



2024 AOAC SEA Section 3rd Annual Conference

Oct 16-17, 2024 | Acacia Hotel Manila, Philippines

PROUDLY ORGANIZED BY TRAINING OF YOUNG SCIENTISTS WORKING GROUP

BREAKOUT SESSION ON 2024 STUDENT AWARD PRESENTATION

Promoting Analytical Excellence in Food Safety and Quality in Academia by Supporting Young Scientists

About the Breakout Session

The Breakout Session on the 2024 Student Award Presentation focuses on "Promoting Analytical Excellence in Food Safety and Quality in Academia by Supporting Young Scientists." This initiative is led by the Training of Young Scientists Working Group (ToYS WG), which aims to establish programs across Southeast Asian countries to develop, train, encourage, support, and recognize young scientists.

In 2022, the program awarded three Student Awards and one Student Travel Award to students in food safety and analytical science. In 2023, it expanded to grant Travel Awards to 12 students from seven countries for a poster competition in Vietnam, with three winning the Best Student Poster Award. This year, six top students are being offered Student Awards, highlighting the achievements of young scientists and fostering collaboration and innovation in food safety and quality.



Register Now

Before 11th Oct 2024

Title	Breakout Session on 2024 Student Award Presentation – Promoting Analytical Excellence in Food Safety and Quality in Academia by Supporting Young Scientists
Date	2 nd day of the conference; afternoon
Venue	Acacia Hotel Manila; Arvore Function Room
Student Awardees	<ul style="list-style-type: none">• Ms. Kirthana Kathirawan• Ms. Kristelle Mae Tardecilla• Mr. Muhammad Raznisyafiq bin Razak• Ms. Norfarizah Hanim Hassan• Mr. Ramon Arvin Noriel Santos• Mr. Sotheaboreach Ham (<i>not attend due to conflict agenda</i>)



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Program of the Breakout Session

Training of Young Scientists Working Group (ToYS WG), AOAC SEA

Date	Time	Content	Speaker
17 Oct 2024	PM session Duration: 2 hours	Opening of the Session Announcement of the winners	Dr. Jianhong Ching ToYS WG
		3D-Integrated Membrane Protected Micro-Solid-Phase Extraction of Sulfonamides in Food Samples: An Innovative Approach	Ms. Kirthana Kathirawan <i>Graduate Student</i> Universiti Malaya
		Evaluation Of Inhibitory, Immunomodulatory, Survival, and Growth Effects of Host-Derived <i>Weissella Confusa</i> on <i>Macrobrachium Rosenbergii</i> Challenged with <i>Vibrio Parahaemolyticus</i>	Ms. Kristelle Mae Tardecilla <i>Graduate Student</i> University of Santo Tomas
		Acute Toxicity and Risk Assessment of Endocrine Disrupting Compounds (EDCs) in Tropical Freshwater Cladocerans <i>Moina micrura</i>	Mr. Muhammad Raznisyafiq bin Razak <i>Graduate Student</i> Universiti Putra Malaysia
		Authenticity and Quality Assessment of Malaysian Stingless Bee Honey: Paving the Path towards the Next Superfood	Ms. Norfarizah Hanim Hassan <i>Graduate Student</i> Universiti Sains Malaysia
		Formulation of a Phage Cocktail for Biocontrol Applications against <i>Listeria monocytogenes</i> and <i>Salmonella enterica</i> ser. Typhimurium in Raw Meat Samples	Mr. Ramon Arvin Noriel Santos <i>Graduate Student</i> University of Santo Tomas
		Assessment of Antibiotic Resistance on <i>Vibrio</i> spp. and <i>Aeromonas</i> spp. Isolated from Red Tilapia Fish in Siem Reap Province, Cambodia	Mr. Sotheaboreach Ham <i>Undergraduate Student</i> Royal University of Agriculture (not attend)
		Award Presentation Ceremony	ToYS WG



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2024 Student Awardee
Ms. Kirthana Kathirawan
Graduate Student
Universiti Malaya
Malaysia



3D-Integrated Membrane Protected Micro-Solid-Phase Extraction of Sulfonamides in Food Samples: An Innovative Approach

Discover a new method to detect harmful sulfonamides (SAs) in food and water! This innovative 3D-integrated membrane-protected micro solid-phase extraction (3D-MP- μ -SPE) technique is eco-friendly, cost-effective, and highly sensitive. Using a 3D-printed filter holder, it efficiently extracts SAs from water, milk, and fish samples prior to HPLC-UV analysis. This method offers a sustainable and efficient solution for SAs determination, with robust performance and minimal environmental impact.



2024 Student Awardee
Ms. Kristelle Mae Tardecilla
Graduate Student
University of Santo Tomas
Philippines



Evaluation Of Inhibitory, Immunomodulatory, Survival, and Growth Effects of Host-Derived *Weissella Confusa* on *Macrobrachium Rosenbergi* Challenged with *Vibrio Parahaemolyticus*

Explore a sustainable solution for prawn farming! This study highlights the use of *Weissella confusa*, a beneficial microorganism from the gut of *Macrobrachium rosenbergii*, to manage bacterial diseases caused by *Vibrio parahaemolyticus*. Unlike antibiotics, which contribute to antimicrobial resistance, this eco-friendly probiotic enhances prawn immunity and overall health. The research shows that supplementing prawn diets with *W. confusa* significantly inhibits the growth of harmful bacteria, boosts immune responses, and improves survival rates, weight gain, and feed conversion ratios.



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2024 Student Awardee
Mr. Muhammad Raznisyafiq bin Razak
Graduate Student
Universiti Putra Malaysia



Acute Toxicity and Risk Assessment of Endocrine Disrupting Compounds (EDCs) in Tropical Freshwater Cladocerans *Moina micrura*

Explore the impact of endocrine disrupting compounds (EDCs) on human health and the environment! This study evaluates the acute toxicity of nine EDCs, including Bisphenol A (BPA) and Perfluorooctane sulfonic acid (PFOS), using native tropical freshwater cladocerans as bioindicators. The research assesses adverse effects at molecular, organ, individual, and population levels, revealing significant upregulation of stress-related genes and reductions in heart rate and individual size at high concentrations. It provides comprehensive and accurate method that examines early-stage diagnosis, and biological impacts of chemicals in several biological organizations.



2024 Student Awardee
Ms. Norfarizah Hanim Hassan
Graduate Student
Universiti Sains Malaysia



Authenticity and Quality Assessment of Malaysian Stingless Bee Honey: Paving the Path towards the Next Superfood

Discover the authenticity of stingless bee honey (SBH), a superfood known for its unique composition and therapeutic properties! This study delves into the chemical profiles, physicochemical properties, antioxidant activities, and thermal properties of SBH to establish quality standards and ensure its authenticity. Using advanced techniques like HPLC and micellar electrokinetic chromatography, researchers identified key phenolic compounds and furanic content. Additionally, machine learning was employed to detect sugar adulteration with high accuracy.



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2024 Student Awardee
Mr. Ramon Arvin Noriel Santos
Graduate Student
University of Santo Tomas
Philippines



Formulation of a Phage Cocktail for Biocontrol Applications against *Listeria monocytogenes* and *Salmonella enterica* ser. Typhimurium in Raw Meat Samples

Discover a potential solution to combat foodborne pathogens! This study explores the use of lytic bacteriophages as biocontrol agents against *Listeria monocytogenes* and *Salmonella Typhimurium*, major pathogens causing foodborne diseases. Researchers isolated and characterized phages from sewage samples, developing effective phage cocktails for both bacteria. These cocktails, applied to raw beef and pork, significantly reduced bacterial loads, especially at 4°C. The Lv-cocktail and Sv-cocktail showed impressive biocontrol activity, with the latter completely clearing *Salmonella* from beef samples.



2024 Student Awardee
Mr. Sotheaboreach Ham
Undergraduate Student
Royal University of Agriculture, Cambodia
(not attend due to conflict agenda)



Assessment of Antibiotic Resistance on *Vibrio* spp. and *Aeromonas* spp. Isolated from Red Tilapia Fish in Siem Reap Province, Cambodia

Dive into the potential issue of antibiotic resistance in Cambodian aquaculture. This study investigates antibiotic-resistant bacteria, such as *Vibrio* spp. and *Aeromonas* spp., in red tilapia farms across Siem Reap Province. Researchers collected samples from five farms and identified high levels of resistance to multiple antibiotics, posing significant risks to food safety and human health. This study provides an implication toward the urgent management and control the spread of Antimicrobial resistance (AMR) in aquaculture practice.