

**INNOVATION PITCH & BUSINESS MATCHING (IPBM 2019) - BIOTECHNOLOGY, MEDICAL DEVICE, PHARMACEUTICALS AND HEALTH**

<b>NO</b>	<b>MAIN RESEARCHER</b>	<b>UNIVERSITIES</b>	<b>NAME OF INVENTIONS</b>	<b>DESCRIPTION OF INVENTIONS</b>	<b>TECHNOLOGY CATEGORY</b>	<b>INVENTION STATUS</b>
1	Mohd Hafiz bin Arshad	Universiti Malaysia Perlis (UniMAP)	Smart Pharmaceutical Temperature Monitoring System (VDSM 1.2)	Temperature monitoring for refrigerated pharmaceutical inventories is vital to make sure the medicine is safe for community health. Conventional practice in monitoring temperature sensitive inventories by paper recording is cheap, however labour intensive, unreliable and gives data gap which may lead to pharmaceutical waste. VDSM 1.2 offers real-time IoT-based web monitoring, complete with alerting notification and alarm to solved the problem. This system is made affordable compare to existing product in the market targeting for SME healthcare businesses.	Digital Technology, Electronics and IOTs;Biotechnology, Medical Device, Pharmaceuticals and Health	READY TO COMMERCIALISED
2	Dr. Nor Azizah Parmin	Universiti Malaysia Perlis (UniMAP)	IN-HOUSE FABRICATED NON-INVASIVE CERVICAL CANCER DETECTION	Nanoparticle-mediated bio-sensing promoted the development of novel sensors in the front of medical diagnosis. A novel biosensor based on	Biotechnology, Medical Device, Pharmaceuticals and Health	PATENT/READY TO COMMERCIALISED

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			NANO LAB- ON-CHIP	single-stranded DNA (ssDNA) probe functionalized with gold nanoparticles (AuNP) was demonstrated for early detection of cervical cancer caused by Human Papillomavirus (HPV). A drop of single-stranded DNA hybridization procedure is proposed, where the probe strand would be extended as long as the target DNA strand. The present approach provides low detection limit for DNA (picomolar), rapid label-free and easy-to-use virus detection, which holds the potential for future use in various single stranded DNA analyzed by integrated into a self-contained biochip.		
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3	IR. DR. SHAHRIMAN BIN ABU BAKAR	Universiti Malaysia Perlis (UniMAP)	PATIENT TRANSFER DEVICE	<p>The Integrated Computerised Maintenance Management System (I-CMMS) for Pre- cast Concrete Buildings is designed to overcome current issues on labour intensive and knowledge transfer between construction team members (consultant, engineer and technician). This prototype focuses on automatic bidirectional communications between Expert System and BIM on a database level. The product can be divided into three main components, which are CMMS, Expert System and BIM software (Autodesk Revit application). Each component plays a different role in the system. CMMS provides the information of inventory component and defect status while the Expert System is considered as a decision-</p>	Biotechnology, Medical Device, Pharmaceuticals and Health	READY TO COMMERCIALISED
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				<p>making tool and to be a comprehensive computerised system that gives recommendations on IBS component diagnosis of concrete structures. This process is used to present the user for selecting one of the three knowledge bases namely leaking, jointing and cracking in concrete including the selection of appropriate construction design or materials and repairs method recommendations. The BIM database is developed to provide technology transfer of knowledge from specialists to other practitioners and vice versa and it provides a common forum for communication between consultants and engineers. Therefore, it is a useful guide to everyone who deals with IBS structure component of building defects. It is an excellent first hand</p>		
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				reference guide for a wide range of structure design defect risk leading to accurate analysis using design condition index with coupled to an independent computerised expert system. Adoption of the approaches suggested in the research will enable the system to achieve the maintenance operation visualisation, information automation and multi-collaborative participation, which can effectively promote the development of zero IBS building maintenance.		
4	IR. DR. SHAHRIMAN BIN ABU BAKAR	Universiti Malaysia Perlis (UniMAP)	MEDICAL & REHABILITATION	The current approach to search for an item in shopping mall, retail stores or even warehouses is mostly manual processes and does not provide any assistance for the users to track the item's location on the shelf. iNavig system is designed as a smart item locator equipped with user-	Biotechnology, Medical Device, Pharmaceuticals and Health	READY TO COMMERCIALISED

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				friendly mobile application and integrated Beacon Bluetooth Low Energy (BLE) technology sensors to provide necessary inventory information of the item on the shelf, assists and navigates the users to the desired item's location/shelf.		
5	Ahmad Fauzan B. Kadmin	UNIVERSITI TEKNIKAL MALAYSIA MELAKA (UTeM)	VOICE ASSISTED WHEELCHAIR CONTROLLER (VOCCON)	The Voccon system is designed to install in manual wheelchair and controls to navigate a wheelchair using multiple virtual controller such as D-pad, joystick and voice in smartphone wirelessly. The objective is to ease the burden for frequent wheelchair user especially for elderly people and stroke patient to move around. These navigation methods in smartphone is a key which may provide a new way of human interaction with machines or tools, The system navigates the wheelchair movement i.e. forward, backward, left, right and also facing the	Biotechnology, Medical Device, Pharmaceuticals and Health	PROTOTYPE

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				Kiblah. The system can also controls remote electrical appliances.		
6	MOHD AZLAN MOHAMED	UNIVERSITI TEKNIKAL MALAYSIA MELAKA (UTeM)	ORIGAMI CORNER CHAIR FOR CHILDREN WITH CEREBRAL PALSY	<p>Foldable corner chair that applies origami concept to provide the advantages of portability, light, and user friendly. These advantages departs from the known corner chair products, thus enable each Cerebral Palsy parents to own one corner chair at home. The pupose is to encourage the involvement of parent in rehabilitation procedure in patientâ€™s house rather than weekly one-off procedure in the hospital. The origami concept enables the design to be folded into a flat, thin and compact shape that can be easily stored in a tight area. The origami concept applied has made the folding movement simple and linear.</p>	Biotechnology, Medical Device, Pharmaceuticals and Health	READY TO COMMERCIALISED

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7	Associate Professor Dr Mohd Fahmi Bin Lukman	UNIVERSITI PERTAHANAN NASIONAL MALAYSIA (UPNM)	Shoulder Air Bag	Shoulder Air Bag (SAB) is a patient positioning device invented with a purpose for elevating patient's shoulder from operation table and thus providing neck extension. It is indicated to position a patient during tonsillectomy, thyroidectomy and maxillofacial related procedures. It comprises an irrigation fluid bag with one inlet and outlet, characterised by the inlet that is connected to a hand-held pump to inflate the bag with air for adjusting the positioning of a patient who lies on the bag. The inlet is connected to the hand-held pump with an elongated flexible tube, where the elongated flexible tube has two ends and a hollow extending between the two ends. Before surgery, flattened irrigation bag will be placed onto operation table and cover with	Biotechnology, Medical Device, Pharmaceuticals and Health	READY TO COMMERCIALISED
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				<p>underpad; a patients moves onto operation table and the bag will be adjusted under the patient's shoulder. After induction of anaesthesia, irrigation fluid bag will be inflated with hand-held pump, turn the adjusting screw clockwise to close. The pressure of the irrigation fluid bag will be monitored every thirty minutes. After surgery, the irrigation fluid bag will be deflated by turning the adjusting screw anticlockwise and the patient's body weight will flatten the irrigation fluid bag. SAB improves patient safety as the patients will be positioned before induction of anaesthesia. This prevents excessive movement that may lead to dislodgement of endotracheal tube, which is patient's only source of oxygen from anaesthesia machine. As the patient still awake</p>		
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				during positioning, only one operating room personnel is required to position a patient and this will save time. In addition, irrigation fluid bag is cost-effective and its flexibility does not create pressure points which impede blood circulation that may damage body parts. SAB provides a cheaper, adjustable, easy to use alternative which simplifies patient positioning procedures and improves patient safety.		
8	Mohd Khairul Amri Kamarudin	Universiti Sultan Zainal Abidin (UniSZA)	EMR Suppressor Design for Phone Cover	Humans are constantly exposed to electromagnetic radiation every day. The radiation coming from cell phones, communications networks, electronic devices, power grids, satellites, radio and TV transmission, vehicles, home appliances and many more. Now, among the hundreds of smartphone cases for iPhone and Android	Biotechnology, Medical Device, Pharmaceuticals and Health	PROTOTYPE

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				<p>phones available in market not including with EMR protector. So this phone cover can reduce the amount of radiation emission which can effect the human health. The advancement of Electromagnetic Suppressor Design for Phone Cover (EMR pc) in human technologies creates an electromagnetic fields (EMF) which believes may effect human health in a long term. The materials used are the main fundamental in making this casing as it needs to fit with the phone and able to give a full protection once it is integrated with the phone. A good deal of a mobile phone are the cell phone owners feel safe and secure when using it, so it is crucial to make sure the very basic communication device which is used for all human in the world are safe to be used and it can</p>		
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				<p>give awareness to the users. This is essential to make sure the recommended public exposure value is complied. The Ministry of Health may utilize the findings to provide healthy environment for the community.</p>		
9	Dr Nor Hafizah Ngajikin	UNIVERSITI TUN HUSSEIN ONN MALAYSIA (UTHM)	Homecare Uric Acid Reader	<p>Homecare uric acid reader is beneficial to facilitate uric acid monitoring at home especially for gout patients. This product that works based on spectrophotometer technology is economical and user-friendly. With measurement using real human urine samples, the product has 96.01% accuracy.</p>	Biotechnology, Medical Device, Pharmaceuticals and Health	PROTOTYPE

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10	Mahanem Mat Noor	UNIVERSITI KEBANGSAAN MALAYSIA (UKM)	Gynulin	<p>Gynulin is the herb based supplement with antihyperglycemic, pro-fertility and pro-libido effects in diabetic males. This current product has undergo pre-clinical validation process to verify its benefits (since 2008). To ensure the quality of the product, standardized extract was prepared with reference to the bioactive compound. This product is not only proven to lower blood glucose level but also can increase the quality of sperm and overall fertility of diabetic rats. Additionally, the process to verify the claims, the side effects on the liver and kidneys can be avoided by taking this product, in contrast to existing commercial drugs. In-depth study at the molecular level(sperm proteomic analysis) also found that the intake of this product was able to increase the expression</p>	Biotechnology, Medical Device, Pharmaceuticals and Health	READY TO COMMERCIALISED
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				of proteins involved in sperm development and sperm-egg interaction, further verifying its potential in curing fertility problems related to diabetes. .		
11	DR. NUR ARZUAR BIN ABDUL RAHIM	Universiti Sains Malaysia (USM)	e-MeVa (e-method verification) software	e-MeVa software platform offers basic and advanced data verification analysis and managing information of diagnostic test method for Medical Diagnostic Laboratory or Research Institute that has variety of high tech testing equipment with high sample load. Its ease of use; efficient system; flexibility and scalability make it accessible to user with all skill levels to follow the ISO and ensure the laboratory accreditation achievement status is maintain.	Biotechnology, Medical Device, Pharmaceuticals and Health	READY TO COMMERCIALISED
12	Hazwani Binti Ahmad Yusof	Universiti Sains Malaysia (USM)	PRO-Gait 17	PRO “ GAIT 17 is a new walking exercise tool that is more efficient, portable, safe and ergonomic that allows a patient to do walking,	Biotechnology, Medical Device, Pharmaceuticals and Health	READY TO COMMERCIALISED

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				coordination and balancing exercise simultaneously at one time. PRO-GAIT 17 is a combination of several walking tools used for rehabilitation (wheelchair, parallel bar)		
13	Zarith Asyikin Abdul Aziz	Universiti Teknologi Malaysia (UTM)	Micellar Acne Serum	Micellar Acne Serum specially formulated from Eucalyptus globulus essential oil as natural active component of anti-acne agent, incorporated with micellar nanotechnology. This product introduces innovative serum application technique with latest market trend nanotechnology used, and enriched with Malaysian local plant (Eucalyptus globulus) extract as the serum anti-acne value. Therefore, through the Micellar Acne Serum formulation, the micellar nanotechnology is functioned as a vehicle to efficiently deliver the Eucalyptus globulus extract on skin by	Biotechnology, Medical Device, Pharmaceuticals and Health	READY TO COMMERCIALISED

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				<p>entrapment the oil component to reduce essential oil's volatility, irritancy and enhance the components' efficacy, promote high valuable nanotechnology-based facial serum with advanced anti-acne effect.</p>		
14	Siti Hamidah binti Mohd Setapar	Universiti Teknologi Malaysia (UTM)	Age-Reverse Micellar Serum	<p>Age-Reverse Micellar Serum is a research-based anti-ageing serum that formulated by various plant extracts, enriched with Roselle oil as natural anti-ageing component. This prototype introduces an innovative serum application technique with latest market trend nanotechnology used, micellar nanotechnology incorporated with the plant extracts (including Roselle oil as active component) to promote anti-ageing therapeutic enhancement. Through the serum formulation, the micellar nanotechnology is functioned as a vehicle</p>	Biotechnology, Medical Device, Pharmaceuticals and Health	READY TO COMMERCIALISED



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				to efficiently deliver the extracts on skin by entrapment of the plant extracts and Roselle oil bioactive components to enhance their efficacy and promote high valuable nanotechnology-based serum with advanced anti-ageing effect.		
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