CURRICULUM VITAE

Name of the applicant:	VINAY KUMAR NANDICOORI
Father's Name	Mr. Vijayakumar Nandikur
Date of Birth	01/03/1969
Current Position & Address	Director, CSIR-Centre for Cellular & Molecular Biology Uppal Road, Hyderabad 500007 Telangana, INDIA Phone: 040-27160789, 040-27192534 Email: vinaykn@ccmb.res.in & vinaykn@nii.ac.in
Telephone	+91-40-27160789; 040-27192534 & +91-9891497516
Permanent Address:	A-12, National Institute of Immunology Aruna Asaf Ali Marg, New Delhi 110067 INDIA
Nationality	INDIAN
Marital Status	Married

Educational Qualification (from matriculation onward):

S. No.	Degree	Board/University	Division	Year of Passing	Subjects
1	Ph.D.	Indian Institute of Science, Bangalore, India	----	1999	Microbiology & Cell Biology
2	M.Sc.	Indian Institute of Technology Mumbai, INDIA.	First	1991	Biotechnology
3.	B.Sc	Andhra University, Visakhapatnam	First	1989	Chemistry, Physics & Mathematics

Academic Research Experience (from current to oldest):

S. No.	From	To	Name of the Organization	Position held
1	06/2021	Present	CSIR-Centre for Cellular and Molecular Biology	Director
2	07/2018	05/2021	National Institute of Immunology New Delhi, INDIA.	Staff Scientist VII
3	07/2012	07/2018	National Institute of Immunology New Delhi, INDIA.	Staff Scientist VI
4	07/2008	07/2012	National Institute of Immunology New Delhi, INDIA.	Staff Scientist V
5	07/2004	07/2008	National Institute of Immunology New Delhi, INDIA.	Staff Scientist IV

Professional training undergone:

Institution & Place	Position	Year
University of Virginia Charlottesville, USA.	Research Associate	Nov. 2000 to July 2004
Texas A & M University Texas, USA.	Research Associate	Oct. 1997 to Oct. 2000

Areas of Specilization:
Molecular and Cellular Biology, Microbiology and Biochemistry

Honors/ Awards/Recognitions received:

JC Bose Fellow (Aug 2019)
P.S. Sarma Memorial Award (2016)
Awarded Bill and Melinda Gates Foundation Global Health Travel Award (2010)
Awarded National Bioscience Award for Career Development (2010)
M Prof. B. K. Bachhawat International Travel Grant for Young Scientist (2011).
NASI-Scopus Young Scientist Award (2009)
Sreenivasaya Award for the Best Thesis, IISc, Bangalore, India (1999)
Senior Research Fellow- CSIR 1994-1997

Junior Research Fellow- CSIR 1992-1994
Department of Biotechnology Fellowship (1988-1990), India.

Academy Fellowships

Fellow, National Academy of Sciences (India), Delhi (2019)
Fellow, Indian Academy of Sciences (India), Bangalore (2018)
Fellow, The National Academy of Sciences (India), Allahabad, (2014)

FULL LIST OF PUBLICATIONS

Total publications	*72*
Peer-reviewed Research publications	*70*
Reviews	*2*
Book Chapter	*2*
Publications as independent investigator	*52*
Total number of citations	*2042 (Google Scholar)*
H-index	*29 (Google Scholar)*
i-10 index	*44 (Google Scholar)*

As a senior author / corresponding author- 32 publications including 2 reviews

1. Pal, S., Soni, V., Kumar, S., Jha, S.K., Medatwal, N., Rana, K., Yadav, P., Mehta, D., Jain, D., Sharma, P., Kar, R., Srivastava, A., Patil, V.S., Dasgupta, U., **Nandicoori, V.K.**, Bajaj, A (2021) A hydrogel-based implantable multidrug antitubercular formulation outperforms oral delivery. Nanoscale 13, 13225-30 doi: 10.1039/d0nr08806d.

2. Khan, M., Singha, B., Ali, F., Taunk, K., Rapole, S., Gourinath, S., & **Nandicoori, V.K**. (2021) Redox homeostasis in *Mycobacterium tuberculosis* is modulated by a novel actinomycetes-specific transcription factor. ***EMBO J*** **, e106111.**

3 Agarwal, M. K., Soni, V. K., Kumar, S., Singha, B. & **Nandicoori, V.K.** (2021) Unique C-terminal extension and interactome of *Mycobacterium tuberculosis* GlmU impacts its in vivo function and the survival of the pathogen. ***Biochem J*** **478, 2081-2099.**

4. Naz, S., Dabral, S., Nagarajan, S., Arora, D., Singh, L.V., Kumar, P., Singh, D., Kumar, D., Varshney, U. & **Nandicoori, V.K.** (2021) Compromised base excision repair pathway in Mycobacterium tuberculosis imparts superior adaptability in the host. ***Plos Pathogens*** 17 :e1009452. doi: 10.1371/journal.ppat.1009452.

5. Naz, S., Singh, Y. & **Nandicoori, V.K.** (2021) Deletion of serine/threonine protein kinase pknL from Mycobacterium tuberculosis reduces the efficacy of isoniazid and ethambutol. ***Tuberculosis***, 128:102066. doi: 10.1016/j.tube.2021.102066.

6. Khan, M.Z. & **Nandicoori, V.K.** (2021) Deletion of PknG abates reactivation of latent *Mycobacterium tuberculosis* in mice. ***Antimicrob. Agents Chemother*** doi: 10.1128/AAC.02095-20

7. Dubey, N., Khan, M.Z., Kumar, S., Sharma, A., Das, L., Bhaduri, A., Singh, Y. & **Nandicoori, V.K** (2021) *Mycobacterium tuberculosis* PPiA interacts with host integrin receptor to exacerbate disease progression. ***J. Infect. Dis.*** doi: 10.1093/infdis/jiab081

8. Singhal, A., Virmani, R., Naz, S., Arora, G., Gaur, M., Kundu, P., Sajid, A., Misra, R., Dabla, A., Kumar, S., Nellissery, J., Molle, V., Gerth, U., Swaroop, A., Sharma, A., **Nandicoori, V.K. &** Singh, Y., (2020) Methylation of two-component response regulator MtrA in mycobacteria negatively modulates its DNA binding and transcriptional activation. ***Biochem J,*** **477**, 4473-4489

9. Bhaskar, A., Kumar, S., Khan, M.Z., Singh, A., Dwivedi, V.P. & **Nandicoori, V.K.** (2020) Host Sirtuin 2 as an Immunotherapeutic Target against Tuberculosis. ***eLife*** Jul 22;9:e55415. doi: 10.7554/eLife.55415

10. Lochab, S., Singh, Y., Sengupta, S. & **Nandicoori, V. K**. (2020) *Mycobacterium tuberculosis* exploits host ATM kinase for survival advantage through SecA2 secretome. ***eLife*** Mar 30;9. pii: e51466. doi: 10.7554/eLife.51466.
Work highlighted in https://scisoup.org/article/2020/a-novel-adjunctive-host-directed-therapy-for-the-treatment-of-TB.html

11 Kaur, P., Rausch, M., Malakar, B., Watson, U., Damle, N. P., Chawla, Y., Srinivasan, S., Sharma, K., Schneider, T., Jhingan, G. D., Saini, D., Mohanty, D., Grein, F & **Nandicoori, V. K**. (2019) LipidII Interaction with specific residues of *Mycobacterium tuberculosis* PknB extracytoplasmic domain governs its optimal activation. ***Nature Communications*** **10, 1231** doi: 10.1038/s41467-019-09223-9.
Among the 6 finalists for The Inspiring Science Award 2020 for the best published scientific paper in the Life Sciences from India.

12 Jain, P., Malakar, B., Khan, M.Z., Lochab, S., Singh, A. & **Nandicoori, V. K.** (2018) Delineating FtsQ mediated regulation of cell division in Mycobacterium tuberculosis. ***J. Biol. Chem***. 293(32):12331-12349.
Work highlighted in multiple forums:
https://vigyanprasar.gov.in/isw/find_protein_role_in_TB_bacteria_growth_story.html

13 Khan, M.Z., Kaur, P. & **Nandicoori, V. K.** (2018) Targeting the Messengers: Serine/Threonine Protein Kinases as Potential Targets for Antimycobacterial Drug Development. ***IUBMB life*****, 70,** 889-904.

14. Arora, D., Chawla, Y., Malakar, B., Singh, A. & **Nandicoori, V.K.** (2018) The transpeptidase PbpA and non-canonical transglycosylase RodA of *Mycobacterium tuberculosis* play important roles in regulating bacterial cell lengths. ***J. Biol. Chem.*** **293,** 6497-6516.

15. Khan, M.Z., Bhaskar, A., Upadhyay, S., Kumari, P., Ramani, R.S., Jain, P., Singh, A., Kumar, D., Bhavesh, N.S. & **Nandicoori, V. K.** (2017) Protein kinase G confers survival advantage to Mycobacterium tuberculosis. ***J. Biol. Chem.*** **292,** 16093-16108.

16. Sharma, A. K., Arora, D., Singh, L.K., Gangwal, A., Sajid, A., Molle, V., Singh, Y. & **Nandicoori, V. K.** (2016) Serine/threonine protein phosphatase PstP of *Mycobacterium tuberculosis* is necessary for accurate cell division and survival of pathogen. ***J. Biol. Chem.*** **291**, 24215-24230

17. Jhingan, G. D., Kumari, S., Jamwal, S. V., Kalam, H., Arora, D., Jain, N., Kirshnakumar, L., Samal, A., Rao, K. V. S., Kumar, D. & **Nandicoori, V. K.** (2016) Comparative proteomic analyses of avirulent, virulent and clinical strains of *M. tuberculosis* identifies strain-specific patterns. ***J. Biol. Chem.*** **291**, 14257-73

18. Soni, V., Upadhyay, S., Suryadevara, P., Samla, G., Singh, A., Yogeeswari, P., Sriram, D. & **Nandicoori, V. K.** (2015) Depletion of *M. tuberculosis* GlmU from infected murine lungs effects the clearance of the pathogen. ***Plos Pathogens*** **11**, e1005235.
Among the 6 finalists for The Inspiring Science Award 2017 for the best published scientific paper in the Life Sciences from India.

19. Nagarajan, S. N., Upadhyay, S., Chawla, Y., Khan, S., Naz, S., Subramanian, J., Gandotra, S. & **Nandicoori, V. K.** (2015) Protein kinase A (PknA) of *Mycobacterium tuberculosis* is independently activated and is critical for growth in vitro and survival of the pathogen in the host. ***J Biol Chem.*** **290,** 9626-9645.

20. Rajanala, K., Sarkar, A., Jhingan, G. D., Priyadarshini, R., Jalan, M., Sengupta, S. & **Nandicoori, V. K.** (2014) Phosphorylation of nucleoporin Tpr governs its differential localization and is required for its mitotic function. ***J Cell Science.*** **127,** 3505-3520.

21. Chawla, Y., Upadhyay, S., Khan, S., Nagarajan, S. N., Forti, F. & **Nandicoori, V.K.** (2014) Protein Kinase B (PknB) of *Mycobacterium tuberculosis* is essential for growth of the pathogen *in vitro* as well as for survival within the host. ***J Biol Chem.*** **289**, 13858 – 13875.

22. Parikh, A., Kumar, D., Chawla, Y., Kurthkoti, K., Khan, S., Varshney, U. & **Nandicoori, V. K.** (2013) Development of new generation of vectors for gene expression, gene replacement, and protein-protein interaction studies in mycobacteria. ***Appl Environ Microbiol.*** 79, 1718-1729.

23. Jagtap, P. K. A., Soni, V., Vithani, N., Jhingan, G.D., Bais, V. S., **Nandicoori, V. K.** & Prakash, B. (2012) Substrate bound crystal structure reveals feature unique to *Mycobacterium*

tuberculosis N-acetyl glucosamine-1-phosphate uridyltransferase and a catalytic mechanism for acetyltransfer. ***J. Biol. Chem.*** 287, 39524-37.

24. Rajanala, K. & **Nandicoori, V.K.** (2012) Localization of nucleoporin Tpr to the nuclear pore complex is essential for Tpr mediated regulation of the export of unspliced RNA. ***Plos One*** 7, e29921.

25. Chakraborti, P.K., Matange, N., **Nandicoori, V. K.,** Singh, Y., Tyagi, J.S. & Visweswariah, S.S. (2011) Signalling mechanisms in Mycobacteria" has been accepted for publication in Tuberculosis. ***Tuberculosis***, 91, 432-440 (Review).

26. Khan, S., Nagarajan, S. N, Parikh, A., Samantaray, S., Singh, A., Kumar, D., Roy, R.P., Bhatt, A. & **Nandicoori, V.K.** (2010) Phosphorylation of enoyl-ACP reductase InhA impacts mycobacterial growth and survival. ***J. Biol. Chem.*** 285, 37860-37871.

27. Tiwari, D., Singh, R. K., Goswami, K., Verma, S. K., Prakash, B. & **Nandicoori, V. K.** (2009) Key residues in Mycobacterium tuberculosis protein kinase G play a role in regulating kinase activity and survival in the host. ***J Biol. Chem.*** 284, 27467-27479.

28. Kumar, P., Kumar, D., Parikh, A., Rananaware, D., Gupta, M., Singh, Y. & **Nandicoori, V. K.** (2009) The Mycobacterium tuberculosis protein kinase K modulates activation of transcription from the promoter of mycobacterial monooxygenase operon through phosphorylation of transcriptional regulator VirS. ***J. Biol. Chem.*** 284, 11090-11099.

29. Parikh, A., Verma, S.K. Khan,S., Prakash, B. & **Nandicoori, V. K.** (2009) PknB-mediated phosphorylation of novel substrate, N-Acetylglucosamine-1-Phosphate Uridyltransferase, modulates its acetyltransferase activity. ***J. Mol. Biol.*** **386**, 451-464.

30. Sajish, M., Kalayil, S., Verma, S. K., **Nandicoori, V. K.** & Prakash, B. (2009) The significance of ExDD and RxKD motif conservation in Rel proteins. ***J. Biol. Chem*** **284**, 9115-9123

31. Vomastek, T., Iwanicki, M. P., Burack, W. R., Tiwari, D., Kumar, D., Parsons, J. T., Weber, M. J. & **Nandicoori, V. K.** (2008) ERK2 phosphorylation sites and docking domain on the Nuclear Pore Complex protein Tpr cooperatively regulates ERK2-Tpr interaction. ***Mol. Cell Biol.*** 22, 6954-6966.

32. Sajish, M., Tiwari, D., Rananaware, D., **Nandicoori, V. K.** and Prakash, B. (2007) A Charge Reversal Differentiates (p)ppGpp Synthesis by Monofunctional and Bifunctional Rel Proteins. ***J. Biol. Chem.*** 282, 34977-83.

As a contributing author: Collaborative work: 20 publications

1. Mlcochova P, Kemp S, Dhar MS, Papa G, Meng B, Ferreira IATM, Datir R, Collier DA, Albecka A, Singh S, Pandey R, Brown J, Zhou J, Goonawardane N, Mishra S, Whittaker C, Mellan T,

Marwal R, Datta M, Sengupta S, Ponnusamy K, Radhakrishnan VS, Abdullahi A, Charles O, Chattopadhyay P, Devi P, Caputo D, Peacock T, Wattal DC, Goel N, Satwik A, Vaishya R, Agarwal M; Indian SARS-CoV-2 Genomics Consortium (INSACOG); Genotype to Phenotype Japan (G2P-Japan) Consortium; CITIID-NIHR BioResource COVID-19 Collaboration, Mavousian A, Lee JH, Bassi J, Silacci-Fegni C, Saliba C, Pinto D, Irie T, Yoshida I, Hamilton WL, Sato K, Bhatt S, Flaxman S, James LC, Corti D, Piccoli L, Barclay WS, Rakshit P, Agrawal A, Gupta RK. (2021) SARS-CoV-2 B.1.617.2 Delta Variant replication and immune evasion. ***Nature,*** doi: 10.1038/s41586-021-03944-y.

2. Prasad, D., Arora, D., **Nandicoori, V. K.** & Muniyappa, K. (2019) Elucidating the functional role of Mycobacterium smegmatis recX in stress response. ***Sci. Rep.*** 10912. doi: 10.1038/s41598-019-47312.

3. Srivastava, S., Battu, M. B., Khan, M.Z., **Nandicoori, V.K.** & Mukhopadhaya, S. (2019) *Mycobacterium tuberculosis* PPE2 protein interacts with $p67^{phox}$ and inhibits ROS production. ***J. Immunology,*** 203, 1218-1229.

4. Caterino, M., Somma, A.D., Soni, V., Agarwal, M., Pasquale, P.D., Zanetti, S., Molicotti, P., Cannas, S., **Nandicoori, V.K.** & Duilio, A. (2019) The bifunctional protein GlmU is a key factor in biofilm formation induced by alkylating stress in *Mycobacterium smegmatis*. ***Research in Microbiology*** pii: S0923-2508(19)30034-8.

5. Sevalkar, R., Arora, D., Singh,P., Singh, R., **Nandicoori, V.K.,** Karthikeyan, S. & Sarkar, D. (2019) Functioning of mycobacterial heat-shock repressors requires the master virulence regulator PhoP. ***J. Bacteriol.*** 201(12). pii: e00013-19

6. Yadav, K., Yavvari, P.S., Pal, S., Kumar, S., Mishra, D., Gupta, S., Mitra, M., Soni, V., Khare, n., Sharma, P., Srikanth, C.V., Kapil, A., Singh, A., **Nandicoori, V.K.** & Bajaj, A. (2019) Oral Delivery of Cholic Acid-Derived Amphiphiles Helps in Combating Salmonella-Mediated Gut Infection and Inflammation. ***Bioconjug. Chem.*** doi: 10.1021/acs.bioconjchem.8b00880

7. Joshi, A.C., Kaur, P., Nair, R.K., Lele, D.S., **Nandicoori, V.K**. & Gopal, B. (2019) Selectivity among anti sigma factors by *Mycobacterium tuberculosis* ClpX influences intracellular levels of extracytoplasmic functions sigma factors. ***J. Bacteriol***. **201(6)**, pii: e00748-18. doi: 10.1128/JB.00748-18

8. Misra, R., Menon, D., Arora, G., Virmani, R., Gaur, M., Naz, S., Jaisinghani, N., Bhaduri, A., Bothra, A., Maji, A., Singhal, A., Karwal, P., Hentschker, C., Becher, D., Rao, V., **Nandicoori, V.K**., Gandotra, S., & Singh, Y. (2019) Tuning the *Mycobacterium tuberculosis* alternative sigma factor SigF through the multidomain regulator Rv1364c and osmosensory kinase, protein kinase D. ***J Bacteriol***. **201(7)** pii e00725-18. doi: 10.1128/JB.00725-18.

9. Muniyan, R., Varatharajan, S., Naz, S., **Nandicoori, V.K.,** & Jayaramn, G. (2017) Alium Sativum Linn contains linear alkylbenzene sulfonates that alter membrane fluidity for the inhibition of *Mycobacterium tuberculosis* H37Ra. ***Asian J Pharm Clin Res,*** **10,** 100-111.

10. Yuvvari, P.S., Gupta, S., Arora, D., **Nandicoori, V.K.,** Srivastava, A. & Bajaj, A. (2017) Clathrin Independent Killing of Intracellular Mycobacteria and Biofilm Disruptions using Synthetic Antimicrobial Polymers. ***Biomacromolecules,*** **18,** 2024-2033.

11. Sharma, G., Sowpati, D. T., Singh, P., Khan, M. Z., Ganji, R., Upadhyay, S., Banerjee, S., **Nandicoori, V.K.** & Khosla, S (2016) Genome-wide non-CpG methylation of the host genome during *M. tuberculosis* infection. ***Scientific Reports,*** **6**, 25006.

12. Suryadevara, P., Yogeeswari, P., Soni, V., Devi, P. B., **Nandicoori, V. K.** & Sriram, D. (2016) Computational Sampling and Simulation Based Assessment of Novel *Mycobacterium tuberculosis* Glutamine Synthetase inhibitors: Study involving structure based drug design and free energy perturbation. ***Curr. Top. Med. Chem.*** **16**, 978-95.

13. Yaseen, I., Kaur, P. **Nandicoori, V. K.** & Khosla, S. (2015) Mycobacteria modulate host epigenetic machinery by Rv1988 methylation of a non-tail arginine of histone H3. ***Nature Communications***, **6,** 8922.

14. Soni, V., Suryadevara, P., Dharmarajan, S., Kumar, S., OSDD consortium, **Nandicoori, V.K.** & Yogeeswari, P. (2015) Structure-based design of diverse inhibitors of Mycobacterium tuberculosis N-acetylglucosamine-1-phosphate uridyltransferase: combined molecular docking, dynamic simulation and biological activity. ***J of Mol. Mod.*** **21**, 174.

15. Sharma, G., Upadhyay, S., Srilalitha, M., **Nandicoori, V. K.** & Khosla, S. (2015) The interaction of mycobacterial protein Rv2966c with host chromatin is mediated through non-CpG methylation and Histone H3/H4 binding. ***Nucleic Acids Res.*** **43,** 3922-37.

16. Singhal, A., Arora, G., Sajid, A., Maji, A., Bhat, A., Virmani, R., Upadhyay, S., **Nandicoori, V.K.**, Sengupta, S. & Singh Y. (2013) Regulation of homocysteine metabolism by *Mycobacterium tuberculosis* S-adenosylhomocysteine hydrolase. ***Sci Rep.*** 3, 2264.

17. Sajid, A., Arora, G., Gupta, M., Singhal, A., Chakraborty, K. **Nandicoori, V. K.** & Singh, Y. (2011) Interaction of Mycobacterium tuberculosis Elongation Factor Tu with GTP is regulated by phosphorylation. ***J. Bacteriology***, 93, 5347-5358.

18. Sajid, A., Arora, G., Gupta, M., Upadhyay, S., **Nandicoori, V. K.** & Singh, Y. (2011) Phosphorylation of Mycobacterium tuberculosis Ser/Thr Phosphatase by PknA and PknB ***Plos One*** 6(3): e17871.

19. Verma, S. K., Jaiswal, M., Kumar, N., Parikh, A., **Nandicoori, V. K.** & Prakash, B. (2009) Crystal structure of N-acetylglucosamine-1-phosphate uridyltransferase (GlmU) from

Mycobacterium tuberculosis in a cubic space group. *Acta Crystallogr Sect F Struct Biol Cryst Commun.* **65**, 435-9.

20. Samantaray, S., Marathe, U., Dasgupta, S., **Nandicoori, V. K.** & Roy, R. P. (2008) Peptide-sugar ligation catalyzed by transpeptidase sortase: a facile approach to neoglycoconjugate synthesis. *J Am Chem Soc.* **130**, 2132-3.

Ph.D and Postdoc work: 18 publications

1. Eblen, S. T., Kumar, N.V. & Weber, M. J. (2007) Using genetically engineered kinases to screen for novel protein kinase substrates: Phosphorylation of substrates in cell lysates with exogeneous kinase. CSH Protoc. doi: 10.1101/pdb.prot4639.

2. Eblen, S. T., Kumar, N.V. & Weber, M. J. (2007) Using genetically engineered kinases to screen for novel protein kinase substrates: Phosphorylation kinase-associated substrates. CSH Protoc. doi: 10.1101/pdb.prot4638.

3. Eblen, S. T., Kumar, N.V. & Weber, M. J. (2007) Using genetically engineered kinases to screen for novel protein kinase substrates: Generation of [γ32P]ATP analog from ADP analog. CSH Protoc. doi: 10.1101/pdb.prot4637.

4. Eblen, S. T., Kumar, N.V. & Weber, M. J. (2007) Using genetically engineered kinases to screen for novel protein kinase substrates: Identification of a Mutant Kinase/ATP analog pair. CSH Protoc. doi: 10.1101/pdb.prot4636.

5. Kumar, N. V.§, Eblen, S.T.§ & Weber, M. J. (2004) Identifying specific kinase substrates through engineered kinases and ATP analogs. Methods 32, 389-397.
§ co-first authors

6. Eblen, S.T.§, Kumar, N. V.§, Shah, K., Henderson, M. J., Watts, C. K. W., Shokat, K. M. and Weber, M. J. (2003) Identification of novel ERK2 substrates through use of an engineered kinase and ATP analogs. J. Biol. Chem. 278, 14926-14935.
§ co-first authors

7. Kumar, N.V. and Bernstein, L. R. (2001) A new analytical scale DNA affinity binding assay for analyses of specific protein DNA interactions. Anal. Biochem. 299, 203-210.

8. Kumar, N. V. and Bernstein, L. R. (2001) Ten ERK-related proteins in three distinct classes associate with AP-1 proteins and/or AP-1 DNA. J. Biol. Chem. 276, 32362-32372.

9. Kumar, N. V. and Bernstein, L. R. (2000) Screening of a cDNA protein expression library by enhanced chemiluminescence detection. Biotechniques 29, 418-424.

10. Thanedar, S. S., Kumar, N. V. and Varshey, U. (2000) Fate of tRNA of the initiator is sensitive to the critical balance between interacting proteins. J. Biol. Chem. 275, 20361-20367.

11. Ghosh, M., Kumar, N. V., Varshney, U. and Chary, K. V. R. (2000) Structural basis for uracil DNA glycosylase interaction with uracil: NMR study. Nucleic Acids Res. 28, 1906-1912.

12. Ghosh, M., Kumar, N. V., Varshney, U. and Chary, K. V. R. (1999) Structural characterisation of a uracil containing hairpin DNA by NMR and molecular dynamics. Nucleic Acids Res. 27, 3938-3944.

13. Kumar, N.V. and Varshney, U. (1997) Contrasting effects of single stranded DNA binding protein on the activity of uracil DNA glycosylase from Escherichia coli towards different DNA substrates. Nucleic Acids Res. 25, 2336-2343.

14. Vasanthkrishna, M., Kumar, N.V. and Varshney, U. (1997) Characterization of the initiator tRNA gene locus and identification of a strong promoter from Mycobacterium tuberculosis. Microbiology. 143, 3591-3598.

15. Mandal, S.S., Kumar, N. V., Varshney, U. and Bhattacharya, S. (1996) Metal ion dependent oxidative cleavage by transition metal complexes of a new water soluble salen derivative. J. Inorg. Biochem. 63, 265-272.

16. Li, S., Kumar, N.V., Varshney, U. and RajBhandary, U.L. (1996) Role of amino acids attached to tRNA in formylation and in initiation of protein synthesis. J. Biol. Chem. 271, 1022-1028.

17. Kumar, N.V. and Varshney, U. (1994) Inefficient excision of uracil from loop regions of DNA oligomers by E. coli uracil DNA glycosylase. Nucleic Acids Res. 22, 3737-3741.

18. Kumar, N.V. and Varshney, U. (1994) Excision of Uracil from the ends of double stranded DNA by uracil DNA glycosylase and its use in high efficiency cloning of PCR products. Current Science. 67, 728-734

Book Chapters

1 Eblen, S.T.[§], **Kumar, N. V.[§]** & Weber, M. J. (2005) Using genetically engineered kinases to screen for novel protein kinase substrates. *Protein-Protein Interactions, A Molecular Cloning Manual, 2nd edition Ed. Golemis, E & Adams, P. Cold Spring Harbor laboratory press.* **§ co-first authors**

2 Bhaskar, A., Dwivedi, V.P., **Nandicoori, V. K (**2019) Eliminating mycobacterial persistence: Novel targets for anti-TB therapy. ***Pathogenicity and Drug resistance of Human Pathogens. Mechanisms and Novel approaches. Springer Press.***

PATENT

3167/DEU2015 Applied on 1st October 2015

Depletion of M. tuberculosis (M. tuberculosis) GlmU from infected murine lungs effects the clearance of the pathogen

We have developed a novel inhibitor Oxa33, which targets M. tuberculosis GlmU and inhibits the growth of M. tuberculosis both in vitro culture as well in the animal models.