

Curriculum Vitae

Brij Bhushan PhD

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Narrative Report

I am Brij Bhushan, a dedicated scientist specializing in microbiome metagenomics and metabolomics. As a postdoctoral associate at NYU Abu Dhabi, I enhance my skills in metagenomics data analysis. Previously, at Brigham and Women's Hospital and Harvard Medical School, I explored predictors of infant and maternal health in breastfeeding outcomes using multi-omics approaches. My academic journey includes an M.S. from Latrobe University, Australia, and a Ph.D. from DRDO, India. Outside the lab, I enjoy experimenting in the kitchen, playing cricket, and traveling, enriching my life with diverse experiences that fuel my passion for science and community engagement.

Education:

2008	B.Tech. Biotechnology	SHUATS, (Formerly AAI), India
2012	M.S. Biotechnology and Bioinformatics	Latrobe University, Australia
2021	Ph.D. Life Science (Supervisor: Dr. Lilly Ganju)	DIPAS-DRDO, Bharathiar University, India

Postdoctoral Research Fellow:

06/2021-02/2024	Postdoctoral Fellow Pediatric Newborn Medicine (Supervisor: Dr. Sarbattama Sen)	Brigham and Women's Hospital, Harvard Medical School, USA
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Postdoctoral Associate:

02/2024- Till date	Postdoctoral Associate, Genetic Heritage Group (Supervisor: Dr. Aashish Jha)	New York University, Abu Dhabi
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Other Professional Positions:

2015	Indian Immunological Society (IIS)	Life-time Member
2015	Indian Sciences Congress. (ISC)	Life-time Member
2016	Association of Polar Early Career Scientists (APECS)	Member
2022	Post-Doctoral Association, BWH	Mentor
2023	American Society of Nutrition	Member

Honors and Prizes:

2015	Member	34 th Indian Scientific Expedition to Antarctica	Scholarly Achievement
2016	Best Paper	During Immunocon at Geetam University, India Ministry of Earth Sciences, Govt. of India	Scholarly Award
2004	President Award Achievement	Bharat Scouts and Guides	Social Service

Report of Regional, National and International Invited Teaching and Presentations

“No presentations below were sponsored by 3rd parties/outside entities”

National

2015 Ship Journey and Antarctic environment induces alteration in oral micro-flora and changes in inflammatory agents (Selected Oral presentation) in Immunocon-2016, Vishakhapatnam, India.

International

2016 Immunity against *Pasteurella multocida* in animals vaccinated with inactivated *Pasteurella multocida* and herbal adjuvant ‘DIP-HIP (Selected Oral Presentation) in International Congress of Immunology-2016, Melbourne, Australia.

2023 Poster presentation “Associations of Maternal Body Mass Index with Human Milk Metabolome in Exclusively Breastfeeding Rural Bangladeshi Women.” in Nutrition 2023, Boston, United States.

2023 Poster presentation “Associations of Human Milk Metabolomics and Infant Growth in Rural Bangladesh.” in Nutrition 2023, Boston, United States.

Report of Publications

Peer reviewed scholarship in print or other media:

Research Investigations

1. Srivastava, A.K., **Bhushan, B.**, Eslavath, M.R., Gupta, H., Chanda, S., Singh, V.V., Singh, S.N., Kumar, B., Varshney, R. and Ganju, L., 2024. Alterations in human health parameters during stressful ship voyage to Antarctica: effects of probiotics intervention. *Polar Biology*, pp.1-12.
2. **Bhushan, B.**, Eslavath, M.R., Yadav, A.P., Srivastava, A.K., Reddy, M.P.K., Norboo, T., Kumar, B., Singh, S.B. and Ganju, L., 2021. Metagenomic sequencing reveals altered gut microbiota of sojourners at high altitude: a longitudinal study. *Journal of Proteins and Proteomics*, pp.1-18.
3. Srivastava, A.K., Rohil, V., **Bhushan, B.**, Eslavath, M.R., Gupta, H., Chanda, S., Kumar, B., Varshney, R. and Ganju, L., 2021. Probiotics maintain the gut microbiome homeostasis during the Indian Antarctic expedition by ship. *Scientific reports*, 11(1), pp.1-14.

4. Kumari, M., **Bhushan, B.**, Eslavath, M.R., Srivastava, A.K., Meena, R.C., Varshney, R. and Ganju, L., 2023. Impact of high altitude on composition and functional profiling of oral microbiome in Indian male population. *Scientific Reports*, 13(1), p.4038.
5. Kumari, M., **Bhushan, B.**, Sharma, D., Ganju, L., Varshney, R., & Meena, R. (2022). Gut Microbiome and COVID-19 Role of Probiotics on Gut Lung Axis. *Defence Life Science Journal*, 7(2), 131-145.
6. Kumari, D., Singh, S., Kumari, M., Gupta, H., Chauhan, D., Singh, K., Eslavath, M.R., **Bhushan, B.**, Dogra, V., Bargotyia, M. and Bhattar, S., 2023. Flow cytometry profiling of cellular immune response in COVID-19 infected, recovered and vaccinated individuals. *Immunobiology*, p.152392.
7. **Bhushan, B.**, Upadhyay, D., Sharma, U., Jagannathan, N., Singh, S.B. and Ganju, L., 2021. Urine metabolite profiling of Indian Antarctic Expedition members: NMR spectroscopy-based metabolomic investigation. *Heliyon*, 7(5), p.e07114.
8. **Bhushan, B.**, Tanwar, H., Eslavath, M.R., Singh, S.B., Kumar, B. and Ganju, L., 2021 Impact of the harsh Antarctic environment on mucosal immunity. *Antarctic Science*, pp.1-9.
9. **Bhushan, B.**, Prabhakar, A., Yadav, A.P., Ashraf, M.Z., Singh, S.B. and Ganju, L., 2019. Activation of platelets and inflammatory cytokines in male participants of an Indian Antarctic expedition. *Polar Science*, 19, pp.146-150.
10. **Bhushan, B.**, Tanwar, H., Dogra, V., Singh, S.B. and Ganju, L., 2021. Investigation of complement system activation and regulation during the Indian Antarctic expedition. *Polar Science*, p.100699.
11. **Bhushan, B.**, Yadav, A.P., Singh, S.B. and Ganju, L., 2019. Diversity and functional analysis of salivary microflora of Indian Antarctic expeditionaries. *Journal of oral microbiology*, 11(1), p.1581513.
12. Tanwar, H., Yadav, A.P., **Brijbhushan**, Sweta., and Singh, S.B., 2016. Immunity against *Pasteurella Multocida* in Animals Vaccinated with Inactivated *Pasteurella Multocida* and Herbal Adjuvant 'DIP-HIP.' *J Vaccines Immun* 2 (1): 010, 14(010).

PhD Thesis:

1. **Bhushan B.**, The study of interaction between microbiome, immunity and transcriptome of Indian Antarctica expedition members, PhD thesis, DIPAS-DRDO, Bharathiar University, India.