

CURRICULUM VITAE

PERSONAL DETAILS

Name : Family name : Liyanage
Given name : Gayani Yasodara
Sex : Female
Date of Birth : 27th August 1988
Nationality : Sri Lanka
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CONTACT DETAILS

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EDUCATIONAL QUALIFICATIONS

2014- 2017 Ph. D in Zoology, Department of Zoology, University of Sri Jayewardenepura, Sri Lanka.

Thesis: *Isolation and characterization of selected veterinary and health important antibiotic resistant bacteria and their prevalence in sediment and water in aquaculture farms, poultry farms and hospital effluent*

2009- 2013 B.Sc. Special Degree in Aquatic Science

First class honors with degree with chemistry as the subsidiary subject. University of Sri Jayewardenepura, Sri Lanka. The dissertation was titled “*Isolation and Characterization of Oil Degrading Bacteria from Coastal Water and Sediments, Sri Lanka*”.

MEMBERSHIPS

1. Life member- Institute of Biology [M.I. Biol (Sri Lanka)]
2. Life member- SLAFA, Sri Lanka
3. Member- American Society of Microbiology

Employment Experiences

Senior Lecturer (Grade II) (2021-to date)	Department of Aquatic Bioresources, Faculty of Urban and Aquatic Bioresources, University of Sri Jayewardenepura
Research Assistant (2018 to 2021)	: Faculty of Graduate Studies, University of Sri Jayewardenepura
Department Research Assistant : (2014 to 2018)	Department of Zoology, University of Sri Jayewardenepura

Demonstrator (2014)	:	Department of Zoology, University of Sri Jayewardenepura
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Research Experience

1. **2013** - Conducted the final year research on "*Isolation and Characterization of Oil Degrading Bacteria from Coastal Water and Sediments, Sri Lanka*".
2. **2014 – 2017** – Conducting the post graduate research on "*Screening of some selected antibiotic contaminations and characterization of antibiotic resistant bacteria in water and sediment, Sri Lanka*"
3. **2016-2017** -Research assistant for the study of "*Introducing Biological Control Methods to Spread of Invasive Alien Aquatic Species in Irrigation Systems in Sri Lanka*" Funded by Department of Irrigation.
4. **2016-** Research assistant for the study "*Kelani River Basin Water Quality Status Monitoring Programme*" Collaborated with IUCN/UNDP
5. **2017-2018-** Research assistant for the study "*Screening of pharmaceutical contamination status in environmental samples in Sri Lanka*" Research collaboration with York University, UK and IWMI, Sri Lanka
6. **2017-** Research assistant for the project "*Later part of the Kelani River Basin Monitoring Programme*" collaborated with Ministry of Mahaweli development and Environment.
7. **2017-** Research assistant for the study "*Analyze water samples and biodiversity Boralesgamuwa Lake, State Ministry of Irrigation and Water Resource Management*".
8. **2017-2018-** Working as a member for the study "*Tackling the "U" in Chronic Kidney Disease of Unknown Aetiology (CKDu) in Sri Lanka; a study of biological and environmental factors for identification of CKD u etiology*"- Research collaboration with Faculty of Medical sciences, USJP and Research Triangle Institute (RTI) International, USA"
9. **2018-** A research was carried out on "*Aflatoxin contaminations of rice varieties in Sri Lanka*"
10. **2018/2019-** Research assistant for the study "*Water Quality monitoring in coastal water samples in Sri Lanka*" Research collaboration with Coast Conservation Department"
11. **2018/2020-**Research assistant for the study "*Pollution status of surface and ground water adjacent to the coir pith industry in Puttalam, Gampaha and Kurunagala districts*" collaborated with Coconut Research Institute
12. **2018/2019-**A research was carried out on "*Microbiology and molecular analysis in soil samples in Bolgoda lake*" Collaborating with German
13. **2019/2020-** Research assistant for the study "*Monitoring water quality and soil quality in environment samples in Knuckles Mountain Range*"

14. **2019/2020-** Research assistant for the study “*Pollution status of surface and ground water adjacent to the coir pith industry in Puttalam, Gampaha and Kurunagala districts*” collaborated with Coconut Research Institute
15. **2019/2020-** Research assistant for the study “*Impact from Norochcholai coal plant for aquatic environment*”
16. **2021/2023-** *Water quality analysis and interpreting results in the coastal stretches, Preethipura, Ethulkala, Morawala and Negombo Lagoon in Gampaha District-* Granted by Coast Conservation Department
17. **2021/2022-** “*Environmental Screening for Surveillance of viruses in surface and ground water in some selected areas in Sri Lanka*”- granted by Ministry of Water Supply

PUBLICATIONS

PEER REVIEWED INDEX/SCI JOURNAL PUBLICATIONS

1. **Liyanage, G.Y.** and Manage. P.M. (2014) Quantification of Oxytetracycline and Amphotericin in two waste water discharging points in Colombo, Sri Lanka, Journal of Environment and Natural Resources, Thailand, pp 193-198.
2. **Liyanage, G.Y.** and Manage. P.M. (2015) Optimisation of Environmental Factors on Oil Degrading Bacteria Isolated from Coastal Water and Sediments in Sri Lanka. Journal of Tropical Forestry and Environment, 13-25.
3. **Liyanage, G.Y.** and Manage. P.M. (2015) Presence of Tetracycline and Oxytetracycline Resistant Bacteria and Resistant Genes in Effluent Water of Zoological Garden, Sri Lanka. Proceeding of 11th International Academic Conference on Development in Science and Technology (IACDST-2015). 11-14.
4. Manage, P.M. and **Liyanage, G.Y.** (2015) Role of native bacteria as a bio remediating agent for naphthalene and phenanthrene, Proceeding of 11th International Academic Conference on Development in Science and Technology (IACDST-2015).8-11
5. **Liyanage, G.Y.** and Manage. P.M. (2016). Isolation and Characterization of Oil Degrading Bacteria from Coastal Waters and Sediments in Sri Lanka. J.Natn.Sci.Foundation Sri Lanka 2016 44 (4): 351 - 358
6. **Liyanage, G.Y.** and Manage. P.M. (2016) Evaluation of Amoxicillin and Sulfonamide removal by *Bacillus cereus*, *Enterobacter ludwigii* and *Enterobacter* sp. Journal of Environment and Natural Resources. 14(1). 39-43.

7. **Liyanage, G.Y.** and Manage. P.M.(2016) Occurrence, fate and ecological risk of antibiotics in hospital effluent water and sediments in Sri Lanka, International Journal of Agriculture and Environmental Research, 4. 909-935.
8. **Liyanage, G.Y.** and Manage. P.M. (2017) Risk of prophylactic antibiotics in livestock and poultry farms; a growing problem for human and animal health. Pharmaceutical Journal of Sri Lanka. Vol 7 (1). 13-22.
9. **Liyanage, G.Y.** and Pathmalal M. Manage (2017). Occurrence and Abundance of Multiple Antibiotic Resistance bacteria in Hospital Effluent Water, Asian Journal of Microbiology, Biotechnology and Environmental Sciences, 19 (4). 276-284.
10. Dharmadasa, P.S., **Liyanage, G.Y.** and Manage. P.M. (2017) Bioremediation of MC-LR and selected antibiotics using native bacteria, Journal of Tropical Forestry and Environment, 7 (2). 21-30.
11. **Liyanage, G.Y.** and Manage. P.M. (2018) Degradation of Ciprofloxacin (CIP) by bacteria isolated from effluent water and identification of degradation pathways, International Journal of Medical, Pharmacy and Drug Research, 2(3), 37-47
12. **Liyanage, G.Y.** and Manage. P.M. (2019) Occurrence and distribution of tetracycline resistance determinants and their pollution profile in the aquaculture environment in Sri Lanka, Journal of National Science Foundation, 47 (4), 455-465.
13. **Liyanage, G.Y.**, Weerarathna, M.M. and Manage. P.M. (2020) Screening and quantification of the selected penicillin and tetracycline resistance genes in the environmental samples, Sri Lanka (Submitted to Journal of National Science Foundation)
14. **Liyanage, G.Y.** and Manage. P.M. (2020) Identification and characterization of antibiotic resistance bacteria in Nile tilapia (*O.niloticus*) and determination of Multiple Antibiotic Resistance (Accepted "Pollution Research")

Book Chapters

1. **Liyanage, G.Y.** and Manage. P.M. (2019), Antibiotics induced antibacterial resistance, Pharmaceuticals and Personal Care Products: Waste Management and Treatment Technology, Elsevier, 429-444

INTERNATIONAL / LOCAL -ABSTRACTS

01. **Livanage, G.Y.** and Manage. P.M. (2014) Isolation and characterization of oil degrading bacteria from coastal water and sediments, 19th International Forestry and Environment Symposium Proceeding. Pg 129.
02. **Livanage, G.Y.** and Manage. P.M. (2014) Effects of environmental factors on oil degrading bacteria from coastal water and sediments in Sri Lanka, 19th International Forestry and Environment Symposium Proceeding. Pg 130.
03. **Livanage, G.Y.** and Manage. P.M. (2014) Quantification of Oxytetracycline and Amphotericin in two waste water discharging points in Colombo, Sri Lanka, The 1st Environment and Natural Resources International Conference Proceeding. Pg 30.
04. Manage, P.M. and **Livanage, G.Y.** (2015) Role of native bacteria as a bioremediating agent for naphthalene and phenanthrene, 11th International Academic Conference on Development in Science and Technology (IACDST-2015).
05. Manage, P.M. and **Livanage, G.Y.** (2015) Isolation of hydrocarbon degrading bacteria from groundwater contaminated with crude oil in Jaffna, Sri Lanka. 4th International Symposium on "Water quality and Human health; Challenges Ahead Proceeding. Pg.35.
06. **Livanage, G.Y.**, Manage, P.M. and De Alwis, A. (2015) Study on the occurrence of Antibiotic Contaminations in the Aquatic Environment, Sri Lanka. International Conference on Multidisciplinary Approaches Proceeding, Pg. 198.
07. **Livanage, G.Y.** and Manage. P.M. (2015) Removal of Amoxicillin and Sulfanamide by freshwater bacteria in Sri Lanka, 20th International Forestry and Environment Symposium Proceeding. Pg 52.
08. **Livanage, G.Y.** and Manage. P.M. (2015) Detection of microbial degradation of natural rubber latex by isolated native bacteria in Sri Lanka, 20th International Forestry and Environment Symposium Proceeding. Pg 37.
09. **Livanage, G.Y.** and Manage. P.M. (2015) Presence of Tetracycline and Oxytetracycline Resistant Bacteria and Resistant Genes in Effluent Water of Zoological Garden, Sri Lanka. 11th International Academic Conference on Development in Science and Technology (IACDST-2015).
10. Manage. P.M. and **Livanage, G.Y.** (2016) Bacterial remediation of hydrocarbons, antibiotics and cyanotoxins; Green solution for sustainable pollution management.

Proceeding of the International Conference on Green Technologies for Sustainable Ecosystems and Trade show. India.pg 36.

11. **Livanage, G.Y.** and Manage. P.M. (2016). Removal of amoxicillin and ampicillin from aqueous solution by using *B.cereus* and Granular Activated Carbon (GAC). Proceeding of the Challenges ahead-water quality and human health- 5th International Symposium. Post Graduate Institute of Science, University of Peradeniya. pg 25.
12. **Livanage, G.Y.** and Pathmalal M Manage (2016). Risk of prophylactic antibiotics in livestock and poultry farms; a growing problem for human and animal health and for the environment. Proceeding of 2nd Environment and Natural Resources International Conference. Thailand. pg 20.
13. **Livanage, G.Y.** and Manage. P.M. (2016) The Role of Hospital Effluent for Occurrence and Distribution of Ecologically Important Antibiotic in Sri Lanka, 21st International Forestry and Environment Symposium Proceeding. Pg 45.
14. **Livanage, G.Y.** and Manage. P.M. (2016) Occurrence and distribution of tetracycline resistance determinants and their pollution status in the aquaculture environment of Sri Lanka. 3rd International Conference on Multidisciplinary Approaches Proceeding, Pg. 8.
15. **Livanage, G.Y.** and Manage, P.M. (2017) Screening of Antibiotic Resistance Bacteria at Hospital Effluent Water in Sri Lanka. Proceeding of International Conference in Post Graduate Institute of Science, University of Peradeniya, pg 26.
16. **Livanage, G.Y.**, De Alwis, A. and Manage. P.M. (2017) Detection of tetracycline resistance genes in isolated bacteria from aquaculture sites in Sri Lanka, Proceeding of the 4th International Conference on Multidisciplinary Approaches. pg 162.
17. **Livanage, G.Y.** and Manage, P.M. (2017) Determination of Multiple Antibiotic Resistance (MAR) and MAR in bacteria isolated from Aquaculture farms in Sri Lanka, Proceeding of International research symposium on Pure and Applied Sciences (IRSPAS), 144.
18. Ekanayake, E.M.M.S., Manage, P.M. and **Livanage, G.Y.** (2017) Isolation of fungi as biological control agents against water hyacinth (*E. crassipes*), Proceeding of 22nd International Forestry and Environmental Symposium, 98.
19. **Livanage, G.Y.** and Manage. P.M. (2017) Bacterial remediation of Ciprofloxacin (CIP) by CIP resistance bacteria isolated from environment samples, Proceeding of 22nd International Forestry and Environmental Symposium, 43.

20. **Livanage, G.Y.**, Manage. P.M. and Weerasekara M.M. (2018) Screening and quantification of the *bla*_{TEM} and *tet M* resistance genes in the environmental samples in Sri Lanka. Proceeding of South Asian Biotechnology Conference, 88.
21. **Livanage, G.Y.**, and P.M. Manage (2018) Contamination status of ciprofloxacin and cloxacillin in Sri Lankan hospital effluents, 6th International Symposium on Water Quality and Human Health: Challenges Ahead, pg 31.
22. **Livanage, G.Y.**, Weerasekara M.M and Manage. P.M. (2018) Penicillin and tetracycline resistance genes as emerging environmental contaminant in the hospital waste water effluent and aquaculture effluent in Sri Lanka, International Conference on Health Sciences, pg 54.
23. **Livanage, G.Y.**, and Manage. P.M. (2018) Screening of antibiotic resistance bacteria and determination of MAR index in isolated bacteria from *O.niloticus*, 5th International Conference on Multidisciplinary Approaches, pg 18.
24. **Livanage, G.Y.**, and Manage. P.M. (2019) Screening and Quantification of Tetracycline and Sulfonamide Resistance Genes in Natural Environmental Samples, International Research Conference Uwa Wellassa University (IRCUWU), pg 305.
25. **Livanage, G.Y.** and Manage. P.M. (2019) Hospital effluent water as hotspots for antibiotic contamination and antibiotic resistant genes in Sri Lanka, International Symposium on Water and Air Pollution: recent Trends in Research, pg 32.
26. **Livanage, G.Y.** and Manage. P.M. (2019) Bacterial degradation of TET by TET resistant bacteria; A green solution for antibiotic pollution, 4th International Symposium on Pure and Applied Sciences, pg 32.
27. **Livanage, G.Y.** and Manage. P.M. (2019) Screening and quantification of oil and grease in selected harbors and lagoons in Sri Lanka, 7th International Symposium on Waer Quality and Human Health: Challenges Ahead, pg 44.
28. **Livanage, G.Y.** and Manage. P.M. (2019) Hospital effluent water as hotspots for antibiotic contamination and antibiotic resistant genes in Sri Lanka, International Symposium on Water and Air Pollution: recent Trends in Research, pg 32.
29. Ekanayake, E.M.M.S., **Livanage, G.Y.**, Mahagamage M.G.Y.L. and Manage. P.M. (2019) Invasion of water hyacinth (*Eichhornia crassipes*) in selected irrigation tanks in Sri

Lanka, 7th International Symposium on Water Quality and Human Health: Challenges Ahead, pg 20.

30. **Liyanage, G.Y.** and Manage. P.M. (2019) Characterizing multiple antibiotic resistant (MAR) and determination of MAR index in cultured bacteria from hospital effluent, Sri Lanka, 6th International Conference on Multidisciplinary Approaches, pg 20.
31. Athauda, N., Ilango, A., **Liyanage, G.Y.**, Kodippili, N.P. and Manage, P.M. (2020) Study on spatial and temporal variation of water quality of the yan oya river basin, 7th PGIS Research Congress, University of Peradeniya.
32. **Liyanage, G.Y.** and Pathmalal M.M (2020) Occurrence and distribution of antibiotic resistance bacteria isolated from shrimps (penaeus monodon) in aquaculture ponds in negombo area, 7th International Conference on Multidisciplinary Approaches, pg 121.

Awards

Name of student	Award	Occasion	Title
G.Y. Liyanage	Best oral presentation	21 st International Forestry and Environmental Symposium	The role of hospital effluent for occurrence and distribution of ecologically important antibiotic in Sri Lanka
G.Y.Liyanage	Most outstanding paper- Health Risk and environmental pollution	2 nd International conference on Environment and natural resources, Thailand.	Risk of prophylactic antibiotics in livestock and poultry farms : a growing problem for human and animal health
Manage P.M., Ganegoda S., G.Y. Liyanage	Bronze Award	Innovate Sri Lanka 2019	Development of a “filter” capable of removing cyanotoxin, taste and odour forming compounds, heavy metals and pesticides from drinking water
Manage P.M., Ganegoda S G.Y. Liyanage	First Place under Energy and Environment	Innovate Sri Lanka 2019	Development of a “filter” capable of removing cyanotoxin, taste and odour forming compounds, heavy metals and pesticides from drinking water
G.Y. Liyanage	Best oral presentation	4th International Symposium on Pure and Applied Sciences	Bacterial degradation of TET by TET resistant bacteria; A green solution for antibiotic pollution

INTERNATIONAL CONFERENCE/SYMPOSIUM ATTENDED

1. The 1st Environment and Natural Resources International Conference, 2014, Thailand
2. 1st International Conference on Multidisciplinary Approaches, 2014
3. 2nd International South Asian Biodiversity Conference, 2014
4. 19th International Forestry and Environment Symposium, 2014
5. 4th International Symposium on “Water quality and Human health; Challenges Ahead, 2015
6. 11th International Academic Conference on Development in Science and Technology (IACDST-2015), Singapore
7. 2nd International Conference on Multidisciplinary Approaches, 2015
8. 20th International Forestry and Environment Symposium, 2015
9. WONCAR-SAR, 2016
10. The 2nd Environment and Natural Resources International Conference, 2016, Thailand
11. 5th International Symposium- the Challenges ahead-water quality and human health, 2016
12. 21st International Forestry and Environment Symposium, 2016
13. 3rd International Conference on Multidisciplinary Approaches, 2016
14. International Conference in Post Graduate Institute of Science, 2017
15. 4th International Conference on Multidisciplinary Approaches, 2017
16. International research symposium on Pure and Applied Sciences (IRSPAS), 2017
17. 4th International Conference on Multidisciplinary Approaches, 2017
18. 22nd International Forestry and Environment Symposium, 2016
19. South Asian Biotechnology Conference-2018
20. 2nd International Symposium on Cyanobacteria and Public Health and Workshop on “cyanotoxin toolbox II”-2018

NATIONAL WORKSHOP/ TRAINING ATTENDED

1. Participated for the international training programme on “**Cyanotoxin toolbox**” conducted by **Dept of Zoology, University of Sri Jayewardenepura and School of pharmacy and life science, The Robert Gordon University, Aberdeen** (2013).
2. One day workshop on “**Scientific writing**” conducted by the SLAFAR & BOBLME (2013).

3. One day workshop on “**Scientific writing**” conducted by the National Science Foundation (NSF), Sri Lanka (2013).
4. One day workshop on “**Scientific writing with LATEX**” conducted by the Department of physics, Faculty of Applied science, University of Sri Jayewardenepura (2014).
5. One day workshop on “**Monitoring water quality for safe drinking water**” conducted by the Sri Lanka Association for Fisheries and Aquatic Resources - SLAFAR (2015).
6. One day workshop on “**Uses of Natural sciences in Medical Research**” conducted by the Medical Research Institute - MRI (2015).
7. Two days’ workshop on “**Invasive Plant Control**” conducted by the Invasive Alien Species Project, Bio Diversity Secretariat, Ministry of Mahaweli Development and Environment with the Collaboration of Irrigation department and International Training Institute of Irrigation and Water Management (2016).
8. One day workshop on “**Enhance emotional Intelligent and Strength of Life Skills**” conducted by the Department of Zoology, Faculty of Applied science, University of Sri Jayewardenepura (2016).
9. Two days’ workshop on “**JOSM (open street mapping)**” conducted by the International Union for Conservation of Nature (IUCN) (2017).
10. One day workshop on “**Review Writing and Publication Metrics**” conducted by the Sri Lankan Academy of Young Scientists (SLAYS) and Faculty of Applied science, University of Sri Jayewardenepura (2017).
11. Two days’ workshop on “**Young Scientists’ Meeting on Effect of Climate change on Biodiversity**” organized by the Boards of Study in Zoological Sciences and Environmental Science and PGIS, University of Peradeniya in collaborated with The World Academy of Science (TWAS) – Regional Office for Central and South Asia (ROCASA) and Jawaharlal Nehru Centre for Advanced Scientific Research, India (2017).
12. Hands on experience in **HPLC** (High-Performance Liquid Chromatography), **ELISA** (Enzyme-Linked Immunosorbent Assay), **AAS** (Atomic Absorption Spectroscopy), **GC-MS** (Gas Chromatography Mass Spectrometry) and **Spectrophotometer** applications.
13. Participated for the international training programme on “**Cyanotoxin toolbox II**” conducted by **Dept of Zoology, University of Sri Jayewardenepura and School of pharmacy and life science, The Robert Gordon University, Aberdeen** (2018).
14. One day workshop on “**Current and future trends on Molecular biology and Biotechnology**” conducted by the Institute of Biochemistry, Molecular Biology and Biotechnology, University of Colombo (2018) and NASTEC.

Extra-Curricular Activities

- Junior prefect - Devi Balika Vidyalaya- 2003/2004
- Senior prefect - Devi Balika Vidyalaya- 2006/2007
- President of the “Science Society “ - Devi Balika Vidyalaya- 2003/2004

- Secretary – “Aquatic Club” , Department of Zoology, University of Sri Jayewardenepura -2009/2010.
- Member of the “Genetic Society”, Department of Zoology, University of Sri Jayewardenepura -2009- 2011.
- Served as a resource person to train GCE A/L students for international **Biological Olympiad** completion on 2014, 2015,2017 and 2018 at University of Sri Jayewardenepura

NON- RELATED REFEREES

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