

## **Keddagoda Gamage Piyumi Wasana**

PhD, BSc (Hons), M IChemC



Senior Lecturer

Department of Postgraduate Studies,

Faculty of Health Sciences,

CINEC Campus, Malabe

Sri Lanka.

Contact no: 0776092238

Email: [piyumi.wasana@cinec.edu](mailto:piyumi.wasana@cinec.edu)

### **Professional qualifications**

November 2023 - January 2024 - Lecturer in Chemistry - visiting (temporary), Lincoln University, Sri Lanka

November 2022 – March 2023 - Lecturer in Biostatistics and Data Analysis – visiting (temporary), ICBT Southern Campus, Matara, Sri Lanka

October 2021 – October 2022 - Teaching Assistant / Demonstrator in Department of Medical Laboratory Sciences – Faculty of Allied Health Sciences, University of Ruhuna, Sri Lanka

September 2016 – February 2017 - Teaching Assistant / Demonstrator in Chemistry, Department of Chemistry, Faculty of Science, University of Ruhuna, Sri Lanka

January 2016 – September 2016 - Teaching Assistant / Demonstrator in Chemistry, Department of Chemistry, Faculty of Science, University of Peradeniya, Sri Lanka

### **Educational qualifications**

2021 - Ph.D in Biochemistry, University of Ruhuna, Sri Lanka

2015 – B.Sc (special in Chemistry), second class honours, University of Peradeniya, Sri Lanka

### **Responsibilities and Duties as a Lecturer**

Conducting lectures, tutorials, and laboratory practical in Chemistry and Biostatistics for the B.Sc in Biomedical Science degree programme and HD in Biomedical Science programme

Setting and conducting examinations and paper marking

## **Responsibilities and Duties as a Teaching Assistant / Demonstrator**

Conducting tutorial classes and laboratory practical in Chemistry and Biochemistry for the B.Sc in Chemistry degree programme and B.Sc in Medical Laboratory Science programme

## **Teaching Experience and curriculum development**

I have conducted lectures, tutorials, laboratory practical, and main examinations in Chemistry and Biostatistics and Data Analysis

I have conducted laboratory practical classes in Biochemistry

## **Research Interest**

Conducting pre-clinical and clinical studies of newly developed antidiabetic drug leads

Isolation, spectroscopic analysis, and structure elucidation of complex natural products using detailed spectroscopic analysis methods

Analysis of commercial Glyphosate (Round Up) and testing it's toxicity on mice

Ethnobotanical survey of medicinal plants used for the management of diabetes mellitus

Synthesis of silver nanoparticles using plant extracts and assessing bioactivity of nano-formulations

Assessing hepato protective activity of Lokanatha Rasa with special reference on Hepatocellular carcinoma

Impact of non-fasting compared to fasting lipid profile on therapeutic decision making of dyslipidemia

## **Research Publications**

### **Patent**

Patent title "A herbal composition for the treatment of diabetes mellitus" (No. 21885).

### **Research articles in SCI/SCI expanded journals**

Wasana, K.G.P., Attanayake, A.P., Arawwawala, L.D.A.M., Weeraratna, T.P., Jayatilaka, K.A.P.W., 2023. Chemical composition of the dietary supplement *Coccinia grandis* (L.)

Voigt and its effect on antioxidant status and inflammatory markers in patients with type 2 diabetes mellitus. *International Food Research Journal*, (Accepted).

Wasana, K.G.P., Attanayake, A.P., Weerathna, T.P., Amarasekera, D.A.B.N., Jayatilaka, K.A.P.W., 2023. Association of dietary intake with body mass index and glycemic profile among newly diagnosed patients with type 2 diabetes mellitus. *American Journal of Human Biology*, <https://doi.org/10.1002/ajhb.23870>.

Wasana, K.G.P., Attanayake, A.P., Arawwawala, L.D.A.M., 2022. Ethnobotanical survey on medicinal plants used for the treatment of diabetes mellitus by Ayurveda and traditional medicine practitioners in Galle district of Sri Lanka. *European Journal of Integrative Medicine*, p. 102177. <https://doi.org/10.1016/j.eujim.2022.102177>.

Shanmuganathan, E., Arawwawala, L.D.A.M., Wasana, K.G.P., Attanayake, A.P., 2022. Selection and optimization of an extraction technique for the preparation of polyphenol and flavonoid rich extract of leafy vegetable, *Coccinia grandis* (Linn.) Voigt. *International Food Research Journal*, 29(5), pp.1032-1042.

Wasana, K.G.P., Attanayake, A.P., Weerathna, T.P. and Jayatilaka, K.A.P.W., 2021. Efficacy and safety of a herbal drug of *Coccinia grandis* (Linn.) Voigt in patients with type 2 diabetes mellitus: A double blind randomized placebo controlled clinical trial. *Phytomedicine*, 81, p.153431.

Wasana, K.G.P., Attanayake, A.P., Weerathna, T.P., Jayatilaka, K.A.P.W., 2021. Value of simple clinical parameters to predict insulin resistance among newly diagnosed patients with type 2 diabetes in limited resource settings. *PLoS ONE*, 16(3): e0248469. <https://doi.org/10.1371/journal.pone.0248469>.

Wasana, K.G.P., Attanayake, A.P., Weerathna, T.P., Jayatilaka, K.A.P.W., 2021. Prevalence of dysglycemia and its associations with age and body mass index among community dwelling adults in a developing country. *International Journal of Diabetes in Developing Countries*, <https://doi.org/10.1007/s13410-021-00995-9>.

### **Research articles in International peer reviewed journals/Scimago**

Kumari, R.M.D.S.S., Weerasinghe, N.P., Wasana, K.G.P., Attanayake, A.P., Piyasiri, B., 2023. Antimicrobial activity of *Thespesia populnea* (L.) extracts against clinical isolates of methicillin-resistant *Staphylococcus aureus* (MRSA). *Jordan Journal of Chemistry*, 18(1), pp.23-32.

Wasana, K.G.P., Attanayake, A.P., Jayatilaka, K.A.P.W., Weerathna, T.P., 2021. Antidiabetic activity of widely used medicinal plants in the Sri Lankan traditional healthcare system: New insight to medicinal flora in Sri Lanka. *Evidence-Based Complementary and Alternative Medicine*, 2021. <https://doi.org/10.1155/2021/6644004>.

Wasana, K.G.P., Attanayake, A.P., Jayatilaka, K.A.P.W., Weerathna, T.P., 2020. Natural drug leads as novel DPP-IV inhibitors targeting the management of type 2

diabetes mellitus. *Journal of Complementary Medicine Research*, 11(1), pp.43-53.

Wasana, K.G.P., Attanayake, A.P., Weerathna, T.P., Jayatilaka, K.A.P.W., 2020. Demographic associations of diabetes status by both fasting plasma glucose concentration and glycated hemoglobin in a community survey in Galle district, Sri Lanka. *Journal of Nutrition and Metabolism*, 2020. <https://doi.org/10.1155/2020/6127432>.

### **Book Chapters**

Wasana, K.G.P., Attanayake, A.P., 2023. Guava (*Psidium guajava* L.) chemical diversity, antidiabetic, and other pharmacological properties. *Antidiabetic Medicinal Plants and Herbal Treatments*, CRC Press, Taylor & Francis Group.

Wasana, K.G.P., Attanayake, A.P., 2023. Scarlet gourd (*Coccinia grandis* L.): Use in diabetes, molecular, cellular metabolic effects. *Ancient and Traditional Foods, Plants, Herbs and Spices used in Diabetes*, CRC Press, Taylor & Francis Group.

### **Presentations**

De Zoysa, P.D.W.D., Weerathna, T.P., Wasana, K.G.P., Weerathna, M.K., Senadheera, V., 2023. The prevalence, patterns, and associations of parental history of diabetes on patients with type 2 diabetes mellitus. *Asian Journal of Internal Medicine, Sri Lanka College of Internal Medicine*, 2(1), p.S12. (Oral)

Weerathna, T.P., Wasana, K.G.P., Kodikara, I., Weerathna, M.K., Senadheera, V., 2023. Clinical utility of different non-invasive markers in the assessment of liver fibrosis in patients with type 2 diabetes mellitus: A cross sectional study in Southern Sri Lanka. *Asian Journal of Internal Medicine, Sri Lanka College of Internal Medicine*, 2(1), p.S18.(Oral)

De Zoysa P.D.W.D., Weerathna, T.P., Wasana, K.G.P., Weerathna, M.K., Senadheera, V., Weerathna, W.A.P.S.R., 2023. Predictors of progression of non-alcoholic fatty liver disease in patients with type 2 diabetes mellitus. *Asian Journal of Internal Medicine, Sri Lanka College of Internal Medicine*, 2(1), p.S28. (Poster)

De Zoysa P.D.W.D., Weerathna, T.P., Lekamwasam, S., Kodikara, I., Wasana, K.G.P., Fonseka, L., 2023. Control of cardiometabolic risk factors and their association with carotid intima media thickness among patients with type 2 diabetes mellitus. *Journal of the Ceylon College of Physicians, Sri Lanka*, 55(1), OP.9 (Oral)

Samadhi, K.G.A., Kalansuriya, P., Wijayarathne, W.M.D.G.B., Wasana, K.G.P., 2023. Antimicrobial and antifungal activities of silver nanoparticles biosynthesized by *Pothos scandens* and *Kaempferia galanga* aqueous extracts. *International Conference on Applied and Pure Sciences, Faculty of Science, University of Kelaniya, Sri Lanka*, p.134. (Oral)

De Zoysa, P.D.W.D., Weerathna, T.P., Palagasinge, D.R., Fonseka, C.L., Wasana, K.G.P., 2023. Positive parental history of diabetes is associated with early diagnosis, better self-reported dietary compliance and glycemic control among patients with type 2 diabetes. *Sri Lanka Medical Association 136<sup>th</sup> Anniversary International Medical Congress*, p.S13. (Oral)

Samadhi, K.G.A., Kalansuriya, P., Wijyaratne, W.M.D.G.B., Wasana, K.G.P., 2023. Antimicrobial activities of silver nanoparticles biosynthesized by *Lansea coromandelica* aqueous extract. *Proceedings of the International Conference on Medical Sciences (ICM), Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka*, p.82. (Poster)

Wasana, K.G.P., Attanayake, A.P., Jayasinghe, J.M.S., Jayatilaka, K.A.P.W., Weeraratna, T.P., 2022. Bioactivity-guided isolation of the antidiabetic compound fucosterol from the leaves of *Coccinia grandis* (L.). *Proceedings of the 5<sup>th</sup> Research Symposium of the Faculty of Allied Health Sciences, University of Ruhuna, Sri Lanka*, p.33. (Oral)

Wasana, K.G.P., Attanayake, A.P., Arawwawala, L.D.A.M., Weeraratna, T.P., Jayatilaka, K.A.P.W., 2022. Determination of *in-vitro* antidiabetic and antioxidant activities of dietary supplement *Coccinia grandis* (L.) Voigt. *Book of Abstracts of the MSF Asia Scientific Days & International Conference on Medical Sciences (ICM)*, p.54.(Poster)

Wasana, K.G.P., Attanayake, A.P., Weeraratna, T.P., Jayatilaka, K.A.P.W., 2022. Dietary habits among newly diagnosed patients with type 2 diabetes mellitus; A cross sectional study in Southern Province, Sri Lanka. *Proceedings of the International Research Conference in Health Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura*, p.73. (Poster)

Wasana, K.G.P., Attanayake, A.P., Weeraratna, T.P., Jayatilaka, K.A.P.W., 2022. Association of major dietary constituents and glycemic load with body mass index of newly diagnosed patients with type 2 diabetes mellitus. *Proceedings of the Annual Scientific Sessions of the Nutrition Society of Sri Lanka*, p.66. (Oral)

Wasana, K.G.P., Attanayake, A.P., Weeraratna, T.P., Jayatilaka, K.A.P.W., 2022. Dietary carbohydrate and fat intake are associated with increased percentage of glycosylated hemoglobin in patients with newly diagnosed type 2 diabetes mellitus: Evidence from a cross-sectional study. *Proceedings of 9<sup>th</sup> Ruhuna International Science and Technology Conference, University of Ruhuna, Sri Lanka*, p.100. (Poster)

Wasana, K.G.P., Attanayake, A.P., Weeraratna, T.P., Jayatilaka, K.A.P.W., 2021. Intake of major dietary constituents in patients with newly diagnosed type 2 diabetes mellitus in Southern, Sri Lanka. *Proceedings of the International Symposium of Rajarata University, Sri Lanka*, p.125. (Oral)

Wasana, K.G.P., Attanayake, A.P., Jayasinghe, J.M.S., Weeraratna, T.P., Jayatilaka, K.A.P.W., 2021. *In vitro* antidiabetic activity of fractionated extracts of *Coccinia grandis*(L.)

Voigt. *International Conference on Applied and Pure Sciences, Faculty of Science, University of Kelaniya, Sri Lanka*, p.96. (Oral)

Wasana, K.G.P., Attanayake, A.P., Weeraratna, T.P., Jayatilaka, K.A.P.W., 2021. Prevalence of dysglycemia and its associations with age and body mass index among semi urban community dwelling adults in Galle, Sri Lanka. *Proceedings of the 3<sup>rd</sup> Conference, College of Biochemists of Sri Lanka*, p.35. (Poster)

Wasana, K.G.P., Attanayake, A.P., Weeraratna, T.P., Jayatilaka, K.A.P.W., 2021. Effect of herbal drug *Coccinia grandis* (L.) on antioxidant status and inflammatory markers and their association with glycemic status in newly diagnosed patients with type 2 diabetes mellitus. *Proceedings of the Research Conference in Health Sciences, Faculty of Allied Health Sciences University of Sri Jayewardenepura*, p.65. (Oral)

Wasana, K.G.P., Attanayake, A.P., Weeraratna, T.P., Jayatilaka, K.A.P.W., 2021. Clinical utility and safety of *Coccinia grandis* extract in patients with newly diagnosed type 2 diabetes mellitus: A double blind, placebo controlled, randomized clinical trial. *18<sup>th</sup> Academic Sessions and 17<sup>th</sup> Vice Chancellor's Awards, University of Ruhuna*, p.87. (Oral)

Wasana, K.G.P., Attanayake, A.P., Arawwawala, L.D.A.M., Weeraratna, T.P., Jayatilaka, K.A.P.W., 2021. *Coccinia grandis* (L) Voigt freeze dried powder: Phytochemical fingerprints, proximate analysis and nutritional composition. *Proceedings of 8<sup>th</sup> Ruhuna International Science and Technology Conference, University of Ruhuna*, p.28. (Oral)

Wasana, K.G.P., Attanayake, A.P., Weeraratna, T.P., Jayatilaka, K.A.P.W., 2020. Prediction of insulin resistance by simple clinical parameters in patients with newly diagnosed type 2 diabetes mellitus. *Ruhuna Journal of Medicine*, 8(1), p.71. (Oral)

Wasana, K.G.P., Attanayake, A.P., Weeraratna, T.P., Jayatilaka, K.A.P.W., 2020. Evaluation of lipid parameters and their association with age, glycemic parameters and anthropometric measurements of newly diagnosed patients with type 2 diabetes mellitus, Galle, Sri Lanka. *International Conference on Applied and Pure Sciences, Faculty of Science, University of Kelaniya, Sri Lanka*, p.18. (Oral)

Wasana, K.G.P., Attanayake, A.P., Weeraratna, T.P., Jayatilaka, K.A.P.W., 2020. Supplementation of freeze-dried Ivy gourd leaf extract on cardiovascular risk factors and atherogenic index in patients with newly diagnosed type 2 diabetes mellitus. *Proceedings of the 3<sup>rd</sup> Research Symposium of the Faculty of Allied Health Sciences, University of Ruhuna*, p.52. (Oral)

Wasana, K.G.P., Attanayake, A.P., Weeraratna, T.P., Jayatilaka, K.A.P.W., 2020. Risk factors associated with diabetes status determined by fasting plasma glucose, glycated hemoglobin and fasting serum fructosamine in newly diagnosed patients with diabetes mellitus. *Galle Medical Journal*, 25(1), p.14. (Poster)

Wasana, K.G.P., Attanayake, A.P., Weeraratna, T.P., Jayatilaka, K.A.P.W., 2020. A

double-blind randomized placebo controlled clinical trial of *Coccinia grandis* (L.) in patients with newly diagnosed type 2 diabetes mellitus. *Sri Lanka Medical Association 133<sup>rd</sup> Anniversary International Medical Congress*, p.166. (Poster)

Wasana, K.G.P., Attanayake, A.P., Weeraratna, T.P., Jayatilaka, K.A.P.W., 2020. Effect of a herbal capsule of *Coccinia grandis* (L.) Voigt (Cucurbitaceae) on lipid profile in patients with newly diagnosed type 2 diabetes mellitus. *Proceedings of the 1<sup>st</sup> International Conference on Frontiers in Chemical Technology*, p.40. (Oral)

Wasana, K.G.P., Attanayake, A.P., Weeraratna, T.P., Jayatilaka, K.A.P.W., 2020. Demographic associations of diabetes status by both fasting plasma glucose concentration and glycated hemoglobin in a community survey in Galle district, Sri Lanka. *17<sup>th</sup> Academic Sessions and 16<sup>th</sup> Vice Chancellor's Awards, University of Ruhuna*, p.62. (Oral)

Wasana, K.G.P., Attanayake, A.P., Weeraratna, T.P., Jayatilaka, K.A.P.W., 2019. Gender differences in the association of age and body mass index with dysglycemia detected during diabetes screening programme in Galle district. *Sri Lanka Medical Association 132<sup>nd</sup> Anniversary International Medical Congress*, p.60. (Poster)

Wasana, K.G.P., Attanayake, A.P., Arawwawala, L.D.A.M., Jayatilaka, K.A.P.W., Weeraratna, T.P., 2018. Assessment on quality control parameters of a newly developed herbal drug from *Coccinia grandis* (Family: Cucurbitaceae). *Asian Symposium on Medicinal Plants, Spices and Other Natural Products XVI*, p.164. (Poster)

Navaratne, A.N., Uduwela, N., Wasana, P., Ranasinghe, S., Waduge, R., Kothalawala, H., 2018. Toxicity studies of POEA 15, surfactant of commercial Glyphosate (Round Up). *Proceedings of the International Conference on Chronic Kidney Disease of Unknown Etiology, University of Peradeniya*, p.32. (Oral)

Wasana, K.G.P., Navaratne, A.N., Ranasinghe, J.G.S., Waduge, R., 2016. Analysis of organic fraction of commercial Glyphosate (Round Up) and testing its toxicity on mice. *Proceedings of the Postgraduate Institute of Science Research Congress, University of Peradeniya*, p.22. (Oral)

## Awards

General research committee (GRC) Postgraduate Research Award – 2022, Sri Lanka Association of Advancement of Science (SLAAS), Sri Lanka

Merit award for the oral presentation in 5<sup>th</sup> Research Symposium – 2022, Faculty of Allied Health Sciences, University of Ruhuna, Sri Lanka

Best poster presentation in the category of “Clinical Medicine, Quality & Patient Safety, and Pharmacology & Toxicology” – 2022, MSF Asia Scientific Days & International

Conference on Medical Sciences, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka

Best poster presentation (Overall) – 2022, MSF Asia Scientific Days & International Conference on Medical Sciences, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka

Vice chancellor's Gold Medal - 2022 for the excellent performance during the post graduate study in generating knowledge that has accepted internationally, University of Ruhuna, Sri Lanka

CNAPT Award for the best paper in Medicine in memory of Richard and Sheila Peris - 2021, Sri Lanka Medical Association, Sri Lanka

1<sup>st</sup> place (Gold Medal) in the University category in the all-island health innovation award 2021, Sri Lanka Medical Association, Sri Lanka

Merck Sri Lanka publication award – 2021, Merck Life Science, Sri Lanka

Best innovator award in Health Sciences – 2021, Research Conference in Health Sciences, University of Sri Jayewardenepura, Sri Lanka

FMAS award for the commendation of the paper (oral-open category) – 2021, Annual Academic Sessions of Faculty of Medicine, University of Ruhuna, Sri Lanka

Wilson Peiris award for the best paper in poster presentation - 2020, 133<sup>rd</sup> Anniversary International Medical Congress, Sri Lanka Medical Association, Sri Lanka

Vice Chancellor's award for the best oral presentation in the Medicine and Allied Health Sciences section – 2020, 17<sup>th</sup> Academic Sessions and 16<sup>th</sup> Vice Chancellor's Awards, University of Ruhuna, Sri Lanka

### **National Services**

I was invited to do Media brief on “Newly developed herbal capsule *Coccinia grandis* L. for the management of diabetes mellitus

### **Professional Affiliations**

Life member, Institute of Chemistry (ICChem), Sri Lanka

Life member, Sri Lanka Association of Advancement of Science (SLAAS), Sri Lanka

Full member, Organization for women in Science for the developing world (OWSD)



Full member, College of Biochemists of Sri Lanka (CBSL)

Life member, Nutrition Society of Sri Lanka (NSSL)