

Maduwage Kalana Prasad

Professor in Biochemistry / Biomedical Researcher

<http://med.pdn.ac.lk/departments/biochemistry/staff/kalana.html>

<https://scholar.google.com/citations?user=lf3F30sAAAAJ&hl=en>

https://www.researchgate.net/profile/Kalana_Maduwage

Google Scholar citations: 764, h-index 17 (April 2019)

E.mail: kalanapm@gmail.com

Date of birth: 5 November 1980

Residence: 55A Galkanda Road, Aniwatta, Kandy, 20000, Sri Lanka

Contact: +94 7 1414 5738

Skype: kalanamaduwege

Summary

I have a Ph.D. in Clinical Pharmacology from the University of Newcastle, Australia, and am now working as a professor at department of Biochemistry, Faculty of Medicine, University of Peradeniya, Sri Lanka. I teach both undergraduate and postgraduate medical students in addition to preparing relevant teaching / learning material. In addition to being the founder-coordinator and chief examiner for the Integrated Human Biology modules of our M.B.,B.S. programme, I have nine years of experience in medical teaching, including three years' teaching experience in the School of Medicine and Public Health of the University of Newcastle, Australia.

My Ph.D. dissertation was on the coagulant effects of Sri Lankan snake venoms and the efficacy of antivenoms. This built on my M.Phil. programme ('Systematics, venom characteristics and clinical features following envenomation by Sri Lankan hump-nosed vipers') and M.B.,B.S at the University of Peradeniya. I have forty-two publications in SCI journals, 12 of these as first author, and have won six international awards for research and thirteen national awards for research. I am focused and hardworking, and am familiar with clinical, pathophysiological and treatment aspects of snake envenomation. I am confident in in-vitro, in-vivo and clinical research methodologies in snake venom toxinology, antivenom research (including isolation and pharmacological characterization of toxins) and research methods associated with the efficacy, safety and effectiveness of antivenom treatment. Exploration of pharmacologically active biomolecules from animal venoms is my future research interest.

Current position:

Professor in Biochemistry, Department of Biochemistry, Faculty of Medicine, University of Peradeniya, Sri Lanka

Education

University of Newcastle (Australia)

Ph.D. Doctor of Philosophy 2012 – 2016
Thesis: Investigation of coagulant effects of venomous Sri Lankan snake venoms and efficacy of antivenoms

University of Peradeniya (Sri Lanka)

M.Phil. Master of Philosophy 2008 – 2011
Thesis: Systematics, venom characteristics and clinical features following envenomation by Sri Lankan hump-nosed vipers

University of Peradeniya (Sri Lanka)

M.B.B.S. Bachelor of Medicine and Bachelor of Surgery 2001 – 2007
Second Class in 2nd MBBS, 3rd MBBS with distinctions in Parasitology and Pathology. B. H. Aluvihare Prize in Surgery in the final M.B.,B.S. examination.

Sri Lanka Medical Council Registration 2008 as a medical practitioner, SLMC No: 24586

Teaching and curriculum development experience and contributions

- Nine years of teaching experience of cellular, nutritional, systematic, experimental and clinical biochemistry for medical undergraduates at the Faculty of Medicine, University of Peradeniya, Sri Lanka. Oct 2009 - present
- Continuous three-year teaching experience in clinical medicine for second and third year medical undergraduates at the University of Newcastle, Australia. 2013 - 2015.
- I have conducted lectures, small-group discussions, practicals, problem-based learning, and examinations for medical undergraduates in the Faculty of Medicine, University of Peradeniya, Sri Lanka. 2009 - 2012 and 2016 - present
- I have conducted lectures, practicals and examinations for the Master of Science in Clinical Biochemistry course at the Postgraduate Institute of Science, University of Peradeniya, Sri Lanka. 2016 - present
- I have given lectures and conducted problem-based learning sessions and examinations on snake envenoming and management for medical undergraduates at the Faculty of Medicine, University of Peradeniya. 2016 - present
- I have served as designer and module coordinator for the Integrated Applied Medicine 1 and Integrated Applied Medicine 2 modules of the MBBS Course at the Faculty of Medicine, University of Peradeniya.

- I developed a new biochemistry curriculum relating to the major curriculum revision occurred in 2016 in the MBBS degree programme. I was actively engaged with the designing of aims, allocation of credits, intended learning outcomes, course contents, structure of assessments and timing relating to a new biochemistry curriculum for the M.B.,B.S. programme. 2017
- I initiated and coordinated the design of a novel teaching/learning method/concept by way of display boards for the biochemistry module, to summarize the course contents of the curriculum. This involved initially the development of 10 display boards incorporating course contents, facilitating the regular exposure of students to teaching material and quick review before assessments.
- I have developed a comprehensive toxinology laboratory at the Department of Biochemistry and was instrumental in designing and implementing basic infrastructure, including procurement, installation and optimization.
- I designed a substantial part of the medical sciences undergraduate curriculum for the newly-established Faculty of Medicine, Wayamba University of Sri Lanka. Sri Lanka.
- I serve as a visiting lecturer at the Sir John Kothalawala Defence University of Sri Lanka. 2016 and 2017

Academic Awards and Scholarships - International

- 2012 **Australian Leadership Award**, offered by Government of Australia. Four years full scholarship for PhD studies at University of Newcastle. Australia. (AU\$ 226,468.00).
- 2016. Finalist of **Aspirin Social Innovation Award**, Bayer Foundations, Berlin, Germany.
- **Global Young Physician Leaders' award 2016** (Awarded by the Intra Academy Medical Panel and the World Academy of Sciences for 20 outstanding physician leaders in the world aged under 40 years–Berlin, Germany).
- 2014 **Informa Health Care Award** for the Best Platform Presentation paper presented at North American Conference of Clinical Toxicology (NACCT 2014), New Orleans, Louisiana, USA. "Diagnosis of snake envenoming using simple phospholipase A₂ assay".
- 2014 **John Morris Scientific Award** for the Best Overall Scientific Poster Presentation at the Australian Society for Medical Research (ASMR) Satellite Scientific Meeting, Newcastle, Australia for "Diagnosis of snake envenoming using simple phospholipase A₂ assay".

- 2014 **ASMR Award for the Best Overall Scientific Poster** Presentation at the Australian Society for Medical Research (ASMR) Meeting, Sydney, Australia for “Diagnosis of snake envenoming using simple phospholipase A₂ assay”.

Academic Awards and Scholarships - National

- 2016. **Committee of Vice-Chancellors and Directors Award** for the most outstanding young researcher in the field of medicine, dental, veterinary and allied sciences field in Sri Lanka offered by the president of Sri Lanka. Aged 36, I was the youngest recipient of this award.
- 2017. **Kandy Society of Medicine Health Research Prize Winner - 2017.**
- 2016 **President’s Award for Scientific Publications.** National Research Council (Awarded by the H.E. President of Sri Lanka).
- 2015 **President’s Award for Scientific Publications.** National Research Council (Awarded by the H.E. President of Sri Lanka).
- 2014 **President’s Award for Scientific Publications.** National Research Council (Awarded by the H.E. President of Sri Lanka).
- 2013 **President’s Award for Scientific Publications.** National Research Council (Awarded by the H.E. President of Sri Lanka).
- 2008 **President’s Award for Scientific Publications.** National Research Council (Awarded by the H.E. President of Sri Lanka).
- 2005 **Presidential Award for the best new invention of 2004:** Invention of a Microscopic Slide Projector (Patent No: 12460).
- 2005 **President’s Award for Scientific Publications.** National Research Council (Awarded by the H.E. President of Sri Lanka).
- 2014. **Award for the Best publication by the Physician** at 48th Annual Academic Sessions, Colombo, for the publication titled “Revisiting Russell’s Viper (*Daboia russelii*) Bite in Sri Lanka: Is Abdominal Pain an Early Feature of Systemic Envenoming?”
- 2005 **National Science Foundation Award for Young Scientists, 2005** (Undergraduate Category): Invention of a Microscopic Slide Projector (Patent No: 12460).
- 2012. **National Research Council Merit Award** for Scientific Publications, Sri Lanka.

- 2011. **National Research Council Merit Award** for Scientific Publications, Sri Lanka.
- 2010. **National Research Council Merit Award** for Scientific Publications, Sri Lanka.
- 2007 Ministry of Social Services and Social Welfare Award for outstanding performance as a young scientist, Sri Lanka.
- 2007 Awarded the B. H. Aluvihare Prize in Surgery for Final MBBS.
- Travel Grant 2011. Asia Pacific Association of Medical Toxicology, Penang, Malaysia (US\$ 750)
- Travel Grant 2015. Asia Pacific Association of Medical Toxicology, Perth, Australia. (US\$ 1000)

Leadership training

- As an **Australian Leadership Award** recipient in 2012, I completed the 'Leadership for Development' programme conducted by the Australian Educational and Leadership Centre, Canberra, Australia. The training programme included attending the Leadership for Development Forum (Canberra), the Leadership workshop (NSW), the Leadership for Development Conference (Canberra) and the Leadership Coaching Module.
- **Global Young Physician Leaders' Award 2016:** Awarded by the Intra-Academy Medical Panel and the World Academy of Sciences for 20 outstanding young-physician leaders worldwide, aged under 40 years – Berlin, Germany.

Research Skills and Experience

- Clinical and Experimental Toxinology (snake envenoming)
- Randomized controlled clinical trials (snake envenoming)
- Cochrane systematic reviews (intervention reviews)
- Pharmacology of snake antivenoms (efficacy, effectiveness, pharmacokinetics and adverse effects)
- Coagulopathy of snake envenoming and toxins
- Manufacturing of Snake antivenoms
- Isolation and characterization of pharmacologically active compounds from animal venom
- Systematics of venomous snakes
- Systematics of freshwater fishes and lizards

Laboratory skills

- Enzyme Linked Immunosorbant Assay (ELISA)
- Western Blotting

- High Performance Liquid Chromatography
 - In-vitro characterization of toxins
 - Pre-clinical efficacy testing of immunoglobulin-based medications
 - Cell culture studies
 - Double-staining for osteological studies
- Department of Clinical pharmacology and Toxicology, Newcastle Calvary Mater hospital, University of Newcastle, NSW, Australia (2010).
 - Monash venom Group, Department of Pharmacology, Monash University, Melbourne, Australia (2008).
 - Monash venom Group, Department of Pharmacology, Monash University, Melbourne, Australia (2009).
 - Isolation and In-vitro characterization of snake venom toxins (2009 - present).
 - Clinical trials on interventions for snake envenoming (2012-2016).
 - Training on Cochrane Systematic Reviews for interventions, Sydney, Australia (2013).
 - Laboratory experience on SDS-PAGE, Western blotting, High Performance Liquid Chromatography, Enzyme link Immunosobant assay, *in-vitro* efficacy of snake antivenoms, lyophilization, clotting assays and *in-vitro* neuromuscular studies (2009 - present).
 - Six weeks training of equine based snake antivenom production and quality control at Institute of Clodomiro Picado, Costa-Rica under the supervision of Professor Jose Maria Gutierrez.
 - Six workshop training on Australian Highly venomous snake handling and collection of venom conducted by John Mostyn (Manager, Venom Collection Devison, Australian Reptile Park, Gosford, NSW, Australia).
 - Clinical and epidemiological studies on snake bites in Sri Lanka (2012 to present).
 - Contributions to several systematic ichthyological and herpetological studies based on Sri Lankan and South Indian fauna, which led to discoveries of several new taxa (2007 - present).
 - Fieldwork experience during leading biodiversity explorations (freshwater fish, snakes and lizards) underwent in rainforests of Sri Lanka, since year 2000.

Contributions to the academic / scientific journals as a reviewer

- *Toxicon* (Elsevier Publications)
- *PLoS Neglected Tropical Diseases*
- *Transactions of the Royal Society for Tropical Medicine and Hygiene* (Elsevier Publications)
- *Neurotoxicity Research* (Elsevier Publications)
- *Thrombosis Research* (Elsevier Publications)
- *Journal of Infections and Public Health* (Elsevier Publications)
- *Sri Lanka Journal of Medicine* (SJM)
- *Ceylon Journal of Science*

Inventions and patents

2004 Patent number 13388: A simple instrument for measuring distance and height.

2004 Patent number 13389: Compound light microscope converted to a projector.

2001 Patent number 12460: Microscopic Slide Projector

Publications, abstracts, popular articles and newsworthy research

Publications in SCI Journals

1. Sudasinghe H, Pethiyagoda R, **Maduwage K**, Meegaskumbura M (2019) The identity of the Sri Lankan *Amblypharyngodon* (Teleostei, Cyprinidae). *ZooKeys* 820: 25–49. <https://doi.org/10.3897/zookeys.820.29632>
2. Ratnayake I, Shihana F, Dissanayake DM, Buckley NA, **Maduwage K**, Isbister GK. (2017). Performance of the 20-minute whole blood clotting test in detecting venom induced consumption coagulopathy from Russell's viper (*Daboia russelii*) bites. *Thrombosis and Haemostasis*. Feb 2. doi:10.1160/TH16-10-0769.
3. Isbister, GK, Jayamanne S, Mohamed F, Dawson AH, **Maduwage K**, Gawarammana I, Lalloo DG, de Silva HJ, Scorgie FE, Lincz LF, Buckley NA. (2017). A randomized controlled trial of fresh frozen plasma for coagulopathy in Russell's viper (*Daboia russelii*) envenoming. *Journal of Thrombosis and Haemostasis*. Jan 20. doi: 10.1111/jth.13628. [Epub ahead of print].
4. Silva A, **Maduwage K**, Buckley NA, Lalloo DG, de Silva HJ, Isbister GK. Antivenom for snake venom-induced neuromuscular paralysis. *Cochrane Database of Systematic Reviews* 2017, Issue 3. Art. No.: CD012604. DOI: 10.1002/14651858.CD012604.
5. **Maduwage K**, O'Leary, M, Silva, A, Isbister, GK. (2016). Detection of Snake Venom in Post-Antivenom Samples by Dissociation Treatment Followed by Enzyme Immunoassay. *Toxins*: 28: 8(5), E130.

6. **Kalana Maduwage**, Anjana Silva, Margaret A O’Leary, Wayne C Hodgson, Geoffrey K. Isbister. (2016). Efficacy of Indian polyvalent snake antivenom against Sri Lankan snake venoms: lethality studies or clinically focussed *in vitro* studies. **Nature Scientific Reports**. 6.26778.
7. Silva A, Johnston C, Kuruppu S, Kneisz D, **Maduwage K**, Kleifeld O, Smith AI, Siribaddena, S, Buckley, NA, Hodgson, WC, Isbister, GK. (2016). Clinical and Pharmacological Investigation of Myotoxicity in Sri Lankan Russell’s Viper (*Daboia russelii*) Envenoming. **PLoS Neglected Tropical Diseases** 10(12): e0005172. doi:10.1371/journal.pntd.0005172.
8. Sudasinghe H, R. Pethiyagoda, K. **Maduwage, M.** Meegaskumbura. (2016). *Mystus nanus*, a new striped catfish from Sri Lanka (Teleostei: Bagridae) **Ichthyological Explorations Freshwaters**, Vol. 27, No. 2, pp. 163-172.
9. Senanayake Kularatne, Kosala Weerakoon, Anjana Silva, **Kalana Maduwage**, Chamara Walathara, Ishani Rathnayake, Senal Medagedara, Ranjith Paranagama, Suresh Mendis, P.V.R. Kumarasiri. (2016). Efficacy of intravenous hydrocortisone administered 2e4 h prior to antivenom as prophylaxis against adverse drug reactions to snake antivenom in Sri Lanka: An open labelled randomized controlled trial **Toxicon** 120: 159-165.
10. Anjana Silva, **Kalana Maduwage**, Michael Sedgwick, Senaka Pilapitiya, Prasanna Weerawansa, Niroshana J Dahanayaka, Nicholas A. Buckley, Sisira Siribaddana, Geoffrey K. Isbister. (2016). Neurotoxicity in Russell’s viper (*Daboia russelii*) envenoming in Sri Lanka: A clinical and neurophysiological study. **Clinical Toxicology** DOI: 10.3109/15563650.2016.1143556).
11. Anjana Silva, **Kalana Maduwage**, Michael Sedgwick, Senaka Pilapitiya, Prasanna Weerawansa, Niroshana Dahanayake, Nicholas A. Buckley, Sisira Siribaddana, Geoffrey K. Isbister. (2016). Common Krait (*Bungarus caeruleus*) envenoming in Sri Lanka: a clinical and neurophysiological study. **PLoS Neglected Tropical Diseases** 10(2): e0004368. doi: 10.1371/journal.pntd.0004368.
12. **Maduwage K**, Scorgie F, Lincz, O’Leary, M. Isbister, GK. (2015). Procoagulant snake venoms have differential effects in animal plasmas: Implications for antivenom testing in animal models, **Thrombosis Research**, 137, 174-177.
13. Isbister GK, **Maduwage K**, Scorgie FE, Shahmy S, Mohamed F, Abeysinghe C, Karunathilake, H. Gnanathanan, CA. Lincz, LF. (2015). Venom Concentrations and Clotting Factor Levels in a Prospective Cohort of Russell’s Viper Bites with Coagulopathy. **PLoS Negl Trop Dis** 9(8): e0003968. doi:10.1371/journal.pntd. 0003968.

14. Isbister GK, **Maduwage K**, Saiao A, Buckley NA, Jayamanne SF, Seyed S. Mohamed, F. Chathuranga, U. Mendes, A. Abeysinghe, C. Karunathilake, H. Gawarammana, I. Lalloo, DG. De Sliva HJ. (2015). Population Pharmacokinetics of an Indian F(ab')₂ Snake Antivenom in patients with Russell's Viper (*Daboia russelii*) Bites. *PLoS Neglected Tropical Diseases* 9(7): 0003873. doi:10.1371/journal.pntd.0003873.
15. O' Leary MA, **Maduwage K**, Isbister GK. (2015). Detection of venom after antivenom administration is largely due to bound venom. *Toxicon*. 93: 112-115
16. Batuwita S. **Maduwage K**. Sudasinghe H. (2015). Redescription of *Pethia melanomaculata* (Teleostei: Cyprinidae) from Sri Lanka. *Zootaxa* 3936 (4): 575–583.
17. **Maduwage. K**. Buckley, NA. de Silva, HJ. Lalloo, DG. Isbister, GK. (2015). Snake antivenom for snake venom induced consumption coagulopathy. *Cochrane Database of Systematic Reviews* Issue. 6 Art.No.:CD011428.DOI: 10.1002/14651858.CD011428.pub2.
18. **Maduwage, K**. O'Leary, MA. Scorgie, FE. Shahmy, S. Mohamed, F. Abeysinghe, C. Karunathilake, H. Lincz, L. Gnanathasan, CA. Isbister, GK. (2014). Detection of Venom after Antivenom Is Not Associated with Persistent Coagulopathy in a Prospective Cohort of Russell's Viper (*Daboia russelii*) Envenomings. *PLoS Neglected Tropical Diseases* 8(12): e3304. doi:10.1371/journal.pntd.0003304.
19. **Maduwage, K**. Isbister, GK. (2014). Current Treatment for Venom-Induced Consumption Coagulopathy Resulting from Snakebite. *PLoS Neglected Tropical Diseases*. 8 (10): e3220. doi:10.1371/journal.pntd.0003220.
20. **Maduwage K**, O'Leary M, Isbister GK. (2014). Diagnosis of snake envenomation using a simple Phospholipase A₂ assay. *Nature Scientific Reports* 4 (4827): DOI:10.1038/srep04827 (2014).
21. Isbister GK, **Maduwage K**, Page CB. (2014). Antivenom cross neutralisation in a suspected Asian pit viper envenoming causing severe coagulopathy. *Toxicon* 90: 286-90.
22. Pethiyagoda R, **Maduwage K**, Manamendra-Arachchi K. (2014). Validation of the South Asian cichlid genus *Pseudetroplus* Bleeker (Pisces: Cichlidae). *Ichthyological Exploration of Freshwaters* 3838 (5): 595–600.
23. Kularatne SAM, Silva A, Weerakoon K, **Maduwage K**, Walathara C, Paranagama R, Mendis S. (2014). Revisiting Russell's Viper (*Daboia russelii*) Bite in Sri Lanka: Is Abdominal Pain an Early Feature of Systemic Envenoming? *PLoS One* 9(2): e90198. doi: 10.1371/journal.pone.0090198.

24. Kularatne SAM, Silva A, **Maduwage K**, Ratnayake I, Walathara C, Ratnayake C, Mendis S, Parangama R. (2014). Victims' Response to Snakebite and Socio-epidemiological Factors Of 1018 Snakebites in a Tertiary Care Hospital in Sri Lanka. ***Wilderness and Environmental Medicine*** 25, 35-40.
25. **Kalana Maduwage**, Fiona E. Scorgie, Seyed Shahmy, Fahim Mohamed, Chandana Abeysinghe, Harendra Karunathilake, Lisa F. Lincz, Christeine A. Gnanathanan, Geoffrey K. Isbister. (2013). Factor deficiencies in Hump-nosed pit viper (*Hypnale hypnale*) envenoming. ***Clinical Toxicology*** 51: 527-31.
26. **Kalana Maduwage**, Geoffrey K. Isbister, Anjana Silva, Sunil Bowatta, Suresh Mendis, Indika Gawarammana. (2013). Epidemiology and clinical effects of Hump-nosed pit viper (Genus: *Hypnale*) envenoming in Sri Lanka ***Toxicon*** 61: 11-15.
27. Kularatne SAM, Hettiarchchi R, Dalpathadu J, Mendis ASV, Appuhamy PDSAN, Zoysa HDJ, **Maduwage K**, Weerasinghe VS, de Silva A. (2013). *Enhydrina schistosa* (Elapidae: Hydrophiinae) the most dangerous sea snake in Sri Lanka: Three case studies of severe envenoming ***Toxicon*** 77, 78-86.
28. Isbister KG, **K. Maduwage**, S. Shahmy, F. Mohamed, C. Abeysinghe, H. Karunathilake, CA Ariaratnam, NA Buckley. (2013). Diagnostic 20-min whole blood clotting test in Russell's viper envenoming delays antivenom administration. ***Quarterly Journal of Medicine*** doi: 10.1093/qjmed/hct102.
29. O'Leary M, **Maduwage K**, Isbister, GK. (2013). Use of immunoturbidimetry to detect venom antivenom binding using snake venoms. ***Journal of Pharmacology and Toxicological Methods*** 67: 171-181.
30. Pethiyagoda, R., Meegaskumbura, M., **Maduwage, K.** (2012). A synopsis of the Indian and Sri Lankan fishes referred to Puntius Hamilton (Teleostei: Cyprinidae: Cyprininae). ***Ichthyological Exploration of Freshwaters*** 23 (1): 69–95.
31. Kularatne, S. A. M., Sivansuthan, S, Medagedara, S. C., **Maduwage, K.**, de Silva, A. (2011). Revisiting saw-scaled viper (*Echis carinatus*) bites in the Jaffna Peninsula of Sri Lanka: ecology, epidemiology and clinical manifestations. ***Transactions of the Royal Society of Tropical Medicine and Hygiene***. 105 (2011): 591–597.
32. **Maduwage, K.** Kularatne, K. Wazil, A. Gawarammana, I. (2011). Coagulopathy, acute kidney injury and death following *Hypnale zara* envenoming – The first case report from Sri Lanka. ***Toxicon***, 58: 641–643.
33. Gower, D., **Maduwage K.** (2011). Two new species of *Rhinophis* Hemprich (Serpentes: Uropeltidae) from Sri Lanka. ***Zootaxa***. 2881: 51–68.

34. Silva, A, **K. Maduwage** & R. Pethiyagoda. (2010). A review of the genus *Rasbora* in Sri Lanka, with description of two new species (Teleostei: Cyprinidae). *Ichthyological Exploration of Freshwaters* 21: 27–50.
35. **Maduwage, K.**, A. Silva, K. Manamendra-Arachchi & R. Pethiyagoda. (2009). A taxonomic revision of the South Asian hump-nosed vipers (Squamata: Viperidae: Crotalinae: *Hypnale*). *Zootaxa* 2232:1–28.
36. **Maduwage, K.**, M. Meegaskumbura, A. Silva & R. Pethiyagoda. (2008). Phylogenetic utility of hemipenial morphology in Sri Lankan agamid lizards. *Current Science* 95: 838–840.
37. Silva, A., **K. Maduwage** & R. Pethiyagoda. (2008). *Puntius kamalika*, a new species of barb from Sri Lanka (Teleostei: Cyprinidae). *Zootaxa* 1824: 55–64.
38. Pethiyagoda, R., M. Kottelat, A. Silva, **K. Maduwage** & M. Meegaskumbura. (2008). A review of the genus *Laubuca* in Sri Lanka, with description of three new species (Teleostei: Cyprinidae). *Ichthyological Exploration of Freshwaters* 19: 7–26.
39. Meegaskumbura, M., A. Silva, **K. Maduwage** and R. Pethiyagoda. (2008). *Puntius reval*, a new barb from Sri Lanka (Teleostei: Cyprinidae: *Puntius*). *Ichthyological Exploration of Freshwaters* 19: 141–152.
40. Pethiyagoda, R., A. Silva, **K. Maduwage**. (2008). *Mystis ankutta* a new catfish from Sri Lanka (Teleostei: Bagridae). *Ichthyological Exploration of Freshwaters* 19: 233–242.
41. Pethiyagoda, R., A. Silva, **K. Maduwage** & L. Kariyawasam. (2008). The Sri Lankan Five-eyed Spiny Eel, *Macroglyphus pentophthalmos* (Teleostei: Mastacembelidae), and its enigmatic decline. *Zootaxa* 1931: 37–48.
42. Pethiyagoda, R., A. Silva, **K. Maduwage** & M. Meegaskumbura. (2008). *Puntius kelumi*, a new barb endemic to Sri Lanka (Teleostei: Cyprinidae). *Ichthyological Exploration of Freshwaters* 19: 201–214.
43. Bahir, M. M. & **K. P. Maduwage**. (2005). *Calotes desilvai*, a new agamid lizard from Morningside Forest, Sri Lanka. *The Raffles Bulletin of Zoology*, Suppl. 12: 381–392.

Publications in peer-reviewed journals

1. Nikapitiya S. **Maduwage K.** Pharmacodynamics and pharmacokinetics of snake antivenom. *Sri Lanka Journal of Medicine* 2017, 21 (1): 51-65.

2. Kudagammana T, Mohotti K, **Maduwage K**, Marasinghe S. (2016). Vitamin B12 status among underprivileged preschool children: Experience from two tea estates. *Sri Lanka Journal of Child Health*, 2016; 45(2): 111-115.
3. Kularatne SAM, Wimalasooriya S, Nazar K, **Maduwage K**. (2014). Thrombotic microangiopathy following Russell's viper (*Daboia russelii*) envenoming in Sri Lanka: a case report. *Ceylon Medical Journal* 59: 29-30.
4. Anjana Silva, Panduka Gunawardena, Danister Weilgama, **Kalana Maduwage**, Indika Gawarammana. (2012). Comparative in-vivo toxicity of venoms from South Asian hump-nosed pit vipers (Viperidae: Crotalinae: Hypnale) *BMC Research Notes* 2012, 5:471.
5. **Maduwage**, K, Silva, A. (2012). Hemipeneal Morphology of Sri Lankan Dragon Lizards (Sauria: Agamidae). *Ceylon Journal of Sciences (Bio. Sci)* 41 (2): 111-123.
6. Kularatne, K., Budagoda S., **Maduwage, K.**, Nasar, K., Kumarasiri, R., Kularatne, S. (2011). Parallels between Russell's viper (*Daboia russelii*) and hump-nosed viper (*Hypnale* species) bites in the central hills of Sri Lanka amidst the heavy burden of unidentified snake bites. *South Asian Journal of Tropical Medicine* 2011: 564–567.
7. **Maduwage, K.** Hodgson, WC. Konstantakopoulos, N. O'Leary, MA. Gawarammana, I. Isbister, GK. (2011). The in vitro toxicity of venoms from South Asian Hump-nosed pit vipers (Viperidae: *Hypnale*). *Journal of Venom Research* 2: 17–23.
8. **Maduwage, KP**, A. Silva and S. Batuwita. (2003). Snakes killed on the Roads of the Gardens of University of Peradeniya. *Loris*, 23: 22–24.

Abstracts in conference proceedings (* denotes presenter)

- Scorgie, FE*. Lincz L. **Maduwage, K.** Jayamanne, S. Fahim, M. Dawson, A. de Silva, HJ. Lalloo, DG. Buckley, NA. Isbister, GK. (2016). Recovery of clotting factors following administration of fresh frozen plasma for Russell's viper (*Daboia russelii*) envenoming. Haematology Society of Australia and New Zealand. Melbourne. Australia.
- **Maduwage, K***. Scorgie, F. Lincz, L. O'Leary, M. Isbister, K. (2015). Effect of pro-coagulant snakevenoms on different animal plasma. Asia Pacific Association of Medical Toxicology (APAMT), University of Western Australia, Perth, Australia. Oral Presentation no: 27. 14th APAMT Conference Proceedings.
- Isbister, GK*. **Maduwage, K.** Saiao, A. Buckley, NA. Jayamanne, SF. Seyed, S. Fahim, M. Mendes, A. Abeysinghe, C. Karunathilake, H. Gawarammana, I. Lalloo, DG. de Silva, HJ (2015). Population pharmacokinetics of an Indian F(ab')₂ snake antivenom in patients with Russell's viper bite. XXXV International Congress of the European Association of Poisons Centres and Clinical Toxicologists (EAPCCT) 26-29 May 2015, St Julian's, Malta. Abstract

published in special conference proceeding of Journal, *Clinical Toxicology* (2015), **53**, page 240. Abstract no 14.

- **Maduwage, K***. Buckley, NA. de Silva, HJ. Lalloo, DG. Isbister, GK. (2015). Snake antivenom for snake venom induced consumption coagulopathy – A Cochrane Review. Asia Pacific Association of Medical Toxicology (APAMT), University of Western Australia, Perth, Australia. Presentation no: 05. 14th APAMT Conference Proceedings.
- **Maduwage, KP***. Silva, A. O’Leary, MA. Hodgson, WC. Isbister, GK. (2015). Efficacy of two Indian polyvalent snake antivenoms against coagulopathy and neurotoxicity of Sri Lankan snake venoms. Australian Society For Medical Research (ASMR) Satellite Scientific Meeting, 2nd April 2015. Hunter Medical Research Institute. Newcastle, Australia. Oral Presentation no 17.
- **Maduwage, K***. O’Leary, MA. Isbister, GK. (2014). Diagnosis of snake envenoming using a simple phospholipase A₂ assay. North American Congress of Clinical Toxicology (NACCT), New Orleans, USA. 17-21 October 2014. Oral Presentation no 10.
- **Maduwage, K***. O’Leary, MA. Isbister, GK. (2014). Diagnosis of snake envenoming using a simple phospholipase A₂ assay. Australian Society for Medical Research (ASMR) 23rd Annual Scientific Meeting, Powerhouse Museum, Sydney, Australia. 2nd June 2015. Presentation no: 91.
- **Maduwage, K***. Buckley, NA. de Silva, HJ. Lalloo, DG. Isbister, GK. (2015). Snake antivenom for snake venom induced consumption coagulopathy – A Cochrane Review. (2014). Australian Society for Medical Research (ASMR) 23rd Annual Scientific Meeting, Powerhouse Museum, Sydney, Australia. 1st June 2014. Presentation no: 31.
- **Maduwage, K***. Scorgie, F. Fahim, M. Karunathilake, H. Abeyasinghe, C. O’Leary, MA. Ariaratnam, CA. Isbister, GK. Measurement of venom and clotting function in patients with Russell’s viper coagulopathy and response to antivenom. XXXIV International Congress of the European Association of Poisons Centres and Clinical Toxicologists (EAPCCT) 27–30, May 2014, Brussels, Belgium. *Clinical Toxicology* (2014), 52, 347. Abstract no: 123.
- **Maduwage, K***. Scorgie, F. Isbister, GK. (2012). Clotting studies and factor deficiencies of Hump-nosed pit viper (*Hypnale hypnale*) envenoming in Sri Lanka. Asia Pacific Association of Medical Toxicology (APAMT), Hong-Kong. 29th November – 1st December 2012. *Hong-Kong Journal of emergency Medicine* 19 (6); p 426. Presentation no: 05.
- **Maduwage, K***. O’leary, MA, Isbister, GK. (2012). Efficacy of Two Indian Polyvalent antivenoms against Sri Lankan Russell’s viper (*Daboia russelii*) and Saw-Scaled viper (*Echis carinatus*) venoms. Asia Pacific Association of Medical Toxicology (APAMT), Hong-Kong. 29th

November – 1st December 2012. *Hong-Kong Journal of emergency Medicine* 19 (6); p 428.
Presentation no: O10.

- **Maduwage, K***. Hodgson, WC. Konstantakopoulos, N. O’Leary, MA. Gawarammana, I. Isbister, GK. (2011). The *in vitro* toxicity of venoms from South Asian Hump-nosed pit vipers (Viperidae: *Hypnale*), 10th Asia Pacific Association of Medical Toxicology Conference, Penang, Malaysia.
- **Kalana Maduwage***, Geoffrey K. Isbister, Anjana Silva, Sunil Bowatta, Suresh Mendis, Indika Gawarammana (2011). Hump-nosed pit viper (Genus: *Hypnale*) envenoming in Sri Lanka: A study of epidemiology and clinical profiles across species. 10th Asia Pacific Association of Medical Toxicology Conference, Penang, Malaysia. Presentation no. 121.
- Silva, A*. Siribaddana, S. Sedgwick, M. **Maduwage, K.** Buckley, N. Isbister, GK. (2015). Indian Krait (*Bungarus caeruleus*) envenoming: A clinical and neurophysiological investigation of neuromuscular dysfunction. XXXV International Congress of the European Association of Poisons Centres and Clinical Toxicologists (EAPCCT) 26-29 May 2015, St Julian’s, Malta. Abstract published in special conference proceeding of Journal, *Clinical Toxicology* (2015), **53**, page 352. Abstract no 261.
- Johnston, C. Silva, A*. Siribaddana, S. Ryan, NM. **Maduwage, K.** Isbister, GK. (2016). Sri Lankan Russell’s viper envenoming causes mild myotoxicity. 36th International Congress of the European Association of Poisons Centres and Clinical Toxicologists (EAPCCT) 24-27 May, 2016, Madrid, Spain. Abstract published in special conference proceeding of Journal, *Clinical Toxicology* (2015), 54 (4), page 480. Abstract no 257.
- Ratnayake, IU*. Fahim, M. Shihana, F. Dissanayake, DM. Buckley, NA. **Maduwage, K.** Chaturanga, U. Aslam, Z. Isbister, GK. (2015). Urinary Neutrophil Associated lipocalin is an early biomarker of acute kidney injury following Russell’s viper envenoming. Asia Pacific Association of Medical Toxicology (APAMT), University of Western Australia, Perth, Australia. Oral Presentation no: 34. 14th APAMT Conference Proceedings.
- Silva, A*. **Maduwage, K.** Siribaddana, S. Isbister, GK. (2015). Adult snakebite patients admitted to a tertiary care centre in rural Sri Lanka: A Cohort Study. Asia Pacific Association of Medical Toxicology (APAMT), University of Western Australia, Perth, Australia. Presentation no: 05. 14th APAMT Conference Proceedings.
- O’Leary, MA*. **Maduwage, K.** Isbister, GK. Detection of venom post-antivenom (Venom antigemaemia) is largely due to Vavaemia. International Society of Toxinology, Asia Pacific Conference (IST), Changsha, China.
- O’Leary, MA*. **Maduwage, K.** Isbister, GK. Detection of venom post-antivenom (Venom antigemaemia) is largely due to Vavaemia. Scientific Meeting of Toxicology And Poisons

Network Australasia (TAPNA) 2014. Newcastle, Australia. 30th April – 3rd May 2014. Conference proceedings p. 31.

- Silva, A*. **Maduwage, K.** O’Leary, MA. Weilgama, D. Isbister, GK. (2013). Development of Rabbit polyclonal antibodies (pAb) against snake venoms in a resource poor setting. Scientific Meeting of Toxicology And Poisons Network Australasia (TAPNA) 2013. Newcastle, Australia. 2nd – 4th May 2013. Conference proceedings p. 24.
- Kularatne, K. Budagoda S. **Maduwage, K***, Nasar, K. Kumarasiri, R. Kularatne, S. (2011). Comparative study of Merrem’s hump-nosed pit viper (*Hypnale hypnale*) bites between two climatic zones (wet vs. dry zone) in Sri Lanka. 10th Asia Pacific Association of Medical Toxicology Conference, Penang, Malaysia. Presentation no. 65.
- 2011. Sivansuthan, S. Kularatne, S. **Maduwage, KP.** Ratnayake, I*. Peranagama, R. Mendis, S. Medegedera, SC. Walatara, C. Ratnayake, RIS. (2011). A Descriptive Study of Offending Species and Epidemiology of Snake Bites of Two areas in the Dry Zone of Sri Lanka: Anuradhapura and Jaffna. Proceedings of the Peradeniya University Research Sessions. Sri Lanka. Vol 16, p 99.
- Pushpakumara, PHGJ*. Priyashantha, AG. **Prasad, MK.** Prasad, MKM. Prasanna, AA. Pandian, R. Ranaraja, RMRD. Ranasingha, Y. Ranaweera, UPNP. (2011). Effects of environmental temperature on visual and auditory reaction time in healthy young adults. *The Kandy Society of Medicine, 33rd Annual Academic Sessions.* p. 36-37.
- Medegedara, SC*. Kularatne, SAM. **Maduwage, K.** Sivansuthan, S. de Silva, A. (2011). Epidemiology of snake bites in Jaffna Peninsula: A hospital based study. *The Kandy Society of Medicine, 33rd Annual Academic Sessions.* p. 130.
- **Maduwage, K***. O’Leary, MA. Isbister, GK. (2014). Diagnosis of snake envenoming using a simple phospholipase A₂ assay. Scientific Meeting of Toxicology And Poisons Network Australasia (TAPNA) 2014. Newcastle, Australia. 30th April – 3rd May 2014. Conference proceedings p. 15.
- **Maduwage, K***. O’Leary, MA. Isbister, GK. (2014). Diagnosis of snake envenoming using a simple phospholipase A₂ assay. Australian Society For Medical Research (ASMR) Satellite Scientific Meeting, 21st March 2014. Hunter Medical Research Institute. Newcastle, Australia. Presentation no 54.
- **Maduwage, K***. O’Leary, MA. Scrogie, F. Shahmy, S. Abeysinghe, C. Isbister, G. (2013). Venom Recurrence in Russell’s Viper (*Daboia russelii*) Envenoming in Sri Lanka. Asia Pacific Association of Medical Toxicology (APAMT), Dubai. 21st – 23rd November 2013. Presentation no: 34. 12th APAMT Conference Proceedings p. 94.

- Silva A*, Gunawardena P, , **Maduwage K**, Gawarammana I, Weilgama D. 2011. Comparison of in-vivo toxicity of venoms from south Asian hump-nosed pit vipers (Viperidae: *Hypnale*) 10th Asia Pacific Association of Medical Toxicology Conference, Penang, Malaysia. Presentation no: 11
- Silva A,* Gunawardena P, Weilgama D, Gawarammana I, **Maduwage K**. 2011. Comparison of in-vivo nephrotoxicity caused by the venoms of south Asian hump-nosed pit vipers (Viperidae: Crotalinae: *Hypnale*) 2nd Annual Research Session, Rajarata University of Sri Lanka. Page 149-152.

Research featured in international / national news

1. <http://www.abc.net.au/science/articles/2014/06/05/4018712.htm?site=tv&topic=latest>
2. <https://www.sbs.com.au/news/aussies-develop-rapid-test-for-snake-venom>
3. <https://www.novabiostorage.com/sample-storage-news/blood-test-developed-to-detect-venom-in-snakebites>
4. <https://www.9news.com.au/health/2014/06/02/14/17/aussies-develop-rapid-test-for-snake-venom>
5. <http://scientist.lk/2016/11/18/a-sri-lankan-innovation-short-listed-for-aspirin-social-innovation-awards-2016/>
6. <http://www.sundaytimes.lk/180715/news/how-to-keep-our-serpents-in-paradise-302412.html>
7. <https://www.dailymail.co.uk/news/article-2645716/Aussies-develop-rapid-test-snake-venom.html>
8. <https://window2nature.wordpress.com/2016/10/01/study-shows-problems-with-snake-antivenom/>
9. <https://www.research.bayer.com/en/snake-venom-antidote-research.aspx>
10. <http://scientist.lk/2016/11/18/a-sri-lankan-innovation-short-listed-for-aspirin-social-innovation-awards-2016/>

Dissemination of research and teaching experience

Orations

- 2017. **SLMA Oration; Dr. S. Ramachandran Oration at Sri Lanka Medical Association** 130th International Sessions. July 2017 at Hotel Galadari. Colombo, Sri Lanka. Title of the Oration is “Diagnosis of snake envenoming: A challenge of 21st century in tropics”.
- 2017. **Bibile Memorial Oration**, 39th Annual Academic Sessions at Kandy Society of Medicine, Kandy, Sri Lanka. Title of the oration: “Snakebite coagulopathy, Controversies on understanding and management”.

- 2017. **KSM (Kandy Society of Medicine) Health Research Prize and the Oration.** “Evidence Based Clinical Practice; A Paradigm shift of snake envenoming management”. National Agricultural Information and Communication Centre, Gannoruwa, Kandy, Sri Lanka.

Keynote speeches, invited speeches, resource persons at scientific conferences and workshops

- Invited speech World Health Summit October 2017, Berlin, Germany. Rapid Venom Test Device – Solving a Medical Dilemma. Invited Speaker. At Kosmos, Karl-Marx-Alle. Berlin Germany.
- Invited speech at Institute of Clodomiro Picado (ICP), University of Costa-Rica. 22.03.2017. Guest Lecture “Potentials and Limitations of snake antivenoms in the management of snake envenoming”.
- Invited speech at academic staff of Division of Biology and Biological Engineering, California Institute of Technology (Caltech), California, USA. 11.04.2017. Guest Lecture “Snake envenoming: burden, challenges. Antivenom and beyond”.
- Invited speech at the 12th International Conference of Asia Pacific Association of Medical Toxicology (APAMT), Dubai. 2013. Keynote Speaker “Assessment of efficacy and effectiveness of snake antivenoms”.
- Conference of Toxicology and Poisoning network of Australasia (TAPNA), Newcastle, Australia.2013 “Assessing the efficacy of antivenoms for Sri Lankan venomous snakes”. Keynote speaker and
- Invited speaker at the Sri Lanka Emergency Medical Congress, Water’s Edge, Colombo. November 2017.
- Annual Academic Sessions, Ceylon College of Physicians (CCP), Cinnamon Grand Hotel, Colombo. 22.09.2016. Workshop “Management of snake envenomation based on latest evidence from Sri Lanka”.
- Invited talk based on original research findings from the faculty alumni at The 50th Anniversary Celebrations, Faculty of Medicine, University of Peradeniya. January 2012. “Hump-nosed pit vipers: Species specific toxicity and clinical profile following a taxonomic revision”, .
- Seminar at Veterinary Teaching Hospital, Faculty of Veterinary Medicine, University of Peradeniya. 23.03.2015. Invited symposium lecture on “Effectiveness of antivenom against snakes in Sri Lanka”.
- Guest Lecture at Centre For Research in Tropical Medicine (CRTM), Faculty of Medicine, University of Peradeniya. 17.03.2015 “Effectiveness of antivenom against snakes in Sri Lanka”.

- Annual Scientific Sessions 2017- Batticaloa Medical Association. Seminar on “Better outcomes of snake envenoming management based on recently uncovered knowledge”.
- Toxic issues in the Emergency Department, Sri Lanka Society of Critical Care and Emergency Medicine, Faculty of Medicine, General Sir John Kotelawala Defense University, Colombo. December 2018.
- Annual Academic Sessions, Ceylon College of Physicians (CCP), Cinnamon Grand Hotel, Colombo. 22.09.2016. Workshop “Management of snake envenomation based on latest evidence from Sri Lanka”.
- Colombo Conference on Medical Education. 10th and 11th November 2017, Colombo, Sri Lanka.
- Foundation Sessions of the Sri Lanka Medical Association (SLMA) 2016, Lionel Memorial Auditorium of SLMA, Colombo. 22.10.2016. “Management of snakebites”.
-
- Library User Seminar sponsored by the WHO through the Ministry of Health and conducted by the Health Literature Library and Information Services (HaLLIS) Network. Nursing Training School, Kandy. 29.09.2016. “EndNote Reference Manager”.
- Workshops of Human structure and function organize by the Department of Anatomy, Faculty of Medicine, University of Peradeniya. 4 workshops during 2017.
- Post graduate Ms Gyn/Obs course (Gynaecology and Obstetrics part 1) conducted by the Department of Gynaecology and Obstetrics, Faculty of Medicine, Peradeniya. 2016.
- Post graduate Ms Gyn/Obs course (Gynaecology and Obstetrics part 1) conducted by the Department of Gynaecology and Obstetrics, Faculty of Medicine, Peradeniya. 2017.
- Workshop. “Understanding your higher degree: Things you wont’s find in books” for the higher degree candidates of the Faculty of Medicine and Allied Sciences, Rajarata University of Sri Lanka on 13th December 2017.
- Snakes and the Epidemiology of snake bites. “global Health Seminar on snakebites and Management” Cross-disciplinary Course on Global Health and Research. Faculty of Medicine and Allied Sciences, Rajarata University of Sri Lanka on 11th August 2017.
- 2017. Re-integration workshop for newly returned Australia Awards Scholars held on the 8th of December 2017, Australia Awards Sri Lanka.
- Invited speech at the Sri Lanka Emergency Medicine Congress, 2017. At Water’s Edge, Colombo on 12th November 2017. “How many vials of antivenom do we need”
- Toxic issues in the Emergency Department, Sri Lanka Society of Critical Care and Emergency Medicine, Faculty of Medicine, General Sir John Kotelawala Defense University, Colombo. 08.04.2016 “Better outcomes of Sri Lankan snake envenoming with recently uncovered knowledge”,

- Resource person at The toxicology workshop adjoining to Sri Lanka Emergency Medicine Congress, 2017. At Kothalawala Defense University on 6th November 2017.
- Toxic issues in the Emergency Department, Sri Lanka Society of Critical Care and Emergency Medicine, Waters Edge, Colombo, 04.12.2016. "Management of snake envenoming based on latest evidence from Sri Lanka",
- Workshop of Toxicology And Poisons Network Australia (TAPNA), APAMT 2015 pre congress symposium, University of Western Australia, Perth, Australia. 02.12.2012. "Better outcomes of Asian snake envenoming with recently uncovered knowledge".

Memberships and Affiliations

- International Society of Toxinology (IST)
- Australian Society for Medical Research (ASMR)
- Asia Pacific Association of Medical Toxicology (APAMT)
- Member of the Snakebite Experts Committee, Sri Lanka Medical Association. Sri Lanka.
- Referee of the Sri Lanka Journal of Medicine (SJM).
- Viper specialized group, IUCN (International Union for Conservation of Nature)
- Member, Centre for Research in Tropical Medicine (CRTM), University of Peradeniya, Sri Lanka
- Member of Ethical Review Committee, Faculty of Medicine, University of Peradeniya, Sri Lanka.

Academic books published

Snake Fauna of Sri Lanka with special Reference to Skull, Dentition and Venom. Co-authored with Dr. P. H. D. H. De Silva. S. Godage publishers, Colombo. 452 pp. ISBN: 978-955-30-9024-9

<http://www.godage.com/book-details/environment/9645-snake-fauna-of-sri-lanka-with-special-reference-to-skulldentiton-and-venomrevised-edition.html>

Other scientific and social contributions

Free web based snake identification service for Sri Lanka.

<https://snakesidentification.org/>

Any person could submit their query of snake identification (details and images) to this website and the team identifies the snake and respond to the person immediately.

Youtube lecture series of snake envenoming.

Nine vocalized lecture series "Snakebites; the Whole Story". e-Learning material for undergraduate and post-graduate medical students.

https://www.youtube.com/watch?v=1YBKgp2Luq4&list=PLbK1TKLi_KNWZ5J-MskTeKrL2z1UetujF

Academic References

Professor José María Gutiérrez Gutiérrez Ph.D

Institute of Clodomiro Picado
University of Costa-Rica
Costa-Rica
Telephone +506 2511-7865
E mail: josemorama@gmail.com

Professor Janaka De Silva MBBS, MD,DPhil (Oxon.), FRCP, FCCP, FNAS (SL), Hon. FRACP, *Hon. FRCP (Thailand), Hon. FCGP(SL)*

Chairman, National Research Council, Sri Lanka
Director, Postgraduate Institute of Medicine, Sri Lanka
Head and Chair, Department of Medicine, Faculty of Medicine, University of Kelaniya, Sri Lanka
Telephone +94 11 2953409 / 11 2961119
E mail: hjanakadesilva@gmail.com

Mr Rohan Pethiyagoda

Ichthyology Section, Australian Museum, 1 College Street, Sydney, NSW 2010, Australia
E.mail: rohanpet@gmail.com
+94 7 7227 6426

Verification Statement

I verify that the information contained within this Curriculum Vitae is true and correct as at 30th January 2019



Maduwage Kalana Prasad

1st April 2019