



اونيورسيتي مليسيا فهغ
UNIVERSITI MALAYSIA PAHANG

iCIABC21

INTERNATIONAL CONFERENCE ON INDUSTRY-ACADEMIA
INITIATIVES IN BIOTECHNOLOGY AND CHEMISTRY

20th – 21st December 2021

Virtual Conference

PROGRAMME

Organized by:

Green Technology & Drug Discovery and Diagnostic Research Clusters,
Faculty of Industrial Sciences and Technology,
Universiti Malaysia Pahang

Towards a Paradigm Shift in Technology for the
Advancement of Industry and Society



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EXCELLENT

PROGRAM AND TENTATIVE

CONFERENCE SCHEDULE

Day 1 – 20th December 2021

Time	Event	Theme
08:15 – 09:00	Registration	
09:00 – 09:15	Opening Speech: Prof. Dr. Jayarama Reddy Venugopal Chairman of iCIABC21, Faculty of Industrial Sciences and Technology, UMP	
09:15 – 09:30	Welcome Speech: Professor Ts. Dr. Kamal Zuhairi bin Zamli Deputy Vice-Chancellor (Research & Innovation), UMP	
09:30 – 10:15	Plenary Speech: En. Mohd Khairul Fidzal Abdul Razak CEO, Bioeconomy Corp.	
10:15 – 11:00	Keynote 1: Prof. Dr. Nor Hadiani Ismail Director, Atta-Ur Rahman Institute for Natural Product Discovery, UiTM Title: The Role, Challenges and Future Prospects of Natural Products: Academia, Industry and Societal Relevance	
		Food Science & Technology
		Genomics & Transcriptomics
		Natural Product & Medicinal Chemistry
		Medical & Healthcare Biotechnology
		Industrial Biotechnology & Applied Microbiology
11:00 – 11:05	Session Login and Preparation	
11:05 – 11:35	<p>Invited Speaker: Mdm. Nur Azwani Ab Karim (Sime Darby Research Sdn. Bhd.) Title: Versatility of Palm Oil in Food Application</p> <p>Invited Speaker: Dr. Gan Han Ming (GeneSEQ Sdn. Bhd.) Title: Current NGS Landscape in Malaysia</p> <p>Invited Speaker: Dr. Teh Chin Hoe (Bruker (M) Sdn. Bhd.) Title: NMR as Structure Characterization and Elucidation Tool for Analytical Chemistry of Natural Products</p> <p>Invited Speaker: Assoc. Prof. Dr. Nina Suhaity Azmi (Glycobio Int. Sdn. Bhd.) Title: Moving Technology from Lab to Market</p> <p>Invited Speaker: Asst. Prof. Dr. Vijitra Luang-In (Maharakham University, Thailand) Title: Beneficial Microbes in Food and Feed</p>	

	Session 1A	Session 1B	Session 1C	Session 1D	Session 1E	Session 1F
11:35 – 11:55	Paper ID M009	Paper ID G071	Paper ID D034	Paper ID D081	Paper ID E059	Paper ID A048
11:55 – 12:15	Paper ID M024	Paper ID A162	Paper ID D038	Paper ID D108	Paper ID E070	Paper ID A049
12:15 – 12:35	Paper ID M060	Paper ID M178	Paper ID D044	Paper ID D119	Paper ID E106	Paper ID A018
12:35 – 12:55	Paper ID M077			Paper ID M176		Paper ID A040
12:55 – 13:15						Paper ID A047
13:15 – 14:00	Break					
14:00 – 14:45	Keynote 2: Dr. Mohd Zulkifli Mustafa USM, Health Campus Title: Pioneering Innovations, Transforming Communities: Stingless Bee Project to Improve Socio-economy and Ecology					
Theme	Food Science & Technology	Genomics & Transcriptomics	Natural Product & Medicinal Chemistry	Medical & Healthcare Biotechnology	Industrial Biotechnology & Applied Microbiology	
14:45 – 14:50	Session Login and Preparation					
Session 2A	Session 2B	Session 2C	Session 2D	Session 2E	Session 2F	
14:50 – 15:10	Paper ID M126	Paper ID M189	Paper ID D148	Paper ID D185	Paper ID C179	Paper ID A052
15:10 – 15:30	Paper ID B193	Paper ID C032	Paper ID D164	Paper ID D135	Paper ID A092	Paper ID A086
15:30 – 15:50	Paper ID C146	Paper ID C120	Paper ID D180	Paper ID D137	Paper ID A094	Paper ID C084
15:50 – 16:10		Paper ID C130	Paper ID D183	Paper ID E151		
16:10 – 16:30		Paper ID C131	Paper ID C147	Paper ID M165		
16:30	END DAY 1					

Day 2 – 21st December 2021

Event	
9:00 – 09:45	<p>Keynote 3: Prof. Ts. Dr. Rashidi Bin Othman IIUM</p> <p>Title: New Insights into Carotenoid Extracts Production: From Chemical Extraction, HPP to SFE Technology</p>
9:45 – 10:30	<p>Keynote 4: Dr. Cheng Ming-Hsun University of Illinois at Urbana-Champaign, USA</p> <p>Title: The Perspective on Cellulosic Biorefinery for Producing Value-Added Bioproducts</p>
Theme	<p>Industrial Chemistry & Biochemistry</p> <p>Computational Biology & Chemistry</p> <p>Green Technology, Renewable Energy & Environmental Sciences</p> <p>Nanotechnology and Biomaterials</p>
10:30 – 10:35	Session Login and Preparation
10:35 – 11:05	<p>Invited Speaker: Mdm. Siti Normaimunah Ariffin (Winwa Medical Sdn. Bhd.) Title: HPLC Spectroscopy and its Application in Pharmaceutical Analysis</p> <p>Invited Speaker: Assoc. Prof. Dr. Azzmer Azzar Abdul Hamid (IIUM) Title: Biomolecular Dynamics of Microbial Proteins</p> <p>Invited Speaker: Mr. William Rodney Yeo (Airestec Sdn. Bhd.) Title: Multi-Enzyme Technology: From Pyramid to Diamond</p> <p>Invited Speaker: Prof. Dr. Jayarama Reddy Venugopal (UMP) Title: Current Trends in Nanotechnology for Healthcare Applications</p>
	<p>Session 3A</p> <p>Paper ID B057</p> <p>Paper ID B027</p> <p>Paper ID B068</p> <p>Paper ID B075</p> <p>Paper ID B149</p>
11:05 – 11:25	<p>Session 3B</p> <p>Paper ID K061</p> <p>Paper ID K062</p> <p>Paper ID K063</p> <p>Paper ID K064</p> <p>Paper ID J118</p>
11:25 – 11:45	<p>Session 3C</p> <p>Paper ID H008</p> <p>Paper ID H042</p> <p>Paper ID H046</p> <p>Paper ID H033</p>
11:45 – 12:05	<p>Session 3D</p> <p>Paper ID H090</p> <p>Paper ID H144</p> <p>Paper ID I005</p>
12:05 – 12:25	<p>Session 3E</p> <p>Paper ID I058</p> <p>Paper ID I076</p> <p>Paper ID I097</p>
12:25 – 12:45	<p>Session 3F</p> <p>Paper ID L085</p> <p>Paper ID L111</p> <p>Paper ID L155</p>

Break						
13:05 – 14:00	Keynote 5: Assoc. Prof. Dr. Ma Nyuk Ling UMT					
14:00 – 14:45	Title: Fungal Science for sustainable economic development					
Theme	Industrial Chemistry & Biochemistry	Computational Biology & Chemistry	Green Technology, Renewable Energy & Environmental Sciences	Nanotechnology & Biomaterials		
14:45 – 14:50	Session Login and Preparation					
	Session 4A	Session 4B	Session 4C	Session 4D	Session 4E	Session 4F
14:50 – 15:10	Paper ID J171	Paper ID K134	Paper ID I110	Paper ID I138	Paper ID I121	Paper ID H073
15:10 – 15:30	Paper ID J173	Paper ID K125	Paper ID I113	Paper ID I184	Paper ID I122	Paper ID H069
15:30 – 15:50	Paper ID J169	Paper ID K167	Paper ID I117	Paper ID I161	Paper ID I190	Paper ID I010
15:50 – 16:10		Paper ID K166		Paper ID I026	Paper ID I083	Paper ID I080
16:10 – 16:30						
16:30 – 17:00	Closing ceremony					
17:00	END					

* This tentative is subjected to change and update depending on the number of participants and final title confirmation by speakers.

* The schedule in this program book uses **Malaysian Standard Time (UTC +8:00)**



PRESENTATION LIST

MONDAY, 20 DECEMBER 2021

SESSION 2C

Natural Product & Medicinal Chemistry

Chair: Assoc. Prof. Dr. Suhaila Mohd Omar
Host: Ms. Nurul Nadiah Binti Hamidon

Presenter

Paper ID

Presentation Title

14:50 - 15:10

Identification and characterization of endophytic fungi from *Garcinia atroviridis* for potential antagonistic against phytopathogenic, *Colletotrichum gloeosporioides*

D148

Nor'aislah Hasan,
Universiti Teknologi MARA

15:10 - 15:30

Elicitor-induced phytochemical properties and transcriptional changes of genes associated with 20-hydroxyecdysone biosynthesis in *Asparagus officinalis*

D164

Waraphon Wichit,
Kasetsart University, Kamphaeng Saen
Campus

15:30 - 15:50

A study on active functional group from *Rhizophora apiculata* extract used by a Malay as medicine and tanning

D180

Razanah Binti Ramya @ Abd Rahim,
Universiti Kebangsaan Malaysia

15:50 - 16:10

Effect of pH on chromaticity and colour stability of curcumin and pla-curcumin coating

D183

Ainaa Eliah Binti Abu Bakar,
International Islamic University Malaysia

16:10 - 16:30

A recent review on phytochemical constituents and medicinal properties of sambau paya (*Chloranthus erectus*)

C147

Nor'aislah Hasan,
Universiti Teknologi MARA

16:30 - 16:50

End of session

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MONDAY, 20 DECEMBER 2021	
SESSION 2D Natural Product & Medicinal Chemistry	
Time	Presentation Title
Chair: Assoc. Prof. Dr. Murni Halim Host: Assoc. Prof. Dr. Tan Suat Hian	
Paper ID	
Presenter	
14:50 - 15:10	Carotenoid pigments from selected green and blue-green algae species cell culture as potential halal food colorants
	D185
	Haslin Hanani Binti Md Zaini, International Islamic University Malaysia
15:10 - 15:30	A comprehensive review of the ethnobotanical, phytochemical and pharmacological properties of the genus <i>Bambusa</i>
	D135
	Mohammad Amil Zulhlimi Bin Benjamin, Universiti Malaysia Sabah
15:30 - 15:50	Grain biochemical composition in carriers of a combination of maize mutant genes o2su2
	D137
	Tymchuk Dmytro S., Kharkiv Institute of Medicine And Biomedical Sciences
15:50 - 16:10	Anti-apoptotic actions of safinamide in 6-hydroxydopamine-induced cell model of parkinson's disease
	E151
	Koh Rhun Yian, International Medical University
16:10 - 16:30	Sensory, proximate, and physicochemical properties of <i>Moringa oleifera</i> leaf juice after clarification by pectinase treatment
	M165
	Fan Hui Yin, Universiti Malaysia Sabah
16:30 - 16:50	
End of session	

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TUESDAY, 21 DECEMBER 2021

SESSION 4D

Green Technology, Renewable Energy & Environmental Sciences

Chair: Dr. Rohasliney Hashim

Host: Dr. Nazikussabah Binti Zaharudin

Presentation Title

Paper ID

Presenter

14:50 - 15:10

Reuse of agricultural waste to adsorp Fe metal content in acid mine water

1138

Lailan Ni' Mah,
Lambung Mangkurat University

15:10 - 15:30

Malay poison: A study on *Melaluca cajuputi* extract as potential natural herbicide to suppress aquatic weed growth

1184

Wan Syibrah Hanisah Binti Wan Sulaiman,
International Islamic University Malaysia

15:30 - 15:50

Using management system standards for improving organisational and national perception. A case of ISO 37001:2016

1161

Dewi Tamara,
Bina Nusantara University

15:50 - 16:10

Assessment of drinking water quality using the NSFQI model: A case study of Alzuhur water supply station and quarters included in the distribution network

1026

Abdulaziz Younis Talea Al-Saffawi,
Mosul University

End of session

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ABSTRACTS

Malay Poison: A study on *Melaleuca cajuputi* extract as potential natural herbicide to suppress aquatic weed growth

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Keywords: *Melaleuca cajuputi*, ethnoscience, phenolic compound, natural herbicide, Malay poison, aquatic weed

Abstract. Malays, are skilled and well known in the art of poisoning. Various poisons are used in a variety of ways and the fact that most of their properties, either poison or intoxicant, as well as their medicinal value obtained from the animal and vegetable kingdoms. One of Myrtaceae family, *Melaleuca cajuputi* (gelam) has been reported in traditional Malay medicinal practices for various functions and purposes. However, its natural extract has not been well studied; therefore, the present study aimed to characterize the chemical composition of the *M. cajuputi* and assess the effect on weed growth and microbial activities. The finding revealed that three major phenolic acid compounds (Ferulic acid, Vanillic acid and Caffeic acid) and twenty volatile compounds were detected with $493.92 \pm 6.88 \mu\text{g GAE/g DW}$ total phenolic content. The effect of leaves extract of *M. cajuputi* on both aquatic weeds showed an inhibitory activity against *Glossostigma elatinoides* and *Rotala rotundifolia* growth as treated by different concentration range from 10g/L to 50g/L. As for microbial activities, *Staphylococcus aureus*, *Escherichia coli*, Methicillin-resistant *Staphylococcus aureus* (MRSA), *P. aeruginosa*, *S. epidermis* and *Candida albicans* were inhibited. Thus, these findings are important because it is the first report of traditional Malay poison plant species used in Malaysia as potential natural herbicide.