

CURRICULUM VITAE

NAME **Bipin Kumar G. Nair, Ph.D.**

ADDRESS School of Biotechnology
Amrita Vishwa Vidyapeetham
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BIRTH DATE January 19, 1959

BIRTH PLACE Bombay, India

EDUCATION

1976 - 1979 Gujarat University, Ahmedabad, India,
B.Sc. in Microbiology

1979 - 1981 Maharaja Sayajirao University of Baroda, Baroda, India;
M.Sc. in Microbiology

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

HONORS

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.

Poster presentation 1st Prize and cash award, Program Management Unit at Biotechnology Industry Research Assistance Council (PMU-BIRAC), New Delhi, March, 2017

Invited to participate 5 year transformative technologies Portfolio Review in Seattle from 18-22 July 2016 by the Bill and Melinda Gates Foundation, Seattle, USA, July, 2016

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

Non-ex-officio member of the Finance Committee, National Center for Cell Science, Pune, India, August 2015

Member, DBT 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

Member of Appraisal Committee, The Modified Special Incentive Package Scheme (M-SIPS), Govt. of India Ministry of Communication and Information Technology- Department of Electronics and Information Technology (DeitY) 2013

Member, Governing Body, National Center for Cell Science, Pune, India, May 2013

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, 1990-1992

Recipient of Senior Research Fellowship, awarded by Dept of Atomic Energy, Govt. of India, 1983-1985

Recipient of Junior Research Fellowship, awarded by Dept of Atomic Energy, Govt. of India, 1982-1983

ROLES

External Examiner for Ph.D. thesis evaluation, Manipal University, June, 2018

External Examiner for Ph.D. thesis evaluation, IIT Mumbai, June, 2014

External Examiner for Ph.D. thesis evaluation, Bharathidasan University, Tiruchirappalli, Tamil Nadu.

PROFESSIONAL APPOINTMENTS

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| Nov 2017 - Present | Dean, Faculty of Science, Amrita Vishwa Vidyapeetham |
| Jul 2007 - Present | Dean, School of Biotechnology, Amrita Vishwa Vidyapeetham, Amritapuri, Kollam, Kerala, India and Coordinator Dept. of Science and Technology-TIFAC CORE in Biomedical Technology |
| Nov 2004 - Jun 2007 | Professor and Chairman, Centre for Biotechnology, Amrita Vishwa Vidyapeetham, Amritapuri, Kollam, Kerala, India, Coordinator Dept. of Science and Technology-TIFAC CORE in Biomedical Technology |
| 2000 – 2004 | Research Manager, Lead Discovery, MDS Pharma Services, Bothell, WA.
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 | Senior Scientist, Drug Discovery Services, MDS Panlabs, Bothell, A.
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** Scientist, Panlabs Inc. Bothell, WA.
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** Instructor, Department of Pharmacology, School of Medicine, University of Tennessee, Memphis; USA
Supervisor: Dr. M. Heimberg
- 1987 - 1991** Postdoctoral Research Associate; Department of Pharmacology, School of Medicine, University of Tennessee, Memphis, USA with Dr. T.B. Patel
- 1986 – 1987** Postdoctoral Fellow; Department of Biochemistry, University of Mississippi Medical Center, Jackson, Mississippi, USA with Dr. A.J. Wahba. Worked on regulation of protein synthesis initiation in rabbit reticulocytes
- 1982 - 1983** Teaching Assistant; Maharaja Sayajirao University of Baroda, India; 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), 2018-2020.
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. *TO STRENGTHEN THE POST-GRADUATE TEACHING AND RESEARCH FACILITIES IN THE DEPARTMENT ON 50:50 MODE BEING A PRIVATE ACADEMIC INSTITUTION*, FIST, DEPARTMENT OF SCIENCE & TECHNOLOGY AND AMRITA UNIVERSITY, 2013-2018.
7. *ANACARDIC ACID-A NOVEL TEMPLATE FOR CANCER THERAPY*, COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH, 2013-2016.
8. *LAB-ON-A-CHIP (LOC) FOR THE MONITORING OF DIABETES, CHOLESTEROL AND KIDNEY FUNCTION*, DEPARTMENT OF BIOTECHNOLOGY, 2012-2016.
9. *DEVELOPMENT OF PEPTIDE INHIBITORS AGAINST FUNCTIONAL COMPONENTS OF SNAKE VENOM*, SCIENCE & ENGINEERING RESEARCH BOARD, DEPARTMENT OF SCIENCE & TECHNOLOGY, 2012-2015.
10. *VALUE ADDITION TO SEABUCKTHORN THROUGH ISOLATION & CHARACTERISATION OF PHARMACOLOGICALLY ACTIVE COMPOUNDS*, DEPARTMENT OF BIOTECHNOLOGY, 2009-2013.
11. *ADAPTIVE AND AUTOMATIC INSULIN PUMP*, TIFAC MISSION REACH-CORE, DEPARTMENT OF SCIENCE & TECHNOLOGY, GOVT. OF INDIA, 2004-2010.

INVITED TALKS

1. Plenary talk: “A Paradigm Shift in Biomaterial Sustainability” SCICON'19: 2nd International Conference on Advanced Materials, Dec 15-17, 2019
2. Invited talk: “Is there a treasure in Ayurveda waiting to be discovered?” OACON 2019, 3rd International conference on Osteoarthritis, Bangalore, Aug 3-4, 2019.
3. Keynote talk: “Natural Products and the Molecular Basis of Therapeutics--Old Wine in a Defined New Bottle” First Cambridge OBOR International Conference, University of Cambridge, July 5-7, 2018.
4. Keynote talk: “Harnessing the potential of microbes power for the micro(be)-grid” Technological Advancements in Power and Energy “TAP Energy 2017”, IEEE, Amritapuri, Kerala, Dec 21-23, 2017.
5. Invited talk: “End to end low cost diabetes solution” Aegis Graham Bell Award Jury Round, Bombay, Nov 13-18, 2017.
6. Invited talk: “Cost-Effective Device and Cloud Enabled Smart Solutions for Diabetes Care” ICACCI, Manipal University, Karnataka, Sept 13-16, 2017.

7. Invited talk: "A low-cost device and cloud enabled smart solution for diabetes care" AIMS Research Synergy Day, AIMS Hospital, Kochi October 7, 2016
8. Invited talk: "Integration of basic and translational research in modern Biotechnology" National Ilan University, May 23, 2016
9. Invited talk: "Biomedicines and Diagnostics---Low-cost strategies and the path ahead" Annual Diri Symposium 2015 International Symposium On Translational Research, Teri Retreat, Gual Pahari, New Delhi, December 6-9, 2015
10. Invited talk: 'Harnessing natural resources for a better tomorrow' University of Cambridge, November 12 2015.
11. United Nations Academic Impact and Amrita University hosted Skills and Technology Accelerating Rapid Transformation [START] Conference on Technology for Sustainable Development. "Harnessing Natural Resources for a Better Tomorrow" July 8, 2015 at the United Nations Head Quarters in New York.
12. Natural Product Modulator of Matrix Metalloproteinases. Tokyo University of Agriculture and Technology, Tokyo, Japan, April 24, 2015.
13. Invited Talk: Natural products lead discovery. PSI 6th Annual meeting, Proteomics from Discovery to Function, International Proteomics Conference Indo-US Workshop, Indian Institute of Technology Bombay, Powai, December 6-9, 2014.
14. Invited talk: "Small molecule inhibitors of MMPs and EGF signaling pathway in a highly metastatic human epithelial cancer cell line" Indo-Australian Workshop on Biotechnology, School of Life Sciences Manipal University, April 11-13, 2014
15. Invited talk: APA International conference on Polymers: Vision and Innovations (February 19-20, 2014), IIT Delhi
16. Invited talk: "International conference on Integrating Basic and Translational Research in Modern Biology", Department of Microbiology and Biotechnology center, The Maharaja Sayajirao University of Baroda, Vadodara. December 27-28, 2013.
17. Life Science Conclave 2012 "Promoting business innovation to drive growth in Life Sciences", Topic Drying Drug Pipelines: Innovative Bio/Pharma Business Model, Stein Auditorium, India Habitat Centre, New Delhi Organized by Confederation of Industry, DBT, DST, BIRAC, Department of Pharmaceuticals Ministry of Chemicals and Fertilizers, December 11-12, 2012.
18. Invited talk "Nanotechnology and its applications in Modern Drug Development and Delivery" Nano-09 UGC sponsored seminar on "Nanotechnology for Biomedical Applications", Sree Narayana College Chengannur, Alappuzha, Kerala, March 17, 2009.

19. Invited talk “The Wound Healing Process - Prospects for the Mathematical Modelling” University of Milan, Italy, November 17, 2008.
20. Invited talk “Green Pharmacy and the Environment”, in the National Seminar on Biotechnology for a Clean Environment at SN College, Kollam, October 15, 2008.
21. Invited talk “Cell Manipulation in Drug Discovery”, in the Golden Jubilee Celebrations of the Department of Botany, Kerala University, Trivandrum, March 27, 2008.
22. Invited talk “Cross talk between Signaling Systems” in the National Science Day Celebrations, Rajiv Gandhi Centre for Biotechnology, Trivandrum, February 28, 2008.
23. Invited to present the theme paper “Nanotechnology in Drug Development & Delivery” in the 7th Annual conference of the Society of Veterinary Pharmacology and Toxicology, November 30, 2007.
24. Invited talk “Drug discovery from Natural Sources”, in the Department of Botany/ Biotechnology, Kerala University, Trivandrum, April 9, 2007.
25. Vishnu Prasad CN, Asoke Banerjee, Bipin G Nair, Anilkumar G Bauhinia fornicata leaf extract exhibits GLUT4 translocation activity Name of the Conference: 75th Annual Meeting of Society of Biological Chemists (India), Theme: Metabolism to Metabolome Name of the Organizer: Society of Biological Chemistry, New Delhi Conference Venue: Jawaharlal Nehru University, New Delhi Page No: 200
26. Suma Mohan, Jeff Perry, Bipin G Nair, Anilkumar G (2006) Structural Analysis of Class I facilitative Glucose Transporters Name of the Conference: INCOB 2006 Satellite meeting: Computational Insights into Biological Systems Duration of the Conference: Dec 2006 Name of the Organizer: Indian Institute of Science Conference Venue: Bangalore Page No: 48
27. Vishnu Prasad, Asoke Banerjee, Bipin G Nair, Anilkumar G (2007) An aliphatic compound from Bauhinia acuminata enhances GLUT4 translocation and glucose uptake activity. Name of the Organizer: American Association of Cell Biology Conference Venue: Washington Page No: B412
28. Karen Yoshino and Bipin Nair (2003) Extracellular Nucleotides Mediate Calcium Signaling Through Endogenous P2Y2 Receptors in Chinese Hamster Ovary Cells Society for Biomolecular Screening; 9th Annual Conference—Drug Discovery : At the Cutting Edge; September 21-25, 2003, Portland, Oregon, USA.
29. B.G. Nair and Khisal Alvi. (2001) High Throughput Screening of Natural Products— More Than A Numbers Game. High Throughput Screening Instrumentation and Miniaturization; ISI sponsored 1st International Conference on Advances in High Throughput Screening Technologies, Atlantic City, New Jersey. Feb. 2001.

30. B.G. Nair, C. Mckenzie, K. Leung and J. Paslay (1994) Characterization of Calcium - Activated Potassium Channel activity by a High Throughput Assay employing ⁸⁶Rubidium Efflux. IBC Meeting on Signal Transduction Therapy; Advances in Understanding and Drug Discovery; San Francisco California, August 4-5, 1994.
31. A.R. Amin, C.D. Swenson, B. Xue, B.G. Nair, T.B. Patel, and G.H. Thorbecke (1992) Upregulation of IgD-receptors on murine T Helper cells by IgD requires tyrosine kinase activity. 8th International Congress of Immunology, Budapest, Hungary, August 23-28, 1992.
32. M. E. Steinhelper, B.G. Nair, H. M. Rashed, T.B. Patel, and L.J. Field (1991). Guanylate cyclase coupled ANF receptors are down regulated in hypotensive transgenic mice expressing a transthyretin-ANF fusion gene. FASEB Meeting, April 21-25, 1991. Abstract No. 1749. FASEB J. 5(4) p A671.
33. C.D. Swenson, A.R. Amin, B. Xue, B. Nair and G.J. Thorbecke (1991). Mechanism of IgD-R upregulation on T cells from young and aged mice. FASEB Meeting, April 21-25, 1991, Atlanta, Georgia. Abstract No 2104. FASEB J. 5(4), p A732.
34. B. G. Nair and T.B. Patel (1991) EGF receptor tyrosine kinase is essential for stimulation of rat cardiac adenylate cyclase by EGF. FASEB Meeting, April 21-25, 1991, Atlanta, Georgia. Abstract No 4718. FASEB J. 5 (5) p. A1184.
35. L. Steinke, Y. Yu, H.M. Rashed, B.G. Nair, J.M. Seyer, and T.B. Patel (1990) Upregulation of the ANF receptor/Guanylate cyclase in regenerating rat liver. Joint meeting of American Society for Biochemistry and Molecular Biology and American Association of Immunologists. June 3-7, 1990. New Orleans, LA. Abstract No. 1702. FASEB J. 4(7), April 1990, p.A1986.
36. B. G. Nair, G. Milligan, and T. B. Patel (1990). Gs α mediates epidermal growth factor elicited stimulation of rat cardiac adenylate cyclase. Joint Meeting of the American Society for Biochemistry and Molecular Biology and American Association of Immunologists. June 3-7, 1990, New Orleans, Louisiana. Abstract No 515. FASEB J. 4(7), April 1990, pA1782.
37. B. G. Nair, H.M. Rashed, and T.B. Patel (1989) Guanine nucleotide binding protein mediated regulation of rat cardiac adenylate cyclase by epidermal growth factor. Joint Meeting of the American Society of Biochemistry and Molecular Biology and American Society for Cell Biology. Jan 29 - February 2 1989, San Francisco, California. Abstract No. 3936. J. Cell. Biol. 107(6), December 1988, p.. 696a.
38. T. B. Patel and B.G. Nair (1989) Regulation of rat hepatic adenylate cyclase by pyridine nucleotides. Joint Meeting of the American Society of Biochemistry and Molecular Biology and American Society for Cell Biology. January 29 - February 2, 1989. San Francisco, California. Abstract No. 2786. J. Cell Biol. 107(6), December 1988, p495a.

PUBLICATIONS:

1. Sreekumar A, Navaneeth P, Suneesh PV, **Nair B**, Babu TS. A graphite pencil electrode with electrodeposited Pt-CuO for nonenzymatic amperometric sensing of glucose over a wide linear response range. *Microchimica Acta*. 2020, 187(2):113.
2. Ravi AK, Navaneeth P, Suneesh PV, **Nair B**, Babu TS. Manganese dioxide based electrochemical sensor for the detection of nitro-group containing organophosphates in vegetables and drinking water samples. *Journal of Electroanalytical Chemistry*. 2020, 113841.
3. Edachana RP, Kumaresan A, Balasubramanian V, Thiagarajan R, **Nair B**, Gopalakrishnan SB. Paper-based device for the colorimetric assay of bilirubin based on in-situ formation of gold nanoparticles. *Microchimica Acta*. 2020, 187(1):60.
4. Vargis VS, Chandhana JP, Suneesh PV, Nair B, Babu TS. Voltammetric immunosensing platform based on dual signal amplification using gold nanoparticle labels. In IOP Conference Series: *Materials Science and Engineering* 2019, (Vol. 577, No. 1, p. 012103). IOP Publishing.
5. Sunilkumar D, Drishya G, Chandrasekharan A, Shaji SK, Bose C, Jossart J, Perry JJ, Mishra N, Kumar GB, **Nair B**. Oxyresveratrol drives caspase-independent apoptosis-like cell death in MDA-MB-231 breast cancer cells through the induction of ROS. *Biochemical pharmacology*. 2019, 113724.
6. 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.
7. Vargis VS, Vasu SP, Sree J, **Nair B**, Gopalakrishnan SB. Peroxidase Labeled Antibody Conjugated Gold Nanoparticles for Ultrasensitive Voltammetric Immunosensing. *IEEE Sensors Journal*. 2019.
8. Kumar GB, **Nair B**, Perry JJ, Martin DB. Recent insights into natural product inhibitors of matrix metalloproteinases. *MedChemComm*. 2019, 10(12):2024-37.
9. 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.
10. Salim A, Babu P, Mohan K, Moorthy M, Raj D, Thirumeni SK, Suresh S, Madhavan A, **Nair BG**, Chattopadhyay S, Pal S. Draft Genome Sequence of an Escherichia coli

Sequence Type 155 Strain Isolated from Sewage in Kerala, India. *Microbiology Resource Announcements*. 2019, 8(27):e01707-18.

11. Binoy A, Nedungadi D, Katiyar N, Bose C, Shankarappa SA, **Nair BG**, Mishra N. Plumbagin induces paraptosis in cancer cells by disrupting the sulfhydryl homeostasis and proteasomal function. *Chemico-biological Interactions*. 2019, 310:108733.
12. Pai AR and **Nair B**. Synthesis and characterisation of Sb-doped ZrO₂ and TiO₂ nanoparticles. *International Journal of Microstructure and Materials Properties*, 2019, 14(3): 286-298.
13. Nutakki C, Radhakrishnan S, **Nair B**, Diwakar S. Modeling fMRI BOLD signals and temporal mismatches in the cerebellar cortex. *CSI Transactions on ICT*. 2019:1-8.
14. 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.
15. 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.
16. 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).
17. 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 tetrastratica*: structural characterisation and functional studies. *Journal of Applied Phycology*, 2019: 1-11.
18. 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.
19. Nanjappa V, Raja R, Radhakrishnan A, Jain AP, Datta KK, Puttamalles VN, Solanki HS, Chavan S, Patil A, Renuse S, **Nair B**.... Jain A. Testican 1 (SPOCK1) and protein tyrosine phosphatase, receptor type S (PTPRS) show significant increase in saliva of tobacco users with oral cancer. *Translational Research in Oral Oncology*, 2018, 3: 2057178X18800534.
20. Vargis V, Priya CJ, Surendran H, Suneesh PV, **Nair B** and Babu S. Gold nanoparticles decorated reduced graphene oxide nanolabel for voltammetric immunosensing. *IET Nanobiotechnology*, 2018

21. Rajagopalan P, Nanjappa V, Patel K, Jain AP, Mangalaparathi 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.
22. 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.
23. Nair M, Kannimoola J, Jayaraman B, **Nair B**, Diwakar S. Temporal Constrained Objects for Modelling Neuronal Dynamics. *Peer J*, 2018, 4: e159.
24. 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.
25. 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
26. 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.
27. 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.
28. Rajagopalan P., Patel K., Jain A. P., Nanjappa V., Datta K. K., Subbannayya T., Mangalaparathi 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.
29. Nedungadi D, Binoy A, Pandurangan N, Pal S, **Nair B**, Mishra N. 6-Shogaol induces caspase-independent paraptosis in cancer cells via proteasomal inhibition. *Experimental Cell Research*. 2018, 364(2): 243-251.
30. Jayalekshmi H., Omanakuttan A, Menon N, Vanuopadath M, Nair SS, Corriden R, **Nair B**, Nizet V, Kumar G. Clove Bud Oil Modulates Pathogenicity Phenotypes of the Opportunistic Human Pathogen *Pseudomonas aeruginosa*. *Scientific Reports*, 2018, 8(1): 3437.

31. Nair D, Krishna J, Panikkar M, **Nair B**, Jayashree G, Nair SS. Identification, purification, biochemical and mass spectrometric characterization of novel phycobiliproteins from a marine red alga, *Centroceras clavulatum*. *International Journal of Biological Macromolecules*. 2018, 114: 679-691.
32. Amrutha V, Prasad M, Lekshmija A, Anjana R, Aleena S, **Nair B**, Madhavan A, Pal S. Effect of compost derived lytic agents against enteric bacteria in sewage. *Innovative Strategies for Sustainable Water Management (ISSWM-2017)*. *Pollution Research*, 2018, 37: 100-107.
33. 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.
34. Sreejith M, Akhila P. Reghu, Anandakrishnan K, Gopika P.J, Gregorious Kuriakose, Reshma M.J, Vishnu K, Madhavan A, **Nair B**, Pal S. Screening potential antimicrobial compounds by resazurin dye based viability assay. *Innovative Strategies for Sustainable Water Management (ISSWM-2017)*. *Pollution Research*, 2018, 37: 160-165.
35. Prakash V, Sreetha H, Poornima K H, Lakshminol 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.
36. Subhash S, Anu B Kuruvelil, 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.
37. Archana PV, Reshma RN, **Nair B**, Madhavan A, Pal S. Activity of probiotic strains against enteric pathogens. *Innovative Strategies for Sustainable Water Management (ISSWM-2017)*. *Pollution Research*, 2018, 37: 145-152.
38. Tharuvana D, Sundaresh S, Sreelakshmi V J, Das A, **Nair B**, Madhavan A, Pal S. Sand and charcoal as matrices for immobilization of phages for wastewater treatment. *Innovative Strategies for Sustainable Water Management (ISSWM-2017)*. *Pollution Research*, 2018, 37: 108-114.
39. Porayath C, Salim A, Archana PV, Babu P, **Nair B**, Madhavan A, Pal S. Characterization of the bacteriophages binding to human matrix molecules. *International Journal of Biological Macromolecules*. 2018, 110: 608-615.
40. Porayath C, Suresh M, Biswas R, Mishra N, **Nair B**, Pal S. Autolysin mediated adherence of *Staphylococcus aureus* with Fibronectin, Gelatin and Heparin. *International Journal Of Biological Macromolecules*. 2018, 110:179-184.

41. Parasuram H, **Nair B**, Naldi G, D'Angelo E, Diwakar S. Understanding Cerebellum Granular Layer Network Computations through Mathematical Reconstructions of Evoked Local Field Potentials. *Annals of Neuroscience*, 2018, 25: 11-24.
42. Rajendran A, Vijayan A, Chaitanya M, **Nair B**, Diwakar S. Computational Modelling of Cerebellum Granule Neuron Temporal Responses for Auditory and Visual Stimuli. *International Journal of Advanced Intelligence Paradigms*, 2018, 10.
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