

Dr.Kandasamy Prabakar

Assistant Professor
Department of Zoology



Education

M.Sc., 1994, Jamal Mohamed College, Bharathidasan University

M.Phil., 1995, New College, University of Madras

Ph.D., 2000, New College, University of Madras

Areas of Research Work

Environmental Microbiology

Isolation and identification of Antibiotic Resistant Genes (ARG) in Environment

Screening of Multi Drug Resistant Bacteria from environmental samples

Phytochemical screening of herbal plants & Cell line cancer

Isolation and structure elucidation of herbal plants

Lung cancer cell lines A549, Breast cancer cell lines against bioactive compounds.

Bio-informatics

Gene sequencing of ARG, Pyro Sequencing of MDR Bacterial genes

Short Summary on Research

The main goal of the research is the temporal variation in the antibiotic load and antibiotic resistant (Gram positive and Gram negative) bacterial population in the hospital and sewage effluents. The phenotypic and molecular epidemiology of antibiotic resistance bacteria and the antibiotic resistance genes encoding resistance to selected antibiotics in the selected subset of bacterial isolates from polymerase chain reaction (PCR) and Southern hybridization. The genetic fingerprinting of the antibiotic resistant bacteria isolates using pulsed field gel electrophoresis (PFGE). The mobile genetic elements and transferability of antibiotic resistance genes through horizontal gene transfer by plasmid profiles, PCR and conjugation experiments and bioactive fractions of herbal plants and structure elucidation with in-vitro of cell line cancer studies.

Publications (selected)

1/26/2016

Kandasamy Prabakar - Google Scholar Citations



Kandasamy Prabakar

Jamal Mohamed College
Environmental Microbiology

Google Scholar

Citation indices	All	Since 2011
Citations	94	85
h-index	7	7
i10-index	4	4

Total Impact Factor: 38.515

Total H Factor: 760

by **SJR** SCImago
Journal & Country
Rank

1. Naresh Devarajan, Amandine Laffite, Patience Ngelikoto, Vicky Elongo, **Kandasamy Prabakar**, Josué I. Mubedi, Pius T. M. Piana, Walter Wildi and John Poté. **2015**. Hospital and urban effluent waters as a source of accumulation of toxic metals in the sediment receiving system of the Cauvery River, Tiruchirappalli, Tamil Nadu, India. *Environ Sci Pollut Res*. September 2015, Volume 22, Issue 17, 12941-12950. **Impact Factor (2.828) Springer Publications.**
2. Naresh Devarajan,,Amandine Laffite,Neil D. Graham, Maria Meijer, **Kandasamy Prabakar**, Josué I. Mubedi, Vicky Elongo, Pius T. Mpiana, Bastiaan Willem Ibelings, Walter Wildi, and John Poté . **2015**. Accumulation of Clinically Relevant Antibiotic-Resistance Genes, Bacterial Load, and Metals in Freshwater Lake Sediments in Central Europe. *Environ. Sci.Technol.* 2015.49. 6528-6537. **American Chemical Society. Impact Factor (5.330) ACS Publications.**
3. **Kandasamy Prabakar**, Samyvel Periyasamy and Charli Deepak **2015**.Phytochemicals screening, antioxidant and antibacterial potential of *Mukiascabrella* (Musumusukkai) against nosocomial bacterial pathogens. *Int.J.of Pure and Appl. Zoology*.3(1): 1-8. **Impact Factor: 0.765**
4. Paola M. Mwanamoki, Naresh Devarajan, Birane Niane, Patience Ngelinkoto, Florian Thevenon, José W. Nlandu, Pius T. Mpiana, **Kandasamy Prabakar** , Josué I. Mubedi, Christophe G. Kabele, Walter Wildi, John Poté. **2015**. Trace metal distributions in the sediments from river-reservoir systems: case of the Congo River and Lake Ma Vallée, Kinshasa (Democratic Republic of Congo). *Environ Sci Pollut Res* (2015) 22:586–597. **Impact Factor (2.828) Springer Publications.**

5. Paola M. Mwanamoki, Naresh Devarajan, Florian Thevenon, Niane Birane, Luiz Felipe de Alencastro, Dominique Grandjean Pius T. Mpiana, **Kandasamy Prabakar**, Josué I. Mubedi, Christophe G. Kabele, Walter Wildi, John Poté. (2014). Trace metals and persistent organic pollutants in sediments from river-reservoir systems in Democratic Republic of Congo (DRC): Spatial distribution and potential ecotoxicological effects. *Chemosphere* 111 (2014): 485–492. **Impact Factor (3.854). Elsevier publications**
6. Joseph B. Tshibanda, Naresh Devarajan, Niane Birane, Paola M. Mwanamoki, Emmanuel K. Atibu , Pius T. Mpiana, **Kandasamy Prabakar**, Josué Mubedi Ilunga,Walter Wildib, John Poté (2014). Microbiological and physicochemical characterization of water and sediment of an urban river: N’Djili River, Kinshasa, Democratic Republic of the Congo. *Sustainability of Water Quality and Ecology* 3–4 (2014): 47–54. **Impact Factor (3.854). Elsevier publications.**
7. Paola M. Mwanamoki & NareshDevarajan & Florian Thevenon & Emmanuel K. Atibu & Joseph B. Tshibanda&Patience Ngelinkoto & Pius T. Mpiana & **Kandasamy Prabakar** & Josué I. Mubedi & Christophe G. Kabele & Walter Wildi & John Poté 2014. Assessment of pathogenic bacteria in water and sediment from a water reservoir under tropical conditions (Lake MaVallée), Kinshasa Democratic Republic of Congo, *Environmental Monitoring and Assessment*,186(10):6821-6830. **Impact Factor (2.828). Springer publications.**
8. Emmanuel K. Atibu , NareshDevarajan , Florian Thevenon Paola M. Mwanamoki , Joseph B. Tshibanda , Pius T. Mpiana, **Kandasamy Prabakar** , Josué I. Mubedi , Walter Wildi ,John Poté2013. Concentration of metals in surface water and sediment of Lulu andMusonoie Rivers, Kolwezi-Katanga, Democratic Republic of Congo. *Applied Geochemistry* 39 (2013):26–32. **Elsevier publications.**
9. Mubedi, J., Devarajan. N., Le Faucheur, S., Sivalingam, P., Kayembe, J., **Prabakar.K.**,Wildi, W., Poté, J., 2013. Effects of untreated hospital effluents on the accumulation of toxic metals in sediments of receiving system under tropical conditions: Case of South India and Democratic Republic of Congo. *Chemosphere* 93(2013): 1070-1076. **Impact Factor (3.854). Elsevier publications.**

10. K. Rajamanickam, S.S. Sudha, M. Francis, T. Sowmya, J. Rengaramanujam, P. Sivalingam, **K. Prabakar, 2013**. Microalgae associated *Brevundimonas* sp. MSK 4 as the nano particle synthesizing unit to produce antimicrobial silver nanoparticles, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* 113(2013): 10-14. **Elsevier publications**.
11. **Prabakar.K,** Sivalingam.P, Mohamed.R, Muthuselvam.M, Devarajan.N, Arjunan.A, Karthick.R, Suresh.M.M, Pote.J. **2013**. Evaluation of antibacterial efficacy of phyto fabricated silver nanoparticles using *Mukiascabrella* (Musumusukkai) against drug resistance nosocomial gram negative bacterial pathogens. *Colloids and Surfaces B: Biointerfaces*. 104:282-288. **Elsevier publications**.
12. Vaitheeswaran T. **K. Prabakar,** K. Anbuarasu and P. Mariappan, **2013**. Record of the Rrog crab, *Ranninoides Personatus* Henderson, 1888 (Crustacea: Decapoda: Raninidae). *Tamil Nadu J. Veterinary & Animal Sciences* 9(5), 362-365.
13. Babu, A., Ravimanickam, Joseph Antony Jerald. I., Mohamed Shamsudin and **Prabakar, K., 2014**. Studies on the Diversity of Phytoplankton in Cauvery River, Thanjavur District, Tamil Nadu, India. *International Journal of Current Microbiology and Applied Sciences*. 3(5), (2014) pp. 824 – 834.
14. Vaitheeswaran T., **K. Prabakar,** S. Malathi, N. Neethisselvan. **2015**. Age and growth of red toothed triggerfish *Odonus niger* (Ruppell, 1836)(Family: Balistidae) off Thoothukudi coast of Gulf of Mannar, Southeast coast of India(08⁰53.6'N78⁰16E and 08⁰ 53.8'N 78⁰ 32'E)-(36m). *International Journal of Fisheries and Aquatic Studies* 2(5):204-209.
15. Vaitheeswaran T., **K. Prabakar,** S. Malathi, N. Neethisselvan. **2015**. Length weight relationship of titan triggerfish *Balistoides viridescens* (Bloch and Schneider, 1801) (Family: Balistidae) off Thoothukudi coast of Gulf of Mannar, Southeast coast of India. (08⁰53.6'N78⁰16E and 08⁰ 53.8'N 78⁰ 32'E)-(36m). *International Journal of Fisheries and Aquatic Studies* 2(5):32-35.
16. Ramesh Pennamareddy, Suresh. B Kotini and **K.Prabakar. 2010**. Detection of NID factor in β -lactam antibiotic drugs. *International Journal of Biological Sciences and Engineering*. ISSN 0976-1519, Vol. 01, No. 01, January 2010, pp. 73-77
17. Ramesh Pennamareddy, Suresh. B Kotini and **K.Prabakar 2010**. Resolving Test Interference in Detection of Endotoxin's In 3rd Generation Cephalosporin Drug. *International Journal of PharmTech Research*. CODEN (USA): IJPRIF ISSN :0974-4304. Vol.2, No.2, April-June 2010. pp 1286-1290.

18. Ramesh Pennamareddy and **K. Prabakar 2010**. Detection of NID factor in lactobionic acid with *Limulus amoebocyte lysate*. *International Journal of Pharmacy and Pharmaceutical Sciences*. Vol 2, Suppl 2.
 19. Ramesh Pennamareddy, **K. Prabakar** and J. Pandiyan. **2009**. Sorting out of interference in detection of endotoxins in biotherapeutic drugs. *Indian Journal of Science and Technology*. Vol 2. No. 11. November 2009. 20-22.
 20. Ramesh Pennamareddy, **K. Prabakar** and J. Pandiyan. **2009**. Determination of NID factor in cephalosporin antibiotics. *Indian Journal of Science and Technology*. Vol 2. No. 12. December 2009. 40-43.
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Book Articles:

1. Joseph Jerald I, M.I.H.SyedBava and **K.Prabakar 2004**. Ground water quality: An overview. *Agrobios*. Vol.2.No.10: 46-49.
2. Joseph Jerald I, M.I.H.SyedBava and **K.Prabakar 2004**. Sustainability of ground water supply- Ground water for the future. *Agrobios*. Vol.3.No.4: 21 and 22.

Book Published:

1. Madhan Chakkaravarthy, V. and **Prabakar. K. 2013**. Enzymology and Enzyme Biotechnology (For UG & PG students of Biological Science). YAZYM Publications, Trichy. ISBN - 9 7 8 - 9 3 - 8 1 5 2 1 - 2 7 - 4
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Research Supervision

Ph.D : 01 (Awarded), 05 (Guiding)

M. Phil. : 30(Guided) 03(Guiding)

Gene Sequence Submitted to GenBank

Accession No.

JX495945; JX495949; JX495946; JX495950; JX495947; JX495951; JX495948; JX495952

Research Projects:

S.No	Title of the project	Funding Agency	Duration	Amount
1	Isolation and structure elucidation of bioactive fractions of <i>Mukiascabrella</i> (Musumusukkai) against drug resistant nosocomial bacterial pathogens and invitro cytotoxicity for A549 (Human lung cancer cell lines)	UGC	2013-2016	₹. 12,98,300

Honours/Awards:

- ❖ **Best NSS programme Officer** Award received from Bharathidasan University, **NSS award** for the year 2012-2013.
- ❖ Presented a talk on “Nunnuyirgalin Perukkamum atthan thakkangalum” on 23th November, 2015 at Broadcasting Corporation of India, **All India Radio**, Tiruchirappalli. Programme broadcasted on 23.12.2015 at 7.00am (concept of Talk: Developing of multidrug resistant bacteria in water and wastewater ecosystem)
- ❖ **Key note address** to “ In-service Training to Secondary Grade Science Teachers” at Dhanalakshmi Srinivasan College of Arts and Science College for Women, Perambalur. Under sponsored by **Tamilnadu State Council for Science and technology, Chennai. 03.08.2015**
- ❖ Resource person: Delivered a lecture in the seminar on “Current Status of Zoology Studies” on 19th February 2009 at National College, Tiruchirappalli.
- ❖ **Programme Officer in National Service Scheme** (Government of India), Jamal Mohamed College, from 2011 to 2014.
- ❖ Presented a talk on “Nunnuyirgalin Perukkamum Vilaivugalum” on 25th September, 2012 at Broadcasting Corporation of India, **All India Radio**, Tiruchirappalli. Programme broadcasted on 11.10.2012 at 7.00am and re broadcasted on 12.10.2012 at 21.16pm (concept of Talk: Developing of multidrug resistant bacteria in water and wastewater ecosystem)

- ❖ **Reviewer in** International Journal of Nanomedicine (Dove Press), Spectrochimica Acta Part A: Molecular and Bimolecular Spectroscopy.
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Membership in Professional bodies:

- Life Member in National Academy of Vector Born Diseases, (19767/199) Orissa, India.
 - Life Member (1325) in National Environmental Science Academy, New Delhi 110019, India.
 - Fellow member of Biologists Forum of India, Chennai, India.
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Conferences/ Special Course organized:

Organizing Secretary of the National Seminar on Environmental Recourse and Sustainable Management sponsored by UGC and Jamal Mohamed College held at Jamal Mohamed College, Tiruchirappalli on 04 March 2015.

Abroad Visits:

1. **Special Lecture on Antibiotic Resistant Bacteria in river Eco-system, from 29th November to 09th December, 2014 at Institute of F.A. Forel, University of Geneva, Switzerland.**
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Contact

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