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Research Area Tocotrienols, palm phytonutrients, drug formulation, nanotechnology, drug delivery systems, pharmaceutical sciences, tumour targeting, cancer research, clinical trial

Experience

▪ **Research Officer**

Nutrition Unit
Product Development and Advisory Services Division
Malaysian Palm Oil Board
(2011 - present)

▪ **Registered Pharmacist**

Registration Number: 9025
Board of Pharmacy
Ministry of Health, Malaysia
(2012 – present)

▪ **Guest Lecturer**

School of Pharmacy
Monash University Malaysia Campus
(2014-2018)

▪ **Tutor and Laboratory Facilitator**

Strathclyde Institute of Pharmacy and Biomedical Sciences
University of Strathclyde
(2007-2010)

Education

- **PhD in Pharmaceutical Sciences**
Strathclyde Institute of Pharmacy and Biomedical Sciences, University of Strathclyde, Glasgow, UK.
Thesis title: Preparation and Evaluation of Tumour-targeted Delivery Systems for Tocotrienol
2007-2010
- **Master of Pharmacy (Distinction)**
University of Strathclyde, Glasgow, UK.
2006-2007
- **Master of Pharmacy (IMU-Strathclyde Twinning Cohort)**
International Medical University, Bukit Jalil, Malaysia.
2004-2006

Publications

- Geetha Maniam, Chun-Wai Mai, Mohd Zulkefeli, **Ju-Yen Fu** (2021) Co-encapsulation of gemcitabine and tocotrienols in nanovesicles enhanced efficacy in pancreatic cancer. *Nanomedicine*. (Accepted)
- Siaw-Kim Chua, **Ju-Yen Fu**, Mohd Hanif Zulfakar, Mei-Han Ng, Zafarizal Aldrin Azizul Hasan, Shiow-Fern Ng (2020) Optimisation and biological evaluation of palm glyceryl monocaprylate antimicrobial nanoemulsion for combating *S. aureus* wound infection. *Journal of Materials Research and Technology*, 9 (6), pp 12804-12817.
- **Fu JY**, Maniam G, Wong FS, Tan DMY, Meganathan P, Chuah LH. (2019) Tocotrienols: from bench to bedside. Book Chapter in *Vitamin E: Chemistry and nutritional benefits*. Published Royal Society of Chemistry.
- De Silva L, **Fu JY**, Htar TT, Muniyandy S, Kasbollah A, Wan Kamal WHB, Chuah LH. (2019) Characterization, optimization, and in vitro evaluation of Technetium-99m-labeled niosomes. *International Journal of Nanomedicine*;2019:14: 1101-1117.
- Tham SY, Loh HS, Mai CW, **Fu JY**. (2019) Tocotrienols Modulate a Life or Death Decision in Cancers. *Int J Mol Sci*;20(2)
- Maniam G, Mai CW, Zulkefeli M, Dufès C, Tan DM, **Fu JY**. (2018) Challenges and Opportunities of Nanotechnology as Delivery Platform for Tocotrienols in Cancer Therapy. *Front Pharmacol*;9:1358.
- Gan YL, **Fu JY**, Lai OM, Chew BH, Yuen KH, Teng KT, Nesaretnam K, Selvaduray KR, Meganathan P. (2017) Effect of palm-based tocotrienols and tocopherol mixture supplementation on platelet aggregation in subjects with metabolic syndrome: a randomised controlled trial. *Sci Rep*;7(1):11542.
- Tan DM, **Fu JY**, Wong FS, Er HM, Chen YS, Nesaretnam K. (2017) Tumor regression and modulation of gene expression via tumor-targeted tocotrienol niosomes. *Nanomedicine (Lond)*;12(20):2487-2502.
- **Fu JY**, Htar TT, De Silva L, Tan DM, Chuah LH. (2017) Chromatographic Separation of Vitamin E Enantiomers. *Molecules*;22(2). pii: E233.

- Meganathan P, **Fu JY** (2016) Biological Properties of Tocotrienols: Evidence in Human Studies. *International Journal of Molecular Sciences*;17(11).pii: E1682.
- Gan YL, Lai OM, Chew BH, Yuen KH, Nesaretnam K, Teng KT, Selvaduray KR, Meganathan P, **Fu JY**. (2016) Safety assessment of tocotrienol supplementation in subjects with metabolic syndrome: A randomized control trial. *Journal of Oil Palm Research*; 28: 34-43
- De Silva L, Chuah LH, Meganathan P, **Fu JY**. (2016) Tocotrienol and cancer metastasis. *Biofactors*; 42(2):149-62
- Che HL, Tan DM, Meganathan P, Gan YL, Abdul Razak G, **Fu JY**. (2015) Validation of a HPLC/FLD Method for Quantification of Tocotrienols in Human Plasma. *Int J Anal Chem*. 2015;2015:357609
- **Fu JY**, Dufes C. (2014) Anti-Cancer efficacy of intravenously administered tumor-targeted vesicles entrapping tocotrienol. *Pharmaceutical Nanotechnology* 2, 000-000
- **Fu JY**, Che HL, Tan DM, Teng KT. (2014) Bioavailability of tocotrienols: evidence in human studies. *Nutr Metab* 11(1):5
- **Fu JY**, Zhang W, Blatchford DR, Tetley L, McConnell G, Dufès C. (2011) Novel tocotrienol-entrapping vesicles can eradicate solid tumors after intravenous administration. *J Control Release* 154, 20-26
- **Fu JY**, Blatchford DR, Tetley L, and Dufès C. (2009) Tumor regression after systemic administration of tocotrienol entrapped in tumor-targeted vesicles. *J Control Release* 140, 95-99
- **Ju Yen Fu**, Doryn Meam-Yee Tan, Kalanithi Nesaretnam. Formulation of a nanocarrier-based delivery system for hydrophobic substances (PI 2015700198, Chinese No. 2016800174763, Australia No. 2016209724, UK No. L7L3495.A.)
- **Ju Yen Fu**, Doryn Meam-Yee Tan, Lay Hong Chuah. A sustained release hydrogel composition (PI 2019005059)
- Noor Lida Habi Mat Dian, **Fu Ju Yen**, Wan Suet Ying. Oral Composition Comprising Natural Active Ingredient from Oil Palm Fruit's Oil (PI 2017704962)

Patents

Presentations

- Palm International Nutraceutical Conference (6-8 January 2021) Invited Speaker. Role of Tocotrienols in the Management of Cancer: Application of Nanotechnology
- Pahang Pharmacy Conference (19-21st July 2019) Invited Speaker. Clinical Benefits of Palm Vitamin E and its Application.
- NSM 34th Scientific Conference (3-4th July 2019) Invited Speaker. Clinical Application of Palm-Tocotrienols: Challenges and Opportunities
- National Pharmacists Convention (26-28th April 2019) Invited Speaker. Formulation of Nutraceuticals: A Journey with Tocotrienols.
- MyCRS Seminar Series 2018 (19th March 2018) Invited Speaker. Palm tocotrienols: bioavailability and formulations.
- 4th International Conference on Palm Phytonutrients and Chronic Diseases, Boston, US (14th October 2017) Invited Speaker. Clinical Application of Palm-Tocotrienols: Challenges and Opportunities.

- Pharma+Bio Asia Conference (28-29th September 2016) Invited Speaker. Bioavailability and Formulations of Palm Tocotrienols
- International Conference of Molecular Imaging and Aero-space Medicine & Physiology (15-16th April 2016) Invited Speaker and Organizing Committee. Metabolism of Tocotrienols: Imaging and molecular research
- 2nd International Conference on Bioresources toward World Class Products, Bangkok, Thailand (23-24th July 2015) Invited Speaker. Tocotrienol: Health Benefits and Research Advancements
- Palm International Nutra-Cosmeceutical Conference, Kuala Lumpur, (3-4th August 2015) Invited Speaker. Tocotrienol and cancer: evidence to date and moving forward.
- 9th Allied Health Scientific Conference Malaysia, Kuala Lumpur (10-11th September 2012) Invited Speaker. Nanodelivery of palm tocotrienols.
- 6th General Assembly of the Asian Pacific Organization for Cancer Prevention, Kuching, Sarawak (26-29th April, 2012) Oral Presentation. Nanomedicine in Cancer Therapy: A study with Tocotrienols.
- 2nd International Conference on Tocotrienols and Chronic Diseases, Las Vegas, USA (13-14th July 2011) Oral Presentation. Tumour suppression after intravenous administration of palm tocotrienols encapsulated in tumour targeted vesicles.
- Palm International Nutra-Cosmeceutical Conference, Kuala Lumpur (May 2011) Invited Speaker. An update of recent advancements in palm tocotrienols.
- International Palm Oil Congress PIPOC, Kuala Lumpur (November 2009) Invited Speaker. Preparation and evaluation of a novel targeted palm oil vitamin E therapeutic system.

Committees

- Member of Malaysian Technical Committee on Nanotechnologies. Standards Development Agency, Institut Kimia Malaysia (2018-present).
- Vice President of The Malaysia Local Chapter of the Controlled Release Society (MyCRS).
- Member of ISO9001:2015 Technical Committee, Malaysian Palm Oil Board.
- Technical Manager of ISO17025 for quantification of vitamin E, Malaysian Palm Oil Board.

Professional Certificates

- Care and Use of Laboratory Rodents and Rabbits in Research
- Good Clinical Practice
- Protocol for Cochrane Systematic Review

Awards

- Young Scientist Travel Award. Controlled Release Society, Valencia, Spain (2019). Recipient: Geetha Maniam.
- Young Scientist Travel Award. Controlled Release Society, New York, US (2018). Recipient: Doryn Tan Meam Yee and Leanne De Silva.
- Saintis Harapan, Malaysian Palm Oil Board (2018)
- Gold medal, 29th International Invention, Innovation & Technology Exhibition. Category: Biotechnology, Health and Fitness. Oral composition comprising

natural full spectrum tocotrienol-rich-fraction (Vitamin E) from oil palm fruits. (2018)

- Gold Medal, 26th International Invention, Innovation & Technology Exhibition. Category: Biotechnology, Health and Fitness. Tocotrienol and curcumin enriched health supplement and transdermal cream. (2015)
- Silver Medal, 26th International Invention, Innovation & Technology Exhibition. Category: Biotechnology, Health and Fitness. Nanocarrier delivery system for hydrophobic substances. (2015)
- MPOB Best of the Best Publication, Anugerah MPOB, Novel tocotrienol entrapping vesicles can eradicate solid tumors after intravenous administration (2012)
- Best Poster Paper, PIPOC 2011, Kuala Lumpur. Qualitative and quantitative assessment of tocotrienol cellular uptake (2011)