



# Industry, Innovation and Infrastructure

**Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation.**



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## Universiti Malaya's Commitment to Industry, Innovation, and Infrastructure

Universiti Malaya (UM) remains at the forefront of advancing Sustainable Development Goal 9 (SDG 9), which focuses on building resilient infrastructure, promoting inclusive and sustainable industrialisation, and fostering innovation. The initiatives of 2023 are rooted in the university's strategic plans, such as the UM Transformation Plan 2021-2030 and the UM Master Plan 2050. These plans underline UM's commitment to integrating research, innovation, and industrial partnerships to address global challenges while fostering economic development at both national and global levels.

UM's dedication to research and innovation has consistently driven economic growth and sustainable development. In 2023, the university's research centers, including the Centre of Printable Electronics (CPE), Nanotechnology and Catalysis Research Centre (NANOCAT), and the Faculty of Medicine's Medicinal Mushroom Research Group, made notable advancements in translating research into marketable products and solutions. Central to these efforts is the role of spin-off companies, which have translated academic research into commercial ventures that contribute to economic development while addressing critical societal challenges.

## JPT-KPT-Industry Roundtable Discussion (JKIRD) 2023

One of the standout initiatives of 2023 was the JPT-KPT-Industry Roundtable Discussion (JKIRD) 2023, held on 14 November at the Putrajaya International Convention Center (PICC). This event represented a significant milestone in the university's effort to synchronise academia and industry for the betterment of future talents. Organised by the Ministry of Higher Education (MOHE), the roundtable brought together academia, policymakers, and industry leaders under the theme *Academia x Industry Synchronisation: Ensuring Future-Ready Talents*. With industry rapidly evolving, the need to equip students with the skills necessary to navigate a digitalised and technology-driven world has never been more critical. This roundtable sought to tackle the existing gap between university education and industry demands, aiming to bridge this gap by ensuring that graduates emerge from their academic journeys ready to contribute meaningfully to Malaysia's industrial growth.

At the roundtable, stakeholders recognised the urgency of revising academic curricula to align with the fast-paced changes in the industry. From the discussions, it was clear that industries are looking for graduates with not only theoretical knowledge but also practical, real-world experience. The conversation revolved around the pressing need for collaborative efforts between universities and industries, specifically in designing more inclusive curricula that integrate industry-specific skills, such as digital marketing, data science, green technology, and AI development. Moreover, participants highlighted the importance of hands-on training, such as internships and industrial placements, as essential to making students future-ready. Universities, such as Universiti Malaya, were encouraged to offer more opportunities for students to engage with industries during their studies to better prepare them for the job market.

Throughout the event, there was also a strong emphasis on research and innovation, particularly on how academic research can fuel industrial innovation. Industry leaders advocated for closer collaborations with universities to ensure that research projects address practical, real-world challenges. Collaborative research efforts were identified as key to driving innovation in Malaysia, with the potential to unlock new economic opportunities, address environmental issues, and support Malaysia's industrialisation goals. Stakeholders agreed that while fundamental research remains essential, there is a growing need for applied research that directly contributes to industry advancements.

UM, with its leading research centers and state-of-the-art facilities, was recognised as a crucial player in fostering such collaborations. Research centers like CPE and NANOCAT continue to drive forward research that aligns with national priorities in sustainability and industrial development. Participants highlighted UM's spin-off companies as successful examples of how academic research can translate into impactful commercial ventures. These companies are not only contributing to the economy but are also addressing societal challenges in areas like environmental sustainability, healthcare, and green technology.

Another critical discussion point during JKIRD 2023 was the development of soft skills among university students. Industry leaders voiced the importance of non-technical skills, such as critical thinking, problem-solving, communication, and adaptability, which are vital for graduates entering the workforce. While technical proficiency is necessary, it was noted that the fast-changing nature of today's industries demands agile thinkers who can navigate complex environments and be lifelong learners. To address this, universities were urged to incorporate more holistic approaches to education that focus on both technical and soft skill development.





## UM-Clarus Coffee Klatch 2023

Universiti Malaya reaffirmed its commitment to Sustainable Development Goal 9 (SDG 9) by hosting the UM-Clarus Coffee Klatch 2023 on 26 October 2023 at the Wyndham Grand Bangsar, Kuala Lumpur. This event aimed to equip UM researchers with essential skills for effective communication with industry partners, crucial for fostering sustainable industrialisation and innovation. By facilitating these workshops, UM sought to strengthen the connection between academia and industry, promoting collaborations that advance both economic growth and research.

The event was interactive and educational, allowing UM researchers to enhance their presentation skills when engaging with industry professionals. Through practical exercises and real-time feedback, participants learned to tailor their presentations to meet industry expectations, improving their ability to communicate projects and findings while positioning themselves as key players in industry-research partnerships.

A unique aspect of the Coffee Klatch was its informal format. The relaxed atmosphere encouraged open discussions, enabling researchers to ask questions and share thoughts freely. This approach fostered mutual learning, allowing researchers and industry representatives to exchange ideas and gain deeper insights into aligning academic research with industrial needs.

The collaboration with Clarus Consulting, an agency renowned for its expertise in industry collaboration and consultancy, provided researchers with valuable insights on navigating industry expectations. Clarus offered practical advice on developing meaningful engagements with industry partners, emphasising long-term collaborations that can lead to successful projects and innovations. Their involvement also introduced fresh perspectives on current industry trends and how researchers could position their work to meet market demands.



**Above:** Poster for “UM-Clarus Coffee Klatch 2023” (Source: UM Industry Liaison Office)

**Below:** Participants engage in group discussions



Several key themes emerged during the event, notably the importance of building trust-based relationships with industry through mutual benefit and clear communication. Clarus Consulting stressed that successful collaborations require ongoing engagement, transparency, and alignment of goals. For UM researchers, this was a critical takeaway, encouraging them to think beyond immediate project outcomes and consider how their research could create lasting value for both academia and industry.



Another major focus of the Coffee Klatch was understanding industry expectations for collaborative projects. Clarus representatives emphasised the need for researchers to communicate not only the scientific merit of their work but also its potential economic and societal impacts. This perspective shift was vital in helping researchers recognise the broader implications of their work and its contributions to national and global development.

The event also addressed potential challenges researchers may face in industry collaborations, such as differing timelines, objectives, and resource constraints. Clarus provided practical advice on managing these challenges, highlighting the importance of adaptability and open communication. Researchers were encouraged to remain flexible and proactive in addressing issues that may arise, ensuring both parties stay committed to shared goals.

One of the event's most valuable aspects was the networking opportunities it provided. UM researchers connected with industry representatives and explored potential collaborations. These interactions were seen as essential for bridging the gap between academia and industry, fostering partnerships that could lead to joint projects, funding opportunities, and innovation-driven initiatives. Researchers left with a deeper understanding of industry engagement and how their work could contribute to the broader industrial ecosystem.

The UM-Clarus Coffee Klatch 2023 was not only a training opportunity for researchers but also a testament to Universiti Malaya's commitment to supporting SDG 9 by fostering innovation and industrial collaboration. The event emphasised the importance of knowledge transfer between academia and industry as a key driver of sustainable industrial growth. By equipping researchers with the tools to engage with industry, UM ensures that its academic outputs have real-world applications, contributing to Malaysia's industrial development and addressing global challenges.

Universiti Malaya's partnership with Clarus Consulting highlighted its strategic focus on enhancing researchers' capabilities in industry engagement. This collaboration served as a model for how universities can work with consulting agencies to prepare their academic communities for successful industry interactions. The insights gained from Clarus helped researchers understand industry expectations and provided practical solutions to common challenges faced in collaborations.

In conclusion, the UM-Clarus Coffee Klatch 2023 was a resounding success, reinforcing Universiti Malaya's commitment to SDG 9 through the promotion of innovation, industry partnerships, and infrastructure development. By equipping researchers with the skills to communicate effectively with industry partners, the university plays a vital role in fostering sustainable industrialisation in Malaysia. The Coffee Klatch also underscored the significance of industry-academia collaboration in driving economic growth, innovation, and societal development.

**Below:** Group photo during "UM-Clarus Coffee Klatch 2023"



## CEO@Faculty Programme 2023 Sharing Session

Universiti Malaya hosted the CEO@Faculty Programme 2023 Sharing Session on 24 August. The session featured three UM staff members who worked with leading companies, UEM Group and Keysight Technologies, as part of the CEO@Faculty Programme. This collaboration aimed to provide staff with valuable industry experience, bridging academic expertise with practical industry needs.

The CEO@Faculty Programme immersed university academics and researchers in leading companies, enhancing their understanding of business development, operations, and culture. Through six months of hands-on experience with seasoned professionals, UM staff gained essential industry insights and skills, preparing them to build stronger, impactful partnerships between academia and industry.

During the CEO@Faculty Programme 2023 Sharing Session on 24 August, three UM staff members from the Faculty of Science, Faculty of Engineering, and Faculty of Education shared their experiences from placements with UEM Group and Keysight Technologies. Each speaker highlighted how the program enriched their understanding of the corporate landscape and enhanced their ability to translate academic theory into practical applications - key for advancing UM's mission to support sustainable industrialisation and innovation.

Dr. Syed Bahari Ramadan from the Faculty of Science discussed his experience with UEM Group, focusing on business development within a multinational company and the balance of innovation with operational efficiency in infrastructure projects. Similarly, Assoc. Prof. Ir. Dr. Hazlee Azil Illias from Engineering shared insights into large-scale project management and the role of industry-academia collaboration in sustainable infrastructure. Dr. Mohd Shahril Nizam from Education, who worked with Keysight Technologies, highlighted his exposure to technology development, product innovation, and business strategy.



**Above:** Poster for the “CEO@Faculty Programme Sharing Session”

**Below:** Speakers during the sharing session



A central theme of the session was understanding industry expectations and culture, with speakers emphasising how these insights better prepare UM students for the workforce. The program enabled UM staff to work on high-impact projects, offering hands-on experience in tackling challenges and driving innovation.

The CEO@Faculty Programme is a key part of UM's strategy to foster academic-industry collaboration, preparing its researchers to meet industry needs and enhance Malaysia's competitiveness. This six-month immersion provided participants with practical experiences to enrich UM's academic programs and support SDG 9. UM's continued support for such initiatives underscores its commitment to sustainable development, innovation, and leadership in industry-research collaboration.



## UM Spin-off Companies

UM's dedication to research and innovation has consistently driven economic growth and sustainable development. In 2023, the university's research centers, including the Centre of Printable Electronics (CPE), Nanotechnology and Catalysis Research Centre (NANOCAT), and the Faculty of Medicine's Medicinal Mushroom Research Group, made notable advancements in translating research into marketable products and solutions. Central to these efforts is the role of spin-off companies, which have translated academic research into commercial ventures that contribute to economic development while addressing critical societal challenges.



Source: [Bioapps Sdn. Bhd.](#)



Source: [Biosight Sdn. Bhd.](#)



Source: [Oleopharma Sdn. Bhd.](#)



Source: [Flexilicate Sdn. Bhd.](#)

## Uniresearch & Innovation Sdn. Bhd.

Uniresearch & Innovation Sdn. Bhd. has made groundbreaking advancements in food safety with the development of an electrochemical-based foodborne bacteria detection device. This innovative device represents a significant advancement in the food industry, providing rapid and accurate detection of harmful bacteria that can cause foodborne illnesses. The device's ability to swiftly identify contaminants reduces the risks associated with consuming tainted food products, ensuring that the food reaching consumers is both safe and of the highest quality. By integrating this technology into food production processes, Uniresearch & Innovation has not only addressed a critical need but has also set new standards in food safety and quality control.

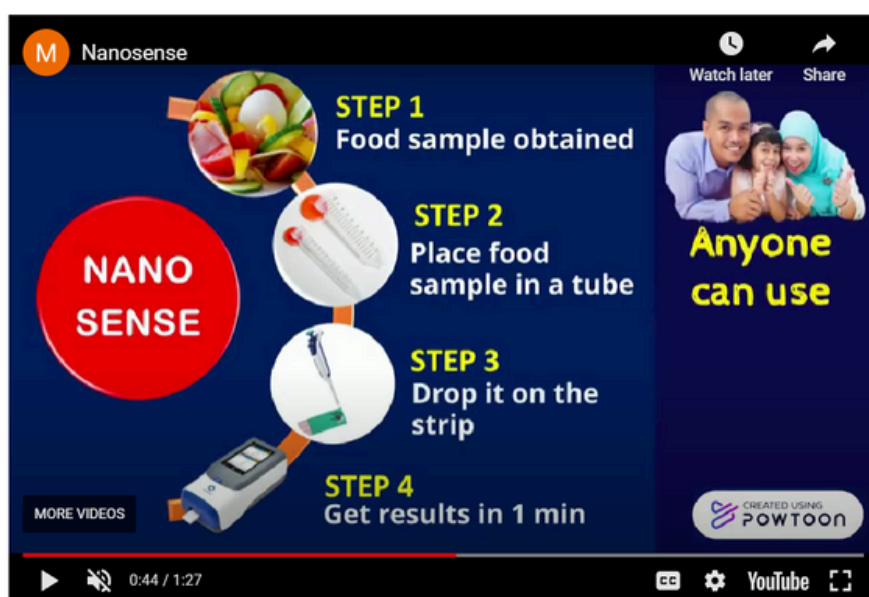
The introduction of this device marks a departure from traditional testing methods, which are often time-consuming and costly. Uniresearch & Innovation's technology streamlines the detection process, making it more efficient and cost-effective, thus appealing to food manufacturers on a global scale.

The company's focus on innovation and quality has resulted in strong partnerships with key stakeholders, including food manufacturers, regulatory agencies, and research institutions. These collaborations are crucial for ensuring that the device meets stringent industry standards and remains adaptable to new challenges in food safety. By protecting its cutting-edge technology with patents, Uniresearch & Innovation has reinforced its position as a leader in the market, securing a competitive edge.

Beyond its business achievements, Uniresearch & Innovation is deeply committed to community engagement and public health. The company actively works with local communities, particularly small-scale food producers, to provide training on implementing food safety measures. These initiatives are vital in enhancing food security at the grassroots level, ensuring that even the smallest producers can meet safety standards and contribute to the broader public health goals. Through these efforts, Uniresearch & Innovation not only drives innovation in the food industry but also fosters a safer, healthier community.

For more info:

<https://www.uniresearchandinnovation.com/>



**Above:** Watch the full video about Nanosense - an electrochemical-based foodborne bacteria detection device (Source: Uniresearch & Innovation Sdn. Bhd.)



## Bioapps Sdn. Bhd.

Bioapps Sdn. Bhd. is a leading company in the field of biomedical engineering, known for its pioneering work in the digital manufacturing of advanced healthcare solutions. The company specialises in the creation of prosthetics and orthopedic devices, employing cutting-edge digital manufacturing techniques to produce custom-fitted devices that are tailored to the unique needs of each patient. This personalised approach not only ensures a more comfortable and effective fit, significantly improving the quality of life for users, but also makes these essential medical devices more affordable and accessible. By leveraging the latest advancements in digital manufacturing, Bioapps is able to streamline production processes, reducing costs without compromising on the quality of the products.

The company's commitment to innovation and quality has earned its products recognition not only within Malaysia but also on an international scale, where they are lauded for their effectiveness and ingenuity. Bioapps's dedication to pushing the boundaries of what is possible in biomedical engineering has positioned it as a leader in the field, with a reputation for delivering high-quality, innovative solutions that address the complex needs of patients.

Beyond its technological achievements, Bioapps Sdn. Bhd. is also deeply committed to social responsibility. The company actively contributes to the community by offering free workshops and consultations for individuals with mobility impairments. These initiatives provide valuable support and resources to those who may not have access to specialised care, significantly enhancing their quality of life. Through these efforts, Bioapps demonstrates a holistic approach to healthcare, combining cutting-edge technology with a strong commitment to improving the lives of people in need. This dual focus on innovation and community service underscores the company's mission to make a positive impact both in the healthcare industry and in the broader society.

The success of Bioapps is further bolstered by its strategic collaborations with hospitals, rehabilitation centers, and research institutions. These partnerships are instrumental in the continuous refinement of their products, ensuring they meet and exceed the highest medical standards.

For more info: <https://bioapps.com.my/>



### PRODUCTION OF PROSTHETIC & ORTHOTIC DEVICES



**Above:** Example of products and services (Source: *Bioapps Sdn. Bhd.*)

## Biosight Sdn. Bhd.

Biosight Sdn. Bhd. has revolutionised the management of scoliosis through the development of its innovative IoT Scoliosis Assessment System. This digital monitoring device is a significant advancement in the medical field, offering real-time, precise data that enables physicians to monitor and manage scoliosis more effectively. Unlike traditional methods, which often require manual adjustments and frequent patient visits, Biosight's system allows for continuous, remote monitoring. This not only enhances the accuracy of the diagnosis but also improves patient outcomes by enabling timely interventions. The technology is particularly beneficial for young patients who require ongoing monitoring as they grow, providing a less invasive and more accessible solution for scoliosis management.

The success of the IoT Scoliosis Assessment System is underpinned by Biosight's strategic partnerships with orthopedic clinics, hospitals, and academic institutions. These collaborations have been crucial in integrating the technology into clinical practice, ensuring that it meets the rigorous standards required in medical care.

Through these partnerships, Biosight continues to refine and expand the capabilities of its system, making it adaptable to other areas of medical diagnostics. The company's commitment to innovation is further demonstrated by the multiple patents it holds, which protect its cutting-edge technology and maintain its competitive edge in the healthcare market.

Biosight's dedication to improving healthcare goes beyond technology development; the company is also deeply involved in social responsibility initiatives. Recognising the disparities in healthcare access, especially in underfunded regions, Biosight donates its scoliosis assessment devices to clinics that may not have the resources to afford such advanced technology. Additionally, the company offers training sessions for healthcare professionals, ensuring that they are well-equipped to use the technology to its fullest potential. These initiatives not only broaden access to high-quality scoliosis care but also contribute to raising the overall standard of healthcare in underserved communities. Through its innovative solutions and commitment to social responsibility, Biosight Sdn. Bhd. continues to make a significant impact in the field of medical diagnostics and patient care.

For more info: <https://biosight.net/>

## The Solution



**Above:** Example of product (Source: Biosight Sdn. Bhd.)



## Flexilicate Sdn. Bhd.

Flexilicate Sdn. Bhd. leads innovation in the medical and telecommunications sectors, specialising in advanced capillary tubes and blood collection tubes for medical use, as well as multi-bore optical fibers for high-speed data transmission. In medical diagnostics, Flexilicate's precision-engineered capillary tubes enable accurate blood collection and analysis. In telecommunications, their multi-bore optical fibers support high-capacity data superhighways, meeting the global demand for faster, more reliable internet connections and positioning Flexilicate as a key player in connectivity.

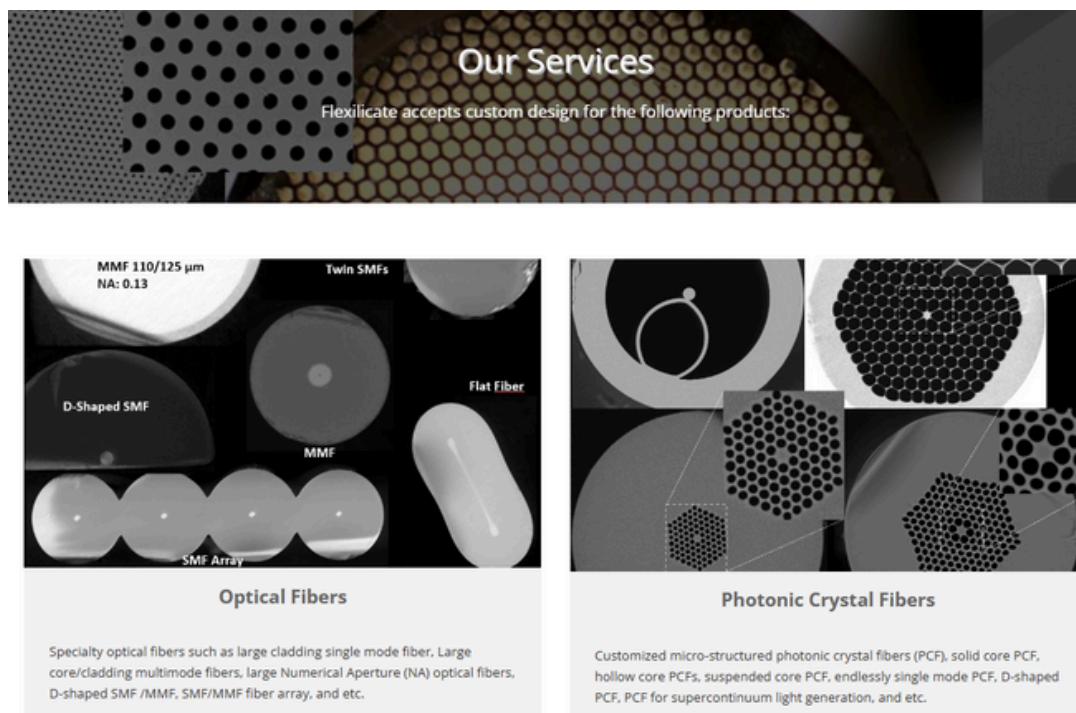
Flexilicate has also contributed to scientific research with micro-capillary arrays used in particle sorting and imaging, essential for biotechnology and nanotechnology research. Widely recognised for quality and innovation, the company holds multiple patents, solidifying its leadership in these competitive markets.

Flexilicate's success is driven by collaborations with research institutions and industry leaders, which have advanced its technology and refined products to meet specific industry needs. In the medical sector, Flexilicate partners with hospitals and labs to ensure its capillary tubes meet stringent standards for reliable diagnostics. In telecommunications, the company works with top tech firms to enhance optical fiber performance, keeping it at the forefront of data transmission.

Committed to education and community engagement, Flexilicate offers outreach programs, including hands-on fiber optics workshops, to inspire future engineers and scientists. By investing in education, Flexilicate fosters innovation and ensures a pipeline of skilled professionals for tomorrow's tech challenges, strengthening its role in both innovation and social responsibility.

For more info: <https://flexilicate.com/>

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**Above:** Example of services by Flexilicate Sdn. Bhd. (Source: *Flexilicate Sdn. Bhd.*)

## Fylix Sdn. Bhd.

Fylix Sdn. Bhd. is at the forefront of innovation in artificial intelligence (AI), specialising in the development of sophisticated chatbots that significantly enhance customer service and user interaction across a variety of sectors. Leveraging advanced machine learning algorithms, Fylix has created AI chatbots that are capable of providing efficient, personalised customer support. These chatbots are designed to understand and respond to user queries with a high degree of accuracy, ensuring that interactions are not only fast and effective but also tailored to the individual needs of users. This capability leads to higher user satisfaction and helps businesses optimise their operational efficiency by automating routine customer service tasks, allowing human agents to focus on more complex issues.

Fylix's success is bolstered by strategic partnerships with leading technology companies and service providers. These collaborations have been crucial in refining their AI chatbot technology, ensuring that it remains at the cutting edge of the industry. By integrating their technology into numerous platforms, Fylix has been able to expand its market presence and demonstrate the versatility of its solutions. The company is also looking to the future, with plans to apply its AI expertise to the healthcare and education sectors - two areas where intelligent automation could have a transformative impact. For example, in healthcare, AI chatbots could assist with patient inquiries, appointment scheduling, and even preliminary diagnosis, while in education, they could serve as personalised tutors or administrative assistants, significantly enhancing the learning experience.

Fylix's commitment to innovation is reflected in the patents that protect their cutting-edge technology, securing their leadership position in the rapidly evolving AI industry. However, the company's vision extends beyond commercial success. Fylix is deeply invested in community development, recognising the importance of democratising access to advanced technology. To this end, the company offers free workshops on AI literacy, aimed at empowering small businesses and non-profits to leverage AI in their operations. These workshops are designed to be accessible, breaking down complex AI concepts into practical knowledge that participants can apply in their own organisations. By doing so, Fylix is helping to bridge the digital divide, ensuring that even small enterprises can benefit from the efficiencies and innovations that AI offers. Through these initiatives, Fylix Sdn. Bhd. is not only leading in AI technology but also playing a key role in fostering a more inclusive and technologically advanced society.

For more info: <https://fylix.my/>

### AI-POWERED CHATBOT

# KRISPI

We partner with the world's leading companies to design and develop conversational experiences. Let us help you connect your brand with customers where they communicate today. Chat or voice.

**Above:** AI-powered chatbot (Source: [Fylix Sdn. Bhd.](https://fylix.my/))

## Oleofarma Sdn. Bhd.

Oleofarma Sdn. Bhd. is a leading innovator in the production of natural-based creams tailored for pharmaceutical and cosmetic applications. The company stands out in the industry due to its unwavering commitment to environmental stewardship and sustainability. Oleofarma's products are meticulously crafted using organic and sustainably sourced ingredients, ensuring that each product not only delivers exceptional results but also aligns with the growing consumer demand for eco-friendly and ethically produced skincare solutions. Their natural-based creams are designed to cater to a wide range of skincare needs, from therapeutic treatments to daily cosmetic use, making them a popular choice in both the pharmaceutical and skincare markets.

Collaboration is at the heart of Oleofarma's operational strategy. The company works closely with dermatologists, cosmetic brands, and research institutions to ensure that every product meets the highest safety and efficacy standards. These collaborations allow Oleofarma to stay at the forefront of skincare innovation, continuously improving their formulations to meet the evolving needs of consumers. The company's dedication to quality and innovation is reflected in the patents that protect their product formulations, ensuring that Oleofarma maintains a competitive edge in a crowded market. This protection also allows them to invest further in research and development, continually pushing the boundaries of what natural-based skincare can achieve.

Beyond its business success, Oleofarma is deeply invested in supporting local communities, particularly in rural areas. The company sources many of its raw materials from local farmers, forging partnerships that promote sustainable agricultural practices. This initiative not only ensures a steady supply of high-quality ingredients for Oleofarma's products but also provides significant economic opportunities for farmers. By choosing to partner with local communities, Oleofarma helps to foster economic growth in rural areas while promoting environmentally sustainable farming practices. This approach aligns the company's business operations with broader social and environmental objectives, demonstrating Oleofarma's commitment to making a positive impact on both the environment and the communities in which it operates. Through these efforts, Oleofarma Sdn. Bhd. not only delivers high-quality skincare products but also contributes to a more sustainable and equitable world.

For more info:

- <https://www.facebook.com/oleopharma>
- <https://umcie.um.edu.my/success-stories>



**Above:** Example of services by Oleofarma Sdn. Bhd. (Source: [Oleofarma Sdn. Bhd.](#))



## UMCH Technology Sdn. Bhd.

UMCH Technology Sdn. Bhd. is a prominent player in the health and wellness industry, with a particular focus on integrating cutting-edge technology into personal health management. The company has developed an advanced personal health and wellness monitoring system that connects seamlessly with mobile devices, allowing users to access real-time health data. This system is designed to empower individuals to take proactive control of their health by providing actionable insights and personalised recommendations based on the collected data. Users can monitor various health metrics such as heart rate, activity levels, sleep patterns, and more, making it easier to maintain a healthy lifestyle and manage potential health issues before they escalate.

UMCH Technology has forged strong partnerships with healthcare providers, fitness centers, and wellness experts to ensure that their technology is not only widely accessible but also continually evolving. These collaborations are crucial as they enable the company to integrate predictive analytics and personalised health recommendations into the system, enhancing its utility and effectiveness. As a result, users receive more than just raw data - they get tailored advice that can significantly improve their overall well-being. The company's innovative approach is backed by several patents, securing their position as a leader in the health and wellness technology market.

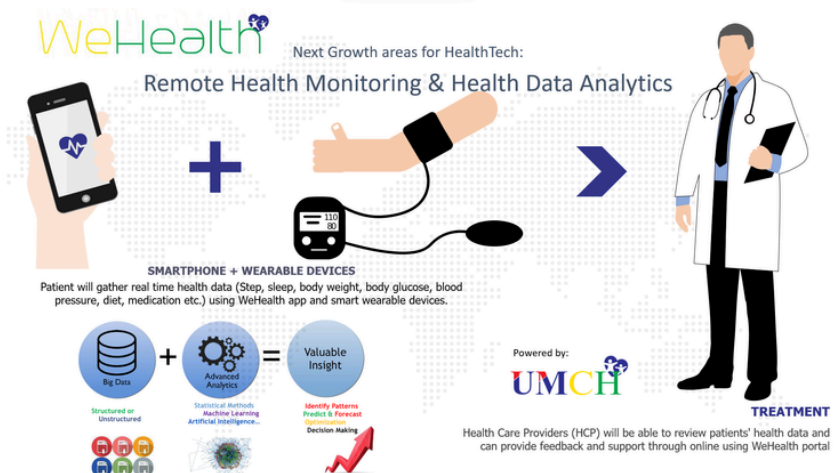
Beyond their technological achievements, UMCH Technology is deeply committed to social responsibility. The company actively works to bridge the health equity gap by providing free health monitoring devices to low-income individuals who might otherwise lack access to such technologies.

Additionally, UMCH Technology conducts workshops and seminars on healthy living, aiming to educate the public on the importance of proactive health management. These efforts demonstrate the company's dedication not just to technological innovation, but also to promoting public health and well-being on a broader scale.

Through these initiatives, UMCH Technology is making a significant impact in the health sector, contributing to the overall improvement of community health standards.

For more info: <https://umchtech.com/>

**Below:** Example of services by UMCH Technology Sdn. Bhd. (Source: UMCH Technology Sdn. Bhd.)



## Xcess Pressure Sdn. Bhd.

Xcess Pressure Sdn. Bhd. is at the cutting edge of renewable energy innovation with its groundbreaking in-pipe hydro power generator technology. This innovative system captures energy from the flow of water through pipelines, converting it into electricity. Unlike traditional hydroelectric power stations that require extensive infrastructure and significant environmental impact, Xcess Pressure's solution is designed to be integrated seamlessly into existing water infrastructure. This makes it an incredibly cost-effective and sustainable alternative, suitable for urban areas where space and resources are limited. By harnessing the energy from everyday water usage, Xcess Pressure is revolutionising how renewable energy can be generated and utilised, contributing to the reduction of reliance on fossil fuels and helping to mitigate climate change.

In addition to its technological innovations, Xcess Pressure is deeply committed to fostering environmental awareness and education within the community. The company engages with local schools and educational institutions to provide training and workshops on renewable energy and sustainability. These initiatives are aimed at empowering the next generation with the knowledge and tools to continue the fight against climate change, fostering a culture of sustainability from a young age. Through these efforts, Xcess Pressure is not only making a significant impact on the renewable energy sector but also contributing to the broader societal shift towards environmental stewardship and sustainability.

For more info: <https://xcesspressure.com/>

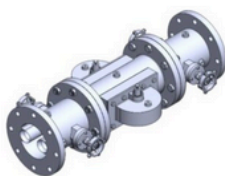
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Xcess Pressure collaborates extensively with water utilities and municipal governments to implement its technology in various settings. These partnerships are critical for tailoring their solutions to the specific needs of different regions and ensuring that their technology delivers maximum impact in terms of energy savings and carbon emission reductions. The company's pioneering approach is safeguarded by a strong portfolio of patents, reinforcing its position as a leader in the renewable energy market and enabling further advancements in sustainable technology.

**Below:** Example of products by Xcess Pressure Sdn. Bhd.  
(Source: [Xcess Pressure Sdn. Bhd.](https://xcesspressure.com/))

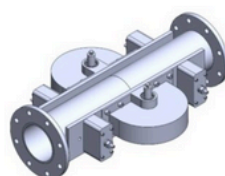
## Our Products

P20



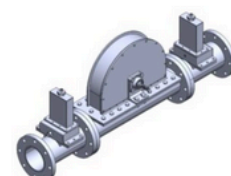
P20 model designed to tap excess pressure in a pipe line at 20% of the full water pressure capacities.

P40



P40 model designed to tap excess pressure in a pipe line at 40% of the full water pressure capacities.

P50



P50 model designed to tap excess pressure in a pipe line at 50% of the full water pressure capacities.

## Van Coating Sdn. Bhd.

Van Coating Sdn. Bhd. is at the forefront of innovation in the solar energy sector, specialising in the development of advanced coating agents designed to enhance the efficiency and durability of solar panels. These coatings play a crucial role in protecting solar panels from environmental factors such as dust, moisture, and UV radiation, which can degrade their performance over time. By extending the lifespan and improving the efficiency of solar panels, Van Coating's products contribute significantly to the broader adoption of solar energy, supporting the global shift towards renewable energy sources. The company's innovative solutions are pivotal in making solar energy a more viable and cost-effective option for both residential and commercial applications.

In its pursuit of excellence, Van Coating collaborates with leading solar energy companies and research institutions. These partnerships are essential for refining their coatings, exploring new applications, and staying at the cutting edge of technology in the rapidly evolving solar energy market. The company's products are protected by a robust portfolio of patents, ensuring that Van Coating maintains a competitive edge and continues to lead in innovation within the industry.

Van Coating's commitment to sustainability is deeply ingrained in both their business practices and corporate ethos. The company prioritises the use of environmentally friendly materials in the formulation of their coatings, ensuring that their products are not only effective but also sustainable. Moreover, Van Coating actively supports renewable energy initiatives in underserved communities, contributing to the democratisation of clean energy access. Through these efforts, Van Coating is making a significant positive impact on the environment while also promoting social equity, aligning their business objectives with broader global sustainability goals.

For more info:  
<https://nanogard.website2.me/contact>

*Below: Example of products by Van Coating  
(Source: Van Coating Sdn. Bhd.)*

**NANOGARD™ SC202-75**

Size: 200mL  
Features: Rain-repellent, Self-cleaning, Scratch-resistance  
Durability: 1 year  
Shelf-life: 1 year

Approved by

Original price: RM 31.99

**PROMOTION PRICE : RM 24.99**



## Essenti Nutrien Sdn. Bhd.

Essenti Nutrien Sdn. Bhd. has established itself as a key player in the health supplement industry, with a strong focus on products derived from the Tiger Milk Mushroom, a fungus revered for its medicinal properties in traditional medicine. The company's supplements are specifically formulated to boost the immune system and improve respiratory health, offering consumers a natural alternative to synthetic drugs. By leveraging the benefits of the Tiger Milk Mushroom, Essenti Nutrien provides a holistic approach to health that is both effective and safe, drawing from the rich heritage of traditional medicine while incorporating modern scientific advancements.

The company's success in the health supplement market is underpinned by its rigorous commitment to quality and innovation. Essenti Nutrien collaborates closely with leading researchers and healthcare professionals to ensure that their products meet the highest standards of efficacy and safety.

This collaboration extends to clinical trials and ongoing research to continuously improve their product offerings. The company's innovations are safeguarded by a robust portfolio of patents, which not only protects their intellectual property but also solidifies their competitive advantage in the rapidly growing health supplement industry.

Beyond their commercial endeavors, Essenti Nutrien is deeply committed to improving community health. The company has initiated several community outreach programs, including the distribution of free supplements to low-income individuals. These efforts are aimed at making health supplements accessible to those who may not otherwise afford them, thereby contributing to the overall well-being of the community. Additionally, Essenti Nutrien organises educational workshops that highlight the benefits of natural health products, empowering individuals with the knowledge to make informed decisions about their health. Through these initiatives, Essenti Nutrien is not only enhancing individual health outcomes but also fostering a broader understanding and appreciation of natural medicine in the community.

*Below: Product description by Essenti Nutrien Sdn. Bhd. (Source: [UM Research Carnival 2022](#))*

**Essenti Nutrien Sdn Bhd**

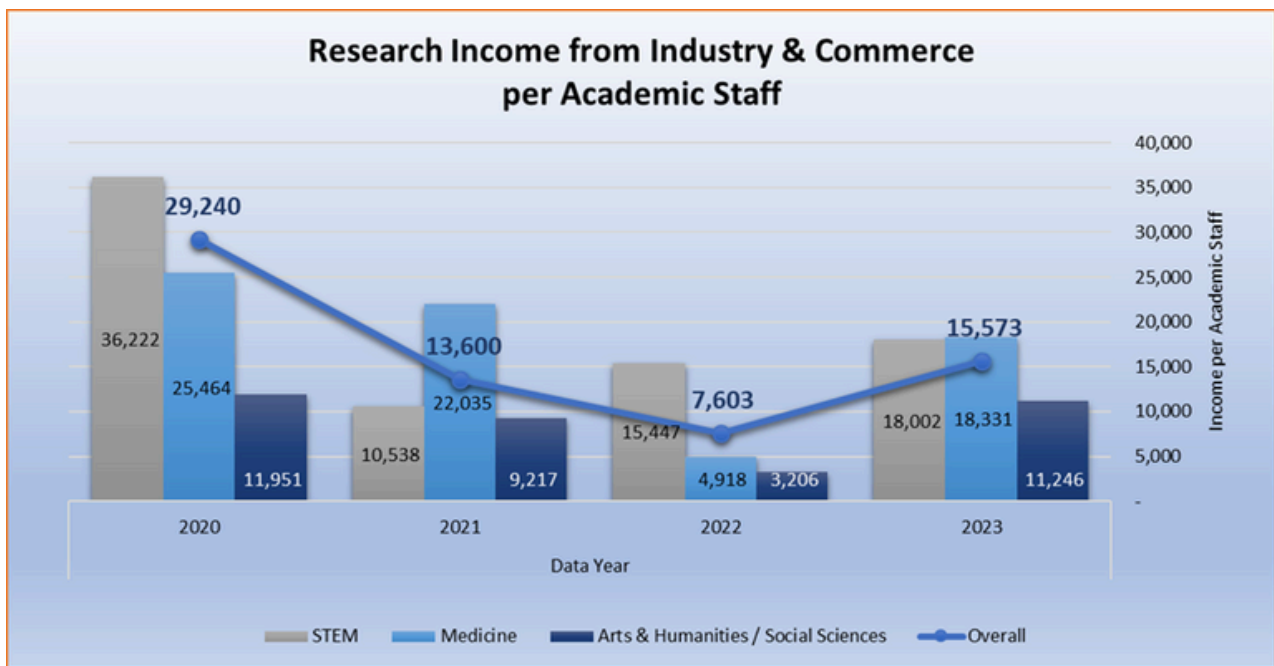
Essenti Nutrien Sdn Bhd is the pioneer producer of Tiger Milk mushroom (TMM)-extract, xLr. Tiger Milk Mushroom Extract (xLr) is the FIRST in the market with known bioactive compounds and bioactivities for medicinal use; and is the upgraded, enhanced version of the crude mushroom powder. With improved technology, the users can expect significant effects from xLr in its value-added form. xLr is produced with our patented technology known as Aqua Cool Extraction (Ace) Technology using only clean, pure water assisted with the quick drying and freezing technology that enables the bioactive compounds to be retained in fully functional form.

xLr Pressed Mushroom Powder

xLr Liquid Extract

UM RESEARCH CARNIVAL (UMRC 2022)

## Research Income from Industry and Commerce per Academic Staff



Universiti Malaya (UM) demonstrates its commitment to Sustainable Development Goal 9 (SDG 9) - Industry, Innovation, and Infrastructure - through its ability to generate substantial research income from industry and commerce. This indicator, also valued in the Times Higher Education World University Rankings, is adjusted for purchasing power parity (PPP) and measured per academic staff, showcasing UM's robust partnerships with industry across various fields. In 2020, UM achieved a peak of 29,240 income per academic staff, with significant contributions from STEM (36,222). Despite fluctuations, the increase to 15,573 per academic staff in 2023 highlights UM's dedication to fostering innovation, strengthening infrastructure, and advancing impactful research across STEM, Medicine, and the Arts, Humanities, and Social Sciences, thereby supporting sustainable industrial growth and innovation.

**Above:** Graph showing research income from industry and commerce per academic staff member across STEM, Medicine, and Arts & Humanities/Social Sciences, comparing data from 2020 to 2023 (Source: Research Management & Innovation)

