Madhuni Madhushika Wijesooriya

Nationality: Sri Lankan **Date of birth:** 08/02/1993

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Home: Stockholmsgade 2B Sth, 8200 Aarhus N (Denmark)

EDUCATION AND TRAINING

PhD Fellow

Department of Biological and Chemical Engineering, Aarhus University [01/04/2023 – Current]

Address: Department of Biological and Chemical Engineering Hangøvej 2, 8200 Aarhus N (Denmark)
Website: https://pure.au.dk/portal/en/persons/madhuni-wijesooriya(86484477-9f00-48e4-9314-cbeb99c4884c).html

Master of Philosophy in Environmental Science

Faculty of Graduate Studies, University of Ruhuna [20/12/2019 – 01/11/2022]

Address: Faculty of Graduate Studies, University of Ruhuna, Matara, 81000 Matara (Sri Lanka)

Bachelor of Science (Special) in Environmental Sciences and Natural Resources Management

Department of Natural Resources, Faculty of Applied Sciences, Sabaragamuwa University of Sri Lanka [04/2015 – 09/2019]

Address: Department of Natural Resources, Faculty of Applied Sciences, Sabaragamuwa University of Sri Lanka P.O. Box 02, 70140 Belihuloya (Sri Lanka)
Field(s) of study: Environmental Sciences and Natural Resources Management
Final grade: First Class (GPA - 3.80/4.00)
Thesis: Development of Microorganisms Mediated Bioremediation Technique for Used Lubricating Oil Contaminated Soil Released from Automobiles – A Pilot Study

Basic techniques in microbiology and molecular biology, field techniques in ecology and biodiversity, practicals in limnology

The General Certificate of Education (GCE) Ordinary Level

Devi Balika Vidyalaya [2008 – 2010]

Address: Sri Jayawardenapura Mawatha, Colombo 08, 00800 Colombo (Sri Lanka)
Website: www.devibalika.com

The General Certificate of Education (GCE) Advanced Level

Devi Balika Vidyalaya [2010 – 2013]

Address: Sri Jayawardenapura Mawatha,Colombo 08, 00800 Colombo (Sri Lanka)
Website: www.devibalika.com

WORK EXPERIENCE

Research Assistant

University of Ruhuna [01/08/2019 – 31/08/2022]

Address: Faculty of Science, University of Ruhuna, 81000 Matara (Sri Lanka)
Website: http://www.dceu.ruh.ac.lk/tto/
Email address: office@sci.ruh.ac.lk
Name of unit or department: Department of Botany - **Business or sector:** Education

Grant Number: AHEAD/RA3/DOR/RUH/SCI/CYANO
Research Project: A Green technological approach to control freshwater algal blooms in Sri Lanka using native bacterial isolates
Techniques Practicing:

- Microbiological and microscopic techniques
- DNA Extraction
- Agarose Gel Electrophoresis
- RCR Techniques
- ELISA and HPLC
- Handling Geneious Prime software

ACADEMIC AWARDS

Three Minute Thesis Competition 2022

[2022]

Declared as the First Runner-up of the SLAYS 3MT competition organized by the Sri Lankan Academy of Young Scientists

D.S. Rupasinghe Memorial Gold Medal (2019)

[2019]

This Gold Medal was awarded to the candidate who had the best performance in Environmental Science and Natural Resources Management, obtaining the **Highest Final GPA mark** with a First Class for the B.Sc. Special Degree in Environmental Sciences and Natural Resources Management at the Sabaragamuwa University of Sri Lanka, Belihuloya, Sri Lanka.

Best Poster Presenter (2019)

[2019]

This was awarded to the candidate who had obtained the highest marks for the Poster presentation session at the Presentation of Final Year Thesis in Environmental Sciences and Natural Resources Management (2013/2014 Batch), Sabaragamuwa University of Sri Lanka, Belihuloya, Sri Lanka.

Dean's Award (2019)

[2019]

This was awarded to the candidate who had the overall outstanding performance in the Fourth Year Examination of the Faculty of Applied Sciences, Sabaragamuwa University of Sri Lanka, Belihuloya, Sri Lanka

PUBLICATIONS

PEER REVIEWED/INDEXED JOURNAL PAPERS

A novel cyanolytic bacterium, Pseudomonas fluorescens BG-E as a potential biological control agent for freshwater bloom-forming cyanobacteria Pseudanabaena spp.

[2023]

M.M. Wijesooriya, K. Masakorala, Widana Gamage, S.M.K. (2023). **"A novel cyanolytic bacterium, Pseudomonas fluorescens BG-E as a potential biological control agent for freshwater bloom-forming cyanobacteria Pseudanabaena spp."** Journal of Phycology. (In Press)

Beryllium contamination and its risk management in complex environmental settings

[2022]

Shiv Bolan, Hasintha Wijesekara, Mohsin Tanveer, Vanessa Boschi, Lokesh P Padhye, **Madhuni Wijesooriya**, Lei Wang, Tahereh Jasemizad, Chensi Wang, Tao Zhang, Jörg Rinklebe, Hailong Wang, Su Shiung Lam, Kadambot H M Siddique, M B Kirkham, Nanthi Bolan (2023). **"Beryllium contamination and its risk management in terrestrial and aquatic environmental settings".** Environmental Pollution. 320,121077.

Co-occurrence of microcystin and cylindrospermopsin in hypereutrophic Mahakanadarawa and Nachchaduwa reservoirs

[2022]

M. H. M. A. S. V. Gunawardana, **M. M. Wijesooriya**, G.W. A. P. Randima, K. S. S. Atapaththu, K. Sanjaya, K. Masakorala, and S. M. K. W. Gamage. (2022). "**Co-occurrence of microcystin and cylindrospermopsin in hypereutrophic Mahakanadarawa and Nachchaduwa reservoirs**". Journal of Science, University of Kelaniya, 15(1), PP 67-97.

The odonate fauna of Belihuloya, Southern Intermediate Zone of Sri Lanka; a preliminary assessment and implications for conservation

[2022]

Madhuni M. Wijesooriya, Malith G. Jayalath, Sandun J. Perera and Chathurika Samanmali. (2022). **"The odonate fauna of Belihuloya, Southern Intermediate Zone of Sri Lanka; a preliminary assessment and implications for conservation".** Journal of Asia-pacific Biodiversity, 15(3), PP 311-328.

An approach to develop bioremediation by isolation and characterization of microorganisms from soil contaminated with used lubricating oil

[2021]

Wijesooriya, M.M., Masakorala, K., Widana Gamage, S.M.K., and Walakulu Gamage, S.S. (2022). "**An approach to develop bioremediation by isolation and characterization of microorganisms from soil contaminated with used lubricating oil"**. Journal of the National Science Foundation Sri Lanka. Journal of the National Science Foundation Sri Lanka. 50 (2), PP 3-15.

Biological control of freshwater cyanobacterial blooms; a review

[2021]

Wijesooriya, M.M., Widanagamage, S.M.K. and Masakorala, K. (2021). **"Biological control of freshwater cyanobacterial blooms; a review"**. Journal of University of Ruhuna, 9(1), PP. 06-27.

Lithium contamination and its risk management: from mine to mind and mobiles

[2021]

Nanthi Bolan, Mohsin Tanveer, Lei Wang, Son A. Hoang, Shiv Bolan, Prasanthi Sooriyakumar, Brett Robinson, Hasintha Wijesekara, **Madhuni Wijesooriya**, S. Keerthanan, Meththika Vithanage, Bernd Markert, Stefan Fränzle, Simone Wünschmann, Binoy Sarkar, Ajayan Vinu, M.B. Kirkhamn, Kadambot H.M. Siddiquet, and Jörg Rinklebe. (2021). **"Lithium contamination and its risk management: from mine to mind and mobiles"**. Environmental Pollution. 290, 118067.

MANUSCRIPTS AND BOOK CHAPTERS IN PREPARATION

Microplastics and soil nutrient cycling

[2023]

Madhuni Wijesooriya, Hasintha Wijesekara, Madushika Sewwandi, Sasimali Soysa, Anushka Upamali Rajapaksha, Meththika Vithanage, Nanthi Bolan (2023). "**Microplastics and Soil Nutrient Cycling.**" *Microplastics in the Ecosphere: Air, Water, Soil, and Food.* John Wiley & Sons, USA. ISBN: 978-1-119-87950-3. https://doi.org/10.1002/9781119879534.ch19

Clays and clay minerals: long lasting applications in environmental remediation

[2023]

Madhuni Madhushika Wijesooriya, Hasintha Wijesekara, Nanthi Bolan, Anushka Upamali Rajapaksha, and Meththika Vithanage. (2023). "**Clays and clay minerals: long-lasting applications in environmental remediation**". (Under editorial review)

ABSTRACT PUBLICATIONS

Oxidative Stress and Antioxidant Responses Of Bloom-Forming Cyanobacterial Genus Pseudanabaena against the Cyanolytic Bacterium Pseudomonas fluorescens BG-E

[2022]

M.M. Wijesooriya, K. Masakorala, and W.G.S.M. Kumari. "**Oxidative Stress and Antioxidant Responses of Bloom-Forming Cyanobacterial Genus *Pseudanabaena* against the Cyanolytic Bacterium *Pseudomonas fluorescens* BG-E**". RESCON 2022. BG-E." Proceedings of the Postgraduate Institute of Science Research Congress 2022. University of Peradeniya, Sri Lanka. 28th-30th October 2022. PP. 33.

Physiological responses of Pseudanabaena to the cyanolytic Pseudomonas fluorescens BG-E

[2022]

M.M. Wijesooriya, K. Masakorala, and S.M.K. Widana Gamage. **"Physiological responses of *Pseudanabaena* to the cyanolytic *Pseudomonas fluorescens* BG-E"**. Proceedings of the Young Scientists' Conference on Multidisciplinary Research (YSCMR), 10 November 2022. National Institute of Fundamental Studies, Sri Lanka. PP. 13

Diazotrophic bacteria from a tropical forest soil with additional plant growth promoting traits: prospective bioinoculants

[2022]

Abeythunga, K., **Wijesooriya, M.,** and Widana Gamage, S.M.K. (2022). **"Diazotrophic bacteria from a tropical forest soil with additional plant growth promoting traits: prospective bioinoculants"**: Proceedings of the International Symposium on Agriculture and Environment 2022, 16th June 2022. Faculty of Agriculture, University of Ruhuna, Sri Lanka, PP. 07.

Effect of Cyanolytic Bacterium, Pseudomonas fluorescens BG-E on the photosynthesis of Pseudanabaena lonchoids: an attempt to understand cyanolytic mechanism

[2022]

M.M. Wijesooriya, W.G.S.M. Kumari, and K. Masakorala. **"Effect of Cyanolytic Bacterium, *Pseudomonas fluorescens* BG-E on the photosynthesis of *Pseudanabaena lonchoids*: an attempt to understand cyanolytic mechanism".** 9th Ruhuna International Science and Technology Conference. 19th January 2022. Faculty of Science, University of Ruhuna, Matara, Sri Lanka, PP 16.

Cyanolytic activity of freshwater bacterium, Pseudomonas fluorescens BG-E against bloom-forming cyanobacteria, Pseudanabaena lonchoids

[2021]

M.M. Wijesooriya, W.G.S.M. Kumari, and K. Masakorala. (2021). **"Cyanolytic activity of freshwater bacterium, *Pseudomonas fluorescens* BG-E against bloom-forming cyanobacteria, *Pseudanabaena lonchoids*"**. Proceedings of the International Conference on Environmental Governance. 23rd - 24th November 2021. Central Environmental Authority, Colombo, Sri Lanka, PP 12.

Pseudomonas fluorescens BG-E, a potential biological control agent for bloom-forming cyanobacterial genus, Pseudanabaena

[2021]

M.M. Wijesooriya, M.H.M.A.S.V. Gunawardane, G.W.A.P. Randima, W.G.S.M. Kumari, and K. Masakorala. (2021). **"*Pseudomonas fluorescens* BG-E, a potential biological control agent for bloom-forming cyanobacterial genus, *Pseudanabaena*"**: Proceedings of the International Research Conference of Uva Wellassa University. July 01-02, 2021. Uva Wellassa University, Badulla, Sri Lanka, PP.167.

Cyanotoxins in Sri Lankan water bodies: A case study in Chandrika wewa in the Walawa river basin

[2021]

M.H.M.A.S.V. Gunawardane, W.G.S.M. Kumari, **M.M. Wijesooriya**, G.W.A.P. Randima, K. Masakorala, K.S.S. Atapattu, and K. Sanjaya. (2021). **"Cyanotoxins in Sri Lankan water bodies: A case study in Chandrika wewa in the Walawa river basin"**: Proceedings of the *International Symposium on Agriculture and Environment 2021*, 7th May 2021. Faculty of Agriculture, University of Ruhuna, Sri Lanka, PP.26.

Klebsiella pneumoniae as a potential member of heterotrophic bacterial consortia to control cyanobacterial blooms and degradation of cyanotoxins

[2020]

M.M. Wijesooriya, W.G.S.M. Kumari, and K. Masakorala. (2020). **"*Klebsiella pneumoniae* as a potential member of heterotrophic bacterial consortia to control cyanobacterial blooms and degradation of cyanotoxins"**: Proceedings of the Twenty Sixth Scientific Sessions of the Sri Lanka Association for Fisheries and Aquatic Resources, 10th December 2020. Department of Zoology and Environmental Management, Faculty of Science, University of Kelaniya, Sri Lanka, PP.10.

Molecular phylogenetics of filamentous cyanobacteria in Lunugamvehera reservoir: evidence for a new species

[2020]

M.H.M.A.S.V. Gunawardane, W.G.S.M. Kumari, K. Masakorala, **M.M. Wijesooriya**, G.W.A.P Randima, K.S.S Atapaththu, and K. Sanjaya. (2020). **"Molecular phylogenetics of filamentous cyanobacteria in Lunugamvehera reservoir: evidence for a new species"**: Proceedings of the Twenty Sixth Scientific Sessions of the Sri Lanka Association for Fisheries and Aquatic Resources, 10th December 2020. Department of Zoology and Environmental Management, Faculty of Science, University of Kelaniya, Sri Lanka, PP.23.

Evaluation of Brachybacterium conglomeratum RUH1 mediated bioremediation of used lubricant oil contaminated soil by using Allium cepa bioassay

[2020]

Wijesooriya, M.M., Masakorala, K., and Widana Gamage, S.M.K. (2020). **"Evaluation of *Brachybacterium conglomeratum* RUH_1 mediated bioremediation of used lubricant oil contaminated soil by using *Allium cepa* bioassay"**: Proceedings of the 2nd International Conference on Environmental Monitoring and Management (EMM). 23rd October 2020. PGIS, Kandy, Sri Lanka, PP. 09.

Trophic status and spatial variation of cyanobacterial diversity in Lunugamwehera reservoir, Sri Lanka

[2020]

M.H.M.A.S.V. Gunawardane, S.M.K. Widana Gamage, **M.M. Wijesooriya**, G.W.A.P. Randima, K. Masakorala, K.S.S. Atapattu and K. Sanjaya. (2020). **"Trophic status and spatial variation of cyanobacterial diversity in Lunugamwehera reservoir, Sri Lanka"**: Proceedings of the International Research Conference of Uva Wellassa University. 29th- 30th July 2020. Uva Wellassa University, Badulla, Sri Lanka, PP. 107.

Bioremediation potential of Aspergillus fumigatus to restore some sites contaminated by used lubricating oil

[2020]

Wijesooriya, M.M., Masakorala, K., Widana Gamage, S.M.K., Jayalal, R.G.U., and Walakulu Gamage, S.S. (2020). **"Bioremediation potential of *Aspergillus fumigatus* to restore some sites contaminated by used lubricating oil"**: Proceedings of the 7th Ruhuna International Science and Technology Conference. 22nd January 2020. Faculty of Science, University of Ruhuna, Matara, Sri Lanka, PP. 29.

Development of bioremediation technique for used lubricating oil contaminated soil by using a novel bacterial strain, Brachybacterium conglomeratum RUH1 – A pilot study

[2019]

Wijesooriya, M.M, Walakulu Gamage, S.S, Jayalal, R.G.U, Masakorala, K and Widana Gamage, S.M.K. (2019). **"Development of bioremediation technique for used lubricating oil contaminated soil by using a novel bacterial strain, *Brachybacterium conglomeratum* RUH_1 – A pilot study"**: Proceedings of the 7th International Conference of Sabaragamuwa University of Sri Lanka. 14th-15th November 2019. Sabaragamuwa Univeristy of Sri Lanka, Belihuloya, Sri Lanka, PP.153.

A preliminary survey on odonate fauna in different land use patterns of Belihuloya, Intermediate Zone of Sri Lanka

[2019]

M.M. Wijesooriya, R.D.M.G. Jayalath, and Sandun J. Perera (2019). **"A preliminary survey on odonate fauna in different land use patterns of Belihuloya, Intermediate Zone of Sri Lanka"**: Proceedings of the Association for Tropical Biology and Conservation-Asia Pacific Conference. 10th -13th September 2019. Association for Tropical Biology and Conservation, Colombo, Sri Lanka, PP. 226-227.

The Livelihood of people related to the Uma-Oya Multipurpose Development Project (UOMDP) in Udaperuwa GN division, Bandarawela

[2019]

Chasika Premathunga, Thashira Dulaj, Malith Jayalath, Nimeshi Wijekoon, Ruchini Wijewardhana, **Madhuni Wijesooriya**, E.P.N. Udayakumara, and Enoka P. Kudawidanage. (2019). **"The Livelihood of people related to the Uma-Oya Multipurpose Development Project (UOMDP) in Udaperuwa GN division, Bandarawela"**: Proceedings of the Association for Tropical Biology and Conservation-Asia Pacific Conference. 10th -13 th September 2019. Association for Tropical Biology and Conservation, Colombo, Sri Lanka, PP. 207.

GENBANK AUTHORSHIPS

First author

GenBank Accession No: **MZ007852**

GenBank Accession No: **MZ007859**

GenBank Accession No: **MK949124**

GenBank Accession No: **OM131572**

GenBank Accession No: **OM131573**

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GenBank Accession No: **OM232851**

GenBank Accession No: **OM232835**

GenBank Accession No: **OM232836**

GenBank Accession No: **OM232837**

GenBank Accession No: **OM232838**

GenBank Accession No: **OM232839**

GenBank Accession No: **OM232840**

GenBank Accession No: **OM232841**

GenBank Accession No: **OM232842**

GenBank Accession No: **OM232843**

GenBank Accession No: **OM232815**

GenBank Accession No: **OM232816**

GenBank Accession No: **OM232817**

GenBank Accession No: **OM232818**

GenBank Accession No: **OM232832**

GenBank Accession No: **OM232833**

GenBank Accession No: **OM232834**

MAGAZINE ARTICLES

Management of E-waste, an emerging contaminant in the Environment

[2021]

Wijesooriya, M.M., Amitha, W.A.K. (2021). **"Management of E-waste, an emerging contaminant in the Environment".** GreenInsights E-magazine 2021, Issue 01, PP 44-50.

INVITED TALKS

Envrionmental Issues and Introduction to Sustainable Development Goals

[07/05/2023]

Guest Lecture for the thirteenth webinar of the “Green Talks” online talk series conducted by the students of the 2019/20 batch, Department of Business Management, Faculty of Management Studies, Sabaragamuwa University of Sri Lanka.

Environmental pollution and prevention

[08/06/2020 – 13/06/2020]

Webinar on “Environmental pollution and prevention” under the course unit of Green Management for the students of 2017/18 batch, Department of Business Management, Faculty of Management Studies, Sabaragamuwa University of Sri Lanka on 08th and 13th June 2020

Bioremediation: Processes, Challenges, and Future Prospects

[16/01/2020]

Guest Lecture on “Bioremediation: Processes, challenges, and future prospects” for Year II Semester II students in Department of Natural Resources, Faculty of Applied Sciences, Sabaragamuwa University of Sri Lanka on 16th January 2020

RESEARCH EXPERIENCE

Master of Philosophy research on "Study on Bacteria-mediated Antagonistic Mechanisms and Degradation of Cyanotoxins as Measures of Controlling Cyanobacterial Blooms"

Final year Undergraduate research on "Development of Microorganisms mediated Bioremediation Technique for Used Lubricating Oil Contaminated soil Released from Automobiles – A Pilot Study"

Undergraduate research on "A Preliminary Survey on the Odonate Fauna in Different Land Use Patterns of Belihuloya, Intermediate Zone of Sri Lanka"

Undergraduate research on "The Livelihood of People Related to the Uma-Oya Multipurpose Development Project (UOMDP) in Udaperuwa GN Division, Bandarawela" under the course module ESNRM 32110 – Community Outreach Program

Participated in the Rapid biodiversity assessment field surveys for the preparation of IEE report of Faculty of Technology, Sabaragamuwa University of Sri Lanka.

Participated in the field work carried out for the research under title, "Larvicidal Potential of Five Selected Dragonfly Nymphs in Sri Lanka over Aedes aegypti (Linnaeus) Larvae under Laboratory Settings".

WORKSHOPS PARTICIPATED

GIS for Ecological Application

[08/05/2018 – 09/05/2018]

Training workshop on "GIS for Ecological Application" organized by Society of Natural Resources Studies and the Department of Natural Resources, Sabaragamuwa University of Sri Lanka (08th and 09th May 2018)

Youth Climate Summit Residential Program

[21/01/2017 – 22/01/2017]

Youth Climate Summit Residential Program held at MAS Athena Campus, Thulhiriya (21st and 22nd January 2017)

CERTIFICATE COURSES

Virtual Bioinformatics short course series organized by Institute of Biology Sri Lanka

Areas covered: Essentials in Bioinformatics, Genomic Data Analysis, Phylogenetics

Virtual Certificate course in Basic Statistics organized by Institute of Applied Statistics Sri Lanka

RECOMMENDATIONS

Professor

Name: Prof. K. Masakorala
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Email: mas@bot.ruh.ac.lk

Dept. of Botany, Faculty of Science, University of Ruhuna, Matara, Sri Lanka

Professor

Name: Prof. R.G.U. Jayalal
Phone number: (+94) 718480740
Email: jayalal@appsc.sab.ac.lk

Dept. of Natural Resources, Faculty of Applied Sciences, Sabaragamuwa University of Sri Lanka, Belihuloya, Sri Lanka