Research Publications

Sri Lanka patents

Sri Lanka patent was obtained on the 27/03/2007 for the following invention (patent No. 14438)

1. Title of the invention - Biological control agent containing Bacillus turingiensis . Sri Lankan isolate for the control of mosquito larva
2. Investigators :
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   Dr. I. S. Weerasinghe
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International patent classificatio – A01N63/00,63/04
Application 27.03.2007

(a) Journals

1. Samarasekera, R.; **Weerasinghe, I. S**.; KD.P. Hemalal. (2008), Insecticidal activity of menthol derivatives against mosquitoes. Pest Management Science 64(3), p.1516
2. Samarasekera, R.; **Weerasinghe, I. S**.; Kalhari, K. S. Insecticidal Activity of Essential Oils of Ceylon *Cinnamomum* and *Cymbopogon* Species against *Musca domestica*. J. Essent. Oil Res., Vol. **8 (1)**, January/February 2006 .
3. Samarasekera, R.; **Weerasinghe, I. S,** Peiris M.L**.,** (2006), Studies on mosquito larvicidal activity of wetable powder formulaions of Sri Lankan Isolate of Bacillus thuringiensis Herbal Medicine,Phytopharmaceuticals and other Natural Products: Trends and advances. NAM S & T centre, India and Institute of Chemistry, Ceylon, Sri Lanka. P. 205 - 209
4. Samarasekera, R.; **Weerasinghe, I. S**; Kalhari, K. S. Mosquitocidal Activity of Leaf and Bark EssentialOils of Ceylon *Cinnamomum zeylanicum*. J. Essent. Oil Res., Vol. **17**, May/June 2005, p. 301-303.
5. **Weerasinghe I.S**., Shinji Kasai and Toshio Shono (2001), Correlation of pyrethroid structure and resistance level of Culex quinquefasciatus from Saudi Arabia. J.Pesticide Sci. 26: 158 – 161

6. Shinji Kasai, **Indira S. Weerasinghe**, Toshio Shono and Minoru Yanakawa (2000). Molecular cloning, nucleotide sequence and gene expression of cytochrome P450 (CYP6F1) from the pyrethroid resistance mosquito Cx. Quinquefasciatus. Insect Biochemistry & Molecular Biology 30: 163 -171

7. .Shinji Kasai, **Indira S. Weerasinghe**, Toshio Shono (1998). P450 Monooxygenases are animportant mechanism of Permethrin Resistance in Cx. Quinquefaciatus say Larvae. Archies of isect Biochemistry and Physiology 37: 47-56

8.. Hemingway J., Jayawardene K.G.I., **I.S.Weerasinghe** and P.R.J. Herath (1988). Possible selective advantage of Anopheline species with oxydase and acetylcholine esterase based insecticide resistant genes after exposure to organophosphates or an insect growth regulator in Sri Lankan rice fields. Bull. Ent. Res. 78: 471 – 478

9.. Hemingway J., Jayawardene K.G.I., **I.S. Weerasinghe** and P.R.J. Herath (1987). Use of bio chemical tests to identify multiple insecticide resistance mechanisms in field collected populations of an. Subpictus Grassi (Diptera : culicidae). Bull. Ent. Res. 77: 57-66

10. Herath P.R.J., Hemingway J., **I.S.Weerasinghe** and Jayawardene K.G.I. (1987). The detection and characterization of Malathion resistance in field populations of Anopheles culicifacies B in Sri Lanka. Pesticide Bio chemistry and Physiology. 29:157-162

Book Chapters

Samarasekera, R.; **Weerasinghe, I. S**.; Natural Products as Bio insecticides for control of vectors of Mosquito borne Diseases. (2008) Advances in Natural products:Importance in Health and Economy

Chapter 17, Daya Publishing House, Delhi

(b) Communications

1. Herath P.R.J., **I.S.Weerasinghe** and Wirtz R. (1988). The role of anophelines in human malaria transmission . In xii th International Congress or Tropical medicine & Malaria (eds). Kagar P.A. and polemn. Am. Experta Medica 810 (tus 15-3) 126
2. E,M.K. Wijerathne L.B.de Silva, W.H.M.Herath and **I.S.Weerasinghe**, Y. Tesuka & T. Kikuchi (1992). Bio active acetogenins from Anona reticulate (Annonacea). Pro. Sri Lanka Advmt. Sci 48 : 92

3. **Weerasinghe I.S.** Kalpage K.S.P., Molligoda P. and Jayasekera N. (1997). Field studies to determine the efficacy of Bcillus sphaericus against Cx. quinquefasciatus in Sri Lanka. Pro. Sri Lanka Advmt. Sci 53: . 223
4. **Indira S. Weerasinghe** (1999). The impact of commercial establishments as a source of dengue vector breeding . Pro. Sri Lanka Advmt. Sci 55:1
5. **Indira S. Weerasinghe**, T.A. Abhayawardene and Y.S. Kanthi (1999). Host preference of the vectors of Japanese Encephalitis in Sri Lanka. Pro. Sri Lanka Advmt. Sci 55:1
6. Shinji Kasai, **Indira S. Weerasinghe** , Minoru Yamakawa and Toshio Shono (1998). P450 Mono Oxygenases are an important mechanism of permethrin resistance in Cx. quinquefasciatus say larvae. Archives of insect Bio chemistry and Physiology 37: 47-56
7. M. Thammitiyagoda, G. Colombage, **I.S.Weerasinghe** , S. Jayasekera, S.S.Kumara and A. Weerasinghe (2000). An investigation of Trypanasomiasis in the animal population of Chenakudiruppu area in kalmunai and possibility of zoonotic transmission. Annual convention and scientific sessions of the Sri Lanka Veterinary Association 52: p.12
8. L.S.R. Arambewela, D.S.C.T.R. Dissanayake and **I.S.Weerasinghe** (2001). Mosquitocidal and larvicidal acitivity of piper betel essential oil. 57: 249
9. Samarasekera, R.; **Weerasinghe, I. S.,** Insecticidal Properties of Essential oils of Cinnamon (*Cinnamomum zeylanicum*). Institute of Biology, Annual Sessions, 22nd September, 2000, Colombo, Sri Lanka.
10. Samarasekera, R.; Hemalal, K. D. P.; **Weerasinghe, I**..**S**.,; Kumari, G. T. Decorative Paint with Insecticidal Properties. SLAAS Annual Sessions, 27th November-1St December, 2000, University of Peradeniya, Sri Lanka.
11. Samarasekera, R.; Hemalal, K. D. P.; **Weerasinghe, I.S.**.; Kalhari, K. S. Studies of Essential Oil Based Anti-mosquito Cream. 57th SLAAS Annual Sessions, 26th November-1St December, 2001, University of Moratuwa, Sri Lanka.
12. Samarasekera, R.; Hemalal, K. D. P.; **Weerasinghe, I**.**S**; Kalhari, K. S. Insecticidal Properties of Menthol Derivatives against Mosquitoes. 31st Annual Sessions of Institute of Chemistry, Ceylon, 19th - 21st June, 2002, SLAAS Headquarters, Colombo, Sri Lanka. Chemistry in Sri Lanka, May 2002, Vol 19 (2), Page 16-17.

13. Samarasekera, R.; **Weerasinghe, I.S**.; Kalhari, K. S. In Pursuit of Mosquitocidal Compounds from Plant Essential Oils. International Symposium on the Chemistry of Essential Oils, Terpenes & Aromatics, October 18-21, 2002 at Tokushima Bunri University, Tokushima, Japan.
14. Samarasekera, R.; **Weerasinghe, I.S**.; Kalhari, K. S. Insecticidal Properties of Eugenol Derivatives against Mosquitoes. 58th SLAAS Annual Sessions, 4th - 7th December 2002, University of Colombo, Sri Lanka.
15. Samarasekera, R.; **Weerasinghe, I. S**.; Kalhari, K. S. (2003). Insecticidal Properties of Geraniol Derivatives against Mosquitoes.Proceedings Sri Lanka Association of Advancement Sci., 59 (1), p. 226
16 Samarasekera, R.; **Weerasinghe, I.S**.; Kalhari, K. S. (2003). Insecticidal Properties of Cinnamaldehyde Derivatives against *Musca domestica*.
Proceedings Sri Lanka Association. Advancement Sci., 59 (1), p. 230
17. Samarasekera, R.; **Weerasinghe, I. S**; Peiris M L.; Kulathunge. (2003) Mosquito Larvicidal Activity of Sri Lankan Isolate of *Bacillus* Strain.
Proceedings Sri Lanka Association Advancement Sci., 59 (1), p. 164
18. Samarasekera, R.; **Weerasinghe, I,S,** Kalhari, K. S. (2004) Insecticidal Properties of Geraniol Derivatives against *Musca domestica*. Proceedings AFASSA Regional Symposium on Natural Products, Kandy, Sri Lanka, June 16-18, p 49.
19 Samarasekera, R.; **Weerasinghe, I. S**; Peiris M L. (2004) Mosquito Larvicidal Activity of Sri Lankan Isolate of *Bacillus thuringiensis* Formulation. Proceedings AFASSA Regional Symposium of Natural Products, Kandy Sri Lanka June 16-18, p.30.
20. Samarasekera, R.; **Weerasinghe, I.S**; Malewana, W E U. (2004) Insecticidal Properties of Mugetanol Derivatives against Vector Mosquitoes.
Proceedings of Sri Lanka Association. Advancement Sci., 60 (1), p. 235.
21. Jayasooriya H.T.R. and **Weerasinghe I.S.** (2004).Status of insecticide resistance in mosquito vectors of Dengue fever , Aedes aegypti and Aedes lbopictus in Sri Lanka Proceedings of Sri Lanka Association. Advancement Sci., 60 :160
22. Samarasekera, R.; **Weerasinghe, I. S**; Peiris M L. (2004) Preliminary Study of Mosquito Larvicidal Activity of Sri Lankan Isolate of *Metarhizium anisopliae*.
Proceedings of Sri Lanka Association. Advancement Sci., 60 (1), p. 181.

23. Samarasekera, R.; **Weerasinghe, I.S.;** Peiris M L. Mosquito Larvicidal activity of Wettable Powder Formulation of Sri Lankan Isolate of *Bacillus thuringiensis*. International Symposium on "Herbal Medicines, Phytopharmaceuticals and other Natural Products:Trends and Advances. Colombo, Sri Lanka, June 15-17, 2005. Proceedings, p. 50.

24. Samarasekera, R.; Kalhari, K. S.; Peiris M L.; Malewana, W E U.; **Weerasinghe, I. S.;** Hemalal, K. D. P. Bioinsecticides for Mosquito Control in Sri Lanka. National Symposium on "Mosquito Control". University of Peradeniya, Sri Lanka, September 15-16, 2005. Proceedings, p. 89 - 92.

25.. **Indira S. Weerasinghe** . Surveillance of Dengue vector mosquitoes in Sri Lanka . National Symposium on "Mosquito Control". University of Peradeniya, Sri Lanka, September 15-16, 2005. Proceedings, p. 102-111.

26**.** Samarasekera, R.; **Weerasinghe, I S**.; Peiris M L. Preliminary Study of Mosquito Larvicidal Activity of Sri Lankan Isolate of *Hirsutella thompsonii*.
Proceedings of Sri Lanka Association. Advancement Sci., 61 (1), p. 52-53

27. D.N.Dilruk., B.D.G.N.K. de Silva, N. Jayasekera, **I.S.Weerasinghe** and E.H. Karunanayake (2005). Preliminary study on genetic variation between the populations of Aedes aegypti and Aedes albopictus Proceedings of Sri Lanka Association. Advancement Sci., 61 (1) p. 50

28**.** Samarasekera, R.; **Weerasinghe, I.S**.; Peiris M L. Mosquito Larvicidal Sri Lanakn Isolates of *Bacillus thuringiensis* and *Bacillus sphaericus*.
10th International Symposium on Natural Product Chemistry, January 6-9, 2006, Karachi, Pakistan.

29 Samarasekera, R.; **Weerasinghe, I.S**.; D.A.S. Siriwardhana and Peiris M L., (2006). Mosquito larvicidal toxin production of Hirsutella thompsoni in different broth mediums and incubation times. Proceedings of Sri Lanka Association. Advancement Sci., 62 (1) p. 86.

30. Samarasekera, R.; **Weerasinghe, I.S**.; Peiris M L., and D.A.S. Siriwardhana (2006). Bacillus thuringiensis and Bacillus sphaericus active against larvae of vector mosquitoes. Proceedings of Sri Lanka Association. Advancement Sci., 62 (1) p. 87

31. Samarasekera, R.; **Weerasinghe, I.S**.(2006) Natural Products as bio insecticides for control of vectors of mosquito borne diseases in Sri Lanka. International workshop cum training course on "natural products-drugs, Pharmaceuticals and neutraceuticals",

February 10 – 19 92006), H.E.J. Research Insitiute, university of Karachi, Karachi, Pakistan

32. Samarasekera, R.; **Weerasinghe, I.S**.; Peiris M L., and D.A.S. Siriwardhana (2007) Mosquito larvicidal bio insecticides from Hirsutella thompsoni. Proceedings of Chemitech 2007, International conference on chemistry, technology and innovation for Greater Safety and Economic Growth . p.18

33, Samarasekera, R.; Peiris M L., and D.A.S. Siriwardhana. and **Weerasinghe, I.S** (2008). Bio control agent containing Sri Lanka isolates of Bacillus thuringiensis for control of vector mosquito larvae. International symposium on Innovations in Food Science and Technology and Health care for social well being, Institute of Chemistry 12th – 14th June 2008. 34. K.Y.P. Dharshika, **I.S.Weerasinghe**. P.V. Udagama-randeniya (2008). Some entomological aspects and physico chemical characteristics of the breeding habitat of Aedes aegypti and Ae. albopictus in a dengue high risk area in the Colombo district, Sri Lanka. Proceedings of Sri Lanka Association. Advancement Sci., 64 (1) p. 93.

35. K.Y.P. Dharshika, **I.S.Weerasinghe**. P.V. Udagama-randeniya (2008), Some entomological aspects and socio economic factors related to the breeding of Aedes aegypti and Ae. albopictus in a dengue high risk area in Colombo district, Sri lanka. Sri Lanka. Proceedings of 28th Annual sessions of the Institute of Biology, Sr Lanka . p.44

36. D.A.S. Siriwardhana, R. Samarasekera, M.L.Peiris, O.V.D.S. Weerasena, **I.S.Weerasinghe (2009)**. Molecular Characterization of mosquito larvicidal strain of Bacillus thuringiensis isolated from Sri Lanka. The Tri Annual Publication of the Institute of Chemistry Ceylon. May 2009, Vol 26,No. 02 p.12

37. R. Samarasekera, Sameera Chinthana, **I.S.Weerasinghe** (2009). Mosquito larvicidal activity of Essential Oils of Ceylon Cinnamomum and Cymbopogan species. The Tri Annual Publication of the Institute of Chemistry Ceylon. May 2009, Vol 26,No. 02, p. 17

38. M.Hapugoda, W. Abeywickrema, I. Peris, S. Warakagoda , V. Perera and I. Weerasinghe, (2010). Detection of dengue viruses in vector mosquitoes collected from localities with reported dengue cases in the Gampaha District, 2008 – 2009. Proceedings of Sri Lanka Association Advancement Sci., 66 (1) p. (6)