

Dr. SAJESHKUMAR N K

Designation: Assistant Professor

Qualification: MSc, MSc, PhD

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Profile in Detail

Academic records**PhD** : Biotechnology, Mangalore University. (Thesis title: Molecular Phylogeny of Indian Artemia strains). 2015**M.Sc.** : Biotechnology, Punjab Technical University, Jalandhar. 2004**M.Sc.** : Medical Biochemistry, Rajiv Gandhi Centre for Biotechnology. 1996**B.Sc.** : Zoology, Mahatma Gandhi University, Kottayam, 1993.

Teaching Experience

Years (in total) : 15 years

Name of Institution : Mar Augusthinose College, Ramapuram.

Position held : Assistant Professor

Period (from-to) : 2005 –to present

Nature of duties : Teaching theory and practical courses of UG and PG Biotechnology programme.

Research experience

1) Research based on the topic “Molecular genetic profiling of indigenous Artemia strains of India” was conducted as a subject of study leading to PhD degree.

2) Worked as Senior Research Fellow in the DBT, Govt. of India funded project “Development of genetically improved strain of Brine Shrimp, Artemia using quantitative and molecular genetic tools”

3) From 1998 January to 2005 July worked as Clinical Biochemist in Meditech Laboratories, Kollam, Kerala, India.

4) From January 1997 to December 1997, worked as Junior Biochemist.

Administrative responsibilities held in College

Head, Department of Biotechnology : from November 2015

NSS Programme officer : 2006 to 2007, 2011-2017

Responsibilities held at University level

Invited member, Board of studies in Biotechnology, Mahatma Gandhi University Kottayam.

Coordinator; Online Question bank -IV semester MSc Biotechnology.

Coordinator, Online Question Bank for BSc Biotechnology, Mahatma Gandhi University Kottayam.

Chief/Additional Examiner for theory examinations of BSc and MSc Biotechnology.

External and Internal Examiner for practical examination for BSc and MSc Biotechnology.

Member, Examination Boards for BSc and MSc Biotechnology.

Patent

A process to prepare naturalized *Artemia franciscana* from Indian subcontinent with high docosahexaenoic acid and trehalose for aquaculture applications. (Patent application No. 2063/CHE/2010).

Publications in peer reviewed national/international journals

1. "Amylase production by *Aspergillus niger* through submerged fermentation using starchy food byproducts as substrate", International Journal of Herbal Medicine 2016; 4(6): 3440, Oct.2016. ISSN: 2394-0514.
2. "Studies on antibacterial properties of stingless bee honey fortified with plant extracts", International Journal of Herbal Medicine, 4(5): 09-13, 2016 Aug. ISSN: 2321-2187.
3. "Phytochemical Analysis and Invitro Hemostatic Activity of *Mimosa Pudica*, *Hemigraphis Colorata* and *Chromolaena Odorata* Leaf Extracts", CIBTech Journal of Pharmaceutical Sciences, Vol.5 (3), 2016 July-September, pp.16-34. ISSN: 2319-3891.
4. "Comparative Study of the Activity of Amylase Produced by *Aspergillus Niger* Through Solid-State Fermentation (Ssf) Using Various Starchy Materials", Indian Journal of Plant Sciences, Vol.5 (3) 2016July-September, pp. 79-90. ISSN: 2319-3824
5. "Larvicidal Activity of *Gliricidia Sepium* Leaf Extracts on Mosquito Larvae and Its Lethal Effect on Nontargeted Organisms", CIBTech Journal of Biotechnology, Vol. 4 (2), 2016 April-June, pp.13-19. ISSN: 2319-3859.
6. "Wine Production from Various Underutilized and Neglected Fruits in Kerala", CIBTech Journal of Biotechnology, Vol. 5 (2), 2016 April-June, pp.1-14. ISSN: 2319-3859. "Pineapple (*Ananas comosus*) cultivation as an intercrop in rubber replant: effects on soil chemical and physical properties", IJALS, Vol.7, Issue 4, November - 2014. ISSN 2277 – 758X. ISSN: 2249-2321.
7. "Studies on Pineapple (*Ananas comosus*) cultivation as an intercrop in rubber replant: effects on soil microorganisms", Science Research Reporter, 4(2):119-127, Oct. – 2014.
8. "Biomass Production and Utilization of Various Lignocellulosic Substrates using Cultivation of Oyster Mushrooms (*Pleurotus spp.*)", Research Journal of Agricultural Sciences, 5(2): 207-211, March-April (2014), ISSN: 0976-1675.
9. "Studies on Caffeine Content in Various Tea Samples: A Case Study from Kerala", Journal of Chemical, Biological and Physical Sciences, Vol. 4, No. 2; 901-906, February 2014 – April 2014. ISSN: 2249 –1929.

10. "Aquaculture related invasion of the exotic *Artemia franciscana* and displacement of the autochthonous *Artemia* populations from the hypersaline habitats of India". *Hydrobiologia*.
11. "Unraveling the effects of live microalgal enrichment on *Artemia* nauplii" *Indian J. Fisheries*."
12. "Quantitative genetic manipulation for nauplii size reduction of *Artemia franciscana* from Indian salinas and correlated changes in the PUFA profile. *Indian Journal of Fisheries*."

Published books with ISBN

1. "Isolation of phosphate solubilizing bacteria and construction of a mixed biofertilizer and Assessment of its effect on plant growth", December 2020, Publisher: Amazon Publishers, USA, ISBN: 9798697569627.
2. "Morphological characterization of edible banana varieties in Kerala (including germplasm collection) and male flower nutritional analysis of selected varieties: an overview", May 2019, Amazon Publishers, USA ISBN:9781071150368, 1071150367.
3. "Green synthesis of copper and zinc nanoparticles using different varieties of banana starch, latex and sap and evaluation of their antifungal activity against *Fusarium oxysporum cubense*", July 2019, ISBN:9781089128670, 1089128673.
4. "Morphological characterization and nutritional analysis (leaf and pseudostem) of selected banana varieties in Kerala: an overview", May 2019, Amazon Asia-Pacific Holdings Private Limited, ASINB07SJ5KGBV, ISBN:9781070898278, 1070898279.
5. "Wine production from vegetables and preliminary component analysis: an overview", 2019, ISBN:9781709797835, 1709797835.
6. "Green synthesis of copper and zinc nanoparticles from plant extracts and evaluation of their antifungal activity against *Fusarium oxysporum cubense*: an overview", April 2019, Independently Published, ISBN:9781095343852, 1095343858.
7. "Comparative study using banana peel and male flower as substrates for amylase production using *Aspergillus niger* in Kerala: an overview", 2018, Amazon Publishers, USA, SBN:9781074447601, 1074447603.
8. "Industrial Biotechnology: An Introduction", May 2018, Independently Published, ISBN:9781983024276, 1983024279.
9. "Morphological, molecular and biochemical characterization of selected banana varieties in Kerala and evaluation of their anticancer activities: an overview", 2018, Prem Jose, ISBN:9781653756582, 1653756586.
10. "Morphological Diversity of Jackfruit (*Artocarpus Heterophyllus*) Varieties in Kerala", Independently Published, November 2018, Amazon Digital Services LLC - KDP Print US. ISBN-13: 978-1731464101
11. "Molecular Phylogenetic Studies of Bitter Gourd (*Momordica charantia*) and Ivy Gourd (*Coccinia grandis*) and Family Comparison Using Rbcl Sequence Analysis", March 2017, Grin Publishing, ISBN: 9783668382640.
12. "Isolation and Molecular Characterization of Glyphosate Resistant Bacteria from Agricultural Soils in Kerala", April 2017, ISBN-13: 9783668424494.
13. "Isolation and Molecular Characterization of Dye Tolerant Bacteria from Dye Contaminated Soil in Kerala", June 2017, Grin publishing, ISBN-13:9783668446885

14. "Isolation of Phosphate Solubilising Bacteria from Rhizosphere of Different Black Pepper (*Piper Nigrum*) Varieties in Kerala", July 2017, Grin Publishing, ISBN-13: 9783668476264, ISBN-10: 3668476268
15. "Studies on Genetic Relationships Among Six Varieties of Jackfruit in Kerala Employing the "Matk" Gene Using PCR Technique and Rflp Markers", January 2017, Grin Publishing, ISBN-13: 9783668380615
16. "Molecular Phylogenetic Studies of Pumpkin (*Cucurbita Argyrosperma*) and Winter Melon (*Benincasa Hispida*), March 2017, Grin Publishing, ISBN-13: 9783668383432
17. "Soil Properties and Enzymatic Characterization of Jackfruit (*Artocarpus Heterophyllus*) Varieties in Kerala", February 2017, Grin Publishing, ISBN-10: 3668376573, ISBN-13: 978-3668376571
18. "Studies on Genetic Relationships Among Locally Cultivated Musaceae Varieties in Kerala Employing Rbcl and Matk Gene Using PCR Technique and Rflp Markers ", July 2017, Grin Publishing, ISBN-10: 3668482624, ISBN-13: 978-3668482623
19. "Phytochemical Analysis and Cholesterol Lowering Efficiency of *Averrhoa Carambola* Linn (Star Fruit)", July 2017, Grin Publishing, ISBN-10: 3668479453, ISBN-13: 9783668479456.
20. "Cholesterol lowering effect of Tamarind (*Tamarindus indica*)", September 2017, Grin Publishing, ISBN-10: 3668511683, ISBN-13: 978-3668511682
21. "Studies on Genetic Relationships Among Locally Cultivated Citrus Varieties in Kerala Employing Matk and Rbcl Gene Using PCR Technique and Rflp Markers", ISBN-10: 3668480842, ISBN-13: 978-3668480841.
22. Molecular Phylogenetic Studies of Pumpkin (*Cucurbita Argyrosperma*) and Winter Melon (*Benincasa Hispida*) March 2017, Grin Publishing, ISBN-10:366838343X, ISBN-13:978-3668383432
23. "Molecular Phylogenetic Studies of Bitter Gourd (*Momordica Charantia*) and Ivy Gourd (*Coccinia Grandis*) and Family Comparison Using Rbcl Sequence Analysis", March 2017, Grin Publishing, ISBN-10: 3668382646, ISBN-13: 978-3668382640.
24. "A Comparative Study on Traditional Herbal Medicines of Mannans (Tribal Group in Idukki, Kerala) for the Treatment of Diabetes", February 2017, ISBN-10: 3668379742, ISBN-13: 978-3668379749
25. "Phytochemical Analysis of Fruit Extracts of *Baccaurea Courtallensis* and Evaluation of Cholesterol Lowering Property", July 2017, Grin Publishing, ISBN-10: 3668486581, ISBN-13: 978-3668486584
26. "Wine production from vegetables and preliminary component analysis: an overview", 2017, Grin Publishing, ASIN: B081RKS1CX
27. "Evaluation of Genetic Diversity of Jackfruit (*Artocarpus Heterophyllus* Lam) Varieties Based on Sequence Analysis of the Rbcl Gene", February 2017, ISBN-10: 3668383294, ISBN-13: 978-3668383296.
28. "Invitro solubilization of inorganic Phosphate by microorganisms: Impacts on growth of crop plants", LAP LAMBERT Academic Publishing, ISBN-10: 3659969435, ISBN-13: 978-3659969430.
29. "Anti-Acne Activity of Medicinal and Herbal Sources.", Grin Publishing, ISBN-10: 3668540624, ISBN-13: 978-3668540620
30. "Isolation, Characterization and Optimization of Dye Degrading Bacteria from Natural Source", July 2017, Grin Verlag, ISBN-10: 3668478600, ISBN-13: 978-3668478602

31. "Phytochemical Characterization of Averrhoa Bilimbi and in Vitro Analysis of Cholesterol Lowering Effect on Fatty Food Materials", August 2017, Grin Publishing, ISBN-10: 3668498865, ISBN-13: 978-3668498860
 32. "Antimicrobial and Phytochemical Analysis of Lime Juice and Different Types of Honey. an Overview", July 2017, Grin Verlag, ISBN-10: 3668476780, ISBN-13: 9783668476783.
 33. "Phytochemical Profiling of Garcinia Gummi-Gutta (Malabar Tamarind) and in Vitro Analysis of Cholesterol Lowering Effect" July 2017, Grin Publishing, ISBN-10: 3668474222, ISBN-13: 978-3668474222.
 34. "The Honey Apple and Its Phytochemical Analysis", June 2017, Grin Publishing, ISBN10: 3668470073, ISBN-13: 978-3668470071
 35. "Morphological Diversity, Nutritional Quality and Value Addition of Jackfruit (Artocarpus Heterophyllus) in Kerala", July 2017, Grin Verlag, ISBN-10: 3668461767, ISBN-13: 978-3668461765
 36. "Behavior of Salivary Amylase in Various Reaction Environments with Reference to Km and Vmax. an Overview", June 2017, Grin Verlag, ISBN-10: 3668458421, ISBN-13: 9783668458420
 37. "Isolation and Molecular Characterization of Dye Tolerant Bacteria from Dye Contaminated Soil in Kerala", June 2017, Grin Verlag, ISBN-10: 3668446881, ISBN-13: 978-3668446885
 38. "Isolation and Molecular Characterization of Glyphosate Resistant Bacteria from Agricultural Soils in Kerala", April 2017, Grin Publishing, ISBN-10: 3668424497, ISBN13: 978-3668424494
 39. "Studies on Genetic Relationships Among Six Varieties of Jackfruit in Kerala Employing the Matk Gene Using PCR Technique and Rflp Markers", January 2017, ISBN-10: 3668380619, ISBN-13: 978-3668380615
 40. "Green synthesis of copper and zinc nanoparticles using different varieties of banana starch, latex and sap and evaluation of their antifungal activity against Fusarium oxysporum cubense", ASIN B07W5YNPX6, Amazon Asia-Pacific Holdings Private Limited.
 41. "Comparative study using banana pseudostem and leaf vein as substrates for amylase production using Aspergillus niger in Kerala: an overview" ASIN B07SWSPRBL
 42. "Characterization and nutritional analysis of commonly cultivated banana varieties in Kerala: an overview" ASIN B07SFTTQTV.
 43. "Health Aspects and Food Safety in Urban and Peri-Urban Agricultural Production in India. Farms and Railway Gardens Across the Mumbai Metropolitan Region", December 2016, Grin Publishing, ISBN-13: 9783668347946.
 44. "Health Aspects and Food Safety in Urban and Peri-Urban Agricultural Production in India. Farms and Railway Gardens Across the Mumbai Metropolitan Region", December 2016, ISBN-10: 3668347948, ISBN-13: 978-3668347946
 45. Comparative study on optimization of cellulase production: Lignocellulosic substrates using Aspergillus niger", November 2016, ISBN-10: 3330006234, ISBN-13: 9783330006232.
 46. "Chemical characterization and challenges: Urban and Peri-urban agricultural production systems in the Mumbai Metropolitan Region (MMR); an overview", October 2016, LAP LAMBERT Academic Publishing, ISBN-10: 3659973432, ISBN-13: 978-3659973437.
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Paper presentations in Seminars/Conferences/Symposium

1. "Isolation of Nitrogen Fixing Bacteria and Development of Biofertilizer", International Conference on Homeopathy & Phytomedicine (ICHP), 2020, Department of Biochemistry, St. Thomas College, Pala.
2. "Identification and characterization of long chain fattyacid Elongase gene in the brine shrimp *Artemia*" at the international Seminar on "Asian Pacific aquaculture 2011" by World Aquaculture Society from 17th to 20th January, 2011.
3. "Molecular phylogeny of Indian *Artemia* strains" at the international Seminar on "Asian Pacific aquaculture 2011" by World Aquaculture Society from 17th to 20th January, 2011.
4. "Correlated response in PUFA profile of *Artemia franciscana* from Indian salinas following quantitative genetic manipulation for naupliar size reduction" at the 9th Indian Fisheries Forum "Renaissance in Fisheries : Outlook and Strategies" by CMFRI, Kochi, India from 19th to 23rd December, 2011.

Seminars/Conferences/Symposium/Webinar attended.

1. Webinar on " FAT Intrabody Communication" organized by Department of Electronics , MA College Ramapuram on 18th December 2020.
2. International webinar on "Frontiers in Biosciences" organized by the department of Biosciences, MES College Marampally, Aluva, Ernakulam, Kerala from 29th July to 3rd August 2020.
3. Faculty Skill Development Programme on NAAC Guidelines organized by IQAC, BVM Holy Cross College, Cherpunkal on 22nd August 2020.
4. NAAC sponsored National Seminar on "Teaching Learning & Evaluation: Shifting Protocols in Pedagogical Dynamics" organized by IQAC, St.Thomas College, Palai. On 7th and 8th February, 2019.
5. Short course on "Research laboratory Techniques" organized by Pushpagiri Institute of Medical Sciences & Research Centre on 28th September, 2019.
6. "Continuing Medical Education (CME) : LAB Mentor's Meet 2019." organized by ICME on 28th July, 2019.
7. "NSS Kalajatha against "Consumption of Alcohol, Tobacco & Drugs" organized by Kerala State NSS Cell in collaboration with Kerala State Excise Department on 28th February,2014 at Baseliious College, Kottayam.
8. "Inter Collegiate Seminar on Biotechnology- BIOCELEST" organized by Dept. of Biotechnology, Mar Augusthinose College Ramapuram on 19th September, 2011.
9. International Conference of "Asian Pacific Aquaculture 2011" organized by World Aquaculture Society from 17th to 20th, 2011.
10. National Seminar on "Clinical Laboratory Practice and the New Decade" organized by Society of Clinical Chemists-Kerala on 7th March, 2010.
11. International Symposium on "Marine Ecosystems: Challenges and Opportunities" organized by Marine Biological Association of India, Kochi from 9th to 12th February,2009
12. Seminar on "Linking Life Sciences with Computer Technologies-BIOREFORM" organized by Dept. pf Bioinformatics, Kristhu Jyothi College, Changanacherry on 7th March, 2007.

13. South Zone “Inter Collegiate Meet – CHIMERA” organized by CMS College Kottayam on 14th October, 2006.
14. UGC sponsored National Seminar on “Biotechnology & Allied Sciences” organized by MES College Marampally, Aluva on 22nd March, 2005.
- 15.” National Seminar on Biotechnology & Bioinformatics” organized by organized by Dept. of Biotechnology, Mar Augusthinose College Ramapuram from 3rd to 5th January, 2005.
16. Indo-UK symposium on “Hospital Infections in ICUs and Control” organized by Sree Chitra Tirunal Institute of Medical Sciences and Technology, Thiruvananthapuram on 17th & 18th January, 1996.

Faculty development programs/Orientation/Refresher Course/ Workshop/ Short term courses attended.

1. One week STTP on “Teaching and Learning Pedagogy” organized by REST Society for Research International, Krishnagiri, Tamilnadu from 10th to 14th May, 2021.
2. One week STTP on “Research Methodology” organized by REST Society for Research International, Krishnagiri, Tamilnadu from 26th to 30th April, 2021
3. One week STTP on “Emerging Trends in Data Analysis in SPSS” organized by REST Society for Research International, Krishnagiri, Tamilnadu from 12th April to 17th April, 2021.
4. One week STTP on “Emerging Trends in Data Analysis in MS EXCEL” organized by REST Society for Research International, Krishnagiri, Tamilnadu from 5th April to 10th April, 2021.
5. National level FDP on “NAAC Process on Quality Advancement” organized by IQAC, SNGC Coimbatore in collaboration with IQAC, Bharathiar University, Coimbatore from 11th to 18th December, 2020.
6. FDP on “Hands-on Training on Learning Management System (Moodle) and Course Design” conducted by the Faculty Development Centre of the Kerala State Higher Education Council (KSHEC), Thiruvananthapuram through online mode from 1st to 5th December, 2020.
7. Faculty Development Programme (FDP) on Entrepreneurship Skill Development organized by Business Innovation and Incubation Centre (BIIC) under the UGC Scheme for Trans-Disciplinary Research for India’s Developing Economy (STRIDE), Mahatma Gandhi University, Kottayam, Kerala, from 23rd to 28th November 2020.
8. Faculty Development Programme (FDP) on “Online Education in Higher Education Institutions” conducted by the Faculty Development Centre of the Kerala State Higher Education Council (KSHEC), Thiruvananthapuram through online mode from 13th to 17th July 2020 for the faculty members from science disciplines in the state universities and affiliated colleges.
9. National Workshop on “Creative Adaptation-Reaching out through Digital Class rooms” organized by St.Thomas College of Teacher Education, Pala in collaboration with UGC-HRDC, University of Kerala from 19th to 25th May, 2020.
10. Workshop on “Next Generation Sequencing and its Applications in Fisheries and Agricultural Sciences for Beginners” organized by Central Marine Fisheries Research Institute, Kochi and Agrigenome Labs, Kochi on 7th and 8th November, 2017.
11. Workshop on “Cell Biology, Molecular Biology & Industrial Biotechnology” organized by CEPC Laboratory and Technical Division, Kollam from 21st & 22nd June, 2016.
12. “9th Indian Fisheries Forum-Renaissance in Fisheries: Outlook and Strategies” organized by Central Marine Fisheries Research Institute, Kochi from 19th to 23rd December, 2011.
13. Training programme on “Advances in DNA Marker Techniques” organized by National Bureau of Fish Genetic Resources, (ICAR) Kochi from 17th to 28th February, 2009.

14. Workshop on “Marine Biodiversity : Today and Tomorrow” organized by Central Marine Fisheries Research Institute, Kochi on 22nd May, 2008.
15. “Orientation Training Course for Programme Officers of NSS” organized by Training & Orientation Centre, Rajagiri College of Social Sciences, Kalamasserry from 11th to 20th September, 2007.
16. DBT Sponsored training programme on “Bioinformatics: Tools and Applications” organized by Bioinformatics Centre, Indian Institute of Spices Research, Calicut from 14th to 18th November, 2006.
17. Training course on “Techniques in Plant Biotechnology” organized by Centre for Plant Biotechnology & Molecular Biology, College of Horticulture, Kerala Agriculture University, Thrissur from 7th to 18th February, 2005.
18. “Training Programme in Plant Tissue Culture” organized by AVT-L J International Ltd., Biotechnology Division, Kochi from 1st July, 2004 to 30th July, 2004.
19. “Practical Wet Lab Training on Genetic Engineering and Recombinant DNA Technology” conducted by BEST Biotech Research Lab (Pvt. Ltd.) Bangalore from 10.04.2004 to 10.06.2004.
20. Three months training on “Biochemical Analysis” at Regional Cancer Centre, Thiruvananthapuram from 15.05.1996 to 14.08.1996.

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20/06/2021.