One defining feature of cancer is the rapid creation of abnormal cells that grow beyond their usual boundaries. Not all cancers can be prevented but there are things you can do to reduce your risk. Things like stopping smoking and keeping a healthy weight can reduce the risk of cancer. By making healthy changes now, you can make a difference to your health in the future.

**Showing Daily**

**Day 2 - 21 June 2022**

**Overview and introduction on MIMOS BERHAD**

MIMOS is Malaysia’s national Applied Research and Development Centre. As a strategic agency under the Ministry of Science, Technology And Innovation (MOSTI), MIMOS contributes to transforming Malaysia’s industry through patentable technology platforms, products and solutions. Over the past 12 years, it has filed more than 2,000 Intellectual Properties in various technology domains and across key socio-economic areas.

**Introducing 5G & AI Innovation Hub, the Future with MAXIS, MIMOS and Huawei**

The MIMOS Vaccine Management and Vaccination Certificate Ecosystem has made travelling for those vaccinated easier. The ecosystem consists of high-assurance systems that track and trace the vaccine supply chain, generate digital vaccination certificates and verify the authenticity of digital health certificates, with tamper-proof record-keeping and privacy protection.

**Vaccine Management and Certification Ecosystem**

The 5G and AI Innovation Hub was developed through a tripartite partnership between MIMOS, Maxis and Huawei Technologies Malaysia. Once it is fully operational, the hub will be a co-creation testbed for research and development (R&D) and an incubator for innovative solutions. It will allow businesses to access infrastructure and facilities enabled by advanced technologies.

**Throwing the Dice Over Cancer: Can I Change My Risk?**

One defining feature of cancer is the rapid creation of abnormal cells that grow beyond their usual boundaries. Not all cancers can be prevented but there are things you can do to reduce your risk. Things like stopping smoking and keeping a healthy weight can reduce the risk of cancer. By making healthy changes now, you can make a difference to your health in the future.

**Go to platform now**

After registration, you can log into our platform anytime with just your email address and watch on the platform. These videos will be available on demand until 03 July 2022.

**Go to YouTube Channel**
In 2018, Taiwan has implemented ‘Regulations Governing the Application or Use of Specific Medical Techniques or Examinations, or Medical Devices’ with the aim to develop stem cells for therapeutic purposes, meeting the clinical requirements and qualifications. Through the continuous efforts of regulatory agents, biotechnologists, medical scientists and practitioners, the hospitals of Taiwan have begun to implement cell therapy as one of the treatment modes to cure osteoarthritis, difficult wound, stroke and cancer, under strict regulatory control.

In this coming Malaysia Technology Expo Advanced Healthcare and Life Sciences webinar, cell manufacturing CDMO, cell therapy physicians, Australian stem cell authority, amniotic fluid stem cell Taiwan Godfather, etc. are brought under one roof to present us with the latest advancement on cell therapy and how their works introduce positive changes to human life from the perspectives of cell science.

22 June 2022 Highlights

Elevating Cancer Care: Taking Support To The Next Level

DAY 3, WEDNESDAY, 22 June 2022
(10.30 am (GMT+8) SG/MYT)

NCSM empowers and supports cancer patients and caregivers so that no one has to face cancer alone. Resources and Wellness Center, Cancer Information Service Nutritional Advice, Peer Support Group, Advanced Breast Cancer, and Psycho-Social Support for Children are all available. This session provides an in-depth look at the assistance and services available.

Accelerate Innovation and Build Inclusive Economies Now

DAY 3, WEDNESDAY, 22 June 2022 (11.30 am (GMT+8) SG/MYT)

The Malaysian Research Accelerator for Technology and Innovation (MRANTI) nurtures fresh ideas for the technology and innovation ecosystem - from start to finish. Their industry insights and cross-sector expertise will help you determine the next step in getting impactful results, regardless of your innovation focus or life-cycle stage. Journey with us in this session to guide you from ideation and applied research to prototyping and viability testing and finally to scaling up and commercialisation.
**After registration, you can log in to our platform anytime with just your email address and watch on the platform. These videos will be available on demand until 03 July 2022.**
24 June 2022 Highlights

How COVID-19 Has Revealed Vaccine Technology and Reroute Malaysia R&D on Vaccine Discovery

Day 5, Friday, 24 June 2022 (10.30 am (GMT+8) SG/MYT)
The COVID-19 event altered the course of vaccine science and technology. It demonstrates how quickly vaccine development can proceed when there is a true global emergency and sufficient resources, and that the process can be significantly accelerated without compromising safety. The COVID-19 response validated new vaccine manufacturing methods, such as using messenger RNA (mRNA). The Malaysian government has spent more than RM60 million on R&D programmes to produce its own Covid-19 vaccine, in an effort to reduce the country’s reliance on imported vaccines. Join this session to learn about the impact it has on Malaysia’s own vaccine R&D.

The Role of Institute for Public Health, National Institutes of Health in the COVID-19 pandemic

Day 5, Friday, 24 June 2022 (11.30 am (GMT+8) SG/MYT)
When the National Crisis Preparedness and Response Center was activated in January 2020, the National Institutes of Health (NIH) established a COVID-19 operation room at the facility level to address the daily increase in COVID-19 infection cases. The NIH COVID-19 operation room committee formed a workforce mobilisation team to create an effective and efficient mobilisation system to meet requests for human resource assistance within Ministry of Health (MOH) Malaysia facilities. Join this webinar to gain firsthand knowledge of the NIH’s role in this pandemic.

Results Announcement

Day 4, Thursday, 24 March 2022 (2.30 pm (GMT+8) SG/MYT)

After registration, you can log in to our platform anytime with just your email address and watch on the platform. These videos will be available on demand until 03 July 2022.
The study of data systems and processes is known as data science. Data science now focuses on data modelling to keep track of the ever-expanding data set. This is similar to our vaccination programme, where the registration count, vaccinees, and vaccine supply and demand are constantly changing. We created a model from the data to churn out information and gather actionable insights.

The vaccination programme began smoothly in February of last year. The first challenge in vaccine supply is determining how many vials of vaccine should be supplied to a specific state. The second question is what types of vaccine should be given to a specific PPV. The next step is to model and forecast the registration rate’s growth rate. Last but not least, how can the PPV capacity be optimised?

There are two main approaches.

Approach 1 is registration-driven, so if you anticipate x number of registrations one month from now, you should have x number of vials for a specific set of vaccines on hand and ready by then. Vaccine distribution and the opening of PPVs followed the expected registration rate. Such projections enabled the committee to estimate the growth rate and, from there, channel sufficient supply to the relevant state.

Approach 2 is PPV capacity-driven; this is a bottom-up approach in which you accumulate all of the numbers to determine the estimated daily doses that must be supplied to a specific state or state level. The challenge is that some states will minister the first dose faster than another state, and vice versa, so you must strike a balance and estimate correctly at the state level rather than the country level. The supply must ensure that everyone receives two doses within the stipulated time frame.

Obtaining PPVs may be difficult because we must estimate whether or not we have a sufficient supply of PPVs and enough people to go into the PPVs. The difficulty is that different PPVs will have varying capacities. We have not only the PPV setup constraints, but also the number of medical officers. From the start, the question of whether we have enough medical officers or manpower at those specific PPVs has been raised.

To ensure that everything is calculated as precisely as possible, we created a simulation tool powered by AI to estimate the number of vaccines arriving at the vaccine centre each day. Using Monte Carlo analysis and forecasting to track cluster growth and determine whether we have enough PPVs for that specific hotspot area.
The capacity to integrate and better knowledge, as well as creative thinking, critically analyse a problem and then have an abundance of thinking in one process that is extremely unique to each of us and each of our educational techniques. Creativity is the ability to create something unexpected, original, and one-of-a-kind. In curate values, innovation is the application of new ideas. Creativity and innovation are interrelated and close to each other.

The term STEM refers to four distinct areas that serve as a foundation for many innovative global industries. It combines science, technology, engineering, and mathematics. A true STEM should integrate the element of true Science, technology, engineering and math. For example, they should be using technology and mathematics to help in their science research project. This intentional integration is the key to defining the element of science and stem education.

Being a pioneer in championing and implementing STEM in 2012 and STEAM in 2016 education in Malaysia. In igniting children's interest in discovery, we are connecting their spaces. So S.P.A.C.E. carries a different meaning. S stands for self-discovery, P stands for path discovery, A stands for adventure discovery, C stands for change discovery and E stands for evolution discovery in this natural learning path.

Students can only learn to think, design, and solve problems if they are given the opportunity to practise. However, this means that the student will struggle, will pursue the end goal, and may receive incorrect answers. Many teachers see this as a failure, but with our own STEM or STEAM mindset, we can see them for what they truly are. Our curriculum is designed using ADST, which stands for apply, design, skills, and technology. Inquire, ignite, inspire, ideate, innovate, and invent are the six I's. This fosters our children's natural curiosity, inventiveness, and desire to create while also working in a very practical manner.

Last but not least we include engineering discovery in our syllabus. The engineering design process is a formal step-by-step guide that aligns with the real-life work of engineers. Introducing engineering to children at an early stage develops an understanding of the world around them and how to improve it. It helps children gain awareness and interest in STEAM learning halfway along with their discovery of life. Our education is to inspire children to build on their desired answers by exploring more engineering contexts.

STEM and STEAM education motivates students to adapt a skill in order to come up with a better solution, and help students understand the fundamental laws of nature. It provides students with the necessary tools and knowledge to solve problems in novel and creative ways.
According to the 2019 National Health and Morbidity Survey, two-thirds of Malaysians suffer from one of three non-communicable diseases (NCDs), namely diabetes mellitus, hypertension, or hypercholesteremia. Lifestyle interventions come in a variety of forms but they primarily provide offline services such as our clinic, pharmacists, and pharma centres. Practitioners are more likely to cause a lot of cost wastage by prescribing unnecessary and ineffective supplements or products to patients.

Some researchers developed myPlan 2.0, which includes action and coping planning to let the user know what obstacles to overcome. It is hoped that by combining action, coping, and self-monitoring, the user’s physical activities will improve and sedentary behaviour will be reduced. We need one wearable device or smart band to allow our users to obtain accurate biometrics data directly from the body rather than relying solely on the app’s Q&A.

The Vitalz Score Algorithm classifies our body stress level using a three-recovery stress profile and three simple primary indicators such as green representing low stress, yellow representing chronic stress, and red representing acute stress. Through our in-house proprietary algorithm, a Vitalz Colour Score System has been created for easier interpretation and diagnosis between patients and healthcare providers. The patient needs to sync their biometric data in the morning and the data actually is in the third-party smartwatch/ band server Vitalz will process the data and convert it to Vitalz Colour Score after that we send the recovery stress profile generated to the provider and also the user.

Healthcare providers and practitioners can understand the patient’s lifestyle risk pattern, such as specific diet or physical activity, as well as the environment that may contribute to high stress in our patient, using the colour zone. Most importantly, we would know if the patient is willing to change. We can send them a reminder and motivational text message to encourage them to change or personalise the dosage of our supplements, as well as the diet, and realign intervention on a daily basis in order to understand our patients’ risk factors and adjust accordingly.

Vitalz also takes advantage of the Internet of Things (IoT) benefits for preventive healthcare by providing a suite of comprehensive and complementary services in a simple and convenient manner. It is basically a daily approach to an individual lifestyle from a macro perspective to access the intervention impact based on the daily intervention analysis. Aside from that, with a multifaceted approach, they are using the patient’s own lifestyle to tune and readjust for their holistic approach to their health goals indefinitely. This is also very personalised because everyone has a different lifestyle intervention and diet plan, as well as physical activity, which is determined by their Vitalz Score.
Innovation Exhibits

Visit the Exhibition Halls at MTE 2022 for more cutting-edge products and services. Stay tuned as we showcase other notable innovations in our Show Daily.

**Tempero as Mobile Storage Container and Incubator for Medical Use**
Universiti Teknologi MARA (UiTM)

**NDecoRapid**
Universiti Teknologi MARA (UiTM)

**Real Time Distortion Classification and Ranking for Laparoscopic Video**
Multimedia University

**Detected Egg**

**Localization and Classification of Parasitic Egg using EfficientDet detector in Microscopic Images**
Multimedia University

**PSF-Si Spiral Wound Membranes for Copper Ions Removal**
Universiti Teknologi MARA

**Nano Spray Phyllanthus Niruri’s Properties: An Option to Prevent Spread of Disease**
Maktab Rendah Sains MARA Mersing

**Occupational hearing Conservation Index System (OHCI)**
Institut Kemahiran Belia Negara
Kuala Langat

**Detection of Dental Caries Via UV Spectroscopy**
Universiti Teknologi MARA

**Automated Medicines Dispenser Machine (AMDMM)**
Kolej Universiti Selatan

**Goose Bone in Nano Particles as A Novel Drug Carrier for Anti-Cancer Drug**
Roxhana Ventures Sdn Bhd

**Smart Hospital Environment**
Asia Pacific University of Technology & Innovation (APU)

**Mobile Application Scoscreen for Early Screening of Adolescent Idiopathic Scoliosis**
Physiotherapy Program, Centre for Rehabilitation and Special Needs Studies (CaRehab), Faculty of Health Sciences, UKM
Dr. Masliyana Husin

RECoVaM Study is a high-speed, and rigorous, research to inform time-sensitive national policy on the COVID-19 vaccination programme, and epidemic. Firstly, automated data pipelines were set up by MoH's analytics unit to coordinate, simplify, and standardise the delivery and receipt of data across the various data custodians. Secondly, without breaching anonymity, the second step consolidates the various data sets into a unified environment that describes the COVID-19 epidemic and vaccine rollout in Malaysia. Both judgment- and data-informed rules were creatively applied to resolve any disagreements, aimed at maximising final data quality and reliability. Moreover, modularity ensured the avoidance of pitfalls of 'bulky' large-scale data. Thirdly, this consolidated data environment formed a core, from which ICR researchers could re-wrangle into various user-specific subsets or permutations.

Dr. Mohd Ridzuan Bin Ahmad

Liquid biopsy device for potential non-invasive early cancer detection capable to detect and measure the impedance of single cell. Measurement of electrical properties of single cell provide the information of cell status, because any alteration in electrical properties single cell not only cause their function change but also lead to several disease.

Dr. Sumaiyah Mat

Elderly people with dementia have difficulty socializing especially during movement control during a pandemic. This module provides an alternative to staying in touch with seniors with dementia by conducting online activities. Activities such as Virtual Exercise, “Game Book” activities, checklist activities, and virtual tours are interrelated and have a holistic impact on seniors with dementia. Exercises, for example, benefits physical health while playing online game activities such as “Game Book”, memory game and checklists, train seniors to remember and give a positive effect on their memory. Nevertheless, the importance of this module is to ensure that senior citizens with dementia stay in touch and stay connected even in a pandemic situation.

Institut Kemahiran Belia Negara Kuala Langat

Kuala Langat National Youth Skills Institute (IKBNKL) is a public TVET institute operating under the Ministry of Youth and Sports Malaysia (KBS). IKBN Kuala Langat is actively involved in various innovation and research events. In 2021, IKBN Kuala Langat has successfully obtained innovation awards in several competitions, among them are champion of the Selangor Innovation Award 2021, champion of Innovation Development Through Educational Activities (iDEA’20), champion of Engineering Technology category for the National TVET Lecturer Innovation Competition (PERISA’21) and 2nd runner up for Innovation Competition & Exhibition (inCex'21). IKBN Kuala Langat is also active in producing various academic research papers. During 2021 to 2022, IKBN Kuala Langat has produced several high-impact innovative projects such as Occupational Hearing Conservation Index System (OHCI) which is an innovation to intervene Noise Induce Hearing Loss (NIHL) disease and COVID-19 Quarantine Management System (COMS) which is an intervention to control the transmission of COVID-19.
Institute For Medical Research

The Dengue Model Forecasting Satellite-based System (D-MOSS) DMOSS model was developed with validated satellite data and observed dengue cases using an Ensemble Probabilistic model with the Gaussian method. This method produces better data representation and allows the model to perform several re-runs with different perturbed starting conditions to generate multiple forecasts. A higher degree of similarity among forecasts is indicative of higher model accuracy. The DMOSS system underwent several iterative cycles of development that were based on extensive user consultation and a formal verification process. The DMOSS output presents different outbreak thresholds, with several probabilistic forecasts of dengue cases/incidence as well as the most accurate forecast at district levels in Malaysia. The DMOSS web Interphase was developed using Shinny R package. It displays Interactive maps and plots which were developed using the Leaflet and ggplot R packages. The DMOSS interphase allows users to (a) identify districts of interest; (b) Select several outbreak thresholds, (c) Access the probability of outbreak threshold exceedance (point estimate & range) and forecast case number 6 months in advance, (d) visualize outputs via interactive maps/time series plots and tables and (e) download all data in several file formats (EXCEL/CSV/Map format).

iRESPIRE Innovations Sdn Bhd

iBreath, is developed by iRespire Innovation Sdn Bhd, a spin-off company of Universiti Teknologi Malaysia committed to the establishment and maintenance of medical devices and certified with ISO 13485:2016. iRespire Innovations Sdn Bhd is a company of engineers, inventor and make to contribute to human welfare by application of bio-medical engineering in the research, design, manufacture, and sale of instruments or appliances that alleviate pain, restore health, and extend life. iRespire Innovation offers optimized healthcare solutions to ensure enhanced quality of life to patients and added value to medical practitioners. iBreath is developed based on a new prognostic index to screen and monitor COVID-19 conditions using the analysis of exhaled breath. iBreath is a real-time, non-invasive COVID-19 monitoring device. iBreath differentiates the severity of COVID-19 based on categories (Cat 1, 2, 3), which adds value to the product, compared to the other products available in market.

Kolej Universiti Selatan

Southern University College (SUC) aims to provide alternative study routes for students. Being a student-oriented institution, SUC is eager to provide diverse courses, ranging from diplomas to PhD degrees. Faculty of Engineering and Information Technology (FEIT), provides various courses, including Diploma in Electrical and Electronics Engineering, Diploma in Information Technology, Bachelor in Electronics Engineering with Honours, and Bachelor in Software Engineering.

In conjunction with MTE, three inventions were sent to showcase the projects. The first invention was named as Automated Medical Dispenser Machine (AMDM). The system is responsible for dispensing specific medicines based on the user's data for daily consumption. The second invention was called Automated Pharmacy Drive-thru (APDT) System, which adopted RFID and image processing technology to generate an alternative to the current traditional queuing method to redeem monthly medicine. The third invention is Automated Disinfection Robot (ADR), in which the robot will automatically sanitize the area efficiently.
About Malaysia Technology Expo

Malaysia Technology Expo (MTE) is an annual event that offers a unique platform for universities, research institutions and enterprises, small and large, to present new innovations and technologies. The aim is to promote efforts to continuously improve current solutions and to develop cutting edge technologies and solutions at all stages of the value chain. It is also intended to encourage inventors, entrepreneurs, suppliers to promote their products or technologies by entering them for this highly successful and internationally recognised competition.

Every year, inventors and innovators from all around the world converge to compete in the prestigious MTE Innovation Awards Programme. By recognising excellent ideas and innovations, we have had more than 20 local and overseas international inventors’ associations and research institution partners have supported us over the past decade awarding special awards to outstanding inventions and breakthroughs.

In addition to the awards, MTE has an Innovation Marketplace that offers exhibitors to display their most creative solutions and practical scalable technology to the highest quality investors and network with a diverse pool of enthusiasts wanting to celebrate their developing company.

About the Organiser

PROTEMP started in 1984, and to date, we have produced more than 300 events. In our formative years, we managed successful events for overseas Organisers before organising our own business events. Our team is based in Kuala Lumpur and trained in Project Management and ISO 9001:2008 Quality Management System.

Our project management processes are fine tuned for digital events fulfilment. We are currently rolling out hybrid events, as we believe hybrid formats are here to stay, and we are committed to plan ahead to stay ahead.

We host, produce and manage business-to-business Conferences, Meetings, Exhibitions, and Awards of different sizes and scale. From large international and multi-track Conferences and exhibitions of over 10,000 participants to small Zoom meetings or webinars, we help you to deliver the desired brand experiences and meaningful connections. We understand the true meaning and importance of exceeding customer expectations, and we have over the years designed and refined a robust hybrid system of project and quality management to manage events successfully all over Asia.