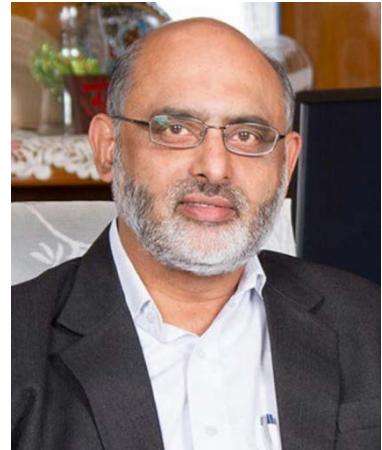


CURRICULUM VITAE

Name	Bipin Kumar G. Nair, Ph.D.
Designation	Dean, Life Sciences Professor and Dean, School of Biotechnology Amrita Vishwa Vidyapeetham
Address	School of Biotechnology Amrita Vishwa Vidyapeetham Amritapuri Campus Kollam - 690525 Kerala, INDIA
Email	bipin@am.amrita.edu
Mobile	+91 9895036316
Date of Birth	19-Jan-1959
Place of Birth	Bombay, India



EDUCATION

- 1981 - 1986 **Ph.D. in Microbiology**
Maharaja Sayajirao University of Baroda, Baroda, India;
Thesis Title: "Some regulatory aspects of carbohydrate metabolism in Neurospora crassa"; Graduate Supervisor: Dr. H.S. Chhatpar.
- 1979 - 1981 **M.Sc. in Microbiology**
Maharaja Sayajirao University of Baroda, Baroda, India
- 1976 -1979 **B.Sc. in Microbiology**
Gujarat University, Ahmedabad, India

HONORS

Adjunct Professor, Department of Cellular and Molecular Medicine, University of Arizona, Tucson,
USA

Editor, Journal of Medical Microbiology (Microbiology Society), London- Current

Aegis Graham Bell Award for 'Innovation in Mobile Health' for research conducted on "Low Cost Device and Cloud Enabled Smart Solution for Diabetes Care", New Delhi, February, 2018.

Expert advisory panel member on 'Sustainable Non-sewered Sanitation Standard' conclave, The American National Standards Institute (ANSI), with support from the Bill & Melinda Gates Foundation, Singapore, May 2015

Member, DBT Indo-Russia Task Force, Department of Biotechnology, Government of India, June 2014

Recipient of Bill and Melinda GATES Foundation – Department of Biotechnology, GOI/BIRAC Grand Challenge Award, March 2014

Associate Editor, Current Pharmacogenomics and Personalized Medicine, August 2013

Coordinator, TIFAC, Centre of Relevance and Excellence in Biomedical Technology, Dept. of Science and Technology, Government of India

Recipient of the Cora Louis Carson award for the best ranked grant at the Peer Review of the American Heart Association, Tennessee Affiliate, USA, March 1992

Recipient of Grant-in Aid awarded by American Heart Association, Tennessee Affiliate, USA, 1992-1993

Recipient of Post-doctoral Research Fellowship awarded by American Heart Association, Tennessee Affiliate, USA, 1990-1999

PROFESSIONAL APPOINTMENTS

Since Sept 2021 **Amrita Vishwa Vidyapeetham**

Dean, Life Science

Since Jul 2007 **Amrita Vishwa Vidyapeetham**, Kollam, Kerala, India

Dean, School of Biotechnology,

Coordinator Dept. of Science and Technology-TIFAC CORE in Biomedical Technology

2017 -2021 **Amrita Vishwa Vidyapeetham**

Dean, Faculty of Science

2004 - 2007 **Amrita Vishwa Vidyapeetham**, Amritapuri, Kollam, Kerala, India

Professor and Chairman, Centre for Biotechnology

Coordinator Dept. of Science and Technology-TIFAC CORE in Biomedical Technology

2000 - 2004 **MDS Pharma Services**, Bothell, WA, USA.

Research Manager, Lead Discovery

Management of High Throughput Screening projects for worldwide client base

Exploration/ Investigation of novel technologies and platforms to integrate High Throughput Screening technologies and dramatically accelerate identification of quality lead compounds

1995 - 2000 **MDS Panlabs**, Bothell, WA, USA

Senior Scientist, Drug Discovery Services

Management of screening data using an in-house Laboratory Information Management system (LIMS)

Exploration/ Investigation of novel technologies and platforms to integrate High Throughput Screening technologies and dramatically accelerate identification of quality lead compounds.

	Successful coordination of wide diversity of High Throughput Screening projects for world-wide client base.
1993 - 1995	Panlabs Inc. Bothell, WA, USA Scientist Development of novel assays employing new technologies and assay procedures. High Throughput Screening of Natural Products and Chemical libraries against wide diversity of targets employing absorbance, radiometric, fluorometric and chemiluminescence formats in isolated membranes and whole cell analysis.
1991 - 1993	University of Tennessee , Memphis; USA Instructor, Department of Pharmacology, School of Medicine Supervisor: Dr. M. Heimberg
1987 - 1991	University of Tennessee , Memphis, USA Postdoctoral Research Associate, Department of Pharmacology Supervisor: Dr. T.B. Patel
1986 - 1987	University of Mississippi Medical Center , Jackson, Mississippi, USA Postdoctoral Fellow, Department of Biochemistry Supervisor: Dr. A J Wahba Worked on regulation of protein synthesis initiation in rabbit reticulocytes
1982 - 1983	Maharaja Sayajirao University of Baroda , India Teaching Assistant Teaching courses in Microbiology and Biochemistry

FUNDED PROJECTS

1. Development Of New Tools To Reverse Antibiotic Resistance In Pathogens Like *Pseudomonas Aeruginosa*, Tata Institute For Genetics & Society (TIGS), 2018-2022.
2. Cost Effective Device And Cloud-enabled Smart Solutions For Diabetes Care, Biotechnology Industrial Research Assistance Council (BIRAC), 2016-2018.
3. An Innovative Green Technology For Treating Municipal And Industrial Wastewater Entering Rivers And Streams, Department Of Biotechnology, 2015-2018.
4. Identification And Characterisation Of The Role Of *Allium Sativum*-microbiome On The Production Of Therapeutic Metabolites, SERB, Department Of Science & Technology, 2015-2018.
5. Use Of Viral Agents, Microbial Fuel Cell And Effective Recycling Strategy To Improve The Economics Of Human Waste Disposal, Biotechnology Industrial Research Assistance Council (BIRAC) And Bill & Melinda Gates Foundation (BMGF) And Department Of Biotechnology, 2014-2016.
6. Anacardic Acid-a Novel Template For Cancer Therapy, Council Of Scientific And Industrial Research, 2013-2016.
7. Lab-on-a-chip (Loc) For The Monitoring Of Diabetes, Cholesterol And Kidney Function, Department Of Biotechnology, 2012-2016.

8. Development Of Peptide Inhibitors Against Functional Components Of Snake Venom, Science & Engineering Research Board, Department Of Science & Technology, 2012-2015.
 9. Adaptive And Automatic Insulin Pump, TIFAC Mission Reach-core, Department Of Science & Technology, Govt. Of India, 2004-2010.
-

PUBLICATIONS:

Scopus ID 36657466300
Orchid ID 0000-0002-4944-8805
ResearchGate <https://www.researchgate.net/profile/Bipin-Nair>

1. Menon, Nitasha D., Samuel Penziner, Elizabeth T. Montaño, Raymond Zurich, David T. Pride, **Bipin G. Nair**, Geetha B. Kumar, and Victor Nizet. "Increased Innate Immune Susceptibility in Hyperpigmented Bacteriophage-Resistant Mutants of *Pseudomonas aeruginosa*." *Antimicrobial Agents and Chemotherapy* (2022): e00239-22
2. Shaji SK, Drishya G, Sunilkumar D, Suravajhala P, Kumar GB, **Nair BG**. Systematic understanding of anti-tumor mechanisms of Tamarixetin through network and experimental analyses. *Scientific reports*. 2022 Mar 10;12(1):1-20. <https://doi.org/10.1038/s41598-022-07087-6>
3. Sasidharakurup, H, Kumar, G, Nair, B, Diwakar, S (2021). Mathematical modeling of SARS-CoV-2 infection network with cytokine storm, oxidative stress, thrombosis, insulin resistance and nitric oxide pathways. *International Journal of Integrative Biology*, 25(12); 770-781. <https://doi.org/10.1089/omi.2021.0155>
4. Salim A, Shetty KS, Febin H, Sameed N, Pal S, **Nair BG**, Madhavan A. Lytics broadcasting system: A novel approach to disseminate bacteriophages for disinfection and biogenic hydrogen sulphide removal tested in synthetic sewage. *Results in Engineering*. 2022 Mar 1;13:100314. <https://doi.org/10.1016/j.rineng.2021.100314>
5. Moni M, Madathil T, Sathyapalan DT, Menon V, Gutjahr G, Edathadathil F, Sureshkumar D, Prasanna P, Jose S, Jerome R, Krishnan A, .. Kumar GB, **Nair BG**. Clinical Efficacy of Inhaled Nitric Oxide in Preventing the Progression of Moderate to Severe COVID-19 and Its Correlation to Viral Clearance-Results of a Pilot Study. *Infectious Microbes & Diseases*. 2021, Dec 28. <https://doi.org/10.1097/IM9.0000000000000079>
6. Rajagopal S, Gupta A, Parveen R, Shukla N, Bhattacharya S, Naravula J, Kumar A, Mathur P, Simlot A, Mehta S, Bihari C .. **Nair BG**, Suravajhala P. Vitamin K in human health and metabolism: A nutri-genomics review. *Trends in Food Science & Technology*. 2021 Dec 10. <https://doi.org/10.1016/j.tifs.2021.12.012>
7. Prakash V, Krishnan AS, Ramesh R, Bose C, Pillai GG, **Nair BG**, Pal S. Synergistic Effects of *Limosilactobacillus fermentum* ASBT-2 with Oxyresveratrol Isolated from

Coconut Shell Waste. Foods. 2021 Oct 22;10(11):2548.
<https://doi.org/10.3390/foods10112548>

8. Radhamani R, Kumar D, Nizar N, Achuthan K, **Nair B**, Diwakar S. What virtual laboratory usage tells us about laboratory skill education pre-and post-COVID-19: Focus on usage, behavior, intention and adoption. *Education and Information Technologies*. 2021;1-9.
9. Salim A, Madhavan A, Babu P, Porayath C, Kesavan M, Hely S, Kumar VA, **Nair BG**, Pal S. Bacteriophage-based control of biogenic hydrogen sulfide produced by multidrug resistant *Salmonella enterica* in synthetic sewage. *Journal of Environmental Chemical Engineering*. 2021;105797. <https://doi.org/10.1016/j.jece.2021.105797>
10. Patel K, Bhat FA, Patil S, Routray S, Mohanty N, **Nair B**, Sidransky D, Ganesh MS, Ray JG, Gowda H, Chatterjee A. Whole-exome sequencing analysis of oral squamous cell carcinoma delineated by tobacco usage habits. *Frontiers in oncology*. 2021;11. <https://doi.org/10.3389/fonc.2021.660696>
11. Punnakkal N, Raveendran J, Vasu SP, **Nair BG**, Babu TS. Highly Sensitive and Wide Range Non-Enzymatic Electrochemical Detection of Cholesterol using Pencil Lead Electrodes. *Journal of The Electrochemical Society*. 2021;168(4):047515. <https://doi.org/10.1149/1945-7111/abf8d8>
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15. Venugopal M, Nambiar J, **Nair BG**. Anacardic acid-mediated regulation of osteoblast differentiation involves mitigation of inflammasome activation pathways. *Molecular and Cellular Biochemistry*. 2021;476(2):819-29.
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Bacteriophage Isolated from a Wastewater Source in South India with Activity against Several Multidrug-Resistant Clinical *Pseudomonas aeruginosa* Isolates. *mSphere*. 2021;6(1).

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19. Nedungadi D, Binoy A, Pandurangan N, **Nair BG**, Mishra N. Proteasomal dysfunction and ER stress triggers 2'- hydroxy- retrochalcone- induced paraptosis in cancer cells. *Cell Biology International*. 2020.
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21. Vijayakumar A, Madhavan A, Bose C, Nanjan P, Kokkal SS, Veedu AP, Prasad M, Pal S, **Nair BG**. Potent Chitin Synthase Inhibitors from Plants. *Current Bioactive Compounds*. 2020;16(1):58-63.
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24. Pathak A, Venugopal P, **Nair BG**, Suneesh PV, Babu TS. Facile pH-sensitive optical detection of pathogenic bacteria and cell imaging using multi-emissive nitrogen-doped carbon dots. *Microchemical Journal*. 2020;159:105324.
25. Chouhan S, Singh S, Athavale D, Ramteke P, Vanuopadath M, **Nair BG**, Nair SS, Bhat MK. Sensitization of hepatocellular carcinoma cells towards doxorubicin and sorafenib is facilitated by glucose-dependent alterations in reactive oxygen species, P-glycoprotein and DKK4. *Journal of Biosciences*. 2020;45(1):1-23.
26. Pradeep A, **Nair BG**, Suneesh PV, Babu TS. Enhancement in mixing efficiency by ridges in straight and meander microchannels. *Chemical Engineering and Processing-Process Intensification*. 2020;108217.
27. Khan AA, Patel K, Patil S, Babu N, **Nair B**, Mangalaparthi KK, Solanki HS, Nanjappa V, Kumari A, Manoharan M, Karunakaran C, Murugan S. Multi-omics analysis to characterize cigarette smoke induced molecular alterations in esophageal cells. *Frontiers in Oncology*. 2020;10.

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29. Puttalamlesh VN, Deb B, Gondkar K, Jain A, **Nair B**, Pandey A, Chatterjee A, Gowda H, Kumar P. Quantitative Proteomics of Urinary Bladder Cancer Cell Lines Identify UAP1 as a Potential Therapeutic Target. *Genes*. 2020;11(7):763.
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36. Nedungadi D, Binoy A, Vinod V, Vanuopadath M, Nair SS, **Nair B**, Mishra N. Ginger extract activates caspase independent paraptosis in cancer cells via ER stress, mitochondrial dysfunction, AIF translocation and DNA damage. *Nutrition and cancer*. 2019, 1-13.
37. Vargis VS, Vasu SP, Sree J, **Nair B**, Gopalakrishnan SB. Peroxidase Labeled Antibody Conjugated Gold Nanoparticles for Ultrasensitive Voltammetric Immunosensing. *IEEE Sensors Journal*. 2019.

38. Kumar GB, **Nair B**, Perry JJ, Martin DB. Recent insights into natural product inhibitors of matrix metalloproteinases. *MedChemComm.* 2019, 10(12):2024-37.
39. Gondkar K, Patel K, Patil Okaly GV, **Nair B**, Pandey A, Gowda H, Kumar P. Dickkopf Homolog 3 (DKK3) Acts as a Potential Tumor Suppressor in Gallbladder Cancer. *Frontiers in oncology.* 2019, 9:1121.
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44. Shaji SK, Sunilkumar D, Mahalakshmi K, Kumar G, **Nair B**. Analysis of microarray data for identification of key microRNAs signature in glioblastoma multiforme. *Oncology Letters,* 2019. 18:1938-1948.
45. Gondkar K, Patel K, Krishnappa S, Patil A, **Nair B**, Sundaram GM, Zea TT, Kumar P. E74 like ETS transcription factor 3 (ELF3) is a negative regulator of epithelial-mesenchymal transition in bladder carcinoma. *Cancer Biomarkers.* 2019: 1-10.
46. Melethadathil N, **Nair B**, Diwakar S, Heringa J. Mining Inter-Relationships in Online Scientific Articles and its Visualization: Natural Language Processing for Systems Biology Modeling. *International Journal of Online Engineering.* 2019, 15(2).
47. Nair D, Vanuopadath M, Balasubramanian A, Iyer A, Ganesh S, Anil AN, Vikraman V, Pillai P, Bose C, **Nair BG** and Pai JG. Phlorotannins from Padina tetrastromatica: structural characterisation and functional studies. *Journal of Applied Phycology,* 2019: 1-11.
48. Dhara K, Ramachandran T, **Nair BG** and Babu TG. Fabrication of Highly Sensitive Nonenzymatic Electrochemical H₂O₂ Sensor Based on Pt Nanoparticles Anchored Reduced Graphene Oxide. *Journal of nanoscience and nanotechnology,* 2018, 18(6): 4380-4386.

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51. Rajagopalan P, Nanjappa V, Patel K, Jain AP, Mangalaparthi KK, Patil AH, **Nair B**, Mathur PP, Prasad, T.K., Califano, J.A. and Sidransky, D... Role of protein kinase N2 (PKN2) in cigarette smoke-mediated oncogenic transformation of oral cells. *Journal of cell communication and signaling*, 2018:1-13.
52. Amrutha V, Bose C, Madhavan A, **Nair B**, Pandurangan N, Archana PV, Prasad M, Pal S, Shetty S. Potent Chitin Synthase Inhibitors from Plants. *Current Bioactive Compounds*, 2018.
53. Nair M, Kannimoola J, Jayaraman B, **Nair B**, Diwakar S. Temporal Constrained Objects for Modelling Neuronal Dynamics. *Peer J*, 2018, 4: e159.
54. Vanuopadath M, Sajeev N, Murali AR., Sudish N, Kangosseri N, Sebastian IR., Jain ND, Pal A, Raveendran D, **Nair BG** and Nair SS. Mass spectrometry-assisted venom profiling of Hypnale hypnale found in the Western Ghats of India incorporating de novo sequencing approaches. *International journal of biological macromolecules*. 2018, 118: 1736-1746.
55. Sajeevan, S.E., Chatterjee M., Paul V., Baranwal G., Kumar V.A., Bose C., Banerji A., **Nair B.G.**, Prasanth B.P. and Biswas R. Impregnation of catheters with anacardic acid from cashew nut shell prevents *Staphylococcus aureus* biofilm development. *Journal of applied microbiology*, 2018
56. Nambiar J., Vijayakumar G., Drishya G., Shaji S. K., Pandurangan N., Kumar G. B., & **Nair B. G.** (I-3, II-3)-Biacacetin-mediated cell death involves mitochondria. *Molecular and cellular biochemistry*, 2018: 1-12.
57. Diwakar S, Nutakki C, Bodda S, Rajendran A, Vijayan A, **Nair B**. Mathematical Modeling of Cerebellar Granular Layer Neurons and Network Activity: Information Estimation, Population Behaviour and Robotic Abstractions. 2018.
58. Rajagopalan P., Patel K., Jain A. P., Nanjappa V., Datta K. K., Subbannayya T., Mangalaparthi K. K., Kumari A., Manoharan M., Karunakaran C., Muruga, S., **Nair B**., Prasad TSK., Mathur P. P., Gupta R., Gupta R., Khanna-Gupta A., Califano J. A., Sidransky D., Gowda H. and Chatterjee A. Molecular alterations associated with chronic

- exposure to cigarette smoke and chewing tobacco in normal oral keratinocytes. *Cancer biology & therapy*. 2018.
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 63. Babu P, Poornendu S J, Salim A, Madhavan A, **Nair B**, Pal S. Resazurin based redox dye as an indicator for monitoring wastewater biological activity. *Innovative Strategies for Sustainable Water Management (ISSWM-2017)*. *Pollution Research*, 2018, 37: 115-120.
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 65. Prakash V, Sreetha H, Poornima K H, Lakshmimol K N, Regma R, Hena Fathima, Vishnu T V, Sruthi Venu, **Nair B**, Pal S. Antagonistic effects of bacteriocins from *Lactobacillus* spp. against enteric pathogens. *Innovative Strategies for Sustainable Water Management (ISSWM-2017)*. *Pollution Research*, 2018, 37: 128-134.
 66. Subhash S, Anu B Kuruvvelil, Aswathi PV, Deepasree K, Navyamol CD, Nimisha Das PV, Parvathi Prasad, **Nair B**, Pal S. Screening of nematicidal activities of biocontrol fungi *Aspergillus niger* and *Penicillium oxalicum* using *C. elegans* as model. *Innovative Strategies for Sustainable Water Management (ISSWM-2017)*. *Pollution Research*, 2018, 37: 121-127.
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76. Chellaiah P, Achuthan K, **Nair B**, Diwakar S. Using Theme-based Narrative Construct of Images as Passwords: Implementation and Assessment of Remembered Sequences. *International Journal of Online Engineering*. 2018, 13(11): 77-9
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