Hasitha Dhananjaya Weerathunge

Senior Research Scientist

Herbal Technology Section (HTS)

Qualifications	Ph.D (Colombo), MPS (UK), BSc (Chem), Grad (I.Chem)
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Specialized Fields	Natural Product Chemistry, Pharmaceutical Sciences, Analytical Chemistry & Phyto-chemistry
Interest Areas	Analytical method development & method validation for herbal products, food, spices and essential oils. SOP preparation, Essential oil research, extraction, isolation & characterization of natural products, Identification and analysis of volatile and non-volatile compounds in natural extracts and derive products by GC-MS, GC, UPLC & HPLC, Pilot scale extraction of plant material and standardization of final product special reference to Ceylon cinnamon.
Publications & Communications	**Research Publications** • Wathsara, H.P.T., **Weeratunge, H.D**., Mubarak, M.N.A., et al., (2020). *In Vitro*Evidence-Based Complementary and Alternative Medicine, Vol. 2020. • Hettiarachchige Dona Sachindra Melshandi Perera, Jayanetti Koralalage Ramani Radhika Samarasekera, Shiroma Mangalika Handunnetti, Ovitigala Vithanage Don Sisira Jagathpriya Weerasena, **Hasitha Dhananjaya Weeratunge** (2018). In vitro pro-inflammatory enzyme inhibition and anti-oxidant potential of selected Sri Lankan medicinal plants, BMC Complementary and Alternative Medicine 18:271. • *Dineth Suharda Samarawickrama, Meegahage Dona YogaMilani, Pitiyage Sagith Dulanjala Perera, Hasitha Dhananjaya Weeratunge,* et al., (2018). The effects of hexanal incorporated composite material (HICM) made of banana fibre and polymers on extending the storage life of mango fruit (Mangifera indica L. var TEJC) in Sri Lanka, Tropical Agriculture 95 (1). • Priyanga Ranasinghe, Priyadarshani Galappaththy, Godwin Roger Constantine, Ranil Jayawardena, **Hasitha Dhananjaya Weeratunge**, Sirimal Premakumara, Prasad Katulanda (2017). *Cinnamomum zeylanicum* (Ceylon cinnamon) as a potential pharmaceutical agent for type-2 diabetes mellitus: study protocol for a randomized controlled trial. Trials (2017) 18:446. • Priyanga Ranasinghe, Ranil Jayawardena, Shehani Pigera, Wasundara Sevwandi Wathurapatha, **Hasitha Dhananjaya Weeratunge**, et al. (2017). Evaluation of pharmacodynamic properties and safety of Cinnamomum zeylanicum (Ceylon cinnamon) in healthy adults: a phase I clinical trial, BMC Complementary and Alternative Medicine 17:550.

Research Communications

- Medawatta, H. M. U. I., Ranasinghe, P.,**Weeratunge, H. D.**, Abeysekera, W. P. K. M., Premakumara, G. A. S., Samaraweera, D. N., and Jayasinghe, G. G. (2021). Antioxidant properties of Sri Gamunu bark (*Cinnamomum zeylanicum* Blume) high yielding Cinnamon variety developed in Sri Lanka: an in vitro study. Proceedings of the 5th Biennial Research Symposium, Industrial Technology Institute Sri Lanka.
- Medawatta, H. M. U. I., Ranasinghe, P., **Weeratunge**, **H. D**., Abeysekera, W. P. K. M., Premakumara, G. A. S., Samaraweera, D. N. and Jayasinghe, G. G. (2021).Antioxidants and antioxidant activity of leaf of Sri Gemunu and Sri Wijeya (*Cinnamomum zeylanicum* Blume) high yielding cinnamon varieties in Sri Lanka. Proceedings of the International Conference on Innovation and Emerging Technologies (ICIET), University of Sri Jayawardenapura Sri Lanka.
- **Weeratunge, H.D**., Premakumara, G.A.S. and de Silva, E.D. (2020). Analysis of volatile constituents of *Gyrinops walla* Gaertn found in Sinharaja forest reserve. University of Colombo Postgraduate Research Symposium, Annual sessions, University of Colombo, Sri Lanka, P. 21.
- **Weeratunge, H.D.**, Premakumara, G.A.S. and de Silva., E.D. (2020). Isolation and characterization of potential fragrance compounds from *Cinnamomum dubium* Nees. (Sewel kurundu) found in Sri Lanka, International Conference on Frontiers in Chemical Technology, Institute of Chemistry, Ceylon, Sri Lanka, P.18.
- **Weeratunge, H.D.**, Premakumara, G.A.S. and de Silva., E.D. (2019). Analysis of volatile constituents of leaf, stem bark and root bark oils of *Cinnamomum dubium* Nees (Sewel kurundu) found in Kanneliya forest reserve, *4th Biennial Research Symposium*, Industrial Technology Institute, Sri Lanka, P.23.
- Thathsarani, Y. K. D. D., Abeysekera, W. P. K. M., **Weeratunge, H. D.**, Abeysekera, W. K. S. M. & Premakumara, G. A. S. (2019). Quantification of selected phenolic compounds in leaf and stem bark of *Moringa oleifera* Lam. (Murunga), Proceedings of the 39th Annual sessions of the Institute of Biology, Sri Lanka. Pp. 63.
- Lokuge, P. L. C.,**Weeratunge H. D**., Abeysekera W. P. K. M., Premakumara G. A. S., Chandrathilake G. G. T., Samaraweera D. N. (2018). Comparative study on chemical compositions of bark and leaf essential oils of Sri Wijeya and Sri Gemunu cinnamon varieties (*Cinnamomum zeylanicum* Blume) developed in Sri Lanka, Proceedings of the International Forestry and Environmental Symposium, University of Sri Jayewardenepura, Sri Lanka, Volume 23, pp. 58.
- **Weeratunge, H.D**., Premakumara, G.A.S. and de Silva, E.D. (2018). Analysis of Volatile Constituents of Wild Variety of *Cymbopogon nardus* (L.) Rendle found in Nilgala Forest Reserve, *University of Colombo Symposium, Annual sessions,* University of Colombo, Sri Lanka, P. 30.
- **Weeratunge, H.D.**, Premakumara, G.A.S. and de Silva, E.D. (2017). Analysis of Volatile Constituents of Leaf, Stem Bark and Root Bark Oils of *Cinnamomum capparu-coronde* Bl., *Research Symposium, Industrial Technology Institute (ITI) Symposium*, Ministry of Technology and Research, Sri Lanka.
- **Hasitha Weeratunge,** Selvaluxmy Kathirgamanathar, Sudharaka Weerakoon, Analysis of aflatoxins in spices by validated methodologies in Sri Lanka, International Symposium of Mycotoxicology 2016 (ISMYCO 2016), University of Tokyo, Japan. P.55.
- **H.D.Weeratunge**, S.K. Ganegamage, N.T.G. Gamage and G.A.S.Premakumara, Comparative GC-MS Study of Ceylon Cinnamon (*Cinnamomum zeylanicum* Blume)

Bark Oils extracted from Selected Cinnamon Cultivation Districts, Proceedings of the 35th Annual Session of the Institute of Biology, 2015, Sri Lanka. P.52.

- **H.D.Weeratunge**, S.K. Ganegamage and G.A.S.Premakumara, Chemical characterization of Ceylon cinnamon (*Cinnamomum zeylanicum*) bark oils distilled from Galle and Ratnapura districts, Biennial Research Symposium, 2015, Industrial Technology Institute (ITI) Symposium, Ministry of Technology and Research, Sri Lanka. P. 23 – 24.
- **H.D.Weeratunge**, S.K. Ganegamage and G.A.S. Premakumara, Comparative study of Ceylon cinnamon (*Cinnamomum zeylanicum*) bark oils extracted from different forms of Ceylon cinnamon bark, Proceedings of the 34th Annual Session of the Institute of Biology, 2014, Sri Lanka. P.31.
- **Weeratunge, H.D**., Premakumara, G.A.S., Dayananda, K.R., 2013. Investigation of coumarin levels in different grades of Ceylon cinnamon. Institute of Chemistry Ceylon Annual Sessions, Sri Lanka, Vol. 30, No. 2, pp.22.
- Rajapakshe, R.M.V.H.C, Wijayasiriwardena, T.D.C.M.K., **Weeratunge, H.D**., Samarasekara, R., Premakumara, G.A.S., 2013. Chemical and Biological Investigation of *Gyrinopes walla* Gertn. World Congress on Pharmaceutical Science & Chemical Technology. pp. 36.
- **Weeratunge, H.D**., Premakumara, G.A.S., 2013. Comparative Study of Coumarin Levels in Ceylon Cinnamon (*Cinnamomum zeylanicum*) and Cassia (*Cinnmomum cassia*). World Congress on Pharmaceutical Science & Chemical Technology. pp. 35.
- Rajapaksha, R.M.V.H.C, Wijayasiriwardena C., **Weeratunge, H.D**., Samarasekera, R. Premakumara G.A.S. (2013) Chemical and Biological Investigation of *Gyrinops walla* Gartn. Proceedings of the World Congress on Pharmaceutical Sciences & Chemical Technology, 36-37.
- **Weeratunge, H.D**., Abeysekara, W.P.K.M., Premakumara, G.A.S., Thavarajah, P., 2011. Phenolic composition of two varieties of red lentils (*Lens culinaris* L.) consumed in Sri Lanka. Proceeding of Nutrition Society Annual Sessions, Sri Lanka, pp. 23.
- Dayananda, K.R., **Weeratunge, H.D**., 2009. Investigation of Oligomeric Procyanidins in Ceylon cinnamon. Institute of Chemistry Ceylon Annual Sessions, Sri Lanka, Vol. 26, No. 2, pp. 14.

Gene Bank Publications

- **Weeratunge,H.D**., Rodrigo,W.W.P., Premakumara,G.A.S. & de Silva,E.D. (2020). Cinnamomum verum voucher CNCZ-1 ribulose-1,5-bisphosphate carboxylase (rbcL) gene, partial cds; chloroplast.

  GenBank Accession number: MT536717

- **Weeratunge,H.D**., Rodrigo,W.W.P., Premakumara,G.A.S. & de Silva,E.D. (2020). Cinnamomum cappara-coronde voucher CNCC-3 maturase K (matK) gene, partial cds; chloroplast.

  GenBank Accession number: MT459831

- **Weeratunge,H.D.,** Rodrigo,W.W.P, Premakumara,G.A.S. & de Silva,E.D. (2020). Cinnamomum dubium voucher CNDNE-KF maturase K (matK) gene, partial cds; chloroplast.

  GenBank Accession number: MT468343

- **Weeratunge,H.D**., Rodrigo,W.W.P., Premakumara,G.A.S. & de Silva,E.D. (2020). Cinnamomum dubium voucher DBA-2 maturase K (matK) gene, partial cds; chloroplast.

GenBank Accession number: MT475829

- **Weeratunge,H.D**., Rodrigo,W.W.P., Premakumara,G.A.S. & de Silva,E.D. (2020). Cinnamomum sinharajaense voucher SG-SF-1 maturase K (matK) gene, partial cds; chloroplast.

GenBank Accession number: MT475830

- **Weeratunge,H.D**., Rodrigo,W.W.P., Premakumara,G.A.S. & de Silva,E.D. (2020). Cinnamomum verum voucher CNCZ-1 maturase K (matK) gene, partial cds; chloroplast.

GenBank Accession number: MT536718

- **Weeratunge,H.D**., Rodrigo,W.W.P., Premakumara,G.A.S. & de Silva,E.D. (2020). Cinnamomum cappara-coronde voucher CNCC-3 photosystem II protein D1 (psbA) gene, partial cds; psbA-trnH intergenic spacer, complete sequence; and tRNA-His (trnH) gene, partial sequence; chloroplast.

GenBank Accession number: MT475831

- **Weeratunge,H.D**., Rodrigo,W.W.P., Premakumara,G.A.S. & de Silva,E.D. (2020). Cinnamomum verum voucher CNCZ-1 photosystem II protein D1 (psbA) gene, partial cds; psbA-trnH intergenic spacer, complete sequence; and tRNA-His (trnH) gene, partial sequence; chloroplast.

GenBank Accession number: MT536719

- **Weeratunge,H.D.,** Premakumara,G.A.S., de Silva,E.D. & Rodrigo,W.W.P. (2018). Cinnamomum cappara-coronde voucher CNCC-3 ribulose-1,5-bisphosphate carboxylase/oxygenase large subunit (rbcL) gene, partial cds; chloroplast.

GenBank Accession number: MK243400

- **Weeratunge,H.D.,** Premakumara,G.A.S., de Silva,E.D. & Rodrigo,W.W.P. (2018). Cinnamomum sinharajaense voucher SG-SF-1 ribulose-1,5-bisphosphate carboxylase/oxygenase large subunit (rbcL) gene, partial cds; chloroplast.

GenBank Accession number: MK243401

- **Weeratunge,H.D.,** Premakumara,G.A.S., de Silva,E.D. & Rodrigo,W.W.P. (2018). Cinnamomum dubium voucher CNDNE-KF ribulose-1,5-bisphosphate carboxylase/oxygenase large subunit (rbcL) gene, partial cds; chloroplast.

GenBank Accession number: MK243402

- **Weeratunge,H.D**., Premakumara,G.A.S., de Silva,E.D. & Rodrigo,W.W.P. (2018). Cinnamomum dubium voucher DBA-2 ribulose-1,5-bisphosphate carboxylase/oxygenase large subunit (rbcL) gene, partial cds; chloroplast.

GenBank Accession number: MK243403

Patents

- Ceylon cinnamon (*Cinnamomum zeylanicum*) capsule for reducing cholesterol and blood pressure
- A natural herbal mouthwash for prevention of respiratory viral infection and oral care and process thereof

	Awards Best oral presentation at Postgraduate Research Symposium of University of Colombo for the abstract "**Weeratunge, H.D**., Premakumara, G.A.S., de Silva, E.D. (2020). Analysis of volatile constituents of *Gyrinops walla* Gaertn found in Sinharaja forest reserve. University
Major Projects Undertaken	• Expanding Ceylon cinnamon exports via research, development & innovation for quality improvement – Funded by International Finance Corporation (IFC), which is a group of World bank (Duration: 3 years). • Value addition to fractionated essential oils and their industrial applications – Funded by Sri Lanka treasury (Duration: 2 years). • Investigation of endemic Ceylon cinnamon for its physic-chemical parameters, some bio activity studies and DNA sequencing (Duration: 3 years) • Value addition to essential oils by fractional distillation under vacuum (Duration 2 yaers)