



## Prof. ILMI G. N. HEWAJULIGE

Additional Director General / Research Professor

Research & Development

### Qualifications

BSc Hon. - Agriculture (University of Peradeniya , 1992) - Second class upper

MPhil - Postharvest Biology and Technology ( University of Colombo, 2001)

PhD - Postharvest Biology and Technology (University of Colombo, 2008)

Postdoctoral (JSPS) Research Fellow (National Food Research Institute, Japan, 2010-2012)

### Professional Qualifications

- Fellow Biologist -designations offered by the Institute of Biology (IOB), Sri Lanka
- Chartered Biologist- designations offered by the Institute of Biology (IOB),Sri Lanka
- Fellow member Institute of Food Science and Technology, Sri Lanka
- JSPS Postdoctoral Fellowship for 2 years at the National Food Research Institute, Tsukuba, Japan
- Food Safety Management Systems Auditor/ Lead Auditor (ISO 22000 -2005) trained by the Nigel Bauer & Associates, UK.
- Quality management systems expert: ISO 9000, ISO 22000, Global GAP, GMP, HACCP and GHP
- Advance International Training on Quality infrastructure for food safety by NFA (National Food Agency) and Swedac (Swedish Board for Accreditation and Conformity Assessment), Sweden.
- Management System Certification auditor (trainee) - PAC ISO/IEC 17021-1, by Sri Lanka Accreditation Board (SLAB)

### Contacts

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### Specialized Fields

- Postharvest Pathology and Physiology of tropical fruits and vegetables; Postharvest technology related to harvest, handling of produce, storage and transportation, Cold chain management, Supply chain management,
- Minimal Processing Technology of Fruits and vegetables,
- Food Safety and Quality Management (GMP, HACCP, ISO 22000),
- Food analytical techniques (chemical , physical, microbiological and Biochemical-antioxidant properties),
- Postharvest Biotechnology (DNA, RNA Isolation, Gel Electrophoresis, PCR, qPCR, gene expression analysis etc

### Interest Areas

Minimizing postharvest loss of fresh produce including methods of biological based methods for disease control and maintenance of quality. Development of protocols for storage and transportation of perishables e.g., for supermarkets, hotels and export. Food Processing and health food product development. Quality management in food industry (GMP, HACCP, ISO 22000 etc.)

Food Irradiation Technology, Food product development, Emergency food development, Dairy Technology and Probiotics

### Presidential Awards

Presidential award for scientific research publications in 2003

Presidential award for scientific research publications in 2005

Presidential award for scientific research publications in 2006

Presidential award for scientific research publications in 2009

### National Awards

**NASTA Award 2018** - National Science and Technology Award for "Excellence in international collaboration for advancement of S&T 2018 awarded by the NSF, Sri Lanka- IDRC project team- Ilmi Hewajulige (PI), Shanthi Wilson, Yoga Milani, Nisala Gunsekara, Shiranthi Perera, Dineth Samarawickrama, Aunura Sooriyachchi and Manori Wijemanna

**National Inventors Awards 2018, Gold medal for 'Bio wax'** formulation at Sahasak Nimavum Inventors exhibition/National Inventors Day– Nisala Gunsekara, Shanthi Wilson, Ilmi Hewajulige, Shiranthi Perera

**National Inventors Awards 2019, Gold medal for 'Aloe-vera ready to serve beverage'** formulation at Sahasak Nimavum Inventors exhibition/National Inventors Competition, Commercialized product category

**National Award for Excellence in Agricultural Research 2019- 1st place in nn plantation crops category –awarded by CARP (Council for Agricultural Research Policy)** - IDRC project team- Ilmi Hewajulige (PI), Shanthi Wilson, Yoga Milani, Nisala Gunsekara, Shiranthi Perera, Dineth Samarawickrama, Aunura Sooriyachchi and Manori Wijemanna.

### Other awards

- Best Scientific Publication Award- ITI 50th anniversary celebrations- 2005
- Best Presentation Award– 18th Annual congress of PGIA-2006- Food and Nutrition session
- Presidential Scholarship Award 2001-2002 – short term training at the University of California Davis, USA
- GRC Post Graduate Research Award –2008 – by the Sri Lanka Association of the Advancement of Science (SLAAS) , Sri Lanka
- JSPS Postdoctoral Fellowship Award 2010 - to conduct 2 year research in Japan
- NRC merit award for scientific research publicaions in 2014
- Best Presentation Award 2018- 2nd International Climate Change Conference 2018- Climate Change and Technology session award
- Best commercialized Technology -2019 – Aloe-vera ready to serve drink. ITI 4th Biennial Research Symposium
- Best Innovative technology -2018 – Bio wax formulation- ITI 4th Biennial Research Symposium

- Best Innovative R&D project of the biennium 2018-2019 - IDRC Canada funded project team.

## Publications

### Publications in indexed journals SCI and SCiexpanded

1. **Hewajulige, I.G.N**, Wilson Wijeratnam, RS., Wijesundera, R.L. C. and M. Abeysekere 2003. calcium concentration and chilling injury during low temperature storage of pineapple. *Journal of the Science of Food and Agriculture*, 83: 1451-1454
2. R.S. Wilson Wijeratnam, **I.G.N. Hewajulige** and N. Abeyratne 2005. Postharvest hot water treatment for the control of Thielaviopsis black rot of pineapple. *Postharvest Biology and Technology*, 36:3, 323-327
3. **Hewajulige, I.G.N**, Wilson Wijeratnam, RS., and Wijesundera, R.L. C. 2006. Pre-harvest application of calcium to control black heart disorder in Mauritius pineapple during low temperature storage. *Journal of the Science of Food and Agriculture*, 86 (3): 420-424 .
4. **Hewajulige, I.G.N**, Sultanbawa, Y., Wilson Wijeratnam, RS., and Wijesundera, R.L. C. 2009. Mode of action of chitosan coating on anthracnose disease control in papaya. *Phytoparasitica* . 37(5): 437-444. (**SCI Journal**)
5. Thammawong M, Orikasa T., Umehara H, **Hewajulige I.G.N**, Kaneta T, Nakamura N, Ito Y., Nakano K.& Shiina T (2014). Modling of the respiration rate and gene expression patterns of cabbage in response to mechanical impact stress using a modified Weibull distribution. *Postharvest Biology and Technology*, 96, 118-127.
6. **Hewajulige, I.G.N**, Sultanbawa, Y., Wilson Wijeratnam, RS., and Wijesundera, R.L. C. 2009. Effect of irradiated chitosan treatment on storage life of fruits of two commercially grown papaya (*Carica papaya* L.) varieties. *Journal of National Science Foundation Sri Lanka*. 37(1): 61-66 (SCI Journal – Expanded web)
7. W.A.H. Champa, Nisala Gunasekera, Wijeratnam S. Wilson, **I.G.N. Hewajulige**, W.M.S.S.K. Weerasinghe & B.A.M.S. Kumara (2019): Postharvest Treatment of Cinnamon (*Cinnamomum zeylanicum*) Bark Oil and Hexanal Incorporated Bio-Wax Maintains Quality and Extends Marketable Life of Lime (*Citrus aurantifolia* Swingle), *International Journal of Fruit Science*, DOI: 10.1080/ 15538362.2019. 1597823 (**SCI Journal – Expanded web**).

### Publications in other international peer reviewed journals

1. Wilson Wijeratnam, R. S., Abeysekere, M. **Hewajulige, I. G. N**. 1997. Studies on the controlled atmospheric storage of Mauritius variety pineapple. *Acta Horticulture*, 425: 581-586
2. R.S. Wilson Wijeratnam, **I.G.N. Hewajulige**, R.L.C. Wijesundera, M. Abeysekere. 2006. Fruit calcium concentration and chilling injury during low temperature storage of *Acta Horticulturae*, 702: 203-208.
3. R. S. Wilson Wijeratnam, **I.G.N. Hewajulige** and M. G.D.S. Perera, 2006. The control of Black Rot disease and the application of novel wax formulation for extending storage life of *Acta Horticulturae*, 185-189..
4. R.S. Wilson Wijeratnam, V. Jeyachandran, K. Karunanithy, **I.G.N. Hewajulige** and M.G.D.S. Perera. 2006. Extending storage life of King Coconut, *Cocos nucifera* var, *Acta Horticulturae*, 712 : 407-411.
5. **I. G. N. Hewajulige**, D. Sivakumar., Y. Sultanbawa , R.S. Wilson Wijeratnam and R.L.C. Wijesundera. 2007. Effect of Chitosan Coating on the control of anthracnose overall quality retention of papaya (*Carica papaya* L.) during storage. *Acta Horticulturae*, 740, 245-250
6. **Hewajulige, I.G.N**, Perera M.G.D.S. and Wilson Wijeratnam, RS. 2009. Efficacy of irradiated chitosan in controlling papaya anthracnose relative to other recommended postharvest *Acta Horticulturae*, 837: 199-204.
7. Apinya Chudhangkura, **Ilmi G.N. Hewajulige** and Takeo Shiina. 2011. Quality of minimally processed pumpkin under selected modified atmosphere packaging. *Agriculture Science Journal*, 42:1, 639-642 (in Thai language).

8. Thammawong M, **Hewajulege IGN**, Kaneta T, Nakamura N, Ito Y & Shiina T (2012) The calmodulin-encoding *BoCam1*: A sensitive wound-responsive gene in cabbage. *Food Preservation Science*, 38:5, 277-283.
9. **Hewajulige, I.G.N.**, Wilson Wijeratnam, R.S., Perera, M.G.D.S. and Fernando, S.A. (2015). Extending storage life of commercially important tropical fruits using bio-*Acta Horticulturae* , 1091:283-289
10. S.G.L.I. Nuwanthi, S.S.K. Madage, **I.G.N. Hewajulige**, R.G.S. Wijesekera (2016). Comparative study on organoleptic, microbiological and chemical qualities of dried fish, Goldstripe Sardinella (*Sardinella gibbosa*) with low salt levels and spices, *Procedia Food Science*, 6. pp 356 – 361.
11. Milani, M.D.Y., Samarawickrama, D.S., Wijeratnam, R.S.W. **Hewajulige, I.G.N.** (2018). Production and commercialization of eco friendly packaging material for transportation of fruits and vegetable. IV International Conference on Postharvest and Quality Management of Horticultural Products of Interest for Tropical Regions. *Acta Horticulturae*. (In Press)
12. **I. G. N. Hewajulige**, R.S. Wilson Wijeratnam, M.M.N.P Gunesekara<sup>1</sup>, R.M.S.I Gunethilaka, M.G.D.S. Perera, G. Paliyath and S. Jayasankar (2018). Pre-harvest 'Tree Fresh' spray treatment reduces disease incidence and extends the harvesting season of Mango var. TJC grown in Sri Lanka, *Acta Horticulturae*. 1201. 49-54.
13. R. S. Wilson Wijeratnam, K. Fernando, **I.G.N. Hewajulige** (2018). Models Adopted for Commercializing new Postharvest Technology for minimizing postharvest loss of Fruits in Sri Lanka. *Acta Horticulturae* 1201, 177-182.
14. M.M.N.P Gunesekara, R.S. Wilson Wijeratnam, M.G.D.S. Perera, **I G N Hewajulige**. G. Paliyath and S. Jayasankar (2018). Extending storage life of Mango (*Mangifera* L.) using a new edible wax formulation incorporated with hexanal and cinnamon bark oil, *Tropical Agriculture* 95, (Special Issue) 1, 97-110
15. D. S. Samarawickrama<sup>1</sup>, M.D.Y. Milani<sup>1</sup>, P.S.D. Perera<sup>1</sup>, H.D. Weeratunge, R.S. Wijeratnam, D.P. Dissanayake, **I.G.N. Hewajulige**, L-T. Lim, G. Paliyath and J. Subramanian, (2018). A hexanal incorporated composite material (HICM) made of banana fibre and polymers extends storage life of mango fruit, *Tropical Agriculture*, 95, (Special Issue) 1, 111-119
16. R S Wilson Wijeratnam, Karin Fernando, Elizabeth Finnis, M E P Ranmuthugala, **I G N Hewajulige**, Jayasankar Subramanian (2019). Reflections on Moving Agricultural Research from Laboratory to Farm. *EPW, Economic & Political Weekly*, 41, 36-42.

#### Invited Review paper in international journal:

**Ilmi G.N. Hewajulige**, Shanthi Wilson Wijeratnam. 2010. Alternative Postharvest to Control Anthracnose Disease in Papaya during Storage. In: Sivakumar D. (Ed.) *New trends in Postharvest Management of Fresh Produce II. Fresh Produce 4 (Special Issue)*, 15-20.

#### Publications in local peer reviewed journals

**I.G.N. Hewajulige**, D. Sivakumar., Y. Sultanbawa, R.S. Wilson Wijeratnam and R.L.C. Wijesundera. 2006. Effect of Chitosan Coating Postharvest life of Papaya (*Carica papaya* L.) var. Rathna grown in Sri Lanka. *Tropical Agricultural Research* **18**:135-142.

D.U. Rajawardana, I.G.N. Hewajulige, C.M. Nanayakkara, S.K.M.R.A. Athurupana and T. Madhujith (2018). Preliminary Evaluation of Probiotic Potential of Yeasts Isolated from Bovine Milk and Curd of Sri Lanka. *Tropical Agricultural Research* **30** (3) : 27–41.

#### Text Books & chapters in books

1. **Ilmi Hewajulige** (2012). Anthracnose and storage life of papaya using chitosan. Lab Lambert Academic Publishing, Deutschland, Germany (Book)
2. **Hewajulige I.G.N.**, Wilson Wijeratnam R.S., Shiina T. (2014) Book chapter on Chitosan, a potential antifungal compound to control anthracnose disease in papaya in *Biological Controls for Preventing Food Deterioration*, Neeta Sharma (ed.). Wileys Blackwell, UK.
3. **Hewajulige I. G. N.** and R.L.C. Wijesundera (2014). "*Thieviopsis paradoxa*, *Thieviopsis basicola*" in *Postharvest Decay, Control Strategies*, Silvia Bautista Banos (ed). Elsevier, USA

4. **Hewajulige I.G.N.**, Dhekney S.A. (2016) Papayas. In: Caballero, B., Finglas, P., and Toldrá, F. (eds.) The Encyclopedia of Food and Health vol. 4, pp. 209-212. Oxford: Academic Press.
5. **Hewajulige, I.G.N.**, Samarajeewa, U., 2016. Food Regulations and Enforcement in Sri Lanka. Reference Module in Food Sciences. Elsevier, pp. 1–7. doi: <http://dx.doi.org/10.1016/B978-0-08-100596-5.21161-X>
6. **Hewajulige, Ilmi Ganga Namali**, Ramola Shanthi Wilson Wijeratnam and Margaret Jesang Hutchinson (2019). Papaya. In: Postharvest Biology and Nano-Technology, Eds: G. Paliyath, Subramanian J, Loong-Tak L., Handa A., Mattoo A. pp 199-214. John Wiley & Sons, USA.

**Communications  
(International)**

1. Wilson Wijeratnam, R. S., Abeysekere, M., **Hewajulige, I. G. N.** and Suganthini, R. "on Black Heart Disorder, electrolyte leakage and endogenous calcium content in Kew and Mauritius variety pineapples grown in Sri Lanka.(1996) In proceedings of international conference on Tropical Fruits, MARDI, Malaysia.
2. Wilson Wijeratnam, R. S., Abeysekere, M. and **Hewajulige, I. G. N.**, Post harvest studies on Black heart Disorder of Pineapple.(1997) Pineapple News, NewsNo.1, International Society for Horticultural Science, Hawaii.
3. Wilson Wijeratnam, R. S., **Hewajulige, I. G. N.** and Abeysekere, M., Maturity of fruit and time of harvest in relation to storage quality of pineapples (1997). In proceedings of Australasian Post harvest Horticulture Conference, NSW Australia.
4. **Hewajulige, I. G. N.**, Wilson Wijeratnam, R. S., Samaratunge, H. and Abeysekere, M. Correlation between calcium levels and variation in storage quality of two varieties of pineapples. Pineapple News, News letter of the pineapple working group, International Society of Horticultural Science, No. 7, June 2000, pp29.
5. **Hewajulige, I. G. N.**, Wilson Wijeratnam, R. S., and Abeysekere, M. Pre-harvest application of calcium and the development of black heart disorder symptoms in Mauritius pineapples. Pineapple News, News letter of the pineapple working group, International Society of Horticultural Science, No. 7, June 2000, pp29.
6. **Hewajulige, I.G.N.**, Chudhangkura, A., Nakamura, N., Umehara, H., Mori, Y., and T. Shiina. Extending the storage life of Okinawa grown pineapples using low temperature and reduced oxygen. In proceedings of the 9th JIRCAS International Symposium, October 16-17th 2002 at Tsukuba, Japan. pp 45.
7. **Hewajulige, I.G.N.**, Chudhangkura, A., Nakamura, N., Mori, Y., and T. Shiina. Effect of storage temperature on chilling injury development in 'Bogor' variety pineapples
8. Chudhangkura, A., **Hewajulige, I.G.N.**, Nakamura, N., Umehara, H., Mori, Y., and T. Shiina. Effect of minimal processing on the respiration rate and quality of broad bean (*Vicia faba*, L). In proceedings of the 9th JIRCAS International Symposium, October 16-17th 2002 at Tsukuba, Japan. pp 44.
9. Chudhangkura, A., Nakamura, **Hewajulige, I.G.N.**, N., Mori, Y., and T. Shiina. "Effect of shelling, temperature and low oxygen on respiration rate and quality of broad bean (*Vicia faba*, L)" In proceedings of the Annual autumn Meeting of the Japanese Society for Horticultural Science, October 13-15th 2002 Kumamoto, Japan. pp 464.
10. Shiina, T., Nakamura, N, Chudhankura, A., **Hewajulige, I.G.N.** and Y. Mori, Cooling profile analysis of spherical produces under air and water cooling. In proceedings of 2002 JSRAE Annual Conference, November 18-21st 2002, Japan. pp 471-472. (*Vicia faba*, L)
11. Wilson Wijerathnam, R.S., **I. G. N. Hewajulige**, H.M.A.U. Herath, and T. Sithamparanthan. Alternative to fungicide for control of Thelaviopsis fruit rot of Pineapple, In proceedings of the 4th International Pineapple symposium ,Mexico, 16-17 April 2002.
12. Wilson Wijerathnam, R.S., **I. G. N. Hewajulige** ,R.L.C. Wijesundera and M. Abeysekere. Fruit calcium concentration and chilling injury during low temperature storage of pineapple, In proceedings of the 4th International pineapple symposium, Mexico, 16-17 April 2002.
13. Wilson Wijerathnam, R.S., **I.G. N. Hewajulige** and M.G.D. Perera. A novel wax formulation for extending storage life and controlling black rot disease of pineapple. In proceedings of the 5th ISHS International Pineapple symposium, South Africa, 10-15 April 2005.
14. **Hewajulige I.G.N**, Sivakumar D., Sultanbawa Y., Wilson Wijeratnam R. S., and Wijesundera R.L.C. Effect of chitosan on control of anthracnose disease in papaya

- during storage. In proceedings of the 1st International Papaya symposium, Malaysia, 21-24 November 2005.
15. **I.G. N. Hewajulige.**, P.Kumara, Y. Sultanbawa, R.S. Wilson Wijeratnam and R.L.C. Wijesundera. Effect of chitosan compared to other recommended postharvest treatments to control anthracnose in papaya (2005). In proceedings of the Innovative approaches in postharvest engineering and technology, 18-22.
  16. **I.G.N. Hewajulige**, Y. Sultanbawa, R.S. Wilson Wijeratnam and R.L.C. Wijesundera. Effect of chitosan coating on chitinase and 1-3 glucanase activities in relation to anthracnose disease development of two commercially grown papaya varieties in Sri Lanka. In proceedings of Institute of Chemistry Ceylon, International Symposium 2008, Sri Lanka.
  17. **I.G.N. Hewajulige**, M.G.D.S. Perera and R.S. Wilson Wijeratnam . Effect of irradiated chitosan compared to other recommended postharvest treatments to control anthracnose disease in papaya, In proceedings of the APS 2008 –Assuring quality and safety of agri-foods, Thailand, 2008.
  18. R.S. Wilson Wijeratnam and **I.G.N. Hewajulige**. The Development of Edible coatings as a means of minimizing postharvest loss of Papaya. Invited speech at the International Conference on Radiation processing: value addition for food, Agro, healthcare, Polymers and other Industrial products. 17-18 Dec 2010, New Delhi, India.
  19. **Hewajulige I.G.N.** and T. Shiina. An alternative treatment to control anthracnose disease in papaya during storage. In proceedings of the 60th Annual meeting of Food Preservation Science, June 2011, Hokkaido, Japan p 75.
  20. **Hewajulige I. G. N.**, Nakamura, N. and T. Shiina. Chitosan, an alternative to chemical control of anthracnose disease and storage life extension of papaya. In proceedings of the Annual meeting of Packaging Science and Technology. July 2011, Kyoto, Japan, pp 54-55
  21. **Hewajulige I.G.N.**, T. Shiina and N. Nakamura, Antifungal effects of chitosan with different molecular weights on *in vitro* growth of anthracnose causing fungi of papaya. In proceedings of Horticulture for the Future, APHC/AuSHS/NZIAHS Conference, Lorne, Victoria, Australia, 2011, p 49.
  22. **Hewajulige I.G.N.**, Wilson Wijeratnam R.S., M.G.D.S. Perera and A. Fernando. Extending Storage life of commercially important tropical fruits using bio waxes. Proceedings of the International Conference on ‘ Managing Quality in Chains’ 2-5 September 2013, Cranfield, UK.
  23. **I. G. N. Hewajulige**, R. S. Wilson Wijeratnam, R. M. S. I. Gunathilaka, M. M. N. P. Gunasekera, M. G. D. S. Perera, G. Paliyath and S. Jayasankar (2017) Pre-harvest “tree fresh” spray treatment reduces disease incidence and extends the harvesting season of mango “TJC” grown in Sri Lanka. Proceedings of the VII ISHS International Conference on Managing Quality in Chains (MQUIC), Stellenbosch, South Africa. 4th - 7th September 2017. pp 26.
  24. R. S. Wilson Wijeratnam, K. Fernando and **I. G. N. Hewajulige**. (2017) Models adopted for commercializing new postharvest technology for minimizing post harvest loss of fruits in Sri Lanka. Proceedings of the VII ISHS International Conference on Managing Quality in Chains (MQUIC). Stellenbosch, South Africa. 4th -7th September 2017. pp56.
  25. Rajawardana D.U, **Hewajulige I.G.N**, Nanayakkara and W.A.D.S. Shanaka (2017). Assessment of safety attributes of potentially probiotic lactic acid bacteria (LAB) of Sri Lankan dairy origin for future food applications. *Abstracts and Proceedings of 4th International Conference on Multidisciplinary Approaches (iCMA)*, Sri Lanka, pp 64
  26. Rajawardana D.U, **Hewajulige I.G.N** and Nanayakkara C.M (2017). Probiotic potential of exopolysaccharide producing *Lactobacillus plantarum* sp. isolated from Sri Lankan dairies. *Abstracts and Proceedings of 10th International Research Conference*, General Sir John Kotelawala Defence University, Sri Lanka, pp 37.
  27. Gunasekera, M. M. N. P., Gunathilaka, R. M. S., Wijeratnam, R. S. W, Perera, M. G. D. S, Sarangi, K. A. N and **Hewajulige, I. G. N** (2016). Effect of new edible wax formulations on postharvest quality of mango (*Mangifera indica*) var. Karuthacolombn, *Proceedings of the Wayamba University International Conference*, Sri Lanka. pp 158
  28. Rajawardana, D. U., Athurupana, S. K. M. R. A., **Hewajulige, I. G. N.**, and Nanayakkara, C. M. (2016) Characterization and identification of yeasts from raw cow's milk and fermented dairy foods. *9th International Conference, KDU*, Sri Lanka, pp 190

29. Rajawardana D.U, **Hewajulige I.G.N** and Nanayakkara C.M (2016). Invitro transit tolerance and technological potential of *B-galactosidase* producing *Kluyveromyces* Newly isolated from selected dairy sources of Sri Lanka. *International Conference on Ayurveda Unani, Siddha and Traditional Medicine*. University of Colombo, pp144.
30. Gamage, D. G.N.D., Madage, S.S.K., Wijesekera R.G.S. and Hewajulige, I.G.N. (2016). Utilization of Tuna (*Thunnus* spp) offal for fish oil extraction, quality evaluation and effect of tocopherol on oxidative rancidity in extracted oil. *3rd International Conference on Fisheries and Aquaculture* .pp 43.
31. Rajawardana D.U, **Hewajulige I.G.N** and Nanayakkara C.M (2017). Identification of potentially probiotic *Lactobacillus* spp. from dairy sources of Sri Lanka as candidates for future food applications. *Proceedings of International Conference on Food Quality, Safety and Security – FOOD2017*, Colombo, Sri Lanka, pp. 29.
32. Shanthi Wilson Wijeratnam, Yoga Milani, Dineth Samarawickrama and **Ilmi Hewajulige**, (2017) Production and commercialization of eco friendly packaging material for transportation of fruit and vegetables. *Proceedings of the IV International Conference on Postharvest and Quality Management of Horticultural Products of Interest for Tropical Regions*, Kandy, Sri Lanka. pp 2.
33. **I.G.N. Hewajulige** , R.C. Pitipanaarachchi , D. Priyangani . D. Jayawardhana ,K.V.T. Gunewardena, A.A.G. Madurakanthi and P. Rathnayake (2018). Food Preservation via Irradiation Technology to combat with climate change related food security. 2nd International Climate Change Conference, ICC 2018, Colombo, Sri Lanka. pp 43.
34. Mahanama, H. A. H. M., **Hewajulige, I. G. N.**, Jayamanne, V. S. & Pitipanaarachchi, R. (2018). Development of Granola Bars Using Locally Available Raw Materials and Gamma Irradiation (60Co). *International Symposium on Agriculture and Environment*, Colombo, Sri Lanka. pp. 23.
35. Jayawardane, K. D. N., **Hewajulige, I. G. N.**, Dasanayake, R., Perera, M. G. D. S., Soomasiri, H. P. P. S & Madhujith W. M. T. (2018). Generation of *trans* fatty acids and oxidative stability of palm and coconut oils during repeated frying. *Proceedings of the Wayamba University International Conference*. pp 246
36. Jayawardana, T. M. D. A., **Hewajulige, I. G. N.** & Abeygunawardena, G. A. S. I. (2018). Study on development of whey based mixed fruit puree incorporated probiotic beverage. *Proceedings of the Wayamba University International Conference*. pp 276
37. Bandara, A. M. D. G. S. R., **Hewajulige, I. G. N.**, Jayamanne, V. S., Perera, M. G. D. S & Gunesekara, M. M. N. P. (2018). Effect of wax and organic acids (ascorbic and citric acid) application on storage life extension of king coconut (*Cocos Nucifera* Var. *Aurantica*) during low temperature storage. *Proceedings of the Wayamba University International Conference*. pp 328.

**Major Projects Undertaken**

**Competitive International Grants**

- **Principal Investigator**, IDRC project (2014-2018) -Enhancing preservation of fruits using Nano Technology (Collaborative project with India, Canada, Kenya, Tanzania and Trinidad.
- **Co-researcher**, IDRC funded project (2012-2014)- Enhanced preservation of fruits in South Asia. (Collaborative project with India and Canada)
- **Co-researcher**, USAID Hort CRISP ( 2010-2011), Biological based Postharvest quality maintenance and diseases control for Mango and Papaya.
- **Co-researcher**, JSPS funded project (2010-2012)- Optimization of Chitosan coating for papaya based on Biotic and Abiotic effects (Collaborative project with Japan – Postdoc.)

**Other International projects**

- **National Project Coordinator (PI)**, IAEA Project (2014-2016) - Supporting Food Irradiation technology to ensure the safety and quality of meals for Immuno-compromised patients and other target groups.

- **National Project Coordinator (PI)**, IAEA Project (2015-2018), Strengthening adaptive climatic strategies for food security through the use of food irradiation
- **Co-researcher**, IAEA Project (2020-2023) - Promoting Food Irradiation by Electron Beam and X Ray Technology to Enhance Food Safety, Security and Trade

#### Competitive local Grants – from NSF, CARP, NAC funds

- **Co-researcher**, CARP project (1994-1996)- Extending the storage life while maintaining postharvest quality of pineapple and Banana with special reference to modified and controlled atmosphere storage.
- **Co-researcher**, NSF project (1997-2000)- The testing of specific pre and post harvest treatments for reducing the incidence of chilling injury in pineapples.
- **Co-researcher**
- **Co-researcher**, CARP project (2001-2003) - Development of low cost continues and dehydrated fruit products.
- **Co-researcher**, NAC project (2004- 2005)- Testing of new Technology for sustainable Sea Shipment of Fresh Pineapple.
- **Co-researcher**, AEA of Sri Lanka (2007 – 2008)- Irradiation Technology for Socioeconomic Development
- **Principal Investigator**, CARP Project (2003-2004) - Effect of Chitosan (*N,O*- Chitosan) coating and salts of carbonic acids on the control of anthracnose and retention of overall quality of papaya during storage.
- **Principal Investigator**, AEA of Sri Lanka (2009-2010)- Radiation Processed natural polymers for Agriculture and Environment.
- **Principal Investigator**, NSF Funded Project (2013-2015) - Value addition to fruits and vegetables by clarifying, concentrating and separation of bio active components using membrane filtration technology and process modeling
- **Principal Investigator**, NSF Funded Project (2016 – 2019) - Biodiversity and technological potential of micro-flora from Selected Sri Lankan dairies

#### Local Grants – from ITI Treasury funds

- **Co-researcher**, ITI-Treasury Grant (2008)- Effective utilization of ginger
- **Co-researcher**, ITI-Treasury Grant (2015- 2016) - Development of Functional bread
- **Co-researcher**, ITI-Treasury Grant (2006- 2009) Minimizing postharvest losses of Fresh fruits via the application of non chemical procedures and generally regarded as safe compounds (GRAS).
- **Principal Investigator**, ITI-Treasury Grant (2006)-Effect of irradiated chitosan on shelf life extension of papaya
- **Principal Investigator**, ITI-Treasury Grant ( 2014- 2015) - Assessment of suitability of selected Sri Lankan tomato varieties for development physico-chemically and functionally sound tomato puree under different processing conditions
- **Research Advisor**, ITI-Treasury Grant (2015- 2016)- Isolation, identification characterization of potentially probiotic lactic acid bacteria of dairy origin in Sri Lanka for future application as probiotic starters.
- **Research Advisor**, ITI-Treasury Grant (2015- 2017) - Development of shelf stable energy instant food products from locally available raw materials using gamma irradiation
- **Principal Investigator**, ITI-Treasury Grant (2018- 2019)- Screening and Assessment of Lactic Acid Bacteria isolated from Sri Lankan Dairies as Source of Functional Ingredients for the Industry
- **Co-researcher**, ITI- Treasury Grant (2015- 2016) Identification of information and research needs of cereal based product industry using “Critical Success Factor Approach” – ISC Project



## Co researcher

- **Principal Investigator, ITI-** (2018-2019) Screening and assessment of Lactic Acid Bacteria from Sri Lankan dairies as source of functional ingredients for the industry
- **Principal Investigator, ITI-** Treasury Grant (2018- 2020) Development of a data base on nutritional, chemical, molecular and morphological characteristics of selected traditional and widely consuming improved rice varieties of Sri Lanka: suitability to use as chemical and molecular finger prints in identifying rice varieties at grain level.
- **Principal Investigator, ITI-** Treasury Grant (2019- 2021) Chemical residues in bovine milk produced by medium and large scale dairy farms and their public health concern in Sri Lanka
- **Co-researcher - ITI-** Treasury Grant (2019-2021)- Development of technologies to waste whey in local dairy bio processing industries for the production of value added/functional beverages.
  
- **Co-researcher - ITI-** Treasury Grant (2019-2021)-Establishment of a facility for thermal process validation of canned food and low moisture processed food operations in Sri Lanka.
- **Principal Investigator, ITI-** Treasury Grant (2019- 2021) Development of a plant based fungicide formulation to control anthracnose disease of mango and papaya.
- **Principal Investigator, Ministry of Science and Technology funds** (2019-2021). Enhancing the nutritional status of people by introducing healthy food products from Jak, Pumpkin, Banana and Fish while reducing postharvest losses.

## Services to professional bodies

1. Board of Directors - Mushroom development & Training centre (Pvt) Ltd. Sri Lanka Export Development Board (EDB) with effect from May 2018
2. Member of the Advisory Committee, Food & Beverages, 2015 to date Ministry of Industries
3. Member of the Advisory Committee, Food & Beverages, 2018 onwards, Sri Lanka Export Development Board
4. Advisory Committee Member - of B.Sc. Biosystem Technology Degree programme of the Wayamba University
5. Member of the ISO 22000-FSMS Certification Committee 2013- onwards, Ind-Expo Certification Limited, Sri Lanka
6. Member of the National Committee on Postharvest Technology, Value addition Human Nutrition, CARP, Sri Lanka, 2013-onwards
7. Member of the Editorial Board : Proceedings / Journal of the Council for Agricultural Research Policy (CARP), Sri Lanka , 2014
8. Member of the Sectoral Committee - Food and beverages, SLSI standard formulation committees, 2016 - onwards
9. Member of the Cabinet Approved High Powered Procurement Committee- for importation of food commodities to CWE, Ministry of Industry and Commerce, 2017 - 2018
10. Member of the reviewers' panel of the International Journal of Food Science and Technology, fruits, HorScience, Plant Pathology etc.
11. Member of the Accreditation Committee for Inspection Bodies SLAB
12. Member of the steering committee of NSF, National Thematic research programme on food security from 2019 to date