THILAHGAVANI NAGAPPAN

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QUALIFICATIONS

- Doctor of Philosophy (Advancement of Biodiversity), Universiti Malaysia Sabah
- Bachelor of Science (Hons.) Conservation Biology, Universiti Malaysia Sabah

FIELD OF RESEARCH

- Ecological Chemistry
- Drug Discovery
- Ethnopharmacognasy

RESEARCH INTEREST

My research interest involves (i) Understanding the ecological chemistry of plants which influence the presence of chemotaxonomical markers, (ii) Isolation and elucidation compunds from marine and terrestrial resources and (iii) Discovery of bioactive compounds thru various screening platform. With rapid urbanization, I strongly believe the need for sustainable exploration of biodiversity resources lead by ethnopharmacognasy for benefit of humankind. Hence, I focus on looking back to nature for answer on discovery of new analogues that can be developed into drugs to flight antibiotic resistance, infectious diseases and cancer.

RESEARCH PROJECTS

- Continuous Operating System for Microalgae Culture Optimized for Sustainable Tropical Aquaculture (COSMOS-SATREPS)
- Elucidating the potential of liverworts as biopesticides in activation of chilli plant defence upon infestation with pest insects

EXPERT LINKAGES

- SHIMADZU (M) SDN. BHD
- UNIVERSITY OF TOKYO, JAPAN
- UNIVERSITY OF SOKA, JAPAN
- UNIVERSITY OF MACAU, CHINA
- UNIVERSITY OF HOKKAIDO, JAPAN
- JEJU NATIONAL UNIVERSITY, KOREA
- UNIVERSITI SAINS MALAYSIA (USM)
- UNIVERSITI MALAYSIA KELANTAN (UMK)
- INSTITUTE FOR TROPICAL BIOLOGY & CONSERVATION, UNIVERSITI MALAYSIA SABAH
- INSTITUTE OF OCEAN AND EARTH SCIENCES, UNIVERSITI OF MALAYA
- NATIONAL INSTITUTE OF PHARMACEUTICAL EDUCATION AND RESEARCH (NIPER), PUNJAB, INDIA

PROFFESIONAL MEMBERSHIP

- Malaysian Board of Technologist (MBOT)

GRANTS

Project	:	Chemical Composition and Nutritional Properties of Plant Materials Used as Feed for Sumatran Rhino (*Dicerorhinus sumatrensis*) In Captivity in Sabah.
Position	:	Principle Investigator
Grant Name	:	Yayasan Sime Darby
Status	:	Completed
Amount	:	RM96,000.00

Project	:	Synergy of Chemotaxonomy and Phylogeny in Systematics of Marine Red Algae Genus *Laurencia* in the Sulu Sulawesi Coral Triangle Region of Malaysia.
Position	:	Co-researcher
Grant Name	:	Fundamental Research Grant Scheme (FRGS)
Status	:	Completed
Amount	:	RM125,000.00

Project	:	Mechanisms of Cell Death Against Human Breast Cancer (MCF-7) Cells from Coastal Plants of Terengganu
Position	:	Principle Investigator
Grant Name	:	RAGS-KPT
Status	:	Completed
Amount	:	RM36,000.00

Project	:	Species Identification, Nutritional Properties and Ethnomycological Aspects of a Wild Edible Bolete Mushroom Found In Gelam Forests In Terengganu
Position	:	Co-researcher
Grant Name	:	Fundamental Research Grant Scheme (FRGS)
Status	:	Completed
Amount	:	RM69,000.00

Project	:	Continuous Operating System for Microalgae Culture Optimized for Sustainable Tropical Aquaculture (COSMOS-SATREPS)
Position	:	Co-researcher
Grant Name	:	SATREPS (KPT-JST-JICA)
Status	:	Active
Amount	:	RM 2 million.

Project	:	Elucidating the potential of liverworts as biopesticides in activation of chilli plant defence upon infestation with pest insects
Position	:	Co-researcher
Grant Name	:	Fundamental Research Grant Scheme (FRGS)
Status	:	Active
Amount	:	RM74,000.00

AWARDS

- PGD-MOSTI PhD Scholarship Recipient
- BioInno Awards 2011 (Silver) " Essence of Curry Leaf : A Healthy Salad Dressing"
- Minggu Penyelidikan Inovasi 2019 (Bronze) : Zing-It Scrub"

PUBLICATIONS

Journal Article

1. Bioprospecting cultivated green algae, *Caulerpa racemosa* (Forsskal) J. Agardh: A perspective on nutritional properties, anti-oxidative capacity and anti-diabetic potential. Abdul, A, Razak, S, Palaniveloo, K, **Nagappan, T,** Rahmah, N, Gan Jin, Chellappan, DK., Chellian, J & Kunnath AP. 2020. *Foods,* 9 (1313)1-20. (Q1, IF: 4.1)

2. *Chlorella vulgaris*: A perspective on its potential for combining high biomass with high value bioproducts. Ru, ITK, Sung, YY., Jusoh, M., Wahid, MEA, & **Nagappan, T**. 2020. *Applied Phycology*, 1(1) 2-11. (Q1: 2.12)

3. Halogenated metabolites from the diet of *Aplysia dactylomela* Rang. Palaniveloo, K, Rizman-Idid, M., **Nagappan, T** & Razak, S.A (2020). *Molecules.* 25(4), 815-821. (Q2: 3.27)

4. Antioxidant capacity of five microalgae species and their effect on heat shock protein 70 expressions in the brine shrimp *Artemia*. Tiong, IKR., **Nagappan, T**., Wahid, MEA., Muhammad, TST., Tatsuki, T, & Sung, YY. (2020). *Aquaculture reports.* 18, 100433. (Q1 : 2.12)

5. Biological properties and chemical diversity of *Sinularia flexibilis*, an Alcyonacean soft coral. **Nagappan, T** & Palaniveloo, K. 2018. *Journal of Sustainability & Management,* 13 (2):15-34. (Q3: 0.63)

6. Diversity in volatile chemicals and antibacterial activity among selected genus of *Cinnamomum, Etlingera and Schizostachyum* from Sabah. **Nagappan, T**., MH Yatau, Salim, JM & Vairappan, C.S. *Journal of Sustainability & Management,* 2017. 12 (2):26-33. (Q3: 0.63)

7. Chemical constiuents and biological activities of essential oils from four species of bamboo genus Schizostachyum. Vairappan, CS., **Nagappan, T**., Hui, LT & Kulip, J. 2015. *Journal of Tropical Biology & Conservation*, 2015. 12: 127-136. (Scopus Indexed)

8. Nutritional and Bioactive Properties of Three Edible Species of Green Algae, Genus *Caulerpa* (*Caulerpaceae*). **Nagappan, T**., Vairappan, C.S. *Journal of Applied Phycology,* 2014. 26: 1019-1027. (Q1: 3.21)

9. The Essential Oil Profiles and Antibacterial Activity of Six Wild *Cinnamomum* species. Vairappan, C.S., **Nagappan, T**., Kulip, J. *Natural Product Communications*, 2014. 9(9):1387-1390. (Q3: 1.25)

10. Major volatile hydrocarbons of rice paddy herb, *Limnophila aromatica* Lam. Merr as possible chemotaxonomy marker. Vairappan, C.S., **Nagappan, T**. *Journal of Tropical Biology & Conservation*, 2014. 11 : 41-48. (Scopus Indexed)

11. Chemotaxonomical markers in essential oils of *Murraya koenigii*. **Nagappan, T**., Ramasamy, P., Vairappan, C.S. *Natural Products Communications*, 2012. 7(10): 1375-1378. (Q3: 1.25)

12. Efficacy of Carbazole Alkaloids, Essential Oil and Extract of *Murraya koenigii* in Enhancing Subcutaneous Wound Healing in Rats. **Nagappan, T**., Ramasamy, P., Wahid, M.E.A., Chandrasegaran, T., Vairappan, C.S. *Molecules* 2012. 17(12): 1449-1463. (Q2: 3.27)

13. Biological Activity of Carbazole Alkaloids and Essential Oil of *Murraya koenigii* Against Antibiotic Resistant Microbes and Cancer Cell Lines. **Nagappan, T**., Ramasamy, P., Wahid, M.E.A., Chandrasegaran, T., Vairappan, C.S, *Molecules* 2011. 16 : 9651-9664. (Q2: 3.27)

14. Essential oil composition, anticancer, and antibacterial activities of five gingers genus *Etlingera* from the Island of Borneo. Vairappan, C.S., **Nagappan, T**., Palaniveloo, K. *Natural Products Communications*, 2012. 7(2): 239-242. (Q3: 1.25)

15. Essential oil profiles of major populations *Zingiber officinale* Rosc. utilized in Malaysia for traditional medicine. Vairappan, C.S., **Nagappan, T**., Ong, J.B., Gobilik, J., Ramachandram, T. *Journal of Tropical Biology & Conservation*, 2012 .9 (2) : 206-213.

Conference Publication

1. Biological activities of selected coastal plants (*Ficus deltoidea, Hibiscus tiliaceus, Melaleuca cajuputi*) from BRIS soil of Terengganu. **Thilahgavani Nagappan**, Shiau Yin Fui, Kishneth Palaniveloo, Nur Atifah Din, Nur Qistina Iwani Yurasbe & Nur Syamiza Mustafar. Proceeding of the 13th Seminar on Science and Technology 2020. Environmental Development and Sustainability Beyond 2020, 6th-7th Oct 2020. E-ISSN : 2735-2226, pg.127-131.

2. Volatile composition of *Etlingera elatior, Etlingera coccinea, Zingiber spectabile* and its antibacterial and antioxidant activities. **Thilahgavani Nagappan**, Zainul Azri Zainul Anuar, Syasya Yusoff & Tuan Haji Muhamad Razali Salam. Joint Symposium of the 8th International Agriculture Congress and 6th International Symposium for Food and Agriculture 2018.Pp320-323.

Other Outputs

[Thesis, manuscript, books, reports, etc.]

1. Chapter 7: Investigation on bioactive potential of selected wild ginger, genus Etlingera from Tasik Kenyir, Terengganu. **Nagappan, T**., Tatin, Y, J.L. Skornickova. Greater Kenyir Landscape: Social Development and Environmental Sustainability: From Ridge to Reef. 2018. Pp: 75-82, Springer International, Switzerland.

2. Chapter 22: Ginsenosides in Diets. **Nagappan, T** & Cheang, WS. Handbook of Dietary Phytochemicals. 2019. Pp: 1-17, Springer Nature, Singapore.

3. Analysis of Amino Acids By Pre-column Derivatization Using HPLC. ***Thilahgavani Nagappan****, Hoh Lian Hoi, Ang May Yen, Chan Viva*. Liquid Chromatography Application sheet 12 for Shimadzu-Fisher Laboratory, Fisher Scientific (M) Sdn.Bhd. (2010)

4. Analysis of Water-soluble Vitamins Using HPLC. ***Thilahgavani Nagappan****, Hoh Lian Hoi, Ang May Yen, Chan Viva*. Liquid Chromatography Application sheet 13 for Shimadzu-Fisher Laboratory, Fisher Scientific (M) Sdn.Bhd. (2010)

5. Analysis of Oil soluble Vitamins Using HPLC. ***Thilahgavani Nagappan****, Hoh Lian Hoi, Ang May Yen, Chan Viva*. Liquid Chromatography Application sheet 14 for Shimadzu-Fisher Laboratory, Fisher Scientific (M) Sdn.Bhd. (2010)

SUPERVISION

Master Degree

Thesis Title	:	Diversity and Pharmacology Study of Selected Zingiberaceae of Peninsular Malaysia
Student Name	:	Yannick Tatin
Role	:	Main Supervisor (TROPIMUNDO)
Status	:	Graduated

Thesis Title	:	Antioxidant capacity of five microalgae species and their effect on heat shock protein 70 expression in the brine shrimp *Artemia franciscana*."
Student Name	:	Irene Tiong Kai Ru
Role	:	Main Supervisor
Status	:	Graduated on Time

Thesis Title	:	Ecological aspects and nutritional properties of an edible bolete fungus from gelam forest in Terengganu
Student Name	:	Lee Shyeen Yee
Role	:	Co-Supervisor
Status	:	Waiting for Viva

Thesis Title	:	Cytotoxicity, antibacterial and chemical profiling of *Etlingera triorgyalis* and *Globba unifolia* from Sekayu Recreational Forest and Tasik Kenyir, Terengganu
Student Name	:	Nur Qistina Iwani bt Yurasbe
Role	:	Main Supervisor
Status	:	On-going

Thesis Title	:	Bioactive potentials of selected wild gingers from Terengganu
Student Name	:	Nur Athifah bt Din
Role	:	Main Supervisor
Status	:	On Going

Thesis Title	:	Anatomical localization of terpenoids in *Encephalartos* spp. (Zamiaceae)"
Student Name	:	Iva Milijevic
Role	:	Co-supervisor (TROPIMUNDO)
Status	:	On-going

COURSE TAUGHT

- Sem I 2015/2016 BDV3700 Conservation Biology
- Sem II 2015/2016 BIO3002 Animal Biology & Diversity
- Sem I 2016/2017 BDV3700 Conservation Biology
- Sem I 2016/2017 BIO3001 Plant Biology & Diversity
- Sem II 2016/2017 BIO3002 Animal Biology & Diversity
- Sem I 2017/2018 BIO3001 Plant Biology & Diversity
- Sem II 2017/2018 BIO3101 Biochemistry
- Sem I 2018/2019 BIO3001 Plant Biology & Diversity
- Sem I 2018/2019 BDV4801 Field Ecology
- Sem I 2019/2020 BIO3601 Developmental Biology
- Sem I 2019/2020 BDV3402 Microbial Diversity
- Sem II 2019/2020 BIO3101 Biochemistry

- Sem II 2019/2020 BDV4992B Industrial Training
- Sem I 2020/2021 BDV3402 Microbial Diversity
- Sem II 2020/2021 BDV4992B Industrial Training

LINKS

- SCOPUS : https://www.scopus.com/authid/detail.uri?authorId=54409252800
- WoS : https://publons.com/researcher/X-3260-2018
- Researchgate : https://www.researchgate.net/profile/Thilahgavani_Nagappan
- ORCID : https://orcid.org/0000-0002-9659-7934
- Google Scholar : https://scholar.google.com/citations?user=5WqS4uAAAAAJ&hl=en

JOURNAL REVIEWER

- Food chemical and Toxicology (Elsevier)
- Sains Malaysiana (UKM University Publisher)
- Journal of Tropical Biology and Conservation (UMS University Publisher)
- Materials Science and Engineering Journal (Elsevier)
- Journal of Sustainable Science and Management (UMT University Publisher)
- Journal of Tropical Biomedicine (Malaysian Society for Parasitology & Tropical Medicine)
- BIODIVERSITAS, Journal of Biological Diversity (Society for Indonesian Biodiversity)
- IOP Conference Proceedings and Paper (IOP Conference Series Publisher)
- Journal of Undergraduate Research (UMT University Publisher)