

## Brief Profile

<b>Name</b>	Dr. Ram Das
<b>Current Designation</b>	Scientist E
<b>Research Discipline</b>	Microbiology and Molecular Biology
<b>Department / Division</b>	Protein Biochemistry
<b>Date of joining the current post</b>	01 <sup>st</sup> July 2024
<b>Date of joining ICMR</b>	24 <sup>th</sup> April 1997
<b>Official E-mail ID</b>	<a href="mailto:ramdas.icmr.nimr@gov.in">ramdas.icmr.nimr@gov.in</a>
<b>Educational Qualification</b>	Ph.D.
<b>Research experience (in years):</b>	27 Years
<b>Research Interest/Thrust Areas</b>	
Molecular diagnosis of <i>Plasmodium</i> species, molecular genotyping of <i>Plasmodium</i> malaria parasites and molecular basis of relapse <i>P. vivax</i> malaria	
<b>Number of projects handled as:</b>	
Principal Investigator - 7	
Co-Principal Investigator - 15	
Co-investigator- 7	
<b>Number of doctorate / post-doc students mentored</b>	
As Guide -	
As Co-guide - 2	
<b>List of significant publications (Please give the details of the publications in APA format)</b>	
<ol style="list-style-type: none"> <li><b>Das, R.</b>, Vashisht, K., Savargaonkar, D., Mercy Aparna, L. L., Nayak, A., &amp; Pandey, K. C. (2024). Genetic diversity of the <i>PvMSP-3α</i> gene in <i>Plasmodium vivax</i> isolates circulating in the National Capital Region (NCR) of India. <i>Parasite Epidemiology and Control</i>, 26(e00362), e00362. doi:10.1016/j.parepi.2024.e00362.</li> <li><b>Das, R.</b>, Vashisht, K., Kori, L., Singh, K., Kumar, G., Hasan, I., Pandey, K. C. (2024). Detection of the infective <i>Plasmodium falciparum</i> gametocytes by RT-qPCR assay from a malaria-endemic region of Northeastern India. <i>Frontiers in Tropical Diseases</i>, 5. doi:10.3389/fitd.2024.1366462</li> <li>Kumar, J., Kumar, A., Gupta, Y., Vashisht, K., Kumar, S., Sharma, A., <b>Das, R.</b>, Pandey, K. C. (2024). A cub and sushi domain-containing protein with esterase-like activity confers insecticide resistance in the Indian malaria vector <i>Anopheles stephensi</i>. <i>The Journal of Biological Chemistry</i>, 300(10), 107759. doi:10.1016/j.jbc.2024.107759</li> <li><b>Das, R.</b>, Vashisht, K., &amp; Pandey, K. C. (2023). A novel multiplex qPCR assay for clinical diagnosis of non-human malaria parasites-<i>Plasmodium knowlesi</i> and <i>Plasmodium cynomolgi</i>. <i>Frontiers in Veterinary Science</i>, 10, 1127273. doi:10.3389/fvets.2023.1127273</li> <li>Lata, S., Kumari, S., <b>Das, R.</b>, Pasi, S., &amp; Dhiman, R. C. (2021). Typical and atypical cutaneous leishmaniasis in Himachal Pradesh (India). <i>Heliyon</i>, 7(6), e07282. doi:10.1016/j.heliyon.2021.e07282</li> <li>Vashisht, K., Srivastava, S., Vandana, V., <b>Das, R.</b>, Sharma, S., Bhardwaj, N., Pandey, K. C. (2022). Cyclic constrained immunoreactive peptides from crucial <i>Plasmodium falciparum</i> proteins: potential implications in malaria diagnostics. <i>Translational Research: The Journal of Laboratory and Clinical Medicine</i>, 249, 28–36. doi:10.1016/j.trsl.2022.06.008</li> </ol>	

7. Early detection, E., Saunderson, P., Matsuoka, M., Cole, S. T., **Das, R.**, Kai, M., Suffys, P., Nanba, Y. (2018). Antimicrobial resistance in leprosy: results of the first prospective open survey conducted by a WHO surveillance network for the period 2009–15. *Clinical Microbiology and Infection: The Official Publication of the European Society of Clinical Microbiology and Infectious Diseases*, 24(12), 1305–1310. doi:10.1016/j.cmi.2018.02.022
8. Mittal, M., Biswas, S. K., Singh, V., Arela, N., Katoch, V. M., **Das, R.**, Mohanty, K. K. (2018). Association of Toll like receptor 2 and 9 gene variants with pulmonary tuberculosis: exploration in a northern Indian population. *Molecular Biology Reports*, 45(4), 469–476. doi:10.1007/s11033-018-4182-z
9. Savargaonkar, D., Sinha, S., Srivastava, B., Nagpal, B. N., Sinha, A., Shamim, A., **Das, R.**, Valecha, N. (2018). An epidemiological study of dengue and its coinfections in Delhi. *International Journal of Infectious Diseases: IJID: Official Publication of the International Society for Infectious Diseases*, 74, 41–46. doi:10.1016/j.ijid.2018.06.020
10. Chauhan, D. S., Sharma, R., Parashar, D., **Das, R.**, Sharma, P., Singh, A. V., ... Katoch, V. M. (2018). Rapid detection of ethambutol-resistant *Mycobacterium tuberculosis* in clinical specimens by real-time polymerase chain reaction hybridisation probe method. *Indian Journal of Medical Microbiology*, 36(2), 211–216. doi:10.4103/ijmm.IJMM\_14\_304
11. Kumar, D., Kumar, G., **Das, R.**, & Agrawal, V. (2018). Strong larvicidal potential of silver nanoparticles (AgNPs) synthesized using *Holarrhena antidysenterica* (L.) Wall. bark extract against malarial vector, *Anopheles stephensi* Liston. *Process Safety and Environmental Protection: Transactions of the Institution of Chemical Engineers, Part B*, 116, 137–148. doi:10.1016/j.psep.2018.02.001
12. Kumar, D., Kumar, G., **Das, R.**, Kumar, R., & Agrawal, V. (2018). In vitro elicitation, isolation, and characterization of conessine biomolecule from *Holarrhena antidysenterica* (L.) Wall. callus and its larvicidal activity against malaria vector, *Anopheles stephensi* Liston. *Environmental Science and Pollution Research International*, 25(7), 6783–6796. doi:10.1007/s11356-017-1038-3
13. Aparna L, M., S, A., I, S., & **Das, R.** (2017). Assessment of sputum quality and its importance in the rapid diagnosis of pulmonary tuberculosis. *Archives of Clinical Microbiology*, 08(04). doi:10.4172/1989-8436.100053
14. **Das, R.**, Dhiman, R. C., Savargaonkar, D., Anvikar, A. R., & Valecha, N. (2016). Genotyping of *Plasmodium vivax* by minisatellite marker and its application in differentiating relapse and new infection. *Malaria Journal*, 15(1), 115. doi:10.1186/s12936-016-1139-3
15. **Das, R.**, Singh, A. V., Katoch, K., Vishwa, M., & Katoch, D. (2016). Mutations in *rpoB* gene and their association with Rifampicin-resistance levels in clinical isolates of *Mycobacterium tuberculosis*. *J. N. A. Lab. Res Biol.* 7, (4):107-111
16. Raizada, N., Sachdeva, K. S., Chauhan, D. S., Malhotra, B., Reddy, K., **Das, R.**, Dave, P. V., Dewan, P. K. (2014). A multi-site validation in India of the line probe assay for the rapid diagnosis of multi-drug resistant tuberculosis directly from sputum specimens. *PloS One*, 9(2), e88626. doi:10.1371/journal.pone.0088626
17. Chauhan, D.S. Sharma, R., **Das R, M.**, & Singh, K. (2016). VM Katoch Early Detection of multidrug resistance (MDR) *Mycobacterium tuberculosis* in a single tube within a single tube with in-house designed fluorescence resonance energy transfer (FRET) probes using real-time PCR. *Ind J Exp Biol*, 4, 229–236.
18. Raizada, N., Sachdeva, K. S., Malhotra, **Das, R.**, B., Thakur, R., Reddy, K., Chauhan, D. S., Paramasivan, P. K. (2015). Proficiency assessment mechanism for Line-Probe Assay testing for diagnosis of Multidrug-Resistant Tuberculosis in India. *Int J Pathol Clin Res*, 1.
19. Meghwani, M.K, Kumar, S., **Das, R.**, Gupta, R.K. (2013). Rapid Detection of Rifampicin Resistance in Sputum Samples using Indigenously Developed Molecular Probes and Comparison with Conventional MIC Method. January 2013. *J Adv Res Biol Sci* 5(1):19-22

20. Bharti, R., **Das, R.**, Sharma, P., Katoch, K., & Bhattacharya, A. (2012). MTCID: a database of genetic polymorphisms in clinical isolates of *Mycobacterium tuberculosis*. *Tuberculosis (Edinburgh, Scotland)*, 92(2), 166–172. doi:10.1016/j.tube.2011.12.001
21. Singh, V., Gaur, R., Mittal, M., Biswas, S. K., **Das, R.**, Girdhar, B. K., Mohanty, K. K. (2012). Absence of nucleotide-binding oligomerization domain-containing protein 2 variants in patients with leprosy and tuberculosis. *International Journal of Immunogenetics*, 39(4), 353–356. doi:10.1111/j.1744-313X.2012.01085.x
22. Natrajan, M., Katoch, K., Katoch, V. M., **Das, R.**, & Sharma, V. D. (2012). Histological diagnosis of early and suspicious leprosy by in situ PCR. *Indian Journal of Leprosy*, 84(3), 185–194. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/23484333>
23. **Das, R.** (2011). *Report of meeting on sentinel surveillance for drug resistance in Leprosy WHO, SEA-GLP-2012.4.*
24. Faujdar, J., Gupta, P., Natrajan, M., **Das, R.**, Chauhan, D. S., Katoch, V. M., & Gupta, U. D. (2011). *Mycobacterium indicus pranii* as stand-alone or adjunct immunotherapeutic in treatment of experimental animal tuberculosis. *Indian J Med Res*, 134, 696–703.
25. Lavania, M., Katoch, K., Sharma, R., Sharma, P., **Das, R.**, Gupta, A. K., ... Katoch, V. M. (2011). Molecular typing of *Mycobacterium leprae* strains from northern India using short tandem repeats. *The Indian Journal of Medical Research*, 133, 618–626. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/21727660>
26. Singh, M., Jadaun, G. P. S., Das, R., , Srivastava, K., Chauhan, V., Mishra, R., Katoch, V. M. (2011). Effect of efflux pump inhibitors on drug susceptibility of ofloxacin resistant *Mycobacterium tuberculosis* isolates. *The Indian Journal of Medical Research*, 133, 535–540. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/21623040>
27. Khare, S., Ahmed, N., Pant, S., & **Das, R.** (2010). Characterization and evaluation of heavy metal tolerance of bacterial species from soil of waste area near Riyan steel rolling mills, Muzaffarnagar, India. *Journal of Applied and Natural Science*, 2(1), 88–92. doi:10.31018/jans.v2i1.103
28. Narang, R., Narang, P., Jain, A. P., Mendiratta, D. K., Joshi, R., **Das, R.**, & Katoch, V. M. (2010). *Mycobacterium avium* bacteremia and dual infection with *Mycobacterium avium* and *Mycobacterium wolinskyi* in the gut of an Aids patient - first case report. *Indian J TubercI*, 57, 148–151.
29. Narang, R., Narang, P., Jain, A. P., Mendiratta, D. K., Joshi, R., **Das, R.** Lavania, M., Katoch, V. M. (2010). Disseminated disease caused by *Mycobacterium simiae* in AIDS patients: a report of three cases. *Clinical Microbiology and Infection: The Official Publication of the European Society of Clinical Microbiology and Infectious Diseases*, 16(7), 912–914. doi:10.1111/j.1469-0691.2009.03021.x
30. **Das, R.** (2009). *Surveillance for Drug Resistance in Leprosy. Report of the Workshop.* Paris, France, WHO, SEA-GLP-2010.2.
31. **Das, R.**, Gupta, P., Singh, P., Chauhan, D. S., Katoch, K., & Katoch, V. M. (2009). Association of mutations in rpsL gene with high degree of streptomycin resistance in clinical isolates of *Mycobacterium tuberculosis* in India. *The Indian Journal of Medical Research*, 129(1), 108–110. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/19287069>
32. Dave, S., Faujdar, J., Kumar, P., Gupta, P., **Das, R.**, Parasher, D., Katoch, V. M. (2009). Comparative growth pattern of multi drug resistance versus susceptible isolates of *Mycobacterium tuberculosis* in mice lungs. *The Indian Journal of Medical Research*, 130(1), 58–62. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/19700802>
33. Singh, M., Chauhan, D. S., Gupta, P., **Das, R.**, Srivastava, R. K., Upadhyay, P., ... Katoch, V. M. (2009). In vitro effect of fluoroquinolones against *Mycobacterium tuberculosis* isolates from Agra & Kanpur region of

- north India. *The Indian Journal of Medical Research*, 129(5), 542–547. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/19675382>
34. Parashar, Deepti, **Das, R.**, Chauhan, D. S., Sharma, V. D., Lavania, M., Yadav, V. S., ... Katoch, V. M. (2009). Identification of environmental mycobacteria isolated from Agra, north India by conventional & molecular approaches. *The Indian Journal of Medical Research*, 129(4), 424–431. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/19535838>
35. Garg, K. B., Ganguli, I., **Das, R.**, & Talwar, G. P. (2009). Spectrum of Lactobacillus species present in healthy vagina of Indian women. *The Indian Journal of Medical Research*, 129(6), 652–657. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/19692744>
36. Jadaun, G. P. S., **Das, R.**, Upadhyay, P., Chauhan, D. S., Sharma, V. D., & Katoch, V. M. (2009). Role of embCAB gene mutations in ethambutol resistance in Mycobacterium tuberculosis isolates from India. *International Journal of Antimicrobial Agents*, 33(5), 483–486. doi:10.1016/j.ijantimicag.2008.10.017
37. Lavania, M., Katoch, K., Singh, H., **Das, R.**, Gupta, A. K., Sharma, R., ... Katoch, V. M. (2007). Predominance of three copies of tandem repeats in rpoT gene of *Mycobacterium leprae* from Northern India. *Infection, Genetics and Evolution: Journal of Molecular Epidemiology and Evolutionary Genetics in Infectious Diseases*, 7(5), 627–631. doi:10.1016/j.meegid.2007.05.011
38. Chauhan, D. S., Sharma, V. D., Parashar, D., Chauhan, A., **Das, R.**, Singh, D., Singh, H. B. Katoch, V. M. (2007). Molecular typing of *Mycobacterium tuberculosis* isolates from different parts of India based on IS6110 element polymorphism using RFLP analysis. *The Indian Journal of Medical Research*, 125(4), 577–581. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/17598945>
39. Parashar, D., **Das, R.**, Sharma, V. D., & Chauhan, D. S. (2007). Katoch VM Pathogenic rapidly growing - *Mycobacterium manitobense* in the environment of Agra, north India. *Indian J Med Res*, 126, 230–232.
40. Jadaun, J., Agarwal, C., Sharma, H., Ahmed, Z., Upadhyay, P., **Das, R.**, Faujdar, J., Katoch, V. M. (2007). Detection of ethambutol MICs for Mycobacterium tuberculosis and Mycobacterium avium isolates by resazurium micrtiter assay. *J Antimicrob Chemo*, 60, 152–155.
41. Singh, P., Wesley, C., Jadaun, G. P. S., Malonia, S. K., **Das, R.**, Upadhyay, P., Katoch, V. M. (2007). Comparative evaluation of Löwenstein-Jensen proportion method, BacT/ALERT 3D system, and enzymatic pyrazinamidase assay for pyrazinamide susceptibility testing of *Mycobacterium tuberculosis*. *Journal of Clinical Microbiology*, 45(1), 76–80. doi:10.1128/JCM.00951-06
42. **Das, R.**, Katoch, K., Singh, G., Gupta, P., Malhotra, B., Garg, A., ... Vm, K. (2006). Association of mutations in embB locus with high degree of ethambutol-resistance in clinical isolates of *Mycobacterium tuberculosis* in Indian. *Curr Sci*, 91, 923–925.
43. Gupta, Pushpa, Jadaun, G. P. S., **Das, R.**, Gupta, U. D., Srivastava, K., Chauhan, A., ... Katoch, V. M. (2006). Simultaneous ethambutol & isoniazid resistance in clinical isolates of *Mycobacterium tuberculosis*. *The Indian Journal of Medical Research*, 123(2), 125–130. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/16575110>
44. Siddiqi, N., **Das, R.**, Pathak, N., Banerjee, S., Ahmed, N., Katoch, V. M., & Hasnain, S. E. (2004). *Mycobacterium tuberculosis* isolate with a distinct genomic identity overexpresses a tap-like efflux pump. *Infection*, 32(2), 109–111. doi:10.1007/s15010-004-3097-x
45. Srivastva, K., **Das, R.**, Gupta, P., Chauhan, D. S., Sharma, V. D., Singh, H. B., ... Katoch, V. M. (2004). Correlation of mutations detected by INNO-LiPA with levels of rifampicin resistance in *Mycobacterium tuberculosis*. *Indian J Med Res*, 120, 100–105.
46. Ahmed, N., Alam, M., Rao, K. R., Kauser, F., Kumar, N. A., **Das, R.**, Qazi, N. N., ... Gilman, R. H. (2004). Hasnain SE Molecular Genotyping of a Large, Multicentric Collection of Tubercle Bacilli Indicates Geographical Partitioning of Strain Variation and Has Implications for Global Epidemiology of *Mycobacterium tuberculosis*. *J. Clin. Microbiol*, 42, 3240–3247.

47. Natrajan, M., Katoch, K., Katoch, V. M., Sharma, V. D., Singh, D., **Das, R.**, & Chauhan, D. S. (2004). In situ hybridization in the histological diagnosis of early and clinically suspected leprosy. *International J Leprosy*, 72, 296–305.
48. Chauhan, D. S., Parashar, D., **Das, R.**, Sharma, V. D., & Katoch, V. M. (2004). Confirmation of identification of non-tuberculous mycobacterial isolates by using 16S rRNA sequencing. *J Immunol Immunopathology*, 6, 83–84.
49. Sharma, N., Gupta, P., **Das, R.**, Chauhan, D. S., Sharma, V. D., & Katoch, V. M. (2004). Molecular characterization of katG gene mutations in isoniazid resistant *Mycobacterium tuberculosis* isolates by automated DNA sequencing. *J Immunol. Immunopathology*, 6, 92–93.
50. **Das, R.**, Srivastava, K., Gupta, P., Sharma, V. D., Singh, D., Chauhan, D. S., ... Katoch, V. M. (2003). Comparison of Etest with MIC method on Lowenstein Jensen medium for susceptibility testing of *Mycobacterium tuberculosis*. *Cur Sci*, 85, 191–193.
51. Malhotra, B., Pathak, S., Vyas, L., Katoch, V. M., Chauhan, D. S., Singh, D., **Das, R.** (2002). Drug Susceptibility Profiles of *Mycobacterium tuberculosis* Isolates at Jaipur. *Indian J Med Microbiol*, 20, 76–78.
52. Singh, H. B., Chauhan, D. S., Singh, D., Das, R., Srivastva, K., Kumar, A., ... Sharma, V. D. (2002). Rapid Discrimination of Indian Isolates of *Mycobacterium tuberculosis* by Random Amplified Polymorphic DNA (RAPD) Analysis-A Preliminary Report. *Indian J Med Microbiol*, 20, 69–71.
53. Gupta, P., Katoch, V. M., Gupta, U. D., Chauhan, D. S., **Das, R.**, Singh, D., ... Singh, H. B. (2002). A preliminary report on characterization and identification of Non Tuberculous *Mycobacteria* (NTM) on the basis biochemical tests and protein/isoenzyme electrophoretic patterns. *Indian J Med Microbiol*, 20, 137–140.
54. Srivastva, K., **Das, R.**, Sharma, V. D., Singh, D., Singh, H. B., & Katoch, V. M. (2001). Relevance of degree of rifampicin resistance in *Mycobacterium tuberculosis*. *Ind J Med Microbiol*, 19, 36–39.
55. Gupta, U. D., Katoch, K., Sharma, R. K., **Das, R.** Singh, H. B., Natrajan, M., Singh, D., ... Katoch, V. M. (2001). Analysis of quantitative relationship between viability determination in leprosy by MFP, ATP bioluminescence and gene amplification assays. *Int J Leprosy*, 69, 328–334.
56. Siddiqi, N., Shamim, M., Amim, A., Chauhan, D. S., **Das, R.**, Srivastva, K., ... Hasnain, S. E. (2001). Typing of drug resistant isolates of *Mycobacterium tuberculosis* from India using IS 6110 element reveals substantive polymorphism. *Infection Genetics and Evolution*, 13, 1–8.
57. Dandapat, P., Verma, R., Vantakesn, K., Sharma, V. D., Singh, H. B., **Das, R.**, & Katoch, V. M. (n.d.). Rapid Characterizatio of *Mycobacterium bovis* by its lipid profiles by thin layer Chromatography. *Vet Microbiol*, 199, 145–151.
58. Katoch, K., Jain, S., Chauhan, D. S., Singh, D. S., **Das, R.**, Gupta, P., ... Singh, P. (2003). *Experience of detection and treatment of tuberculosis in a fixed area of Ghatampur* (Vol. 15, pp. 124–126). Kanpur, UP.

#### Achievements/Awards/Additional Information

- i. Life member of Indian Association of Leprologistes (IAL)
- ii. Life member of Indian Society for Malaria and Other Communicable Diseases
- iii. Member of IAMM