

Dr. SEKAR VIJAYAKUMAR
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https://www.researchgate.net/profile/Vijayakumar_Sekar2/citations?sorting=citationCount&page=1

<https://scholar.google.com/citations?user=nSxDa8gAAAAJ&hl=en>

<https://publons.com/author/1364132/vijayakumar-sekar#profile>

Researcher ID: A-8600-2018 (Thomson Reuters)

Mobile No. : +91-9976326646/+86-15063145252

h- index: 16

i10 index : 23



RG Score: 28.41

PROFESSIONAL OBJECTIVE

Seeking an interesting research position in life science with a goal of service to the society utilizing my extensive research background and the rich set of opportunities to excel in all endeavours.

Personal Profile:

Name	: S. VIJAYAKUMAR
Father's Name	: V. Sekar
Age	: 29 years
Date of Birth	: 5 th June 1991
Sex	: Male
Marital Status	: Married
Nationality	: Indian
Passport no	: N7513930
Address (Res)	: No: 81, D.No:04, Swamynathan Chettiyar Street Muthupattinam 2 nd Street, Karaikudi-630001 Tamil Nadu, India. Mobile No.: +91-9976326646
E-mail ID	: vijaysekar05@gmail.com
Languages Known	: Tamil, English

Professional Qualification:

Degree	Institution/ University	Subject	Year of passing	Class	% of Marks obtained
B.Sc.,	Alagappa Govt. Arts College Alagappa University	Zoology	April -2011	I Class	71 %
M.Sc.,	Alagappa University Karaikudi,India.	Zoology	April -2013	I Class	83 % 1 st Rank Distinction
PG Diploma in Bioinformatics	Alagappa University Karaikudi, India.	Bioinformatics, Structural Pharmacogenomics	August- 2015	I Class	71 %
Ph.D	Alagappa University, Karaikudi, India.	Zoology	Septemper- 2019		Highly commended

Technical Qualifications

- Diploma in Office Management (DOM:MS-DOS, Windows, MS-Office).
- Business application Software, Publication software, Photoshop, Coral draw
- Computer-cum Internet Literacy Programme

Training Programmes:

- Participated in the National Workshop on ‘**Recent Trends in Life Science**’ organized by Science mela, Ananda College of Arts and Science, Devakottai, 7th - 9th January 2011.
- Participated in the National Workshop on ‘**Live Feed Culture For Aqua- Hatcheries**’ organized by the Unit of Reproductive Biology and Live Feed Culture, Department of Zoology, The New College (Autonomous), Chennai, 15th-19th September 2014.
- Participated in the Workshop on ‘**Advances in Nanotechnology: Fabrication, Processing and Applications**’ organized by the Centre for Nanoscience Nanotechnology, School of Physics, Bharathidasan University, Tiruchirappalli, 28th February & 1st March 2014.
- Participated in the Training programme on “**Motivation for Business Development Skills in Livestock rearing and its by product Production**” organized by the University

Business Collaboration Centre, Department of Animal Health & Management, Alagappa University, Karaikudi, 7th December 2015.

- Participated in the Training programme on “**Shrimp and Finfish production skills for Aquaculture Business**” organized by the University Business Collaboration Centre, Department of Animal Health & Management, Alagappa University, Karaikudi, 15th December 2015.
- Participated in the National Symposium cum Workshop on “**Recent Trends in Structural Bioinformatics and Computer Aided Drug Design**” (SBCDD-2015) organized by the Department of Bioinformatics, Alagappa University, Karaikudi, 24th-27th February 2015.
- Participated in the Training programme on “**Small scale business setup in Ornamental Fish forming, Apiculture, Mushroom silk production**” organized by the University Business Collaboration Centre, Department of Animal Health & Management, Alagappa University, Karaikudi, 20th January 2016.
- Participated in the Training programme on “**Live Feed Culture Production (Artemia, Phytoplanktons & Zooplanktons, Spirulina) and Sea Weed Culture and its allied industries**” organized by the University Business Collaboration Centre, Department of Animal Health & Management, Alagappa University, Karaikudi, 26th February 2016.
- Participated in the International Workshop on ‘**Molecular Physiology, Therapeutics and Experimental Medicine**’ (MPTEM-2016) organized by the Department of Animal Health and Management, Alagappa University, Karaikudi, 6th-7th September 2016.
- Participated in the National Symposium cum Workshop on “**Recent Trends in Structural Bioinformatics and Computer Aided Drug Design**” (SBCDD-2017) organized by the Department of Bioinformatics, Alagappa University, Karaikudi, 14th-17th February 2017 and presented a paper on “**Synthesis and Characterization of *Capsicum Annum* fruit extract (Capsaicin) coated silver nanoparticle (Ca- Agnps) and their toxicity assessment on *Ceriodaphnia cornuta* through *invivo* and *insilco* approaches**”.
- Participated in the Training programme on “**Business Resource of Solid Waste Management through Vermi composting**” organized by the University Business

Collaboration Centre, Department of Animal Health & Management, Alagappa University, Karaikudi, 14th & 15th March 2017.

- Participated in the Training programme on **“Achieving publication index scores”** organized by the University Business Collaboration Centre, Department of Library and Information Science, Alagappa University, Karaikudi, 10th January 2018.
- Participated in the National Workshop on **“Commercialization Prospects of Microbial Formulates”** organized by the University Business Collaboration Centre, Department of Microbiology, Alagappa University, Karaikudi,
- Participated in the Training programme on **“Business Opportunities in Aquaculture and Vermiculture Technology”** organized by the University Business Collaboration Centre, Department of Animal Health & Management, Alagappa University, Karaikudi, 02nd to 08th March 2018.
- Participated in the National workshop on **‘Indigenous cow Management and their Value Added Products’ (ICMVAP-2K18)** organized by the Department of Animal Health & Management, Alagappa University, Karaikudi, 18th-19th December 2018.

Research Papers Presented/ Participated in Symposia/ Seminar: International level

- Participated in the International Seminar on **“Recent Trends in Aquatic Animal Biotechnology”** (RTAAB’ 2013) organized by the Department of Animal Health & Management, Alagappa University, Karaikudi, 21-22nd October 2013 and presented a paper on **“Recent Technologies in Aquatic Animal Health Management”**.
- Participated in the World Congress on **“Microscopy: Instrumentation, Techniques and Applications in Life Sciences and Material Sciences”** (WCM 2015) organized by the International Unit on Macromolecular Science and Engineering (IUMSE), Mahatma Gandhi University, Kerala, 9-11th October 2015 and presented a paper on **“Synthesis, Characterization, Antibiofilm and Ecotoxicological Evaluation of Biopolymer based Silver nanoparticles”**.
- Participated in the International Conference on **“Recent Advances in Modern Medicine: Molecular signaling scenarios in tissues and diseases”** (RAMM 2016) organized by Research & Development Wing Sree Balaji Medical College and Hospital Bharath University (BIHER), Chennai 3rd & 4th September 2016 and presented a paper on

“Synthesis and Characterization of Chitosan stabilized silver nanoparticles and its control of Nosocomial Human Pathogen Biofilms and Wound Healing Efficacy”.

- Participated in the **“International Conference on Recent Trends in Biosciences”** (ICRTB2016) organized by School of Biological Sciences Alagappa university, Karaikudi, 7-9th April 2016 and presented a paper on **“Synthesis of *Nigella Sativa* oil coated gold nano particles and their antibacterial, antibiofilm and cytotoxic effects on MCF – 7 Cell lines”.**
- Participated in the International Conference on **“Asian Fisheries and Aquaculture Conference and Exposition 2016 and 11th Asian Fisheries and Aquaculture Forum”** (11thAFAF) organized by Asian Fisheries Society (AFS), Network of Aquaculture Centers in the Asia–Pacific (NACA), and the Department of Fisheries, Thailand. Bangkok 3-7th August 2016 and presented a paper on **“Biosynthesis of Ag/ZnO nanocomposite using chitosan from shell waste of mud crab, *Scylla serrata* and its antibiofilm screening”.**
- Participated in the International Conference on **“Recent Trends in Microbiology”** (RTM-2016) organized Department of Microbiology, Alagappa University, Karaikudi, 20-21st December 2016 and presented a paper on **“Control of methicillin resistant *Staphylococcus aureus* biofilm and mosquito vectors using *Plectranthus amboinicus* leaf extract mediated synthesis of Silver nanoparticles”**
- Participated in the International Conference on **“Aquatic Animal Health and Parasitic Diseases”** (ICAAP-2017) organized by Centre of Advanced study in Marine Biology Faculty of Marine Sciences, Annamalai University, Parangipettai, 6th - 7th March 2017 and presented a paper on **“Immunostimulatory effects of dietary ZnO nanoparticle on fresh water tilapia *Oreochromis mossambicus* challenged with *Aeromonas hydrophila*”.**
- Participated in the International Conference on **“10th Symposium on Diseases in Asian Aquaculture (DAA10)”** organized by Diseases in Asian Aquaculture (DAA), 28 August – 1 September 2017 The ANVAYA Beach Resort, Kuta, Bali, Indonesia. And presented a paper on **“EFFECT OF β -GBP-ZNO NPS ON IMMUNE RESPONSE OF TILAPIA”.**

- Participated in the International Conference on “**International Conference on Nanoscience and Nanotechnology (ICONN 2017)**” organized by SRM University, Chennai, India 9–11 August 2017 and presented a paper on “**Textile Dye removal and antibacterial activity of Hydroxyapatite / Graphene oxide composite**”.
- Participated in the International Conference on “**International Conference on Potential impact of Pesticides on Environment and Human Health (ICPIPEHH-2017)**” organized by Department of Chemistry, School of Engineering, and Dayananda sager University, Bangalore 560068, Karnataka, India. 2 – 4 November 2017 and presented a paper on “**Ecotoxicity of chemically synthesized ZnO NPs on the fresh water microcrustacean *Ceriodaphnia cornuta***.”
- Participated in the **International Conference on Advanced Materials Chemistry at the interfaces of Energy Environment and Medicine** (AMCI 2019). Organized by Department of Chemistry Manonmaniam Sundaranar University, Thirunelveli, Tamilnadu, India. 30&31st January 2019 and presented a paper on “**Nanotheronostics applications Chitosan-silver biomaterial and control of wound infection causing pathogenic bacteria**”.

National level

- Participated in the “**State Level Seminar on Technology of Organic Farming for Rural Development**” organized by Department of Botany, Alagappa Govt Arts College, Karaikudi, 25th & 26th September 2008.
- Participated in the National Seminar on “**Application of Genomics and Bioinformatics in Animal Health and Management**” (NSGB09), organized by the School of Animal Health and Management, Alagappa University, Karaikudi, March 25th & 26th, 2009.
- Participated in the National seminar on “**Role of Microbes in Health, Agriculture and Industry**”, organized by the Department of Biotechnology, Alagappa University, Karaikudi, 26th & 27th March, 2012.
- Participated in the National Conference on “**Innovations, Implementations and Controversies of Animal Biotechnology (NCIICAB–2014)**” organized by the

Department of Animal Science, Bharathidasan University, Tiruchirappalli, 20th & 21st March 2014 and presented a paper on **“Antibacterial and Mosquito larvicidal activities of *Plectranthus amboinicus* leaf extract based synthesis of ZnO nanoparticles.**

- Participated and presented a paper on **“Phytochemical screening, antibiofilm and anticancer activity of aqueous extract of *Musa paradisiaca* fruit peel”** in the National Seminar on **“Recent Trends in Nanotechnology and Aquaculture Technologies”** (RTNAT-2016), organized by the Department of Fishery Science and Aquaculture, Sri Venkateshwara University, Tirupati, Andrapradesh, India, 18th & 19th August 2016.
- Participated and presented a paper on **“Protective effects of the probiotic *Bacillus licheniformis* Dahb1 against *Vibrio parahaemolyticus* Dahv2 infection in the Asian catfish, *Pangasius hypophthalmus* by enhancing the growth and antioxidant responses”,** in the National Symposium on **“Current Advances in Immunology Research”**, organized by the Centre for Advanced studies in Marine Biology, Annamalai University, Chidambaram, TamilNadu, India, 7-8th August 2015.
- Participated in the National Conference on **“Exploring Commercialization of Biosensors in India,”** organized by the Department of Bioelectronics and Biosensors, Alagappa University, Karaikudi, 14th March, 2017.
- Participated in the National Conference on **“Trends in Microbiology (NCTM-2017)”** organized by the Department of Microbiology, Alagappa University, Karaikudi, 27th September, 2017 .

RESEARCH EXPERIENCE

M.Sc., PG Diploma Bioinformatics

🚩Project title: SYNTHESIS AND CHARACTERIZATION OF GARLIC EXTRACTS (ALLICIN) COATED SILVER NANO PARTICLES (GE-AGNPS) AND ITS TOXICITY EFFECT ON *CERIO DAPHNIA CORNUTA* THROUGH IN VIVO AND IN SILICO APPROACHES

Time: Since March 2015-August 2015

Research Supervisors: Dr. Sanjeev Kumar Singh and Dr. Vaseeharan B

Techniques involved: Molecular Docking, Molecular Simulations and Dynamics

M.Sc., Zoology

Project title: CHARACTERIZATION OF *PLECTRANTHUS AMBOINICUS* LEAF EXTRACT BASED SYNTHESIZED ZnO NANOPARTICLES AND ITS ANTIMICROBIAL, ANTIBIOFILM AND MOSQUITO LARVICIDAL ACTIVITY

Time : Since Nov 2012 –April 2013

Research Supervisor : Prof. Vaseeharan. B

Techniques involved : Nanoparticle synthesis, Biofilm, CLSM

Name of University : Alagappa University, Karaikudi– 630 003.

Ph.D

“Biosynthesized metallic/metal oxide nanoparticles - Potential applications and ecotoxicity assessment”

Time: Since December 2013- September 2019

Research Supervisor: Dr. Vaseeharan. B

Name of University: Alagappa University, Karaikudi– 630 003.

PDF

Post Doctoral Research Fellow

Time: Since December 2019- till now

Research Supervisor: Prof. Dr. JingdiChen

Name of University: Marine College, Shandong University, P.R.China.

Working Experience

Full time Researcher

Time: Since March 2019- September 2019

Research Supervisor: Prof. Dr. Myeong-Hyeon Wang

Name of University: Department of medical Biotechnology, College of Biomedical sciences, Kangwon National University, Chuncheon, South Korea.

LABORATORY SKILLS

Nanotechnology : Synthesis of Versatile nanoparticles (green, chemical and Microbial synthesis methods, Metallic, non-metallic Polymeric

and Drug loaded nanoparticles, Physicochemical Characterization analysis of nanoparticles (UV, XRD, FTIR, SEM, HR-TEM, AFM, PL SPECTRA, TGA, Zeta Potential, XPS, EDAX).

- Biochemistry** : Protein and DNA estimation, Paper Chromatography, TLC, Column Chromatography, MALDI-TOF, Poly Acrylamide Gel Electrophoresis, (SDS), Estimation analysis.
- Biotechnology** : Isolation of DNA from blood, animal tissue and microbial source, Plasmid isolation, mRNA, Synthesis of cDNA, RT -PCR, PCR-RFLP, RAPD, Agarose Gel Electrophoresis, synthesis of nanoparticles.
- Microbiology** : Aseptic procedures of Streaking, Spread plating, Staining, MIC, Disc & Well diffusion, Biofilms, Probiotic Strains, Green fluorescent protein tagged bacteria cultures and maintenance, Microscopic analysis-Confocal Laser Scanning Microscopy, Nikon microscope, Spectrophotometric analysis, ELISA
- Aquaculture** : Freshwater and Marine Fish live feed culture and maintenance, Species identification (*Zooplanktons-Daphnia* sp., *Ceriodaphnia* sp., Rotifer sp., *Moina* Sp., copepods sp., paramecium sp., and *Artemia* Sp., freshwater & Marine water fish sp., and Crustacean sp. (Shrimp and Crab) cultures & maintenance and its using isolation of Biomaterials, Biopolymers, Immunological, Toxicological, and host pathogen interaction studies.
- Vector control** : Mosquito cultures and maintenance, Species identification, control of mosquito vectors using nanobiomaterials and bioactive compounds.
- Bioinformatics** : Molecular Docking, Molecular Simulations and Dynamics BLAST, FASTA, EXPASY Tools, Phylogenetic tree construction, Analysis of DNA Sequences using Vector NTI software usage and other bioinformatics tools.

PUBLICATIONS

International– 41, Citations-905, Total Publications–41 (41- Peer reviewed Journal)

Submission of Sequences in NCBI Genbank, KT763080.1

List of Research Papers Published in Journals: (Total Impact Factor **102.297**)

International Journals

1. **Vijayakumar Sekar**, Balasubramanian Malaikozhundan, Narayanan Gobi, Baskaralingam Vaseeharan, Chavali Murthy: Protective effects of chitosan against the hazardous effects of zinc oxide nanoparticle in fresh water crustaceans *Ceriodaphnia cornuta* and *Moina micrura*. *Limnologica-Ecology and Management of Inland Waters*10/2016;61. DOI:10.1016/j.limno.2016.09.007(**Impact factor 1.814**).
2. **Sekar Vijayakumar**, Baskaralingam Vaseeharan, Balasubramanian Malaikozhundan, Malaikkarasu Shobiya: *Laurus nobilis* leaf extract mediated green synthesis of ZnO nanoparticles: Characterization and biomedical applications. *Biomedicine & pharmacotherapy = Biomedecine & pharmacotherapy*10/2016;84. DOI:10.1016/j.biopha.2016.10.038 (**Impact factor 3.457**).
3. Narayanan Gobi, Chinnu Ramya, Baskaralingam Vaseeharan, Balasubramanian Malaikozhundan, **Sekar Vijayakumar**, Kadarkarai Murugan, Giovanni Benelli: *Oreochromis mossambicus* diet supplementation with *Psidium guajava* leaf extracts enhance growth, immune, antioxidant response and resistance to *Aeromonas hydrophila*. *Fish & Shellfish Immunology* 10/2016;58. DOI:10.1016/j.fsi.2016.09.062 (**Impact factor 3.185**).
4. Rajagopalan Thaya, Balasubramanian Malaikozhundan, **Sekar Vijayakumar**, Jeyachandran Sivakamavalli, Raja Jeyasekar, Sathappan Shanthi, Baskaralingam Vaseeharan, Palaniappan Ramasamy, Avinash Sonawane: Chitosan coated Ag/ZnO nanocomposite and their antibiofilm, antifungal and cytotoxic effects on murine macrophages. *Microbial Pathogenesis* 09/2016;100., DOI:10.1016/j.micpath.2016.09.010 (Impact factor 2.332).
5. Balasubramanian Malaikozhundan, Baskaralingam Vaseeharan, **Sekar Vijayakumar**, Raja Sudhakaran, Narayanan Gobi, Ganesan Shanthini: Antibacterial and Antibiofilm Assessment of *Momordica charantia* Fruit Extract Coated Silver Nanoparticle. *Biocatalysis and Agricultural Biotechnology* 09/2016; 8. DOI:10.1016/j.bcab.2016.09.007 (**Impact factor 0.887**).

6. **Vijayakumar Sekar**, Malaikozhundan Balasubramanian, Palaniappan Ramasamy, Vaseeharan Baskaralingam: Assessment of biopolymer stabilized silver nanoparticle for their ecotoxicity on *Ceriodaphnia cornuta* and antibiofilm activity. Journal of Environmental Chemical Engineering 03/2016; 4(2). DOI:10.1016/j.jece.2016.03.036 (**Impact factor 1.385**).
7. Narayanan Gobi, Balasubramanian Malaikozhundan, **Vijayakumar Sekar**, Sathappan Shanthi, Baskaralingam Vaseeharan, Jayakumar Rengarajan, Abdul Khudus Nazar: GFP tagged *Vibrio parahaemolyticus* Dahn2 infection and the protective effects of the probiotic *Bacillus licheniformis* Dahn1 on the growth, immune and antioxidant responses in *Pangasius hypophthalmus*. Fish & Shellfish Immunology 03/2016; 52. DOI:10.1016/j.fsi.2016.03.006 (**Impact factor 3.185**).
8. Sathappan Shanthi, Barbanas David Jayaseelan, Palaniyandi Velusamy, **Sekar Vijayakumar**, Cheng Ta Chih, Baskaralingam Vaseeharan: Biosynthesis of silver nanoparticles using a probiotic *Bacillus licheniformis* Dahn1 and their antibiofilm activity and toxicity effects in *Ceriodaphnia cornuta*. Microbial Pathogenesis 01/2016;93. DOI:10.1016/j.micpath.2016.01.014 (**Impact factor 2.332**).
9. Sivalingam Manju, Balasubramanian Malaikozhundan, **Sekar Vijayakumar**, Sathappan Shanthi, Ameeramja Jaishabanu, Perumal Ekambaram, Baskaralingam Vaseeharan: Antibacterial, antibiofilm and cytotoxic effects of *Nigella sativa* essential oil coated gold nanoparticles. Microbial Pathogenesis 12/2015;91. DOI:10.1016/j.micpath.2015.11.021 (**Impact factor 2.332**).
10. **S Vijayakumar**, G Vinoj, B Malaikozhundan, S Shanthi, B Vaseeharan: *Plectranthus amboinicus* leaf extract mediated synthesis of zinc oxide nanoparticles and its control of methicillin resistant *Staphylococcus aureus* biofilm and blood sucking mosquito larvae. Spectrochimica Acta Part A Molecular and Biomolecular Spectroscopy 09/2014; 137C. DOI:10.1016/j.saa.2014.08.064 (**Impact factor 2.880**).
11. **S.Vijayakumar**, B.Vaseeharan, B. Malaikozhundan, N. Gopi, P. Ekambaram, R. Pachaiappan, P. Velusamy, K. Murugan, G. Benelli, R. Suresh kumar, M. Suriya narayanamoorthy: Therapeutic effects of gold nanoparticles synthesized using

- Musa paradisiaca* peel extract against multiple antibiotic resistant *Enterococcus faecalis* biofilms and human lung cancer cells (A549). *Microbial Pathogenesis* 12/2016; DOI:10.1016/j.micpath.2016.11.029 (**Impact factor 2.332**).
12. Ramachandran Ishwarya, Baskaralingam Vaseeharan, Sathappan Shanthi, Subramani Ramesh, Pitchaimani Manogari, Kannan Dhanalakshmi, **Sekar Vijayakumar**, Giovanni Benelli: Green Synthesized Silver Nanoparticles: Toxicity Against *Poecilia reticulata* Fishes and *Ceriodaphnia cornuta* Crustaceans. *Journal of Cluster Science* 11/2016; DOI:10.1007/s10876-016-1126-4 (**Impact factor 1.715**).
 13. Balasubramanian Malaikozhundan, Baskaralingam Vaseeharan, **Sekar Vijayakumar**, Karuppiah Pandiselvi, Rajamohamed Kalanjiam, Kadarkarai Murugan, Giovanni Benelli: Biological therapeutics of *Pongamia pinnata* coated zinc oxide nanoparticles against clinically important pathogenic bacteria, fungi and MCF-7 breast cancer cells. *Microbial Pathogenesis* 01/2017; DOI:10.1016/j.micpath.2017.01.029 (**Impact factor 2.332**).
 14. **Sekar Vijayakumar**, Balasubramanian Malaikozhundan, Sathappan Shanthi, Baskaralingam Vaseeharan, Nooruddin Thajuddin: Control of biofilm forming clinically important bacteria by green synthesized ZnO nanoparticles and its ecotoxicity on *Ceriodaphnia cornuta*. *Microbial Pathogenesis* 03/2017; DOI:10.1016/j.micpath.2017.03.019 (**Impact factor 2.332**).
 15. **Sekar Vijayakumar**, Baskaralingam Vaseeharan, Balasubramanian Malaikozhundan, Narayanan Gobi, Samuthirapandian Ravichandran, Sellamuthu Karthi, Balasubramaniam Ashok kumar, Natesan Sivakumar: A novel antimicrobial therapy for the control of *Aeromonas hydrophila* infection in aquaculture using marine polysaccharide coated gold nanoparticle. *Microbial Pathogenesis* 06/2017; 110., DOI:10.1016/j.micpath.2017.06.029. (**Impact factor 2.332**).
 16. Periyakaruppan Suganya, Baskaralingam Vaseeharan, **Sekar Vijaya Kumar**, Banumathi Balan, Marimuthu Govindarajan, Naiyf S. Alharbi, Shine Kadaikunnan, Jamal M. Khaled, Giovanni Benelli: Biopolymer zein-coated gold nanoparticles: Synthesis, antibacterial potential, toxicity and histopathological effects against the

- Zika virus vector *Aedes aegypti*. Journal of photochemistry and photobiology. B, Biology 06/2017; 173., DOI:10.1016/j.jphotobiol.2017.06.004. (**Impact factor 3.165**).
17. Balan Banumathi, Baskaralingam Vaseeharan, Thenmozhi Chinnasamy, **Sekar Vijayakumar**, Marimuthu Govindarajan, Naiyf S. Alharbi, Shine Kadaikunnan, Jamal M. Khaled, Giovanni Benelli: *Euphorbia rothiana*-Fabricated Ag Nanoparticles Showed High Toxicity on *Aedes aegypti* Larvae and Growth Inhibition on Microbial Pathogens: A Focus on Morphological Changes in Mosquitoes and Antibiofilm Potential against Bacteria. Journal of Cluster Science 07/2017;, DOI:10.1007/s10876-017-1263-4. (**Impact factor 1.715**)
 18. Balasubramanian Malaikozhundan, **Sekar Vijayakumar**, Baskaralingam Vaseeharan, Anthonisamy Anthoni Jenifer, Ponnaiah Chitra, Narayanan Marimuthu Prabhu, Ethiraj Kannapiran: Two potential uses for silver nanoparticles coated with *Solanum nigrum* unripe fruit extract: Biofilm inhibition and photodegradation of dye effluent. Microbial Pathogenesis 09/2017;, DOI:10.1016/j.micpath.2017.08.039. (**Impact factor 2.332**)
 19. Balasubramanian Malaikozhundan, Baskaralingam Vaseeharan, **Sekar Vijayakumar**, Merlin P. Thangaraj: *Bacillus thuringiensis* coated zinc oxide nanoparticle and its biopesticidal effects on the pulse beetle, *Callosobruchus maculatus*. Journal of photochemistry and photobiology. B, Biology 08/2017; 174., DOI:10.1016/j.jphotobiol.2017.08.014. (**Impact factor 3.165**).
 20. **Sekar Vijayakumar**, Baskaralingam Vaseeharan, Balasubramanian Malaikozhundan, Mani Divya, Muthukumar Abhinaya, Narayanan Gobi, Attanu Bhattacharyya, Nachimuthu Balashanmugam, Dhan Surmistha, Kadarkarai Murugan, Giovanni Benelli: Ecotoxicity of *Musa paradisiaca* leaf extract-coated ZnO nanoparticles to the freshwater microcrustacean *Ceriodaphnia cornuta*. Limnologica - Ecology and Management of Inland Waters 10/2017;, DOI:10.1016/j.limno.2017.09.004. (**Impact factor 1.814**).
 21. Balasubramanian Malaikozhundan, Baskaralingam Vaseeharan, Mohamed Ali Rajamohamed Kalanjiam, **Sekar Vijayakumar**, Raja Jeyasekarand Jiann-Chu Chen: Effect of Dietary Supplementation of ZnO Nanoparticles Based Diets on the

Asian Catfish, *Pangasius hypophthalmus*. *J. Fish. Soc. Taiwan*, 2016, 43(3): 205-214.

22. Dhatchayani Surendran, Vaseeharan Baskaralingam, **Vijayakumar Sekar**, Sarala Natarajan, Sankaranarayanan Krishnasamy: Synthesis and Characterization of Hydroxyapatite/Graphene Oxide for Biomedical Applications. One Day International Seminar on Materials Science & Technology (ISMST 2017) 4th August, Department of Physics, Mother Teresa Women's University, Kodaikanal, Tamilnadu, India; 09/2017(**Conference Proceeding**)
23. Mani Divya, Baskaralingam Vaseeharan, Muthukumar Abinanya, **Sekar Vijayakumar**, Marimuthu Govindarajan, Naiyf S. Alharbi, Shine Kadaikunnan, Jamal M. Khaled, Giovanni Benelli: Biopolymer gelatin-coated zinc oxide nanoparticles showed high antibacterial, antibiofilm and anti-angiogenic activity. *Journal of photochemistry and photobiology. B, Biology* 11/2017; 178., DOI:10.1016/j.jphotobiol.2017.11.008 (**Impact factor 3.165**).
24. Vairavan Girija, Balasubramanian Malaikozhundan, Baskaralingam Vaseeharan, **Sekar Vijayakumar**, Narayanan Gopi, Marian Del Valle Herrera, Jiann-Chu Chen, Perumal Santhanam: In vitro antagonistic activity and the protective effect of probiotic *Bacillus licheniformis Dahb1* in zebrafish challenged with GFP tagged *Vibrio parahaemolyticus Dahv2*. *Microbial Pathogenesis* 12/2017; 114., DOI:10.1016/j.micpath.2017.11.058(**Impact factor 2.332**).
25. Narayanan Gobi, Baskaralingam Vaseeharan, Jiann-Chu Chen, Ravichandran Rekha, **Sekar Vijayakumar**, Mahalingam Anjugam, Arokiadhas Iswarya: Dietary supplementation of probiotic *Bacillus licheniformis Dahb1* improves growth performance, mucus and serum immune parameters, antioxidant enzyme activity as well as resistance against *Aeromonas hydrophila* in tilapia *Oreochromis mossambicus*. *Fish & Shellfish Immunology* 01/2018; 74., DOI:10.1016/j.fsi.2017.12.066 (**Impact factor 3.185**).
26. Ponnuchamy Kumar, Mani Kannan, Prasanna Vimalanathan Arun, Baskaralingam Vaseeharan, **Sekar Vijayakumar**: Proteomics analysis of crude squid ink isolated from *Sepia esculenta* for their antimicrobial, antibiofilm and cytotoxic properties.

- Microbial Pathogenesis 01/2018; 116., DOI:10.1016/j.micpath.2018.01.039
(**Impact factor 2.332**).
27. Narayanan Gobi, Baskaralingam Vaseeharan, Ravichandran Rekha, **Sekar Vijayakumar**, Caterina Faggio: Bioaccumulation, cytotoxicity and oxidative stress of the acute exposure selenium in *Oreochromis mossambicus*. Ecotoxicology and Environmental Safety 07/2018; 162:147-159., DOI:10.1016/j.ecoenv.2018.06.070.
(**Impact factor 3.974**).
28. Muthukumar Abinaya, Baskaralingam Vaseeharan, Mani Divya, **Sekar Vijayakumar**, Marimuthu Govindarajan, Naiyf S. Alharbi, Jamal M. Khaled, Mohammed N. Al-anbr, Giovanni Benelli: Structural characterization of *Bacillus licheniformis* Dabhl exopolysaccharide—antimicrobial potential and larvicidal activity on malaria and Zika virus mosquito vectors. Environmental Science and Pollution Research 04/2018; 25(5)., DOI:10.1007/s11356-018-2002-6(**Impact factor 2.800**).
29. **Sekar Vijayakumar**, Baskaralingam Vaseeharan: Antibiofilm, anti cancer and ecotoxicity properties of collagen based ZnO nanoparticles. Advanced Powder Technology 06/2018, DOI:10.1016/j.appt.2018.06.013. (**Impact factor 2.943**).
30. Ponnuchamy Kumar, Rathinam Yuvakumar, **Sekar Vijayakumar**, Baskaralingam Vaseeharan: Cytotoxicity of phloroglucinol engineered silver (Ag) nanoparticles against MCF-7 breast cancer cell lines. Materials Chemistry and Physics. DOI:10.1016/j.matchemphys.2018.08.074. (**Impact factor 2.210**)
31. Ravichandran Rekha, Baskaralingam Vaseeharan, **Sekar Vijayakumar**, Muthukumar Abinaya, Marimuthu Govindarajan, Naiyf S. Alharbi, Shine Kadaikunnan, Jamal M. Khaled, Mohammed N. Al-anbr: Crustin-capped selenium nanowires against microbial pathogens and Japanese encephalitis mosquito vectors insights on their toxicity and internalization. Journal of Trace Elements in Medicine and Biology 10/2018;, DOI:10.1016/j.jtemb.2018.10.017(**Impact factor 3.755**).
32. V. Kalaiselvi, R. Mathammal, **S. Vijayakumar**, B. Vaseeharan: Microwave assisted green synthesis of Hydroxyapatite nanorods using *Moringa oleifera* flower extract and its antimicrobial applications. 08/2018; 6(2). DOI:10.1016/j.ijvsm.2018.08.003.

33. **Sekar Vijayakumar**, Balasubramanian Malaikozhundan, Ayyanar Parthasarathy, Kandasamy Saravanakumar, Myeong-Hyeon Wang, Baskaralingam Vaseeharan: Nano Biomedical Potential of Biopolymer Chitosan-Capped Silver Nanoparticles with Special Reference to Antibacterial, Antibiofilm, Anticoagulant and Wound Dressing Material. *Journal of Cluster Science* 08/2019;, DOI:10.1007/s10876-019-01649-x (**Impact factor 2.125**).
34. Fabian Ávila-Salas, Adolfo Marican, Soledad Pinochet, Gustavo Carreño, Oscar Valdés, Bernardo Venegas, Wendy Donoso, Gustavo Cabrera-Barjas, **Sekar Vijayakumar**, Esteban F Durán-Lara: Film Dressings Based on Hydrogels: Simultaneous and Sustained-Release of Bioactive Compounds with Wound Healing Properties. *Pharmaceutics* 08/2019; 11(9):447., DOI:10.3390/pharmaceutics11090447. (**Impact factor 4.773**).
35. **Sekar Vijayakumar**, Balasubramanian Malaikozhundan, Kandasamy Saravanakumar, Esteban F. Durán-Lara, Myeong-Hyeon Wang, Baskaralingam Vaseeharan: Garlic clove extract assisted silver nanoparticle – Antibacterial, antibiofilm, antihelminthic, anti-inflammatory, anticancer and ecotoxicity assessment. *Journal of photochemistry and photobiology. B, Biology* 07/2019;, DOI:10.1016/j.jphotobiol.2019.111558(**Impact factor 4.067**).
36. Kandasamy Saravanakumar, Xiaowen Hu, Sabarathinam Shanmugam, Ramachandran Chelliah, Ponarulselvam Sekar, Deog-Hwan Oh, **Sekar Vijayakumar**, Kandasamy Kathiresan, Myeong-Hyeon Wang: Enhanced cancer therapy with pH-dependent and aptamer functionalized doxorubicin loaded polymeric (poly D, L-lactic-co-glycolic acid) nanoparticles. *Archives of Biochemistry and Biophysics* 07/2019; 671., DOI:10.1016/j.abb.2019.07.004(**Impact factor 3.559**).
37. Narayanan Gopi, **Sekar Vijayakumar**, Rajagopalan Thaya, Marimuthu Govindarajan, Naiyf S. Alharbi, Shine Kadaikunnan, Jamal M. Khaled, Mohammed N. Al-Anbr, Baskaralingam Vaseeharan: Chronic exposure of *Oreochromis niloticus* to sub-lethal copper concentrations: Effects on growth, antioxidant, non-enzymatic antioxidant, oxidative stress and non-specific immune responses. *Journal*

- of Trace Elements in Medicine and Biology 06/2019; 55., DOI:10.1016/j.jtemb.2019.06.011(**Impact factor 2.895**).
38. **Sekar Vijayakumar**, Baskaralingam Vaseeharan, Raja Sudhakaran, Jeyaraman Jeyakandan, Palaniappan Ramasamy, Avinash Sonawane, Avinash Padhi, Palaniyandi Velusamy, Periasamy Anbu, Caterina Faggio: Bioinspired Zinc Oxide Nanoparticles Using *Lycopersicon esculentum* for Antimicrobial and Anticancer Applications. Journal of Cluster Science 05/2019;, DOI:10.1007/s10876-019-01590-z (**Impact factor 2.125**).
39. **Sekar Vijayakumar**, Kandasamy Saravanakumar, Xiaowen Hu, Myeong-Hyeon Wang: In Vitro Biocidal Actions of *Rhus verniciflua* Bark Extract Wrapped Gold Nanoballs Against Biofilm-Forming Food-Borne Bacterial Pathogens. Journal of Cluster Science 05/2019;, DOI:10.1007/s10876-019-01592-x (**Impact factor 2.125**).
40. Kandasamy Saravanakumar, Xiaowen Hu, **Sekar Vijayakumar**, Myeong Hyeon Wang: Statistical Optimization to Augment the Photocatalytic Reduction of Brilliant Blue G-250 Using the Biogenic Semiconductor Nanorods: An Ecosafety Approach. Journal of Cluster Science 05/2019;, <https://doi.org/10.1007/s10876-019-01678-6> (**Impact factor 2.125**).
41. **Sekar Vijayakumar**, Kandasamy Saravanakumar, Balasubramanian Malaikozhundan, Mani Divya, Baskaralingam Vaseeharan, Esteban F. Durán-Lara, Myeong-Hyeon Wang: Biopolymer K-carrageenan wrapped ZnO nanoparticles as drug delivery vehicles for anti MRSA therapy. International Journal of Biological Macromolecules 12/2019; 144., DOI:10.1016/j.ijbiomac.2019.12.030 (**Impact factor 4.784**).

Awards & Grants Received:

- **University First Rank Holder** in M.Sc., Zoology.
- Department of Science and Technology (DST) awarded the “**Innovation in Science Pursuit for Inspired Research (INSPIRE)**”INSPIRE Fellowship (Ref. No: IF140145), New Delhi, India.
- **Outstanding reviewer award from various Elsevier journals.**

- **Top reviewers in Pharmacology and Toxicology - September 2019 (Publons)**
- **Top reviewers in Cross-Field - September 2019 (Publons)**

Countries Visited

1. Place : Bangkok-Thailand
 Purpose of Visit : International Conference
 Duration : From August 3rd-7th 2016.
2. Place : Indonesia
 Purpose of Visit : International Conference
 Duration : From August 28th to September 1st 2017.

EVALUATION ACTIVITIES AS JOURNAL REFEREE

- Journal of Environmental chemical engineering-Elsevier (Impact factor- 1.385)
- Particuology- Elsevier (Impact factor- 2.785)
- Industrial crops and Products- Elsevier (Impact factor- 3.849)
- Food Research International-Elsevier (Impact factor- 3.520)
- Ecohydrology and Hydrobiology- Elsevier(Impact factor- 1.592)
- Chemico-biological interactions –Elsevier (Impact factor- 3.296)
- Journal of Molecular Liquids - Elsevier (Impact factor-4.513)
- Environmental Research - Elsevier (Impact factor- 4.732)
- ActaTropica - Elsevier (Impact factor-2.509)
- Analytical Methods- RSC (Impact factor-2.073)
- Ecotoxicology- Springer (Impact factor-1.987)
- Journal of Nanomedicine & Nanotechnology-Omics publishing (Impact factor-5.573)
- Journal of Shipping and Ocean Engineering (David Publishing company)
- Toxicology Letters- Elsevier (Impact factor-3.166)
- Veterinary Parasitology- Elsevier (Impact factor-2.422)
- Waste Management - Elsevier (Impact factor-4.723)
- Journal of Controlled Release-Elsevier (Impact factor-7.877)
- Biocatalysis and Agricultural Biotechnology –Elsevier
- BMC Pharmacology and toxicology (Impact factor-1.865)
- Ecotoxicology and Environmental safety- Elsevier (Impact factor-3.974)
- European Journal of Pharmacology- Elsevier (Impact factor-3.040)
- Carbohydrate polymers- Elsevier (Impact factor-5.158)
- Journal of Infection and Public Health- Elsevier (Impact factor-2.118)

- Science of the Total Environment- Elsevier (Impact factor-4.610)
- Comparative Biochemistry and Physiology - Part C: Toxicology & Pharmacology- Elsevier (Impact factor-2.697)
- Indian Journal of Microbiology-Springer (Impact factor-1.533)
- Talanta -Elsevier (Impact factor-4.916)
- Life sciences Elsevier (Impact factor-3.448)
- Biomedicine and Pharmacotherapy -Elsevier (Impact factor-3.743)
- Photochemistry and Photobiology B -Elsevier (Impact factor-4.067)
- Analytica Chimica Acta -Elsevier (Impact factor-5.256)
- Journal of Hazardous Materials -Elsevier (Impact factor-7.650)
- Frontiers in Bioengineering and Biotechnology – Frontiers (Impact factor-5.122)
- Tissue Engineering Part B: Reviews -Mary Ann Liebert, Inc. (Impact factor-6.512)
- Microelectronic Engineering- Elsevier (Impact factor-1.654)
- Frontiers Cellular and Infection Microbiology - Frontiers (Impact factor-3.518)
- PeerJ (Life & Environment)- (Impact factor-2.353)
- Material Chemistry and Physics- Elsevier (Impact factor-2.781)
- Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy- Elsevier (Impact factor-2.931)
- Food and Chemical Toxicology- Elsevier (Impact factor-3.775)
- Bioprocess and Biosystems Engineering- Springer (Impact factor-2.371)
- Saudi Journal of Biological Sciences- Elsevier (Impact factor-2.820)

Membership in Professional Bodies

- ❖ Indian Science Congress Association-Life member
- ❖ The Association of Microbiologists of India(AMI)
- ❖ Indian Biophysical Society-Life member

Editorial Board

- ❖ Editorial Board Member- “Frontiers in Environmental Microbiology” (FEM- Science Publishing group)
- ❖ Editorial Board Member- “Journal of Biomaterials and Nanobiotechnology” (Scientific Research Publishing, USA)
- ❖ Editorial Board Member-“Journal of Nuclear Technology in Applied Science” (JNTAS-official journal setup by ESRSA, Egypt-Publishing)
- ❖ Associate Editor-Current Scientific Research in Biomedical Sciences (CSRBS) (Chembio publishers, USA)
- ❖ Editorial Board Member- EC Microbiology (E-Cronic on open access)

- ❖ Editorial Board Member-Annals of Pharmaceutical Nanotechnology and Nanomedicine (APNTNM) (ONOMY Science publisher-USA)
- ❖ Editorial Board Member- "Journal of Biology "(SCIREA)
- ❖ Editorial Board Member- "Journal of Clinical Biotechnology and Microbiology" (Scientia Ricerca – Multi disciplinary Open Access, USA)

Extra curricular

- Spear headed National & International seminars with College and University team.
- Won prizes in sports and cultural – Cricket, Dance, Mimicry. Served as a volunteer in the blood stem cells donor recruitment drive organized by “**DATRI BLOOD STEM CELLS DONORS REGISTRY**” Taramani, Chennai-600113. Held on 01.03.2017.

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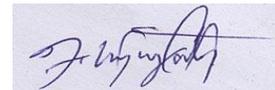
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DECLARATION

I hereby declare that the information furnished by me in this profile are true and correct to the best of my knowledge. _

Place: Karaikudi

Date: 13.03.2020



S.VIJAYAKUMAR