

IndustriVersity@UM

A NEWSLETTER BY THE INNOVATION & RESEARCH COMMERCIALIZATION MANAGEMENT DEPARTMENT



UNIVERSITI
MALAYA



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INNOVATION & RESEARCH COMMERCIALIZATION MANAGEMENT DEPARTMENT

JPIPP



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JPIPP

The Innovation & Research Commercialization Management Department (JPIPP) is a department under the Office of Deputy Vice-Chancellor (Research & Innovation), Universiti Malaya (UM), responsible for manages industry collaborations, driving innovation, protecting intellectual property, and facilitating the commercialization of research outputs.

JPIPP plays a strategic role in transforming research into real-world solutions and fostering impactful collaborations between academia and industry.

Under its management are three (3) Responsibility Centers (PTj): the UM Centre of Industry Relations (UMCIR), the UM Centre of Innovation & Enterprise (UMCIE), and the Technology Innovation Centre (Makerspace@UM). Together, these entities position JPIPP as a vital catalyst in advancing UM's research and innovation ecosystem.

NEWSLETTER

IndustriVersity@UM is a monthly newsletter that was initially introduced by the UM Centre of Industry Relations (UMCIR) and is now coordinated under the Innovation & Research Commercialization Management Department (JPIPP) to serve as a more comprehensive and impactful communication platform.

As the official newsletter of JPIPP, IndustriVersity@UM features updates, news, and achievements related to industry engagement, research commercialization, and innovation development at Universiti Malaya.

Through this publication, readers can stay informed about the university's latest initiatives, strategic collaborations with industry, and efforts in strengthening its innovation ecosystem—highlighting UM's commitment to creating real-world impact through research and partnerships.

JPIPP HIGHLIGHT

Engagement Session
with Top Management of
Public Universities

Universiti Malaya &
Global Turbine Asia Seal
Strategic Partnership at
LIMA 2025

Strategic MoU Signed by
UM, CRM, and CADT

Universiti Malaya & MIDA
Strengthen Partnership
for Research &
Innovation

ENGAGEMENT SESSION WITH TOP MANAGEMENT OF PUBLIC UNIVERSITIES

On May 20th, 2025, a high-level engagement session was held in conjunction with the Langkawi International Maritime and Aerospace Exhibition (LIMA) 2025 at Wings by Croske Resort, Langkawi. The session was hosted by Universiti Malaya, represented by Prof. Ir. Dr. Tan Chou Yong, Executive Director of the Innovation & Research Commercialization Management Department (JPIPP).

The event was graced by several distinguished guests, including the Deputy Minister of Higher Education, YB Datuk Ts. Mustapha Sakmud, accompanied by his spouse, YBhg Datin Hajah Rosnih Nasir. Also in attendance were YBhg Datuk Mohamad Azhan Md. Amir, Deputy Secretary-General (Management & Development) of the Ministry of Higher Education, and YBrs. Prof. Dr. Zainal Amin Ayub, Deputy Director-General of Higher Education (Academic and Research), along with Vice-Chancellors from public universities across Malaysia.



This engagement provided a strategic platform for in-depth discussions on the direction of innovation, research, and commercialization within Malaysia's higher education sector. The focus was particularly on enhancing collaboration with key industries such as defense, aerospace, and maritime, aligning with the overarching themes of LIMA 2025.

Prof. Ir. Dr. Tan Chou Yong emphasized UM's commitment to innovation through strong academia-industry ties, aligning with the national goal of becoming an innovation-driven, high-income nation.

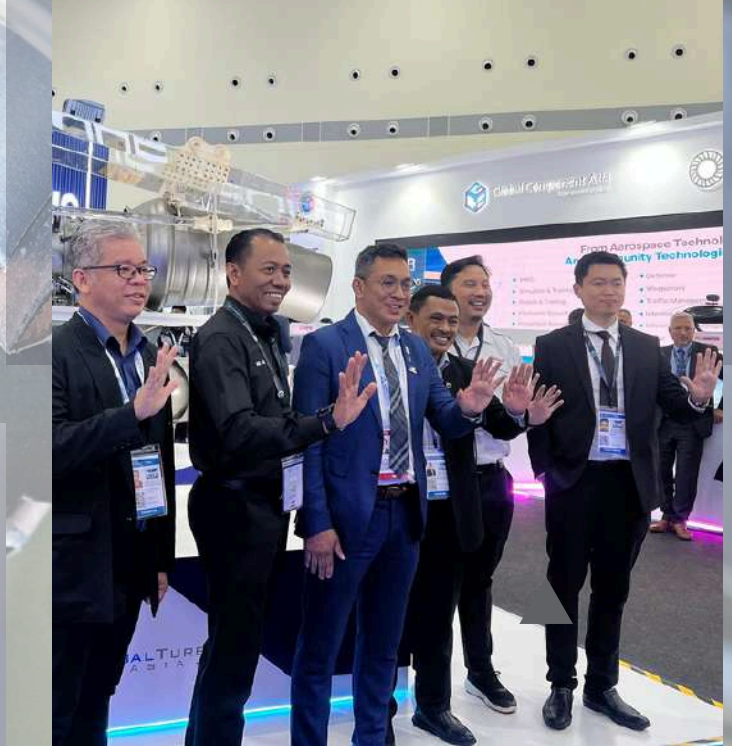
“Empowering Innovation, Driving Nation-Building.”



UNIVERSITI MALAYA & GLOBAL TURBINE ASIA SEAL STRATEGIC PARTNERSHIP AT LIMA 2025

On May 21st, 2025, Universiti Malaya (UM) and Global Turbine Asia Sdn Bhd (GTA) formalized a new collaboration through a Memorandum of Understanding (MoU) exchange ceremony at the Langkawi International Maritime and Aerospace Exhibition (LIMA) 2025, held at the Malaysian International Aerospace Centre.

The MoU exchange was attended by Professor Ir. Dr. Kaharudin Dimiyati, Deputy Vice-Chancellor (Research & Innovation), and Azhar Abdul Halim, Executive Director of GTA.



“Strengthening Malaysia’s Aerospace Ecosystem: Education Meets Industry.”

The partnership focuses on advancing aerospace innovation, research, and talent development within Malaysia. The collaboration will cover key areas such as technology transfer and intellectual property development, joint research and development initiatives, human capital development through specialized training and scholarship programs, and corporate social responsibility projects aimed at supporting education and community growth.

Witnessed by Professor Ir. Dr. Yap Hwa Jen, Director of UM Consult, and Mahathir Azmi, GTA’s Head of Project, the ceremony marked the start of a promising partnership.

The MoU exchange took place alongside the LIMA 2025 exhibition, which showcased cutting-edge aerospace and maritime technologies, underscoring Malaysia’s emerging role as a hub for industrial innovation. The agreement will remain in effect for two years, with opportunities for extension as both parties move forward with detailed planning to implement joint initiatives.



STRATEGIC MOU SIGNED BY UM, CRM, AND CADT

On May 23rd, 2025, a landmark Memorandum of Understanding (MoU) was officially signed in Kuala Lumpur, formalizing a collaborative partnership between Universiti Malaya (UM), Clinical Research Malaysia (CRM), and the Centre for Affordable Diagnostics and Therapeutics (CADT). This agreement represents a major step forward in advancing clinical research initiatives aimed at developing innovative and affordable healthcare solutions. The MoU was signed by key representatives: Professor Ir. Dr. Tan Chou Yong, Executive Director of the Innovation & Research Commercialization Management Department at Universiti Malaya; Dr. Akhmal Yusof, Chief Executive Officer of Clinical Research Malaysia; and Professor Dr. Sanjeev Krishna, Professor of Molecular Parasitology and Medicine at CADT.

Under the terms of this comprehensive agreement, Universiti Malaya, led by Professor Dr. Ivy Chung, will take primary responsibility for overseeing the overall execution of the clinical research projects, ensuring strict adherence to regulatory compliance, and managing the disbursement of funding throughout the trial period.

Clinical Research Malaysia, with Mr. Yau Yit Huan as its representative, will coordinate critical operational components, including site feasibility evaluations, detailed budget planning, and thorough financial reporting across the Ministry of Health (MoH) trial sites. The Centre for Affordable Diagnostics and Therapeutics, guided by Professor Dr. Sanjeev Krishna



“Innovating Together for Affordable Health.”

UNIVERSITI MALAYA & MIDA STRENGTHEN PARTNERSHIP FOR RESEARCH & INNOVATION



On May 29th, 2025, Universiti Malaya (UM) hosted a collaboration meeting with the Malaysian Investment Development Authority (MIDA) at the Institute of Advanced Studies (IAS). The session aimed to explore potential partnerships to advance research, innovation, and commercialization. The meeting began with welcoming remarks from Profesor Ir. Dr. Tan Chou Yong, Executive Director of UM's Department of Innovation Management and Research Commercialization. He emphasized UM's commitment to innovation and industry engagement. Following this, Mr. Sivasuriyamoorthy Sundra Raja, Deputy Chief Executive Officer of MIDA (Investment Promotion and Facilitation), highlighted MIDA's role in supporting research-driven investments and facilitating academia-industry collaborations. Professor Tan then presented UM's key initiatives, including the UM-INCO innovation platform, industry-linked collaborative projects, and efforts in patent development and commercialization. Afterward, the MIDA delegation toured UM's Nanocat Laboratory and CRIA.0 Laboratory at the Faculty of Engineering to see the university's cutting-edge research firsthand. The meeting concluded with a networking lunch at The Cube, Faculty of Engineering, fostering informal discussions to explore further collaboration opportunities. Both UM and MIDA expressed enthusiasm for continued engagement to drive innovation and commercial impact.



**“Unlocking Potential
Through
Collaboration.”**

UM CENTRE OF INDUSTRY RELATIONS

UMCIR



www.industry@um.edu.my



CORE FUNCTIONS AND SERVICES

UMCIR offers a comprehensive suite of services aimed at strengthening university-industry partnerships:

- **Connect:** Focuses on building professional and comprehensive links between external entities and university experts, ensuring seamless collaboration.
- **Engage:** Facilitates initial discussions and communication to explore potential opportunities between the university and external partners.
- **Partner:** Aims to cultivate strategic, mutually beneficial partnerships that align with the university's goals and external stakeholders' interests.

VISION, MISSION, AND CORE VALUES

UMCIR's vision is to make Universiti Malaya a top choice for industry collaboration and innovation. Its mission is to create impactful partnerships that enhance UM's research and education, contributing to national development. Guided by core values of integrity, professionalism, innovation, and excellence, UMCIR ensures that all collaborations are ethical, effective, and aligned with the university's goals.

UMCIR HIGHLIGHT

MOA Signing Ceremony
Between Universiti
Malaya and COWAY
Malaysia Sdn. Bhd.

MoU Signing Ceremony
Between Universiti
Malaya & SpeeQual Sdn.
Bhd.

Mayo Clinic Meets UM: A
Collaborative Exchange
at the Faculty of
Medicine

MOA SIGNING CEREMONY BETWEEN UNIVERSITI MALAYA AND COWAY MALAYSIA SDN. BHD.

On May 5th, 2025, Universiti Malaya (UM) and COWAY (Malaysia) Sdn. Bhd. officially signed a Memorandum of Agreement (MOA) to launch a collaborative research project titled “Study on Insect Repellent Gel Incorporated with Essential Oils.” The ceremony, held at the Centre for Foundation Studies in Science (PASUM), marked a significant step in strengthening academic-industry partnerships.

The 12-month project aims to develop an insect repellent gel that is effective against household pests such as ants, cockroaches, and house lizards, while ensuring safety for human use. The research will also study the gel's degradation rate and explore potential for scalable local production.



The event was attended by Prof. Ir. Dr. Farazila binti Yusof, Executive Director of PASUM; Assoc. Prof. Dr. Low Van Lun from the Tropical Infectious Diseases Research and Education Centre (TIDREC); Dr. Syazreen Nadia binti Sulaiman from PASUM; Mr. Ian Lee Sang Kyun, Head of R&D at COWAY Malaysia; Mr. Chang Jang Sen, Manager of the Environmental Analysis Department; and Prof. Ir. Dr. Chong Wen Tong, Director of the UM Centre of Industry Relations (UMCIR).

Research activities will involve repellency and cytotoxicity testing at TIDREC, alongside GC-MS/FID analysis for degradation studies at PASUM.



“Advancing Eco-Friendly Innovation Through Academic-Industry Collaboration.”

MOU SIGNING CEREMONY BETWEEN UNIVERSITI MALAYA & SPEEQUAL SDN. BHD.

On May 9th, 2025, Universiti Malaya (UM) and SpeeQual Sdn Bhd formalized a strategic academic-industrial partnership through the signing of a Memorandum of Understanding (MoU) at the Seminar Room of Pusat Perhubungan Industri (KPPI), Universiti Malaya. This collaboration aims to enhance research, education, and training in language sciences and technology, fostering innovation and knowledge exchange.

The MoU covers cooperation in student and staff exchanges, joint academic programs, collaborative research and development projects focusing on language solutions and AI-driven tools, as well as workshops, training, and academic publication exchanges to strengthen ties between industry and academia.

The ceremony was witnessed by Prof. Ir. Dr. Kaharudin Dimiyati, Deputy Vice-Chancellor (Research & Innovation) of UM; Ms. Emyllia Raganathan, Head of SpeeQual Malaysia; and Prof. Ir. Dr. Chong Wen Tong, Director of KPPI, UM. Prof. Kaharudin highlighted UM's commitment to translating linguistic research into practical applications, while Ms. Emyllia emphasized SpeeQual's mission to leverage academic expertise for cutting-edge language solutions.

“Bridging Academia and Industry for Language Innovation.”



A joint committee with representatives from UM's Academy of Malay Studies, Faculty of Arts and Social Sciences, and Faculty of Languages and Linguistics will oversee the implementation of the projects under this MoU, which will be effective for three years with an option to extend.

MAYO CLINIC MEETS UM: A COLLABORATIVE EXCHANGE AT THE FACULTY OF MEDICINE

On May 14th, 2025, the Faculty of Medicine, Universiti Malaya had the honour of hosting Dr. Mohamad Alkhouli from the renowned Mayo Clinic, United States, in a visit facilitated by the Malaysian Investment Development Authority (MIDA).

The session took place from 1:00 PM to 2:00 PM at the Tan Sri Dr. Lim Wee Chai Medical Museum, where Dr Alkhouli was warmly welcomed by faculty representatives. The visit began with a meet-and-greet, followed by a brief introduction and discussion session between Dr Alkhouli and members of the Faculty of Medicine. Selected faculty representatives also presented introductory slides, highlighting key areas of academic strength and potential collaboration.

Dr. Alkhouli was then given a guided tour of the museum, providing insight into the history and achievements of the Faculty of Medicine. The visit concluded with light refreshments served at the museum.

This engagement reflects Universiti Malaya's ongoing commitment to fostering international collaboration and strengthening ties with globally recognised institutions like Mayo Clinic. We extend our appreciation to all involved, including MIDA, for making the visit a success.



“Global Partnerships, Local Impact.”

UM CENTRE OF INNOVATION AND ENTERPRISE

UMCIE



www.umcie@um.edu.my



CORE FUNCTIONS AND SERVICES

UMCIE is dedicated to supporting and assisting both staff and students in their entrepreneurial endeavors. It engages with industry and public stakeholders to foster collaborative efforts and drive economic growth through innovation. The center offers a comprehensive range of services, including:

- Intellectual Property Management: Protecting and managing UM's broad intellectual property portfolio with a focus on rapid licensing to industry.
- Technology Commercialization: Facilitating the commercialization of UM innovations and technologies through various channels, including licensing and spin-off companies.
- Accelerator Programs: Providing structured support for startups through initiatives like the UM Deep Tech (UMDT) Accelerator Programme and the Universiti Malaya Malaysian Life Science Accelerator (MyLiSA).
- Incubation Facilities: Offering professionally managed service incubators, such as UMXcelerate, to accelerate the commercialization of UM innovations and facilitate technology uptake by industries.

VISION, MISSION, AND CORE VALUES

UMCIE is guided by a commitment to advancing knowledge and learning through quality research and education for the nation and humanity. Its mission is to be an internationally renowned institution of higher learning in research, innovation, and commercialization. The center upholds core values of integrity, respect, teamwork, and professionalism, ensuring a collaborative and ethical approach to innovation and enterprise.

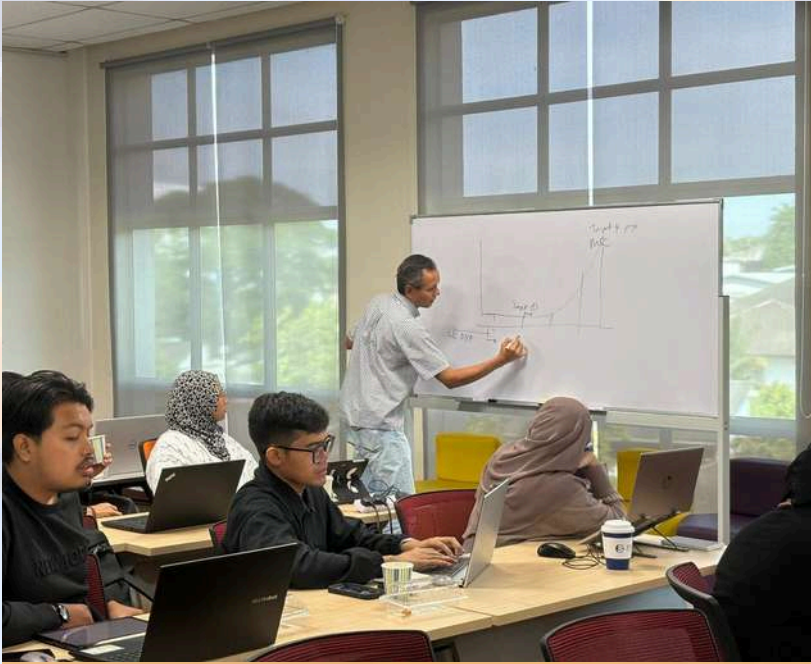
UMCIE HIGHLIGHT

UMDT Cohort 4 Weekly
Class Continues!

MRANTI IP Policy
Framework Workshop
2025

Benchmarking Visit with
Universiti Brunei
Darussalam

Universiti Malaya at
Hong Kong Tech 300
Expo 2025



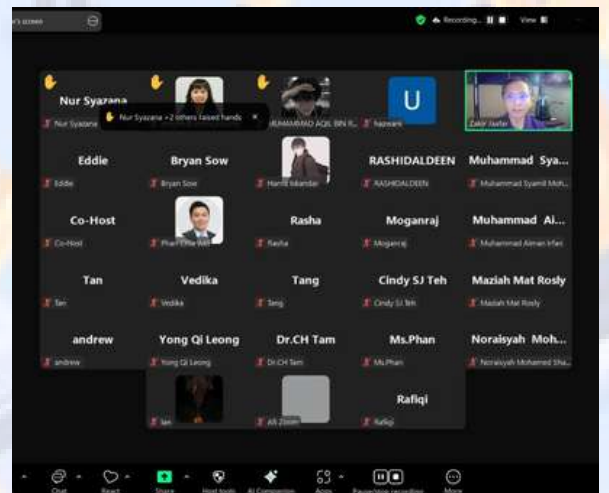
UMDT COHORT 4 WEEKLY CLASS CONTINUES!

On May 10th, 2025, the Universiti Malaya Deep Tech (UMDT) Accelerator Programme marked a key milestone as Cohort 4 entered its next phase of weekly classes, guiding 14 promising teams on their journey from research to market.

Each session is thoughtfully designed to equip participants with critical entrepreneurial skills—including market validation, IP strategy, business model development, and investor pitching—while fostering a culture of collaboration and innovation.

UMDT remains committed to empowering researchers and innovators to transform their ideas into viable, high-impact solutions for society and industry.

Stay tuned as we continue to support these future changemakers!



“Igniting Deep Tech Innovation: Journey from Idea to Impact.”



INTELLECTUAL PROPERTY (IP) CLINICS



From May 13th to 15th, 2025, the Universiti Malaya Centre of Innovation and Enterprise (UMCIE) successfully hosted a highly impactful Intellectual Property (IP) Clinic, designed to equip researchers with the knowledge and tools necessary to protect their innovations and unlock their commercial potential.

Structured around personalized one-to-one consultations, the clinic offered hands-on support from experienced IP professionals. Researchers had the opportunity to delve into their individual projects and receive tailored guidance on identifying intellectual property within their research, understanding protection strategies, and navigating the pathway to commercialization.

Participants benefitted from expert advice on evaluating the patentability of their work, preparing essential IP documentation, and drafting patent claims aligned with their specific innovations. The clinic also provided strategic insights into filing processes and long-term protection of intellectual assets.

By addressing both technical and strategic aspects of IP management, the clinic played a pivotal role in helping researchers transition from ideation to impactful innovation. It further reaffirmed UMCIE's strong commitment to cultivating an innovation-driven ecosystem at Universiti Malaya—where research is not only safeguarded but also translated into real-world applications.

UMCIE extends its heartfelt appreciation to all participating researchers and IP experts for their active engagement and valuable contributions. Your involvement marks a vital step toward building a more

“Personalized Support for Research Commercialization.”



EMPOWERING INNOVATION: PATENT DRAFTING WORKSHOP

On May 19th, 2025, the Universiti Malaya Centre of Innovation and Enterprise (UMCIE) successfully organized a Patent Drafting Workshop to strengthen the foundation of innovation and intellectual property (IP) protection at Universiti Malaya. This full-day, hands-on session was designed for researchers, academics, and early-career innovators eager to transform novel ideas into protectable and market-ready assets.

Led by Mr. Lawrence Yip, a seasoned IP expert, the workshop provided an in-depth exploration of the patent drafting process—from the structure of patent specifications to crafting robust and defensible patent claims. Participants also gained valuable insights into the legal nuances of patent protection and strategies to enhance patentability throughout the innovation lifecycle.

The interactive format enabled attendees to engage directly with the facilitator, ask targeted questions, and receive practical feedback on real-life examples. This workshop is part of UMCIE's ongoing commitment to equip UM's research community with the knowledge and confidence to safeguard their inventions, attract industry interest, and pave the way for successful commercialization.

UMCIE extends heartfelt appreciation to all participants for their active engagement and dedication to protecting innovation—an essential step toward creating solutions with real-world impact. Stay tuned for more capacity-building initiatives from UMCIE as we continue to support the journey from lab to market!

Key objectives of the workshop included:

- Providing researchers with critical tools to draft their own patent applications;
- Supporting the early stages of research commercialization through strong IP foundations;
- Enhancing awareness of intellectual property rights and their strategic value;
- Building a university-wide culture of innovation and IP literacy.



"Protecting Innovation, Empowering Discovery."

MRANTI IP POLICY FRAMEWORK WORKSHOP 2025

On May 20th, 2025, the Universiti Malaya Centre of Innovation and Enterprise (UMCIE) was honoured to participate in the MRANTI IP Policy Framework Workshop 2025, held at MRANTI, Kuala Lumpur. The workshop marked a significant initial step in co-developing a clear, strategic, and fit-for-purpose intellectual property (IP) framework to support Malaysia's innovation ecosystem. This initiative aims to streamline MRANTI's programme structures, clarify IP ownership and licensing frameworks, and reinforce effective commercialisation pathways.



Bringing together a diverse group of key stakeholders—including representatives from MOSTI, MOHE, MyIPO, MIMOS, SIRIM, CREST, ASM, NIBM, top research universities (UM, UPM, USM, UKM, IIUM), industry leaders (such as Adastra and MTDC), and five Registered Technology Transfer Professionals (RTTPs) from MRANTI's Tech Transfer Programme with Oxentia—the workshop fostered multi-stakeholder dialogue essential to shaping a unified national IP strategy. Adding global perspective, international partners from the World Intellectual Property Organization (WIPO) in Geneva and ASTRI in Hong Kong joined virtually, offering valuable insights into international best practices and innovation-led IP policy development.



"From Ideas to Impact: Shaping Malaysia's IP Future."

The session, expertly moderated by Prof. Dr. Shahir (President of ITMA), focused on facilitating co-creation of an MRANTI-specific IP policy that aligns with national frameworks while addressing critical areas such as ownership clarity, revenue sharing, and programme synchronisation.

This collaborative effort represents a pivotal milestone in establishing a resilient, forward-looking IP ecosystem that not only protects intellectual assets but also catalyses their transformation into tangible societal and economic impact. UMCIE is proud to support and contribute to this national-level initiative, reinforcing its commitment to strategic, innovation-led IP management and technology transfer in Malaysia.

UNIVERSITI MALAYA AT HONG KONG TECH 300 EXPO 2025

From May 23rd to 24th, 2025, UMCIE proudly represented Universiti Malaya at the HK Tech 300 Expo 2025, held in conjunction with the Launch Ceremony of the HK Tech 300 International Start-up Competition, organized by City University of Hong Kong (CityU). This prestigious event brought together universities, entrepreneurs, industry leaders, and investors from around the world to explore opportunities in deep-tech innovation and venture creation. As part of the Malaysian delegation, UMCIE actively engaged with international partners to foster cross-border collaboration, promote university-born technologies, and gain valuable insights into global best practices in innovation and start-up development.



The HK Tech 300 initiative serves as a unique platform to empower early-stage start-ups and university researchers to accelerate their ideas toward commercialisation, offering substantial seed funding, mentorship, and market access.

UMCIE's participation reinforces Universiti Malaya's commitment to global innovation partnerships and the advancement of entrepreneurship through strategic ecosystem engagement.



“Innovating without Borders: From Research to Global Markets.”

BENCHMARKING VISIT WITH UNIVERSITI BRUNEI DARUSSALAM

On May 30th, 2025, the Universiti Malaya Centre of Innovation and Enterprise (UMCIE) had the honour of hosting a benchmarking and collaboration visit from Universiti Brunei Darussalam (UBD). This strategic engagement served as a platform to share insights, exchange best practices, and explore new avenues for collaboration in the areas of innovation management, intellectual property (IP) commercialization, and university-industry partnerships.

The visit featured productive dialogue between both institutions, focusing on strengthening research translation efforts, aligning innovation strategies, and advancing academic-industry engagement. Key topics included mechanisms to accelerate technology transfer, fostering entrepreneurial mindsets within universities, and exploring co-development opportunities for impactful regional initiatives.

As we continue to drive innovation with purpose, we are excited about the potential for future joint initiatives between Universiti Malaya and Universiti Brunei Darussalam. Collaborations like these reinforce our collective role in shaping the future of research and enterprise in the region.

Thank you to our counterparts from UBD for the inspiring exchange—we look forward to translating ideas into impactful outcomes together.

The session underscored the shared commitment of UMCIE and UBD to:

- Advance innovation and technology commercialization in Southeast Asia;
- Create mutually beneficial cross-border partnerships;
- Build resilient innovation ecosystems through knowledge-sharing and joint programmes



"Strengthening Regional Innovation through Knowledge Exchange."

UMCIE PROMOTIONS



UNIVERSITI MALAYA **UMCIE**

NEXT-GEN HFMD VACCINE INNOVATION

Kes HFMD di seluruh negara meningkat 286 peratus - KKM

Patent No. : PI PI2024004640
Technology Readiness Level : TRL4

Universiti Malaya is proud to announce a groundbreaking innovation by our researchers — a chimeric enterovirus vaccine platform that provides dual protection against Hand, Foot, and Mouth Disease (HFMD), targeting both EV-A71 and CV-A16. This represents a significant advancement over current vaccines that only cover a single virus strain, offering broader protection and enhanced public health impact.



KEY HIGHLIGHTS

- ✓ Dual-virus coverage (EV-A71 + CV-A16)
- ✓ Site-directed mutagenesis for precise immune response
- ✓ Fast, scalable production (14 days from plasmid to virus)
- ✓ Demonstrated safety & strong immunogenicity in animal models
- ✓ Lower production cost vs. inactivated vaccines

TARGETED IMPACT:

- Pediatric immunization in endemic regions
- Outbreak response programs
- Potential for military & field deployment
- Platform extendable to other enteroviruses

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NEXT-GEN HFMD VACCINE INNOVATION

Universiti Malaya proudly unveils a new chimeric enterovirus vaccine offering dual protection against Hand, Foot, and Mouth Disease by targeting both EV-A71 and CV-A16. This fast, scalable, and cost-effective vaccine uses precise site-directed mutagenesis to ensure strong immunity, proven safe in animal studies. Ideal for children in endemic areas, outbreak responses, and military use, its adaptable platform also holds promise against other enteroviruses—marking a major step forward in public health protection.

RAPID DETECTION SYSTEM FOR MORGANELLA MORGANII

Universiti Malaya presents a rapid, portable detection system for Histamine Fish Poisoning (HFP), offering a faster and more accessible alternative to traditional PCR methods. Delivering results in just 30 minutes through a simple colorimetric readout, it targets the *Morganella morganii* urease gene with high specificity and no cross-reactivity. Ideal for seafood exporters, aquaculture, and food safety agencies, this scalable solution enhances on-site testing, protects consumers, and supports Malaysia's seafood industry.

UNIVERSITI MALAYA **UMCIE**

RAPID DETECTION SYSTEM FOR MORGANELLA MORGANII

Patent No. : PI2024006194 Technology Readiness Level : TRL5

This innovation introduces a rapid and portable DNA-based detection system for *Morganella morganii*, the bacterium responsible for histamine fish poisoning.

! WHAT'S THE MATTER?


Histamine Fish Poisoning (HFP) is a growing public health concern caused by histamine-producing bacteria like *Morganella morganii*, particularly in seafood. Traditional detection methods like PCR are costly, slow (2–3 hours), and require complex lab equipment—making them impractical for many real-world food safety settings. With Malaysia's strong seafood export sector, a faster and more accessible detection system is urgently needed to ensure consumer safety and regulatory compliance.

INNOVATION HIGHLIGHTS:

- Novel Detection Method
- 30-Minute Results
- Colorimetric Readout
- Validated Primers: Targets *M. morganii* urease gene with high specificity and no cross-reactivity.
- Portable & Scalable

IDEAL FOR:

- Seafood Industry
- Fisheries & Aquaculture
- Food Safety Authorities



Now Open for Collaboration | Licensing | Strategic Partnership
Ideal for seafood companies, food safety labs, and diagnostic tool manufacturers.

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TECHNOLOGY INNOVATION CENTRE

MAKERSPACE@UM



www.makerspace@um.edu.my



CORE FUNCTIONS AND SERVICES

Makerspace@UM offers a range of services and facilities to support the creative endeavors of its members:

- **Membership Program:** Open to individuals aged 12 and above, the membership provides access to the makerspace and its facilities during operating hours. Members can also enjoy discounted rates for workshops and events.
- **Training Courses:** The space offers various training sessions, including 3D printing and design, Internet of Things (IoT), data analytics, computer programming, and the use of microcontroller/microprocessor boards.
- **Services:** Members can utilize services such as 3D printing and laser engraving to bring their projects to life.
- **Facilities:** The makerspace is equipped with SLA and FDM 3D printers, laser engravers, microcontroller kits, robotic kits, Raspberry Pi 4, electronics work tools and components, and woodworking tools. These resources are available to members for hands-on creation and prototyping

VISION, MISSION, AND CORE VALUES

Makerspace@UM aims to empower the community through hands-on learning and innovation. Its mission is to foster a creative and inclusive environment that encourages collaboration and the maker spirit, aligned with STEM and STEAM values. Guided by creativity, inclusivity, and experiential learning, it supports individuals in turning ideas into impactful solutions.

MAKERSPACE@UM HIGHLIGHT

MOHE Visit Highlights
Innovation &
Entrepreneurial
Excellence at UM

Makerspace@UM
Associate Members
Meeting

Program Malaysia
Makers Meet (MMM)
2025

Simultaneous
Workshops with (Tenby
Schools Setia Eco
Gardens)



Department of Higher Education (JPT), focusing on potential collaboration to enhance innovation-based entrepreneurship at the national level. The visit highlighted UM's commitment to nurturing a vibrant entrepreneurial ecosystem through maker-driven initiatives and student empowerment. This engagement reaffirmed the importance of aligning institutional efforts with national strategic goals and provided valuable insights for strengthening policy implementation, support mechanisms, and cross-sector partnerships in university-based entrepreneurship.



MOHE VISIT HIGHLIGHTS INNOVATION & ENTREPRENEURIAL EXCELLENCE AT UM

On May 19th, 2025, the Ministry of Higher Education (MOHE), represented by the Strategic Planning Division, conducted an official visit to Universiti Malaya (UM) to monitor the implementation of the 2024 Entrepreneurship Programme. The session, coordinated by the Student Entrepreneurship Centre under the Deputy Vice-Chancellor (Student Affairs), was held at the Student Lounge, Kompleks Perdanasiswa. As part of the itinerary, the delegation visited Technology Innovation Centre (Makerspace@UM), where they were introduced to various student-driven innovation and entrepreneurship projects. The team showed keen interest in the creative use of technology and interdisciplinary approaches presented by the students.

Several prototypes showcased during the visit sparked discussions on real-world application and commercialization potential. In addition to the tour, a strategic discussion was held between the Director of Technology Innovation Centre (Makerspace@UM) and representatives from the -

**“Empowering
Innovation,
Igniting
Entrepreneur-
ship.”**

TECHNOLOGY INNOVATION CENTRE (MAKERSPACE@UM) ASSOCIATE MEMBERS MEETING



On May 21st, 2025, the Technology Innovation Centre (Makerspace@UM) convened its Associate Members Meeting, bringing together appointed representatives from each faculty across Universiti Malaya to strengthen cross-disciplinary engagement and institutional collaboration. Officiated by the Director of Makerspace@UM, the session highlighted the centre's vision as a multidisciplinary hub for innovation, applied research, and academic-industry partnerships. The Director emphasized the critical role of Associate Members as faculty ambassadors who bridge their departments with Makerspace activities by promoting maker culture, integrating technological tools into academic programs, and fostering student participation. Each member is expected to initiate workshops, support research and final-year projects, and identify opportunities for collaborative innovation aligned with their faculty's goals. The meeting served as a platform for exchanging ideas, discussing shared challenges, and exploring new initiatives such as capacity building, project prototyping, transdisciplinary co-creation spaces, and leveraging Makerspace resources for community engagement. This initiative underscores Makerspace@UM's commitment to cultivating a university-wide ecosystem that empowers creativity, experimentation, and impactful innovation. The Associate Members Meeting marks a key step towards enhancing connectivity, resource sharing, and sustainable innovation practices within Universiti Malaya's academic environment.

“Empowering Collaboration for Creative Impact.”

PROGRAM MALAYSIA MAKERS MEET (MMM) 2025



On May 29th, 2025, Universiti Malaya hosted Malaysia Makers Meet 2025 (MMM 2025), bringing together 100 participants representing educators, industry leaders, policymakers, and makers from across the nation. Centered on the theme “Empowering the Next Generation of Makers & Innovators through Makers Education,” the event aimed to foster collaboration and inspire new ideas to advance the maker movement in Malaysia.

The program featured keynote addresses and topical presentations covering key issues such as nurturing maker mindsets in schools, promoting cross-sector partnerships, and leveraging digital platforms to support maker communities. Two dynamic panel discussions provided in-depth exploration of challenges and opportunities in integrating makers education with national STEM-RBT initiatives.

Participants also engaged with poster exhibitions and interactive tours, offering hands-on experiences with innovative projects and technologies. Networking sessions facilitated meaningful connections among attendees, encouraging ongoing collaboration and knowledge exchange.

Overall, MMM 2025 succeeded in positioning makers education as a vital driver of creativity, innovation, and educational transformation—laying a strong foundation for Malaysia’s future as a leader in the global maker ecosystem.

“Igniting Creativity: Shaping Malaysia’s Future Makers & Innovators.”

SIMULTANEOUS WORKSHOPS WITH (TENBY SCHOOLS SETIA ECO GARDENS)

On May 29th, 2025, Technology Innovation Centre (Makerspace@UM) in collaboration with STEM 4 ALL Makerspace hosted a series of simultaneous workshops for 100 students and 8 teachers from Tenby Schools Setia Eco Gardens. Held from 10:00 a.m. to 1:00 p.m., the program featured seven hands-on sessions designed to introduce participants to key areas of STEM and maker-based learning. The workshops included Introduction to 3D Design & Modelling, Laser Cutting, Arduino Projects, Soldering Experience, Sound Recorder, Drone Coding & Piloting, and Augmented Reality.



Participants engaged in practical activities across different workstations within Technology Innovation Centre (Makerspace@UM), gaining exposure to real tools and technologies in a guided, supportive environment. Each session was led by expert trainers who provided instruction and facilitated interactive, problem-solving experiences. Students explored creativity, innovation, and technical skills while teachers observed how maker-based learning can be integrated into classroom practice. This initiative aimed to inspire interest in STEM fields and foster future-ready skills among school students through experiential learning. It also marked a meaningful collaboration between the university and school community, reinforcing the role of Technology Innovation Centre (Makerspace@UM) as a dynamic platform for STEM outreach and educational engagement.

“Hands-On Innovation: Empowering Young Makers Through STEM.”





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