

Name: Dr. K. Kannan, M.Sc., M.Phil., Ph.D (Microbiology)

Designation: Assistant Professor

Department: Food Science & Nutrition

Date of Joining: 08.08.2022

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Educational Qualification:

Degree	Subject	College / University & Place	Year Completed
Post-Doc	Microbiology of dental caries	University of Texas Health Science Center, San Antonio, Texas, USA	2023-2024
Ph.D.	Microbiology	Bharathidasan University, Tiruchirappalli, TN	2018
M.Phil	Microbiology	Bharathidasan University, Tiruchirappalli, TN	2013
M.Sc.	Microbiology	Bharathidasan University, Tiruchirappalli, TN	2011
B.Sc.	Industrial Microbiology	Thiyagarajar Arts and Science College, Madurai, TN (Madurai Kamaraj University)	2009

Specialization in Teaching: Microbiology, Food Microbiology, and Dental Microbiology

Specialization in Research: Rhizosphere Biology, Food & Agri Microbiology & Cariology

Research Interests: Food Microbiology, Caries Research, Biocontrol research

Administrative /Academic Position/s (held / currently holding):

Positions held / currently holding	Year – From (month/year) To month/year)
Assistant Professor, Department of Microbiology, The Madura College, Madurai	June 2018 to August 2022 – 4 years, 2 months
Assistant Professor, Department of Food Science and Nutrition, The American College, Madurai	8 th August 2022 to Till Date

Membership of Professional Body

- Tamil Nadu Science Forum (TNSF)
- Indian Society of Soil Biology and Ecology
- BDU Blood Donor, Bharathidasan University, Tiruchirappalli- 620024, TN.

Other Activities / Academic Credentials:

1. External Examiner – Department of Microbiology, Bharathidasan University, Tiruchirappalli, TN.
2. External Examiner – Department of Microbiology, The Thassim Beevi Abdul Kader College for Women, TN
3. External Examiner - Department of Biotechnology, The Madura College, Madurai, TN

Editorial board member	Archives of Phytopathology and Plant Protection, Taylor and Francis.
Reviewer	Archives of Phytopathology and Plant Protection, Taylor and Francis.
Reviewer	Applied Biochemistry and Biotechnology, Springer

Citation Indices (Google Scholar)

Citation indices	All	Since 2024
Citations	759	660
h-index	11	10
i10-index	12	10

Publication: 22 Number of Publications till date

S.No	Authors	Publication	Journal
1.	Kannan. K. 2022.	History of Microbiology in Comics. (Book)	Discovery book publications, Chennai. Edition 2. & Amazon Kindle E book.
2.	Kannan K. , Vijayan D., Mubarak Ali A., Praveen Kumar R., Parveez Ahamed A and Thajuddin N. (2014).	Evidence Based Analysis of a Novel Symbiotic and Epiphytic Cyanobacteria Associated with Azolla by Cyto and Molecular taxonomy.	Biotechnology.13(2), 46-53.
3.	Kanthaiah Kannan , Duraisamy Nivas, Velu Rajesh Kannan, and Kubilay Kurtulus astas. (2015).	Agro-Traditional Practices of Plant Pathogens Control. sustainable Approaches on Controlling of Plant Pathogenic Bacteria. Edited by: Rajesh Kannan & mp; Bastas Kubilay,	CRC Press, USA. 111-121. (ISBN: 978-1-4822-4053- 5).
4.	Kanthaiah Kannan , Velu Rajesh Kannan *. (2019).	Characterization of the Bioactive Metabolite from a Plant Growth Promoting Rhizobacteria <i>Pseudomonas aeruginosa</i> VRKK1 and Exploitation of Antibacterial behaviour against <i>Xanthomonas campestris</i> a causative agent of Bacterial blight disease in Cowpea.	Archives of Phytopathology and Plant Protection https://doi.org/10.1080/03235408.2018.1557883
5.	Kanthaiah Kannan. , Velu Rajesh Kannan., Shibiraya Natarajan., Umamaheswari Mari Muthu. (2019)	Control of Fusarium Wilt disease in Cowpea plant (<i>Vigna unguiculata</i> L.). using Secondary Metabolites produced in <i>Bradyrhizobium japonicum</i> .	Kong. Res. J. 6(2): 28-36
6.	Duraisamy Nivas, Kanthaiah Kannan ,	Bacteriophages: An Emerging Biocontrol Agent for Plant	CRC Press, USA. (ISBN: 978-1- 4822-

	Velu Rajesh Kannan, and KubilayKurtulusBastas. (2015)	Pathogenic Bacteria. sustainable Approaches on Controlling of Plant Pathogenic Bacteria. Edited by: Rajesh Kannan & amp; BastasKubilay	4053-5). 97-310
7.	Rajendran Sangeetha Devi, Velu Rajesh Kannan, Krishnan Natarajan, Duraisamy Nivas, Kanthaiah Kannan , Sekar Chandru, and Arokiaswamy Robert Antony.	The Role of Microbes in Plastic Degradation. 341-370. (2016). In Environmental Waste Management. Edited by: Ram Chandra,	CRC press, Taylor & Francis Group, LLC
8.	Rajendran Sangeetha Devi., Duraisamy Nivas; Kanthaiah Kannan ; SekarChandru; Arokiaswamy Robert Antony. (2015).	Biodegradation of HDPE by Aspergillus spp. from Marine Ecosystem of Gulf of Mannar, India.	Marine Pollution Bulletin 96: 32–40
9.	Robert Antony A., Nivas D., Chandru S., Sangeetha Devi R., Kannan K. and Rajesh Kannan V. (2017).	Validation of <i>Alcaligenesfaecalis</i> RBL1 Efficacy on Zinc Solubilization in Sorghum bicolor Rhizosphere Soils	Asian Journal of Microbiology, Biotechnology and Environmental Science. (3). ISSN # 0972 – 3005
10.	N. Bhuvanesh , S. Suresh , P. Ram Kumar , E.M. Mothi, K. Kannan , V. Rajesh Kannan, R. Nandhakumar (2018)	Small molecule “turn on” fluorescent probe for silver ion and application to bio imaging.	Journal of Photochemistry & Photobiology A: Chemistry 360:6–12
11.	S. Suresh, N. Bhuvanesh, J. Prabhu, A. Thamilselvan, S. Rex Jeya Rajkumar, K. Kannan , V. Rajesh Kannan, R. Nandhakumar.	Pyrene based chalcone as a reversible fluorescent chemosensor for Al ³⁺ ion and its biological applications.	Journal of Photochemistry and Photobiology A: Chemistry. 359 (15) 172-182.
12.	N. Bhuvanesh, S. Suresh, J. Prabhu, K. Kannan , V. Rajesh Kannan, R. Nandhakumar (2018).	Ratiometric fluorescent chemosensor for silver ion and its bacterial cell imaging..	Optical Materials. 82: 123–129
13.	R. Sangeetha Devi, R. Ramya, K. Kannan , A. Robert Antony, V. Rajesh Kannan. (2019).	Investigation of biodegradation potentials of high density polyethylene degrading marine bacteria isolated from the coastal regions of Tamil Nadu, India.	Marine Pollution Bulletin 138 (2019) 549–560.
14.	N. Bhuvanesh, S. Suresh,	Bis-anthracene derived bis-	Royal Society of

	K. Kannan , V. Rajesh Kannan, Nikhil Maroli, Ponnalai Kolandaivel and R. Nandhakumar. (2019).	pyridine: selective fluorescence sensing of Al ³⁺ ions.	Chemistry. 1-10.
15.	Robert Antony, K. Kannan , R. Sangeetha Devi, S. Nathiya, A. Manikandan and V. Rajesh Kannan.(2019).	Impact of micronutrient variations on phosphate solubilizing PGPR <i>Alcaligenes aecalis</i> RBL2 isolated from Sorghum bicolor rhizosphere soil.	Journal of Soil Biology & Ecology. Voume 39 (1 & 2). 15-31.
16.	Manikandan A, Akila V, Kannan K , Ramya R, Rajeshkannan V, Ayyasamy P.M and Rajakumar S. (2020).	Antimicrobial Activity of Green Seaweed <i>Ulva</i> sp against Pathogenic Microorganisms.	Indian Journal of Natural Sciences,10,27600-27606. 18.
17.	Manikandan, A., Sangeetha Devi, R., Ramya, R., Kannan, K. , Rajakumar, S. and Rajesh Kannan Velu. (2020).	Biodegradation of triclosan by <i>pseudomonas putida</i> RBL8 from Cosmetics contaminated sites.	Journal of Interdisciplinary Cycle Research, Volume XII, Issue VI: 446-460. DOI:18.0002.JICR.2020.V12I4.008301.3170833
18.	Bennett Amaechi, Parveez Ahamed Abdul-Azees, Sahar Mohseni, Minh Luong, Chun-Yen Lin, Maria Restrepo-Ceron, Yuko Kataoka, Temitope Omosebi, and Kannan Kanthaiah . (2024).	Caries Preventing Efficacy of new Isomalt containing Mouthrinse Formulations: a microbial study.	BDJOPEN-01926R. (Accepted on June 10,2024)-(Impact Factor-2.6)
19.	Bennett Tochukwu Amaechi, Parveez Ahamed Abdul Azees, Sahar Mohseni, Maria Camila Restrepo-Ceron, Yuko Kataoka, Temitope Olabisi Omosebi, Kannan Kanthaiah . (2024).	Effectiveness of new Isomalt-containing Toothpaste formulations in preventing caries development.	Dentistry Journal. Manuscript ID: dentistry-2987674. (Communicated)-(Impact Factor-2.5)
20.	Sunil Mankar, Bennett T Amaechi, Kannan Kanthaiah , Nahid Iftikhar, Amos C. Obiefuna. (2024).	Clinical Evaluation of the Effect of Nanohydroxyapatite Lozenge on the pH of Dental Plaque.	Clinical Cosmetic and Investigational Dentistry.
21.	Kanthaiah Kannan , Rajamanickam Ramachandran, Gnanaselvan Suvathika, Devanesan Arul Ananth, Murugan Mani Sabareesh. (2024).	Potential Degradation of Nanomaterials by Enzymes. In Nano-Enzyme Incorporated Particles: Fundamental Concepts, Synthesis & Applications	Progress in Biochemistry and Biotechnology, Elsevier, Academic Press, 307-332.
22.	Kiruthika Lakshmi Parameswaran., Sree Gayathri Subbaraju and Kanthaiah Kannan (2024).	Various activities on the enhancement of nanobiocatalysts. In Nano-Enzyme Incorporated Particles: Fundamental Concepts,	Progress in Biochemistry and Biotechnology, Elsevier, Academic Press, 113-132.

NCBI Submission: (Authors/GenBank Accession No./Name of the gene/Title)

- ✓ **Kannan K** and V Rajesh Kannan. (2013). KF537265/16S rRNA/*Pseudomonas aeruginosa* VRKK1. 781bp. Partial sequence.
- ✓ **Kannan K** and V Rajesh Kannan. (2013). KF537266/16S rRNA/*Bacillus safensis* VRKK2. 780bp. Partial sequence.
- ✓ Ramya R, Rajesh Kannan V, Sangeetha Devi R, **Kannan K** and Manikandan A. (2015). KT383848/16S rRNA/ *Pseudomonas pseudoalcaligenes*RBL7S6. Partial sequence.
- ✓ Shibiraya N, **Kannan K** and Rajesh Kannan V. (2018). MH165174/16S rRNA/ *Rhizobium leguminosarum* and MH165175/16S rRNA/*Bradyrhizobium japonicum*. Partial sequence.

International Research Students Guidance/Co-Guidance

- **Miss. Alexandria I. Tan, DDS candidate** - Evaluation of the caries remineralizing effect of new toothpaste formulations: a pH cycling study (2024)
- **Mrs. Emily Holladay, DDS candidate** - Comparative Efficacy of Hydroxyapatite Toothpaste formulations for Remineralization of Initial Caries Lesions (2024)
- **Miss. Kelly Wang**. Graduate Student Biology – Evaluation of Menuka honey and SLF honey for the prevention of dental caries (2024)

Research Students Guidance/Co-Guidance

Degree	Awarded	Thesis/ Dissertation Submitted	Synopsis Submitted	Ongoing
Ph. D.	-	-	-	-
M. Phil.	-	-	-	-
M. Sc.	9	-	-	-
Total	9	9	0	-

M. Sc. Students: 9 dissertations submitted

- **Ms. S. Kaleeswari:** Microbial Pheromones against Plant pathogens (2016-17)
- **Ms. N. Shibiraya:** *Rhizobium* and Nodule Secondary Metabolites to Control *Fusarium* Wilt in Cowpea (*Vigna unguiculata* L.). A Confirmation Study of PGPR as Biocontrol Agent (2017-18)
- **Ms. Uma Maheswari:** Analysis of Rhizodeposits from Cowpea Plant Root using Biochemical and Analytical Methods (2017-18)
- **Mr. Nandha Kumar :** Control of Rice blight disease using potential PGPR isolated from Rice Rhizosphere soil (2019-20)
- **Mr. M . Sabareesh:** Control of Leaf spot disease in cowpea using potential PGPR isolated from Rhizosphere (2020-2021).
- **Mr. S. veenkumar:** Biocontrol of *Fusarium* Wilt (*Fusarium Oxysporium*) disease in Jasmine Sambac Plant (2020-2022)
- **Mr. Srikrishnan:** Biocontrol of Sclerotium wilt (*S. rolfsii*) disease in Jasmine Sambac plant (2020-2022)
- **Mr. Petchiraj & Mr. Vijay.** DOMS-Donkey Milk & Millet Based Choco Sticks & Callets for Undernourished Children’s in India (2022-2024).

Conference/Seminar/Symposia Organized/Participated

- Organized a two days virtual seminar on “A juncture of classical and contemporary research in biological sciences” in the Department of Microbiology, The Madura College, Madurai-625 011, held on 27th and 28th October, 2021
- Intercollegiate student's seminar on "Bioinformatics and drug design" Thiagarajar College of arts & science (autonomous) Madurai-9, held on 24th September, 2007.
- State level student's seminar on "Molecular evolution and bioinformatics" Thiagarajar College of arts & science (autonomous) Madurai-9, held on February, 2009.
- Actively participated in the seminar on ‘Immunology and Immunotechnology’- SOII '09 held on 18 and 19 September, 2009 organized by the Department of Microbiology, Bharathidasan University, Tiruchirappalli- 620024, Tamilnadu jointly with Indian Immunology Society, New Delhi.
- Participated in the "International conference on climatic change and bioresource" (ICCCB-2010)held in the Department of bio technology, Bharathidasan University, Tiruchirappalli - 620024.
- Participated in the Colloquium on "In Vitro Toxicology and Vaccinology" Organized by Mahatma Gandhi-Dorenkamp Center (MGDC)held at Bharathidasan University, Tiruchirappalli-620024 on 2nd October, 2010.
- Participated in the "Spatial Strategies for Sustainable Management" SSSM 2011 held from February 14- 16, 2011. Organized by the Department of Environmental Management, Bharathidasan University, Tiruchirappalli-620 024.
- Presented poster in NABS-Fourth Interactive Workshop “ Biotechnological Applications for Sustainable Development” held on 12-13 March, 2011 at PRIST University, Thanjavur, Tamil Nadu.
- Participated and Presented a paper in the National Symposium on “ Prospects and Retrospects in Microbial Technology” held on 17-18 February, 2012 at Department of Microbiology & Biotechnology, Cauvery College for Women, Tiruchirappalli-620 024.
- Presented a Paper in International Conference on Advances in Biotechnology and Patenting (ICABP-2013) held on 18-21 February, 2013 in school of Biotechnology and School of Chemistry, Bharathidasan University, Tiruchirappalli – 620 024.
- Presented a Paper in National Conference on New Opportunities and Challenges in Microbial Research - (MICREC13) held on 5th& 6th September, 2013 organized by the Department of Microbiology, Bharathidasan University, Tiruchirappalli- 620 024, Tamilnadu, India.
- Participated in the TEQIP II Sponsored Faculty Development Programme (FDP) on “Multidisciplinary Perspectives for Pharmaceutical, Life-Science Educators and Researchers” held on 9-15th December, 2013 organized by Department of Pharmaceutical Technology, Anna university, Tiruchirappalli-620 024.

- Actively Participated in refresher training on “Gene Expression Analysis” held from 14-24 July, 2014 by Integrated Biotechnology Course, Department of Plant Biotechnology, College of Agriculture, Kerala Agricultural University, Kerala.
- Participated in an international conference on Trends in Plant Systematics (TIPS) held on 31st October - 2nd November, 2014. Organized by Department of Plant Science, Bharathidasan University, Tiruchirappalli-620 024.
- Presented Paper in International Conference on Emerging Challenges in Biotechnology, Human Health and Environment held on 18-20 December, 2014. Organized by Devi Ahilya University, Indore, India.
- Participated in the “National Workshop On “High Performance Liquid Phase Separation Technique” held on 23rd January, 2015, organized by Department of Marine Biotechnology, Bharathidasan University, Tiruchirappalli- 620 024.
- Participated in the “National Conference on Challenges and Future Prospectus of Applied Research in Life Sciences” held on 6 February, 2015 at Department of Biochemistry, Bharathidasan University, Tiruchirappalli 620 024.
- Participated in 36th Annual Conference and National Symposium on “Challenges and Management Approaches for the Crop Diseases of National Importance – Status and Prospects” held on 12-14 February, 2015 in AC&RI, Madurai, Tamil Nadu.
- Participated in 36th Annual Conference and National Symposium held on 12-14 February, 2015. Entitled “Challenges and Management Approaches for Crop Diseases of National Importance-Status and Prospects” Organized by Tamil Nadu Agricultural University, Coimbatore. Indian Society of Mycology and Plant Pathology, Udaipur, Rajasthan.
- Presented a Paper in National Conference on “Recent Advances in Industrial Biotechnological Skills Development” held on 30th and 31st March, 2015. Organized by Thiagarajar College of arts and science, Madurai-625 009.
- Participated in One Day Awareness Cum Training Programme on “Shodhganga ETD Database” held on 6th November, 2015 at Bharathidasan university, Tiruchirappalli – 620 024.
- Presented a Paper in “International Conference on Biodiversity and Biotechnology” held on 25-27 February, 2016 combined organized by Department of Biotechnology, Bharathidasan university, Tiruchirappalli and Periyar Maniyammai university, Thanjavur.
- Participated in National Workshop on “Intellectual Property Rights” held on 3-4 March, 2016 at Department of Botany, Bharathiyar University, Coimbatore.

Talks Given

- Given a talk on “**The Importance of Book Reading**” in Department of Microbiology, Bharathidasan University.
- Given a talk on “**Books are the Eighth Wonder**” in Department of Animal Science, Bharathidasan University.

Resource Person and Science Lectures

- Appeared as a Resource person and delivered a lecture on **“Rhizosphere engineering for sustainable agriculture- A bottom up approach”** at Department of Microbiology, Govt. Arts and Science College, Kozhinjampara, in One Day National Seminar on “Current Scenario in Life Science Research” on 31st October 2019.

Honorary Position

Judge for drawing competition and other arts events:

- Drawing Competition, among School students held in District Science Center, Tirunelveli Dt., TN.
- Intra college fest **“Wings”** held in Cauvery College for women, Tiruchirappalli, TN.
- Intra College fest held in St. Joseph College, Tiruchirappalli, TN.

Meetings, Cultural fest and Campaigns Organized

- Organized one day **“Blood Donation Camp”** with Scholars and Student Community of Bharathidasan University, Tiruchirappalli – 620 024, TN.
- Organized “Inter Collegiate Fest” **“CENITTERZ”** by the Bharathidasan University Master students and Scholars in the year 2011, 2012, 2013, 2014 and 2017 with Department of Microbiology, Bharathidasan University, Tiruchirappalli-620 024, TN.
- Organized **“Antibiotic Resistance Awareness Programme”** and served as volunteer for pamphlet distribution in Bharathidasan University Campuses and Tiruchirappalli Corporation Areas, initiated by the Department of Microbiology, Bharathidasan University, Tiruchirappalli and the Indian Initiative for Management of Antibiotic Resistance, Ujjani on 15th November 2017.
- Acted as **“Coordinator”** for the fine arts team and lifted **“Runner Up Trophy”** in the state level cultural fest held in “Microgalxia 2018” organized by Srimad andavar arts and science college, Trichy.
- Acted as **“Guidance and trainer”** for the Bharathidasan University, fine arts team and lifted **“2nd Runner Up Trophy”** in the cultural fest held in “Vyuha 18” organized by Madurai Medical College, Madurai.

Others (Extra-curricular Experience)

- I have worked as **Fine Arts Tutor/Fine arts Master** for Cauvery College for women, Trichy and Thanthai Hans Roever College, Perambalur in the year 2015, 2016 and 2018.
- Won **“Fine arts Champion”** at BDU fest 2015 with the team of Cauvery Women’s College, Tiruchirappalli- 620024 (1st place in Junk arts, Clay modelling, Poster Making, 2nd place in Rangoli and Collage making).

Science Write up in Tamil and English and Science Outreach Events

- Tamil Nadu Science Forum (TNSF): Vignana Siragu-விஞ்ஞான சிறகு & Vizhudhu
- Arivukkan Science Magazine, Monthly Magazine
- Jantar Mantar - ஆங்கிலத்தில் அறிவியலுக்கான மாணவர் இதழ்