

**Name** : Lim Yau Yan  
**Gender** : Male  
**Citizenship** : Malaysia

**Academic Qualification** : B. Sc. (Hons; Uni. Malaya, 1966)  
Ph. D. (University of Illinois, Urbana, USA; 1971)

**Membership:**

Fellow of Academy of Sciences Malaysia (elected)  
Member of American Chemical Society, Malaysian Institute of Chemistry;

**Email:** lim.yau.yan@monash.edu

**Position: Current:** Associate Professor (Monash University Sunway campus, Malaysia)  
**Past** (1971-1998): Retired as Professor of chemistry in University of Malaya

**Areas of Expertise:** Natural Products chemistry- including bioactivity studies; Food chemistry and herbal plants processing; Physical Inorganic Chemistry-Coordination chemistry

**Research Interest:**

(a) Past research interest in 1970-1990s:

- (i) Synthesis, structural and spectroscopic studies of transition metal and organometallic compounds
- (ii) Surfactant Chemistry - structural and catalytic properties of micellar aggregates that contain metal ions in the head-groups

(b) *Current research interest:*

- (i) *Bioactive properties of tropical plants – evaluation of antioxidant, antimicrobial and anti-proliferative activities of plant extracts and isolation and characterization of bioactive compounds by column chromatography, HPLC, NMR and MS*
- (ii) *Effects of drying processes on bioactivities of herbal plants*

**Teaching experience:**

I have taught chemistry at the university level since 1971. The subjects that I have taught are: General Chemistry; Inorganic Chemistry; Spectroscopy and Analytical Chemistry; Natural Products chemistry; Environmental Chemistry; and Special topics such as Magnetochemistry

**Postgraduate supervision:**

Currently I am supervising several PhD and MSc students. I have successfully supervised more than ten PhD students and one MSc student in the past ten years.

**Professional services:**

(a) I have actively taken part in organizing and presenting papers in international and national conferences/seminars

- (b) Regular reviewer for many chemistry and food science journals, mostly with good impact factors.
- (c) Evaluator/reviewer for research grant applications for MOHE grant (national) and Greek Government Research Grant- Education (international)
- (d) Editorial board member of the following journals: BMC Complementary and Alternative Medicine; Heliyon
- (e) External Examiner for PhD and MSc thesis for local and foreign universities

### Research publications:

**Citations: 4907**

**h-index (Google-Scholar) = 28**

**i 10-index = 53**

I am the author or coauthor of **more than 100 refereed journal papers**. Listed below are papers published since 2008. A complete list dating back to 1971 can be obtained upon request.

1. Chan E W C, Lim Y Y, Wong L F, Lianto FS, Wong S K, Lim K K, Joe C E, and Lim T Y, Antioxidant and tyrosinase inhibition properties of leaves and rhizomes of ginger species. Food Chemistry, 2008, 109, 477-483.
2. Lim T Y, Lim Y Y and Yule C. Evaluation of antioxidant, antimicrobial and anti-tyrosinase activities of four *Macaranga* species. Food Chemistry, 2009, 114, 594-599.
3. Chan E W C, Lim Y Y, Wong S K, Lim K K, Lianto F S and Yong M Y. Effects of different drying methods on the antioxidant properties of leaves and tea of ginger species. Food chemistry, 2009, 113, 166-172.
- 4 Chan E W C, Lim Y Y, Ling S K, Tan S P, Lim K K, and Khoo M G H. Caffeoylquinic acids from leaves of *Etilingera* species (Zingiberaceae). LWT, 2009, 42, 1026-1030.
5. Chew Y L, Goh J K, and Lim Y Y. Assessment of *in vitro* antioxidant capacity and polyphenolic composition of selected medicinal herbs from Leguminosae family in Peninsular Malaysia. Food Chemistry, 2009, 116, 13-18.
6. Lai H Y, Lim Y Y, and Tan S P. Antioxidant, tyrosinase inhibition and antibacterial activities of the leaf extracts from medicinal ferns. Bioscience, Biotechnology, and Biochemistry. 2009, 73, 1362-1366.
7. Wong S K, Lim Y Y and Chan E W C. Antioxidant properties of *Hibiscus*: Species variation, altitudinal change, coastal influence, and floral colour change. Journal of Tropical Forest Science. 2009, 21, 307-315.
8. Wong L F, Lim Y Y., and Omar M. Antioxidant and antimicrobial activities of *Alpinia* species. Journal of Food Biochemistry, 2009, 33, 835-851.
9. Chan E W C, Lim Y Y, Chong K L, Tan J B L, Wong S K. Antioxidant properties of tropical and temperate herbal teas. Journal of Food Composition and Analysis, 2010, 23, 185-189.
10. Lai H Y and Lim Y Y. *Blechnum orientale* Linn- A fern with potential as antioxidant, anticancer and antibacterial agent. BMC Complementary and Alternative Medicine, 2010, 10:15
11. Chan E W C, Lim Y Y and Nor Azah M A. Composition and antibacterial activity of essential oils from leaves of *Etilingera* species (Zingiberaceae). International Journal for the Advancement of Science and Arts, 2010, 1, 1-12.
12. Wong S K, Lim Y Y, Abdullah N R and Nordin F J. Antioxidant, antiproliferative and antiplasmodial activities of leaf extracts of five Apocynaceae species. BMC Complementary and Alternative Medicine, 2011, 11:3
13. Chan E W C, Lim Y Y, and Tan S P. Standardised herbal extract of chlorogenic acid from leaves of *Etilingera elatior* (Zingiberaceae). Pharmacognosy Research, 2011, 3, 178-184.
14. Chew Y L, Chan E W L, Tan P L, Goh J K, and Lim Y Y. Preliminary assessment on phytochemical content, polyphenolic composition, antioxidant and antibacterial activities of Leguminosae medicinal plants in Peninsular Malaysia. BMC Complementary and Alternative Medicine, 2011, 11:12

15. Wong S K, Lim Y Y, Abdullah N R and Nordin F J. Antiproliferative and phytochemical analyses of leaf extracts of ten Apocynaceae species. *Pharmacognosy Research*, 2011, 3, 100-106.
16. Chan E W C, Lim Y Y, and Wong S K. Antioxidant properties of ginger leaves: An overview. *Free Radicals and Antioxidants*, 2011, 1, 6-16.
17. Lai H Y and Lim Y Y. Evaluation of Antioxidant Activities of the Methanolic Extracts of Selected Ferns in Malaysia. *International Journal of Environmental Science and Development*, 2011, 2, 442-447.
18. Chong K L, and Lim Y Y, Effects of Drying on the Antioxidant Properties of Herbal Tea from Selected *Vitex* species. *Journal of Food Quality*, 2012, 35, 51-59.
19. Pushpamalar V, Langford S, Ahmad M and Lim Y Y. Preparation of Carboxymethyl Sago Pulp Hydrogel from Sago Waste by Electron Beam Irradiation and Swelling Behaviour in Water and Various pH Media. *Journal of Applied Polymer Science*, 2013, 128, 451-459.
20. Pushpamalar V, Langford S, Ahmad M, Hashim K B and Lim Y Y. Adsorption Characterization of Ca<sup>2+</sup>, Na<sup>+</sup> and K<sup>+</sup> on Irradiation Crosslinked Carboxymethyl Sago Pulp Hydrogel. *Journal of Applied Polymer Science*, 2013, 128, 1828-1833.
21. Wong S K, Lim Y Y and Chan E W C. Botany, uses, phytochemistry and pharmacology of selected Apocynaceae species: A review. *Pharmacognosy Communications*, 2013,3(3), 2-11.
22. Wong S K, Lim Y Y, Ling S K and Chan E W C. Caffeoylquinic acids in leaves of selected Apocynaceae species: their isolation and content. *Pharmacognosy Research*, 2014, 6, 67-72.
23. Lim T Y, Lim Y Y and Yule C M. Bioactivity of *Macaranga* leaves in tropical peat swamp and non-peat swamp environments. *Journal of Tropical Forest Science*, 2014, 26, 134-141.
24. Wong S K, Lim Y Y, Ling S K and Chan E W C. Antiproliferative activity of *Valaris glabra* Kuntz (Apocynaceae). *Pharmacognosy Magazine*, 2014, 10, S232-S239.
25. Tan J B L, Lim Y Y and Lee S M. Antioxidant and antibacterial activity of *Rhoeo Spathacea* (Swartz) Stern leaves. *J Food Sci and Technology*.2013, doi:10.1007/s13197-013-1236-z.
26. Tan J B L, Lim Y Y and Lee S M. *Rhoeo spathacea* (swartz) stearn leaves, a potential natural food colorant. *J Functional Foods*, 2014, 7, 443-451.
27. Loh J Y, Lim Y Y, Harmin S A, and Ting A S Y. In vitro assessment on intestinal microflora from commonly farmed fishes for control of the fish pathogen *Edwardsiella tarda*. *Turk J Vet Anim Sci.*, 2014, 38, 257-263.
28. Chew Y L, Lim Y Y, Stanslas J, Ee G C L, Goh J K. Bioactivity-guided isolation of anticancer agents from *bauhinia kockiana* korth. *Afr J Tradit Complement Altern Med.*, 2014, 11(3), 291-299.
29. Tan J B L, Yap W J, Tan S Y, Lim Y Y, Lee S M. Antioxidant content, antioxidant activity and antibacterial activity of five plants from the Commelinaceae family. *Antioxidants*,2014, 3(4), 758-769.
30. Tan J B L, Lim Y Y. Critical analysis of current methods for assessing the *in vitro* antioxidant and antibacterial activity of plant extracts. *Food Chemistry*, 2015, 172, 814-822.
31. Tan J J Y, Lim Y Y, Siow L F, Tan J B L. The effect of polyphenol oxidase on the antioxidant activity of dried *Morus alba* leaves. *J Food Preservation and Processing*. 2015, 39, 2811-2819.
32. Tan J B L, Lim YY. Antioxidant and tyrosinase inhibition activity of the fertile fronds and rhizomes of three different *Drynaria* species. *BMC Research Notes* 2015, 8: 468.
- 33: Karthik D, Saravanan M, Lim Y Y, & Pushpamalar J. Electron beam radiation mediated green synthesis of silver nanoparticles using carboxymethyl sago pulp obtained from sago waste. *Polymer*, 2016, 86, 147-156. doi: 10.1016/j.polymer.2016.01.048
34. Yule C M, Lim YY, and Lim TY. Degradation of Malaysian peatlands decrease levels of phenolics in soil and in leaves of *Macaranga pruinosa*. *Frontiers in Earth Science*,2016, 4:45. doi: 10.3389/feart.2016.0004591.
35. Saik A Y H, Lim YY, Stanslas J, & Choo W S. Lipase-catalyzed acylation of quercetin with cinnamic acid. *Biocatalysis and Biotransformation*. 2016, 34, 33-43.
36. Loh, JY, Lim, YY and Ting ASY. Bacteriocin-like substances produced by *Lactococcus lactis* subsp. *lactis* CF4MRS isolated from fish intestine: Antimicrobial activities and inhibitory properties. *International Food Research Journal*. 2017, 24(1), 394-400.
37. Lai HY, Lim YY, and Kim KH. An antioxidative, antibacterial and anti-cancer proanthocyanidin from fern *Blechnum orientale*. *Pharmacognosy Magazine*. 2017:13:31-37. DOI: 10.4103/0973-1296.197659.

38. Saik A Y H, Lim YY, Stanslas, and Choo WS .Enzymatic synthesis of quercetin oleate esters using *Candida antarctica* lipase B. *Biotechnology Letters*, 2017, 39(2), 297-304. DOI 10.1007/s10529-016-2246-596.
39. Anand K V, Thenapakiam S, Saravanan M, Pushpamalar J, S J Langford, and Lim Y Y. Optimizing Extraction of Cellulose and Synthesizing Pharmaceutical Grade Carboxymethyl Sago Cellulose from Malaysian Sago Pulp. *Applied Sciences*, 2016, 6, 170
40. Yew PN, Lee WL, and Lim YY. Antioxidant and Intracellular ROS/RNS Scavenging Activities of three Porcupine Bezoars from *Hystrix brachyuran*. *Pharmacognosy Research*. 2017, 9:366-71. DOI: 10.4103/pr.pr\_145\_16
41. Daniel D, Dwiyanto J, Lim YY, Tan JBL, Muhamad A, Yap SW, Lee SM. Investigation on the antimicrobial activities of gingers (*Etilingera coccinea* (Blume) S.Sakai & Nagam and *Etilingera sessilanthera* R.M.Sm.) endemic to Borneo. *Journal of Applied Microbiology*, 2017, 123 (4), 810-818. DOI: 10.1111/jam.13536
42. Mawang C, Lim YY, Ong K S, Muhamad A, and Lee SM. Identification of  $\alpha$ -tocopherol as a bioactive component of *Dicranopteris linearis* with disrupting property against pre-formed biofilm of *Staphylococcus aureus*. *Journal of Applied Microbiology*, 2017, 123(5), 1148-1159. doi:10.1111/jam.13578
43. Pushpamalar J, Langford SJ, Ahmad MB, Lim YY, and Hashim K. Eco-friendly smart hydrogels for conditioning and sustain release fertilizer. *International Journal of Environmental Science and Technology*. 2017, 1-16. DOI 10.1007/s13762-017-1598-2.
44. Lim TY, Lim YY and Yule CM. Distribution and Characterisation of Phenolic Compounds in *Macaranga Pruinosa* and Associated Soils in a Tropical Peat Swamp Forest. *Journal of Tropical Forest Science*, 2017, 29(4), 509-518.
44. Ho LY, Lim Y Y, Tan CP and Siow LF. Comparison of physicochemical properties and aqueous solubility of xanthone prepared via oil-in-water emulsion and complex coacervation techniques. *International Journal of Food Properties*, 2018, DOI: 10.1080/10942912.2018.1446022
45. Yule CM, Lim YY, and Lim TY. Recycling of phenolic compounds in Borneo's tropical peat swamp forests. *Carbon Balance and Management*, 2018, 13:3. doi.org/10.1186/s13021-018-0092-6
46. Loh ZH and Lim Y Y. Drying effects on antioxidant activity, enzyme activity and phytochemicals of avocado (*persea americana*) leaves. *Journal of Food Preservation and Processing*, 2018, doi.org/10.1111/jfpp.13667.
47. Loh ZH, Oh H KF, and Lim YY. Relationship between polyphenol oxidase activity and phenolics degradation on ambient air-drying of herbal plants. *Journal of Food Processing and Preservation*, 2018, doi.org/10.1111/jfpp.13672.
48. Chew YL, and Lim YY. Evaluation and Comparison of Antioxidant Activity of Leaves, Pericarps and Pulps of Three *Garcinia* Species in Malaysia. *Free Radicals and Antioxidants*, 2018, 8(2), 130-134.
49. Ong KS, Mawang C, Daniel D, Lim YY, Lee SM. Current anti-biofilm strategies and potential of antioxidants in biofilm control. *Expert Review of Anti-infective Therapy*, 2018, DOI: 10.1080/14787210.2018.1535898

Book Chapter:

1. Yew Peng Nian, Goh Bey Hing, Lim Yau Yan, and Lee Wai Leng: **Gastrointestinal Bezoar Stones: Current Knowledge and Future Perspective on the Potential of Plant-Derived Phytobezoar in Cancer Treatment**. In Mohd Sayeed Akhtar and Mallappa Kumara Swamy (Eds): *Anticancer Plants: Natural Products and Biotechnological Implements*, Volume 2 pp 19-39. Springer Nature Singapore Pte Ltd. 2018

**Patents filed:**

1. Antioxidative, antibacterial and anticancer proanthocyanidins from *Blechnum orientale* Linn.- method of preparation and application thereof. (Filing date: 21 March 2013; Application number: PI2013000995).
2. Preparation of food colorant from *Rhoeo spathacea* leaves. (Filing date: 9 Sep 2014; Application number: PI2014702542)

**Conference presentation:**

To date I have presented > 20 papers (Oral and poster) in local and international conferences.