaceutical Biology*, 2022, 60:1, 2237-2252.
 37. **Anchal Singh**. Impact of climate changes and global warming on vector borne diseases {In: Existing climate change scenario and its arising risks, 2022 {978-81-953029-0-1} MRFSW, India.
 38. **Anchal Singh**. “Climate change: An upcoming challenge for re-emergence and control of infectious diseases” Impact of Climate change on Socio-economics and ecological transformation in Himalayan region 2023 {978-81-965883-7-3} MRFSW, India.
 39. G. Dutta, M. Dutta, S. Dutta, **Anchal Singh** and M K Saha. Neuropsychiatric complications among elderly people living with HIV. “Neuropsychiatric complications of HIV” 2024, 1st edition Academic Press, USA {978-0-12-818851-4}.
 40. H. O. Singh, A. Jenitha, R. Choudhari, A. Verma, **Anchal Singh**, A. Nair. Role of Matrix metalloproteinases (MMPs) and Tissue inhibitors of metalloproteinases (TIMPs) genes in neuroHIV. “Neuropsychiatric complications of HIV” 2024, 1st edition Academic Press, USA {978-0-12-818851-4}.
 41. A. Mishra, S. Kumar, **Anchal Singh**. Biosynthesis and characterization of *Ocimum sanctum* green silver nanoparticles and unravelling its enhanced anti-filarial activity through HRAMS proteomics approach *RSC Advances*, 2024, 14, 5893 – 5906.
 42. S. Dutta, **Anchal Singh** and M. K. Saha. Neuro AIDS: Neuro-Invasion by HIV and Novel Therapeutic Approaches. “Neuropsychiatric complications of HIV” 2024, 1st edition Academic Press, USA {978-0-12-818851-4}.
 43. **Anchal Singh**, S. Kumar, H.O. Singh and M.K. Saha. The neurobiology of HIV. “Neuropsychiatric complications of HIV” 2024, 1st edition Academic Press, USA {978-0-12-818851-4}.
 44. S. Kumar, A. Mishra, S.P. Singh and **Anchal Singh**. Anti-filarial efficacy of *Centrathrum anthelminticum*: Unravelling the underlying mechanisms through biochemical, HRAMS proteomics and MD simulation approaches. *RSC Advances*, 2024, 14, 25198-25220.
 45. **Anchal Singh**: Climate Change and Extreme Environmental Exposures: Impacts on the Immune System (In: Climate Smart Agriculture- Innovative Approaches for Plant Protection and Crop Management), MRFSW, India {978-81-965883-0-4}, 2024.
 46. T. Singh, S. Sharma, S. Kumar and **Anchal Singh**: Impact of Climate Change on Dynamics and Outcomes of Host- Pathogen Interactions (In: Climate Smart Agriculture- Innovative Approaches for Plant Protection and Crop Management), MRFSW, India {978-81-965883-0-4}, 2024.
 47. S. Kumar, A. Mishra, V. Kumar, T. Singh, A. K. Singh and **Anchal Singh**. Designing and

Comparative Analysis of Anti-oxidant and Heat shock proteins based multi- epitope filarial vaccines, BMC Infectious diseases, 2024, 24:1436.

48. A. Mishra, S. Kumar, V. Kumar, H.O. Singh and **Anchal Singh**. HRAMS proteomics insights on the anti-filarial effect of *Ocimum sanctum*: Implications in phytochemical based drug-targeting and designing. Proteomes, 2024, 13, 2.
49. T. Singh, S. Sharma, S. Kumar and **Anchal Singh**. Unravelling the Key to Filarial Immune responses. Immuno (Basel) 2025, 5 (4) 57, <https://doi.org/10.3390/immuno5040057>.
50. P. Dubey, S. Sharma, T. Singh and **Anchal Singh**. Biofortification: An Innovative Approach for Climate Smart Agriculture (In: An Innovative Approach for Climate Smart Agriculture), MRFSW, India {978-81-965883-3-5} 2025.
51. P. Dubey, L. Bharti, S. Kumar, and **Anchal Singh**. “Agroforestry for extreme weather resilience and alternate source of income for small scale farmers”, Indian Journal of Agriculture and Allied Sciences, 2025, 11, 1.
52. H. O. Singh, J. Wilson, G. Namdev, M. Bhattacharya, **Anchal Singh**, S. D. Mahajan, N. Ali, A. F. AlAsmari. IL-8 polymorphisms (-251T/A, -1633T/C) and their effects on COVID-19 clinical outcomes: An observational study. Microbial Pathogenesis, 2025 207, 107839.
53. D. Biswas, **Anchal Singh**, R. Kumar and Uttam. The Multifaceted Role of Secondary Metabolites from Medicinal Plants in combating various Antimicrobial Resistance Mechanisms In Bacteria: A Systematic Review. Journal of Natural Products. 2025 (<https://doi.org/10.1021/acs.jnatprod.5c00349>).
54. V. Kumar, S. Sharma and **Anchal Singh**. Nanoparticles: A New Frontier in Neurodegenerative Disease Therapy. Frontiers in Medical Technology, 2025 7:1654003. doi: 10.3389/fmedt.2025.1654003.
55. K. A. Singh, R. K. Duary, S. Kumar, **Anchal Singh**. Malting, Germination, and Fermentation influence on the Thermochemical, Functional, Anti-nutritional, and Antimicrobial Properties of Buckwheat Flour: An Untargeted HRAMS-Based Metabolite Study. Food Chemistry (Under Review)
56. H. O. Singh, G. Tripathi, A. Khan, A. Verma and **Anchal Singh**. Autophagy, Telomerase, and Endothelial Dysfunction in COVID-19–Induced Cardiac Injury: An Evidence-Graded Genetic and Epigenetic Synthesis. Frontiers in Cardiovascular Medicine. Front. Cardiovasc. Med. 13:1769828. doi: 10.3389/fcvm.2026.1769828.
57. S. Sharma, A. K. Singh, T. Singh and **Anchal Singh**. Field-Based Assessment of Lymphatic Filariasis Transmission Dynamics and Intervention Outcomes in Varanasi (2019-2025). BMC public health. (Under Review).
58. V. Kumar, S. Kumar V. K. Singh and **Anchal Singh**. Designing of a novel multi-epitope cocktail candidate vaccine for Lymphatic Filariasis using Immunomics, Computational biology and Molecular Dynamics approaches. ACS omega. (Under Review).

Books published

1. **Anchal Singh**, U.P. Singh and A.S. Verma. “Biochemistry”. Punjab Technical University: 2011. Vikas Publishing House Pvt. Ltd., India {978-81-259-4653-3}.
2. A.S. Verma and **Anchal Singh**. “Antitumor and Immunomodulatory effects of Ehrlich’s ascites

fluid adsorbed over attenuated *Staphylococcus aureus* Cowan I.” Lambert Academic Publishing, Germany 2011 {978-3-8454-2023-3}.

3. A.S. Verma, S. Das and **Anchal Singh**. “Laboratory Manual for Biotechnology Student” 2014, S. Chand and Company Ltd., India {978-93-83746-22-4}.
4. A.S. Verma and **Anchal Singh**. “Animal Biotechnology: Models in Discovery and Translation” 2014, 1st edition, Academic Press, USA {978-0-12416-0026}.
5. A.S. Verma and **Anchal Singh**. “Animal Biotechnology: Models in Discovery and Translation” 2019, 2nd edition, Academic Press, USA {978 -0-12-811710-1}.
6. **Anchal Singh**. “DNA: The Elixir Of Life” 2022, 1st edition, Jagdamba Publishing Company, India {978-93-85437-28-1}.
7. **Anchal Singh**. “Neuropsychiatric complications of HIV” 2024, 1st edition, Academic Press, USA {978-0-12-818851-4}.

Popular Articles in magazines

1. A.S. Verma, P. Mallick, U.P. Singh, and **Anchal Singh**: HIV and Prevailing Myths. Science India, 2010 (December): 7-13.
2. S. Rastogi, S. Agrahari, **Anchal Singh**, and A.S. Verma. Clinical Stages of HIV. Biolixir, 2011, 1, 29-31.
3. S. Agrahari, S. Rastogi, **Anchal Singh** and A.S. Verma. Biotechnology: A Historical Perspective. Biolixir, 2011, 1, 26-28.
4. **Anchal Singh**, V. Singh and A.S. Verma. Filariasis: An Overview. Biolixir 2011, 1, 9-12.
5. A.S. Verma and **Anchal Singh**. Racial Discrimination done by HIV itself. Science India, 2011, December, 31-34.
6. A.S. Verma S. Saran, P. Mallick, and **Anchal Singh**. HIV treatment: Antiretroviral Drugs. Science India, 2012, 43-49.
7. **Anchal Singh**, D. Kumar, A. Yadav and A.S. Verma. Antibody Therapy and its adverse effects Science India, 2014, March, 6-12.
8. A.S. Verma and **Anchal Singh**. Bone Marrow Transplantation: A Possible Cure for HIV. Science India, 2013, December, 40-45.
9. A.S. Verma, N. Gupta, R. Bansal and **Anchal Singh**. NeuroAIDS. Science India, 2014, December, 12-15.

Invited Lectures

1. **Anchal Singh**. Anti-Selenium Glutathione Peroxidase: Novel Biomarker for Lymphatic Filariasis. International Conference on Microbial, Plant and Animal Research, March 29-31, 2012, Lakshmangarh, India.
2. **Anchal Singh**. Neurobiology of HIV. National conference on HIV and AIDS: Biology to Bedside, March 15-16, 2012, Amity University, NOIDA, India.
3. **Anchal Singh**, Parasitic infections in Tropical countries, September 20, 2016, UGC-HRDC, 62nd orientation course, Jadavpur University, Kolkatta, India.
4. **Anchal Singh**. Ayurvedic Treatment of Lymphatic Filariasis. Role of Basic Sciences in Translational Research in Ayurvedic Medicine, Oct 28-29, 2017, Dept. of Biochemistry, BHU,

Varanasi, , India. **(Best Lecture Award).**

5. **Anchal Singh.** Ayurvedic Treatment of Parasitic Diseases. National Workshop, on Opportunities and Challenges in Ayurveda and Medical Sciences: Global perspective, January 15-28, 2019, Dept. of Dravyaguna, BHU, Varanasi. India.
6. **Anchal Singh,** Parasitic Infections: An emerging threat to human health August 22, 2019, UGC-HRDC, 82nd orientation course, BHU, Varanasi, India.
7. **Anchal Singh,** Helminth parasites and human health, August 22, 2019, UGC-HRDC, 83nd orientation course, BHU, Varanasi, India.
8. **Anchal Singh.** Anti-filarial efficacy of Indian plants: *In silico* and *in vitro* approaches. International Conference on Current perspectives of Biochemistry in Health and Diseases, 11-12 January, 2020, Department of Zoology, Banaras Hindu University, Varanasi
9. **Anchal Singh** “Anti-filarial effects of Ocimum and its bioactive components: A proteomics approach”, “Ist Paramedicon” An International conference, 7-8 April 2022 Rajiv Gandhi South Campus, BHU, Varanasi.
10. **Anchal Singh** “Targeting the Lymphatic filarial antigens with plant derivatives: *In silico* and *ex vivo* Approaches”. Contemporary Multidisciplinary Issues in “Applied Science, Humanities, Agriculture, Animal Health & Production (ASHAA-2022), 14-15, November, 2022 Rajiv Gandhi South Campus, BHU, Varanasi.
11. **Anchal Singh** “Impact of Climatic Changes and Global warming on Vector Borne Diseases” in Existing climate change scenario and its Arising risk, 21-22, October, 2022 held at Sher-e-Kashmir University of Jammu, Jammu.
12. **Anchal Singh.** “Identification of promising nutraceuticals against filarial immune modulatory and antioxidant proteins: Insights gained from *in silico* and *ex vivo* studies” International Conference on Challenges & Opportunities in Food, Pharma & Biotechnology, September 15-17, 2022 at S.V.N. Educational Campus, Lucknow.
13. **Anchal Singh.** ‘Identification of promising nutraceuticals against filarial antigenic proteins” International Conference on Impact of Climate Change on Socio Economics and Ecological Transformation in Himalayan Region, September 21-22, 2023, held at Sher-e- Kashmir University of Jammu, Jammu **(Best Lecture Award).**
14. **Anchal Singh,** Ayushi Mishra, Vipin Kumar, Sunil Kumar ‘Anti-filarial efficacy of *Ocimum sanctum*: Implications in drug-targeting and designing’ The 3rd International Electronic Conference on Biomolecules, Apr 23–25 2024, online MDPI.
15. **Anchal Singh.** ‘Herbal treatment of Lymphatic Filariasis: prospects and challenges. Regional Workshop on Lymphatic Filariasis jointly organized by ICMR Vector Control Research Centre, Puducherry & Women’s Collective Forum, Delhi, Varanasi June 9 , 2025, India.
16. **Anchal Singh.** Designing of a novel multi-epitope cocktail vaccine candidate for Lymphatic Filariasis: Immunomics, HRAMS, Computational biology, and Molecular Dynamics approaches. 33rd National Congress on Parasitology on Recent Advances in Parasite Biology and Drug Discovery is jointly organized by the CSIR-Central Drug Research Institute, Lucknow in association with the Indian Society for Parasitology (ISP), 26-28 November, 2025.

Presentations in Conferences

1. **Anchal Singh** and S. Rathaur; Selenium dependent Glutathione Peroxidase in *Setaria cervi* a bovine filarial parasite. 3rd Global Meet on Parasitic Diseases, Bangalore, India, 2004.
2. A.S. Verma, **Anchal Singh** and P.D. Dwivedi. NeuroAIDS in Indian Scenario. Biotechnology and Microbiology in Human Welfare: The Indian Scenario at MITS, Lakshmangarh, Rajasthan, India, 2009.
3. A.S. Verma, U.P. Singh, S. Agrahari, S. Rastogi and **Anchal Singh**. NeuroAIDS: An Upcoming Health Concern. International Conference on Emerging Frontiers and Challenges in HIV/AIDS Research, Feb. 5-8, 2011, Mumbai.
4. Mishra A, Kumar V, **Anchal Singh**. Anti-tumor effect of N-acetylcysteine (NAC) supplemented ascites fluid adsorbed over Protein-A containing *Staphylococcus aureus* Cowan-I. 8th International Translational Cancer Research Conference on Role of Inflammation and immune system for cancer prevention and Treatment (TCR 2020), 13-16 February, 2020.
5. **Anchal Singh**, R. Pal and A.S. Verma, Bone Marrow Transplantation: A Novel Treatment for HIV Seropositives. International Conference on Anti-microbial resistance novel drug discovery and development: Challenges and Opportunities” March 2-3, 2015, New Delhi, India.
6. **Anchal Singh**. Role of DNaK heat shock system in pathogenesis of *S. aureus*. Interdisciplinary research in Life Sciences: Current scenario and future directions, DBT- ISLS, BHU, Nov 12-13, 2017, India.
7. **Anchal Singh** and A.S. Verma. Ayurveda Cure For Lymphatic Filariasis. 86th Annual Conference on Society of Biological Chemists (SBC-2017) on Emerging Discoveries in Health and Agricultural Sciences, Delhi, Nov 16-19, 2017, India.
8. **Anchal Singh** and A.S. Verma. Role of Media in Lymphatic Filariasis-Awareness. National Seminar on Media and Contemporary Indian Society: Issues and Challenges, Chandauli, December 3-4, 2017, India.

Professional Workshops

1. UK-India Newton Bhabha Researcher links Workshop, organized by University of East London and Jadavpur University, Kolkata, India from September 4-7, 2018.
2. "I - CARE Workshop to develop Faculty as Primary Counselors for students, organized by BHU, Varanasi, India, November 10, 2023.
3. Nurturing Future Leadership Program (NFLP) under the aegis of Malaviya Mission Teachers Training Programme (MMTTP), Ministry of Education, Government of India organized by Indian Institute of Management– Kashipur (IIMK) from 14th - 18th April 2025.
4. FLY Professional from Competitiveness Mindset Institute, BHU, Varanasi, India from December 15-19, 2024.

Participation in Conferences

1. **Anchal Singh**, S. Gupta and S. Rathaur; Identification of Glutathione Peroxidase in *Setaria*

- cervi*. Indian Society of Parasitology, Bareilly, India, 2002.
2. E. Srikanth, S. Srivastava, **Anchal Singh**, Y. Srivastava and S. Rathaur; Collagenase like Cysteine Protease in *Setaria cervi*: Identification, Purification and Characterization. Proceedings of National Conference on Parasitic Diseases, Bangalore, 2007, 88.
 3. S. Srivastava, E. Srikanth, **Anchal Singh**, C. Ray and S. Rathaur; Identification of potential antigens and their role in Filarial Diagnosis. Proceedings of National Conference on Parasitic Diseases, Bangalore, 2007, 64.
 4. A.S. Verma, P.D. Dwivedi, U.P. Singh and **Anchal Singh**. NeuroAIDS, neurotoxicity and HIV vpr. 30th Annual Conference of Society of Toxicology, India at Hamdard University, New Delhi, India, 2010.
 5. T. Johhansson, **Anchal Singh**, K. Singh and V.K. Singh. Expression Pattern and Significance of Methionine Sulfoxide Reductases in *Staphylococcus aureus*. American Society of Microbiologists, New Orleans, USA, May 21-24, 2011.
 6. A.S. Verma, U.P. Singh, S. Agrahari, S. Rastogi, and **Anchal Singh**. NeuroAIDS: An Upcoming Health Concern. International Conference on Emerging Frontiers and Challenges in HIV/AIDS Research, Mumbai, Feb. 5-8, 2011, India.
 7. A.S. Verma, S. Rastogi, S. Agrahari and **Anchal Singh**. NeuroAIDS and Omics. International Conference and Exhibition on Proteomics & Bioinformatics, Hyderabad, June 6-8 2011, India.
 8. A.S. Verma and **Anchal Singh**. NeuroAIDS: A Health Concern. National Conference on Advancement in Convergence of Technologies, Manesar, September 8-9, 2011, India.
 9. A.S. Verma and **Anchal Singh**. Lymphatic filarial diagnosis: Challenges and Milestones. National Conference on Advancement in Convergence of Technologies, Manesar, September 8-9, 2011, India.
 10. A.S. Verma and **Anchal Singh**. NeuroAIDS in Current Perspective. 6th Biyani's International Conference-2011 (BICON-11) Sept 19-22, Jaipur, 2011, India.
 11. A.S. Verma, P. Mallick, M. Chaudhary and **Anchal Singh**. NeuroAIDS: Indian Perspective. 2nd Biennial Conference of Indian Academy of Science and Nature, Nov 30-Dec 1, 2011, Agra, India.
 12. A.S. Verma, S. Rastogi, S. Agrahari and **Anchal Singh**. NeuroAIDS and Omics. International Conference and Exhibition on Proteomics & Bioinformatics, June 6-8 2011, Hyderabad, India.
 13. A.S. Verma and **Anchal Singh**. NeuroAIDS: Role of Virotoxins. International Conference on Microbial, Plant and Animal Research March 29-31, 2012, Lakshmangarh, India.
 14. **Anchal Singh** and S. Rathaur. Anti-Selenium Glutathione peroxidase: Novel Biomarkers for Lymphatic filariasis. International Conference on Microbial, Plant and Animal Research March 29-31, 2012, Lakshmangarh, India.
 15. A.S. Verma, S. Sharan, and **Anchal Singh**. NeuroAIDS: Should We Worry About? National Conference on Role of New Technologies in Conservation of Environment, March 23-24, 2012, Rewa, India.
 16. A.S. Verma and **Anchal Singh**. NeuroAIDS, Neurotoxicity and Blood Brain Barrier. HIV and AIDS: Biology to Bedside, NOIDA, March 15-16, 2012, India.
 17. A. S. Verma and **Anchal Singh**. NeuroAIDS: Do We Know its Impact? West Bengal State Science & Technology Congress, Siliguri, Feb 28, 2015, India.

18. **Anchal Singh** and A.S. Verma. Role of Matrix Metalloproteinases in Lymphatic Filariasis etiology and progression. 43rd Immunocon, February 16-18, 2017, Gitam University, Vishakhapatnam, India.
19. **Anchal Singh** and A.S. Verma. Natural product For Lymphatic Filariasis Treatment International Conference on Nutraceuticals and Chronic Diseases, Sept 1-3, 2017, Goa, India.
20. A.S. Verma, P. Mallick and **Anchal Singh**. NeuroAIDS: An upcoming health issue. International conference on Trends in Biochemical & Biomedical Research, February 13-15, 2018, B.H.U. India.
21. A.S. Verma and **Anchal Singh**. NeuroAIDS and HIV virotoxins: B17. 7th Annual World Congress of Infectious Diseases, July 12-14, 2018, Bangkok, Thailand.
22. Mishra A, Kumar V, **Anchal Singh**. Active components of herbal plants as anti-filarial agents: An *in silico* approach. Indo-US Conference on Bioengineering and Regenerative Medicine, 27-29 February, 2020, IIT BHU.
23. Kumar V, Mishra A, **Anchal Singh**. Targeting the HIV-1 Tat protein and Human Tat protein complex, Indo-US Conference on Bioengineering and Regenerative Medicine, 27-29 February, 2020, IIT BHU.
24. Tripti Singh, Sunil Kumar, Shivani Sharma and **Anchal Singh**, Untargeted Serum Metabolomics to identify novel therapeutic targets of Lymphatic Filariasis, International Conference on Impact of Climate change on Socio-Economics and Ecological Transformation in Himalayan Region, Kashmir, India, 21-22 September, 2023.
25. Sunil Kumar, Shivani Sharma, Tripti Singh and **Anchal Singh**, Designing of a multi-epitope vaccine for Lymphatic Filariasis: An *in-silico* approach International Conference on Impact of Climate change on Socio-Economics and Ecological Transformation in Himalayan Region, Kashmir, India, 21-22 September, 2023.
26. Shivani Sharma, Tripti Singh, Sunil Kumar and **Anchal Singh**, Filarial Heat Shock Proteins: Role in pathogenesis and persistence, International Conference on Impact of Climate change on Socio-Economics and Ecological Transformation in Himalayan Region, Kashmir, India, 21-22 September, 2023.
27. Sunil Kumar and **Anchal Singh**, Identification of novel molecular candidates against filarial antioxidant proteins through comprehensive computational approaches and *in-vitro* studies of *Centritherum anthelminticum*, 8th Institute Day, Banaras Hindu University, Varanasi, India, 18 December 2023.
28. Sunil Kumar and **Anchal Singh** Mining Filarial Proteomes to Understand Host Specificity and Immunity, 48th Annual Conference of Indian Immunology Society, BHU, 8-9 July, 2022.
29. Tripti Singh, Sunil Kumar, Shivani Sharma and **Anchal Singh**, Untargeted Serum Metabolomics to identify novel therapeutic targets of Lymphatic Filariasis. International Conference on Impact of Climate change on Socio-Economics and Ecological Transformation in Himalayan Region, Kashmir, India, 21-22 September, 2023.
30. Sunil Kumar, Shivani Sharma, Tripti Singh and **Anchal Singh**, Designing of a multi-epitope vaccine for Lymphatic Filariasis: An *in-silico* approach International Conference on Impact of Climate change on Socio-Economics and Ecological Transformation in Himalayan Region, Kashmir, India, 21-22 September, 2023.

31. Shivani Sharma, Tripti Singh, Sunil Kumar and **Anchal Singh**, Filarial Heat Shock Proteins: Role in pathogenesis and persistence (International Conference on Impact of Climate change on Socio-Economics and Ecological Transformation in Himalayan Region, Kashmir, India, 21-22 September, 2023).
32. Shivani Sharma, Amit Kumar Singh, Tripti Singh, Sunil Kumar, and **Anchal Singh**, Field-Based Assessment of Lymphatic Filariasis Transmission Dynamics and Intervention Outcomes in Varanasi District, 33rd National Congress on Parasitology on Recent Advances in Parasite Biology and Drug Discovery is jointly organized by the CSIR-Central Drug Research Institute, Lucknow in association with the Indian Society for Parasitology (ISP), 26-28 November, 2025.
33. Tripti Singh, Shivani Sharma, Sunil Kumar, and **Anchal Singh**, Biochemical profiling and untargeted metabolomics in bancroftian microfilaremic cases, 33rd National Congress on Parasitology on Recent Advances in Parasite Biology and Drug Discovery is jointly organized by the CSIR-Central Drug Research Institute, Lucknow in association with the Indian Society for Parasitology (ISP), 26-28 November, 2025.