



## Prof. R.M. DHARMADASA

Research Professor Herbal

Technology Section

### Qualifications

**B.Sc.** Sp. (Hons) - Agriculture -University of Ruhuna, Sri Lanka

**M.Phil.** – Botany (Biochemistry & Plant tissue culture)

University of Sri Jayawardanapura, Sri Lanka

**Ph.D.** – Botany (Plant systematics & secondary metabolites)

University of Sri Jayawardanapura, Sri Lanka

### Contacts

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### Specialized Fields

- Organic agriculture & insect pheromones
- Agronomy & processing technology of medicinal plants
- Tissue culture of medicinal, aromatic and ornamental plants
- Plant taxonomy / Molecular taxonomy
- Plant secondary metabolites and bioactive compounds
- Pharmacognosy

### Interest Areas

- Natural pesticides and insect pheromones, tissue culture technology for medicinal and ornamental plants, agrotechnology for medicinal plants, plant secondary metabolites and their biological activity, pharmacognosy of medicinal plants, organic farming

### Publications

1. Dehl Gamage Nadeeshani Dilhara Gamage, Rathnayaka Mudiyansele Dharmadasa, Don Chandana Abeysinghe, Rathnayaka Gamlathge Saman Wijesekara, Gamika A. Prathapasinghe, Takao Someya, (2022). Global perspective of Plant-based cosmetic industry and possible contribution of Sri Lanka to the development of herbal cosmetics. *Evidence-Based Complementary and Alternative Medicine*, 2022 Article ID 9940548, 26 pages, 20 <https://doi.org/10.1155/2022/9940548>
2. Subramaniam Prabagar, **Rathnayake Mudiyansele Dharmadasa**, Anantharasa Lintha, Suganja Thuraisingam, Jasotha Prabagar (2021). Accumulation of heavy metals in grape fruit, leaves, soil and water: A study of influential factors and evaluating ecological risks in Jaffna, Sri Lanka. *Environmental and Sustainability Indicators*, 12. <https://www.sciencedirect.com/science/article/pii/S2665972721000489>
3. Dehl Gamage Nadeeshani Dilhara, **Rathnayake Mudiyansele Dharmadasa**, Don Chandana Abeysinghe, Rathnayake Gamlathge Saman Wijesekara, Gamika A. Prathapasinghe, Takao Someya (2021). Ethnopharmacological Survey on Medicinal Plants Used for Cosmetic Treatments in Traditional and Ayurveda Systems of Medicine in Sri Lanka. *Evidence-Based Complementary and Alternative Medicine*. <https://doi.org/10.1155/2021/5599654>

4. Gamage, D.G.N.D, **Dharmadasa, R.M.** Abeysinghe, D.C, Wijesekara, R.G.S, Prathapasinghe, G.A; and Takao Someya, (2021). Effect of drying methods and type of packaging materials on phytochemical content and total antioxidant capacity off Fivemedicinal plants with cosmetic potential over three monts storage at ambient temperature. *World Journal of Agricultural Research*. 9(2):73-79. doi: 10.12691/wjar- 9-2-5
5. P.V. Munasinghe, R.M. Dharmadasa, W.C.P. Egodawatta, G. Liyanaarachchi and Udayani Binduhewa. Transforming King Coconut Waste into Functional Beverage. *World Journal of Agricultural Research*. 2025; 13(2):34-39. doi: 10.12691/wjar-13-2-3
6. Dharmadasa, R.M and Vimukthi, N.G.S. and Warnasooriya, W.M.R.S.K. and Medawatta, H.M.U.I. Transforming of Pomegranate (*Punica granatum* (L.)) Leaf Waste into Functional Beverage and It's Phytochemical and Antioxidant Properties. *Sustainable Food Technology* 2025, 1-8.
7. Bandara, S.M.P.P. Dharmadasa, R.M. and W.C.P. Egodawatta, and Upeksha Medawatta, (2025) Formulation of Standardized Herbal Tea from Whole Flowers, Stamens and Immature Fruits of Bael (*Aegle marmelos* (L.) Corrêa)." *World Journal of Agricultural Research*, 13, 2, 16-22.
8. R.S. Gunasekara, K. Yakandawala, S. Jayakody, D.S.A. Wijesundara, **R.M. Dharmadasa** & W.A.I.P. Karunaratne 2024. Are volatile organic compounds the secret to Visitations by pollinators in the food deceptive Orchid *Vanda tessellata* (roxb.) Hook. Ex g. Don. (Orchidaceae) *Taprobanica*, 39-47.
9. Jayarathne, P.S.I.U., **Dharmadasa, R.M.** ., Abeysinghe, D.C, and S.W.A. Weerawarna, (2024). Changes of physicochemical parameters, bioactive compounds & antioxidant capacity of four different cultivars of *Punica granatum* (L.) at four distinct maturity stages, *Food Chemistry Advances*, 4,1-7 <https://doi.org/10.1016/j.focha.2024.100640>.
10. Preethimali, A. H. N., **Dharmadasa, R. M.**, Abeysinghe, D. C., and M. N. A Mubarak (2023) Functional Properties, Proximate and Mineral Compositions of Seeds of Selected Cucurbit Species. *World Journal of Agricultural Research*, 11(3), 83-86. doi: 10.12691/wjar-11-3-3
11. Gunarathna, H.W.L.S. **Dharmadasa, R.M.** Amadoru, I.J. and D.C. Abeysinghe, (2023) Functional Properties of Essential Oils Distilled from Areal Parts of Mandarin Varieties (*Citrus reticulata* Blanco.)." *World Journal of Agricultural Research*, 11(3), 68-71. DOI: 10.12691/wjar-11-3-1.
12. Mudugamuwa, M.A.S.P.K., **Dharmadasa, R.M.** Abeysinghe, D.C (2023). Functional Properties and Physicochemical Composition of Different Leaf Positions of Soft and Firm Flesh Trees of *Artocarpus heterophyllus* Lam. (Moraceae). *World Journal of Agricultural Research*. **2023**, 11(2), 54-58. DOI: 10.12691/wjar-11-2-3
13. Yasara Kavindi Kodagoda, Chamila Vinodanee Liyanage Jayasinghe, **Rathnayake Mudiyanseelage Dharmadasa** (2023). In vitro antioxidant activity and antidiabetic potential of five spiral ginger (*Costus speciosus* (J. Koenig) Sm.) populations available in Sri Lanka, *Journal of Agriculture and Food Research*, 12,(1). <https://doi.org/10.1016/j.jafr.2023.1005531>.
14. Nipunika, M.M. Abeysinghe, D.C. and **R.M. Dharmadasa** (2022). Distribution of bioactive compounds and antioxidant capacity of different parts of *Justicia adhatoda* L (Acanthaceae). *World Journal of Agricultural Research*, 10, (2): 60-63. doi: 10.12691/wjar-10-2-4.

<p>Major Projects Undertaken</p>	<p><b>More Publications and Research Communications</b></p> <p><b><i>Booklets published on underutilized medicinal plants:</i></b></p> <ul style="list-style-type: none"> <li>• Cultivation and processing of <i>Solanum xanthocarpum</i> (Katuwelbatu)</li> <li>• Cultivation and processing of <i>Cassia angustifolia</i></li> <li>• Cultivation and processing of <i>Piper longum</i></li> <li>• Cultivation and processing of <i>Withania somnifera</i></li> <li>• Cultivation and processing of <i>Munronia pinnata</i></li> <li>• Cultivation and processing of <i>Plectranthes zeylanicus</i></li> <li>• Cultivation and processing of <i>Acmella oleraceae</i></li> <li>• Cultivation and processing of <i>Mucunapureins</i></li> <li>• Establishment of quality standards for controversial medicinal plants</li> <li>• Comprehensive study of <i>Munronia pinnata</i></li> <li>• Medicinal plant in south East Asia</li> <li>• Guidance Document on Use of Nature-Based Solutions for Site-specific Landslide Risk Mitigation, Nature Based Landslide Risk Management Project in Sri Lanka</li> <li>• Cultivation and processing of <i>Ocimum tenuiflorum</i> L.</li> <li>• Cultivation and processing of <i>Pogostemon heyneanus</i></li> <li>• Cultivation and processing of <i>Acmella oleraceae</i></li> <li>• Cultivation and processing of <i>Mucunapuriens</i></li> <li>• Cultivation and processing of <i>Withania somnifera</i></li> <li>• Cultivation and processing of <i>Plectranthes zeylanicus</i></li> </ul> <ul style="list-style-type: none"> <li>• <b>Principal Investigator</b> - Commercialisation of underutilised essential oil-bearing plants</li> <li>• <b>Co-Investigator</b> - Evaluation of impacts of agrochemicals on grape tree and grape cultivating soil and water; study of heavy metals, nitrate and phosphate content</li> <li>• <b>Principal Investigator</b> - Extraction, isolation and formulation of plant protection products (PPP) from local medicinal plants for the management of sucking pests of fruits, vegetables and ornamental plants</li> <li>• <b>Principal Investigator</b> - <i>In vitro</i> propagation of <i>Stevia rebaudiana</i>; A non-caloric sweetener</li> <li>• <b>Co- investigator</b> - Development of Technologies for Sustainable Raw Material Production for Cosmetic Industry Using Endemic <i>Gyrinops Walla</i> Gaertn. (Sin: Walla Patta)- An Endemic, Industrial Potential, Lucrative Fragrance Plant Grown in Sri Lanka</li> <li>• <b>Principal Investigator</b> - Establishment medicinal plant gardens in Schools</li> <li>• <b>Principal Investigator</b> - Formulation of a Para- pheromone from local varieties of <i>Ocimum sanctum</i> for the control of fruit and melon flies</li> <li>• <b>Principal Investigator</b> -Establishment of quality standards for the authentication of controversial endemic/rare herbal plants of <i>Rauvolfiaserpentina</i>, <i>Rauvolfiadensiflora</i>, <i>Munroniapinnata</i>, <i>Andrographis panniculata</i>, <i>Withaniasomnifera</i> and <i>Rueliatuberosa</i></li> <li>• <b>Co- Investigator</b> - Systematic search for antimalarial compounds from different ecotypes of <i>Munroniapinnata</i> (Wall) Theob. (S = Binkohomba) a Sri Lankan medicinal plant used in traditional medicine for malaria</li> <li>• <b>Co- Investigator</b> - Systematic search for antimalarial compounds from different ecotypes of <i>Munroniapinnata</i> (Wall) Theob. (S = Binkohomba) a Sri Lankan medicinal plant used in traditional medicine for malaria</li> </ul>
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<p><b>Awards Received</b></p>	<ul style="list-style-type: none"> <li>• <b>Principal Investigator</b> - Large scale seed production of Amukkara (<i>Withaniasomnifera</i>)</li> <li>• <b>Co- Investigator</b> - Screening of suitable raw materials and establishment of commercial fertilizer units</li> <li>• <b>Co- Investigator</b> - Propagation and nursery practices of selected medicinal plants</li> </ul> <ul style="list-style-type: none"> <li>• Gold medal for scientific innovation - 2020 - SLIC</li> <li>• Award for academic achievement - 2019- ITI</li> <li>• Award winning academic achievement - 2019-ITI</li> <li>• Gold medal for scientific innovation - 2019-SLIC</li> <li>• Outstanding reviewer award - 2018-ICP</li> <li>• Presidential award for scientific publications - 2018 &amp; 2016 NRC</li> <li>• DASIS award for the most outstanding innovation - 2018 - SLIC</li> <li>• Gold medal for scientific innovation- 2018 - SLIC</li> <li>• Best project with nationally significant output - 2017 - ITI</li> <li>• Award for academic achievement - 2017 - ITI</li> <li>• Best oral presenter award - 2017 - SLAAS</li> <li>• Reviewer award - 2016 - JIPH</li> <li>• Reviewer award - 2016- JEP</li> <li>• Outstanding reviewer award - 2015 - JEP</li> <li>• Presidential award for scientific publications - 2015 - NRC</li> <li>• NRC merit award for scientific publication - 2014 - NRC</li> <li>• Postgraduate Research Award - 2013 - SLAAS</li> <li>• Best Oral presenter award - 2010- INSYM</li> </ul> <p>NRC-National Research Council; ITI-Industrial Technology Institute; INSYM-International symposium; JEP-Journal of Ethnopharmacology, SLIC-Sri Lanka Inventors commission, ICP- Industrial Crops and Products; JIPH- Journal of Infection and Public Health</p>
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