AIMST Achieved International Ranking for the First Time in History

AIMST University Released its Strategic Plan for 2022-2026

Chairman of MIED Extended Financial Support to Deserving Malaysian Students
VISION

To be an Internationally Renowned University Achieving Excellence in Teaching and Research by 2025

MISSION

To Develop Talent for National Prosperity and Spearhead Cutting-edge Research for Humanity

OUR MISSION

In Discharging Our Mission, We Shall

- Ensure students experience the best teaching and research in medicine and other health sciences, engineering, computer technology, applied sciences, business and accountancy and law that will put them in good stead in their professional carries
- Maintain high academic standards and quality in teaching that promote analytical thinking necessary to function responsibly in globalized world
- Offer high quality and accredited undergraduate and post graduate programmes at an affordable cost in line with the national educational philosophy
- Establish centres of excellence for research and innovation in frontier areas of science and technology
- Ensure the sustainability of the university through the design of relevant programmes that guarantee graduate employability
- Discharge our purpose with integrity, respect, teamwork, professionalism, excellence and service to the community
- Care for the welfare of the employee
- Undertake social responsibility initiatives including promoting life-long learning
EDUCATIONAL OUTCOMES

- Demonstrate outstanding knowledge and expertise in their field
- Exhibit critical, creative and problem solving skills in their professional practice
- Synthesize information from varied disciplines to achieve their professional goals
- Engage in continuous self-improvement and professional growth
- Display transformational leadership and support the professional growth of others
- Possess a respectful mind that allows for learning from others
- Communicate effectively with other professionals and the community
- Have a strong sense of social responsibility to improve social welfare
- Assimilate and apply the university’s core values (integrity, respect, teamwork, professionalism, excellence and service) in their professional and daily lives

PROGRAMME OUTCOMES

- Knowledge
- Practical skills
- Social skills & Responsibility
- Values, Attitudes & Professionalism
- Communication, Leadership & Team Skills
- Problem Solving & Scientific Skills
- Information Management & Lifelong Learning Skills
- Managerial & Entrepreneurial Skills
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FROM THE DESK OF THE VICE-CHANCELLOR

This year has started off well for us. We have received reaccreditation certificates for five years from the Malaysian Qualifying Board, or MQA, for the Dental and Engineering programmes. We hope to pull off a similar feat for the Medical programme. The Malaysian Medical Council and the MQA had recently wrapped up their audit. From the exit meeting with the panel, we are hopeful that they would similarly recommend an extended reaccreditation.

This year too holds promise for us in improving our QS Asian ranking. We are currently among the top 400 universities in Asia. The next ranking is due in June.

Similarly, we have done the best to improve our four-star SETARA ranking. We shall be assessed on our performance over the past three years – 2019, 2020 and 2021 - by the Ministry of Higher Education. We are in the last leg of collecting data on our performance over these three years. These data will decide whether we shall receive the coveted five-star rating.

We need to keep up our good effort to further improve our rankings, especially the QS world ranking. Rankings are important. They indicate whether we are closer to our goal of becoming a world-renowned university excelling in quality teaching and cutting-edge research by 2025. The rankings will serve as a magnet to attract greater student enrolment. This will certainly augur well for our continued sustainability.

In this regard, I must thank all staff for putting their shoulders together in drafting the 2022-2026 strategic plan of the University. Planning is great. But plans mean we are still floating at 30,000 feet. We need to get the plan to a three-feet execution level. I urge our staff to give their best in the execution of the strategic plan as they have done in the planning it.

Best wishes for the rest of the year. We reap what we sow. And I know we shall reap bountifully in terms of global reputation and sustainability because you continue to put in your best effort for the University.

Thank you.
AIMST University SETARA 6-star rating, top 500 in the QS international rating and top 200 in the QS Asian ranking by 2026

Increase in the number of student enrolment by 35% each year

Secure a minimum of RM 2 million external grant yearly. (RM10,000 per lecturer per staff)

Establish 10 industrial linkages and community collaborations and 5 institutional partnerships with universities annually

Reduce paper usage by 50% through digitalization as part of ESG initiatives

Minimum of 300 publications a yearly (min. of one publication per lecturer) and 20% annual increase in yearly citation. 5 year target: 10,000 citations

Achieve 5 national and international award and recognition annually

introduce 10 new short courses, MCs, APEL that are relevant to industry annually

Increase operational excellence by 50% including operational efficiency, personnel development and resource integration

Achieve an average of 90% in Student Assessment and Teaching Evaluation (SATE)
Prior to 2021, AIMST was unranked terms of world ranking. We made history in 2021 by securing a rank that places AIMST among the top 351-400 Asian Universities.

AIMST thus has a foot in the door of world rankings for the future. The target for this plan is for AIMST to be rated as top –100 university in the QS world ranking.

As a mature university, our research output is categorized as high profile. We have progressed well in increasing the number of publications, number of citations, international students as well as the number of staff who have PhD.

OVERALL RANK
351 - 400

TOP 51%

In the 2022 edition, AIMST University performed among the top 51% in the QS Asia University Rankings 2022.
On January 15, 2022, H.E. YBhg Tan Sri Dato Sri SA Vigneswaran, Chairman of MIED, handed over RM 2,694,442.00 in Scholarships and loans to 230 deserving Malaysian students. Out of which 55% were underprivileged students from families with a monthly household income of RM5000.00 and below. Since 1984 MIED has disbursed RM 169,871,579.79 to 12,487 students to fulfill their dreams and hopes.

MIED is determined to build confidence in education among students who hail from an underprivileged background.
AIMST University Signed a Memorandum of Understanding (MOU) with SRM Group of Institutions

On 24 March 2022, AIMST University virtually signed a Memorandum of Understanding (MoU) with SRM Group of Institutions comprising the SRM IST Ramapuram Campus, SRM Easwari Engineering College, SRM IST Tiruchirappalli Campus, and SRM TRP Engineering College. The MoU encourages and promotes cooperation in training, joint research & grant, staff and student mobility, franchise programs, and the conduct of bilateral programs or projects by both parties. AIMST University was represented by its Vice-Chancellor & Chief Executive, Professor Datuk Dr. John Antony Xavier, while SRM Group of Institutions by its Chairman, Dr. R. Shivakumar.
AIMST University Signed a Memorandum of Understanding with Sri Tanjung Medicare (M) Sdn Bhd

On 26 January 2022, AIMST University signed a Memorandum of Understanding (MoU) with Sri Tanjung Medicare (M) Sdn Bhd. The MoU encourages and promotes co-operation in training, information exchange, and the conduct of bilateral programs or projects by both parties involving our Faculty of Allied Health Professions (FAHP).

AIMST University was represented by its Vice-Chancellor & Chief Executive, Professor Datuk Dr. John Antony Xavier, while Sri Tanjung Medicare (M) Sdn Bhd by its Managing Director, Dr. Srikkanthan Dato Saravanan.
AIMST University Partners with NCER in Strategic Areas

Vice-Chancellor & Chief Executive, Professor Datuk Dr. John Antony Xavier with Dato Sri Isaacs and Dato Ananthan at Kedah rubber city launch by NCER. Dato’ Sri Ismail Sabri bin Yaakob, Prime Minister of Malaysia, inaugurating the session (right)

“Why AIMST” Marketing Campaign Created Positive Vibes among Prospective Students
AIMST Welcomes New Registrar

AIMST community is very pleased to welcome Assoc. Prof. Dr. Sundram M. Karuppih as the new Registrar. As the Registrar, he will be the key person in undertaking student administration and upholding institutional governance. In addition, he will be the official secretary of the University Senate and Council and take functional responsibility for the administration of official committees.

The newly appointed Registrar will provide a leadership role in the areas of research, innovation, and industry linkages that meet and support the university’s vision and mission. His administrative approach and leadership qualities will help the university climb new heights of success.
AIMST University undertook a Fundraising initiative for those affected by the recent catastrophic flood in the Klang Valley. On 30 December 2021, AIMST handed over the medicines supply derived from the donations to AIMST alumni, Dr. Shalini Devi Ramachandran, who, together with her doctor husband, volunteered for free medical consultations and treatment despite their clinic in Sri Muda being devastated by the flood.
AIMST University & Tech Dome Penang signed an MOU on 25 November 2021. Tech
dome is a nonprofit organization that has a science & technology museum at Komtar
Penang. On 8 December 2021, a five-member team comprising Ts. Khoo Boo Wooi,
CEO, Ms. Oun Sui Leng, Sr. MarCom Manager, Mr. Puvarnan Shanmugam, Sr. Education
Executive, Mr. Fatin Fadhilah, Education Executive, and Mr. Edward Toh, Education
Executive visited AIMST University. They visited Engineering, Dental, Medical, and
Biotechnology labs. A joint young scientist program will be explored for potential
school children and AIMST exhibits will be displayed at Tech Dome. It is a way forward
for both the institutions.
AIMST congratulate the Registrar Dr. Sundram M. Karupiah, and Dr. Yu Chye Wah, Dean of Faculty of Allied Health Professions (FAHP), for being appointed as Panel Members of the Malaysian Qualifications Agency (MQA) for three years from 2021 to 2024. They will work closely with MQA to ensure that the programs offered by the higher education providers in Malaysia are of high quality and comply with the Malaysian Qualifications Framework (MQF). It is a proud moment for the AIMST community as they were selected from the finest in their respective fields. AIMST wish them all the best in their role as MQA Panel Members.
"Vaccine" has become a common word used in this pandemic. It has been proved that vaccines saved lives in this Covid-19 pandemic. Vaccines are critical to the prevention and control of infectious disease outbreaks. They underpin global health security and will be a vital tool in the battle against infectious diseases in the future.

Since 2000, with more than two decades of research, the Cholera vaccine team headed by Prof M. Ravichandran has made significant progress in developing the Cholera vaccine prototype. This team has filed the USA, European and Malaysian Patents and owns the MyChol trademark. The cold chain-free cholera vaccine formulation developed by this team, particularly Dr. G Prabhakaran, will be a game-changer in the vaccine arena. Prof Norazmi Mohd Nor, a renowned vaccinologist from USM, is the program head and a key person in the SRF grant from MOSTI that is targeted toward five research grants, of which one will be on the clinical trial of the cholera vaccine.

To support the establishment of CoEVD, I am happy to inform you that AIMST management has allocated a dedicated lab on the first floor of the medical building. The current “Multidisciplinary lab F3” lab will be renamed CoEVD. I am sure the expert researchers from USM, Faculty of Applied Sciences, and Faculty of Pharmacy will bring excellence to CoEVD and serve humanity.
The process of drug discovery or finding a lead molecule is long, tedious, and expensive. Researchers have to screen through thousands or millions of compounds before finding a suitable candidate. Fortunately, we now have computational tools to help us and simplify the path to drug discovery. Of all techniques, molecular docking has played a crucial role in computer-aided drug design, while virtual screening provides an alternative approach to screen millions of compounds within a few days.

The Centre for Postgraduate Studies (CPS) organized an online workshop on “Molecular Docking and Virtual Screening” on 25 September 2021 (Saturday), 10.00 am to 5.00 pm, via Zoom. The trainer was Prof. V. Ravichandran, Head of Pharmaceutical Chemistry Unit, Faculty of Pharmacy, AIMST University from Faculty of Pharmacy. A total of 37 participants, both local and international attended the workshop. The participants were taught the basic concepts of drug discovery and molecular docking, various related databases, and hands-on skills to perform molecular docking.
Collaborative Partnership Meeting between AIMST and Luo Yang Normal University, China

AIMST University has signed an MOU with the Luoyang Normal University (LYNU), China on 10th November 2021 to collaborate on a franchise program for BSc. (Hons) in Biotechnology. Prof. Datuk John Antony Xavier, Vice-Chancellor & CEO of AIMST University, and Mr. Darren Teh, who represented Henan Wanyu & LYNU, China, signed the MOU.

The MOU marks a milestone in the history of AIMST University and the Faculty of Applied Sciences as this will be the first time an AIMST undergraduate program will be franchised in China. The BSc (Hons) Biotechnology program is a 3 year, MQA accredited program that was established in 2003. The Faculty is comprised of a strong and well-respected team of academicians with experience in teaching, learning, and research. Over 800 students have graduated from the program since 2006. It is hoped that this collaboration with LYNU will open up the pathway for the global recognition of AIMST programs.
Biotechnology Webinar on Breakthrough Nutritional Immunology

Faculty of Applied Sciences organized a webinar “Breakthrough Nutritional Immunology” on 15 October 2021 via Zoom. The guest speaker was Dr. Ebenezer Satyaraj, Director of Molecular Nutrition, Nestle Purina Research, St. Louis, MO, USA. Dr. Satyaraj talked about an innovative cat food that effectively reduces feline allergen due to Fel d1. Cats have specific allergens responsible for various allergies, including respiratory disorders. Fel d1 protein is present in the cat’s saliva, and sebaceous glands are the important allergen. His research developed a cat feed formulation with an innovative egg product with polyclonal anti-Fel d1 antibodies that decreases allergic response due to Fel d1. His innovation has been commercialized as ProPlan Optistart Puppy & Kitten and Pro Plan LiveClear product by Nestle. This webinar was organized as part of the Immunology course teaching for Year 2 BSc (Hons) Biotechnology students.
SPSS Workshop "Old but Relevant: Handling SPSS Step by Step"

Dr. Arunagiri Shanmugam and Dr. Rusnifaezah Musa from the faculty of Business and Management conducted the SPSS workshop "Old but Relevant: Handling SPSS Step by Step" on 26 & 27 November 2021. A total of 29 participants joined the workshop.

Memorandum of Understanding (MOU) Signing Ceremony

A memorandum of understanding (MOU) signing ceremony between AIMST University and the Chinese Chamber of Commerce and Industry of Central Kedah was held on Wednesday, 10 November 2021. Ms. Selvamalar and Dr. Yeoh represented the Faculty of Business and Management.
A One-Day Workshop

A collaboration between AIMST University’s Research Management Centre (RMC) and the Faculty of Business & Management (FBM) in conducting a one-day workshop to encourage academics in preparing an outstanding research proposal for the FRGS 2022. The guest speaker, Dr. Nurul Fadly Habidin from Universiti Pendidikan Sultan Idris (UPSI) has made notable contributions via his significant experience conducting seminars on developing research proposals at several universities in Malaysia. A total of 43 participants registered and joined the session.
The Dean of the Faculty of Business and Management, Dr. Arunagiri Shanmugam along with two senior lecturers, Ms. Santhi Appannan, and Ms. Barathy Doraisamy organized a webinar titled “Successful career in business and management diploma and degree programs as marketing initiatives, through the Association of Hindu Sangam Malaysia, on October 9, 2021.
Malaysian Dental Intervarsity Debate Competition

On the 5th and 6th of March 2022, our outstanding undergraduate dental students (Foo Jia Yee, Elin Ting, and Sammy Yeoh Pei Meh) made a remarkable achievement by winning second place in the 4th Malaysian Dental Intervarsity Debate Competition. The competition was hosted by MDA KL & Selangor Toastmasters Club in collaboration with the Malaysian Dental Students' Association, in conjunction with SCATE 2022. Besides, Sammy Yeoh was also selected as the Best Speaker of the Grand Finale.

In March 2022, Dr. Priyadarshini Karthikeyan delivered an International CDE e-talk on “Teledentistry-Boon & Bane” conducted in Chettinad Dental College, India.
Dr. Galvin Sim Siang Lin from the Faculty of Dentistry has successfully organized a virtual webinar entitled, 'What Can You Do After BDS/DDS' on 5th March 2022 to enlighten undergraduate dental students, graduate awaiting posting dentists, and junior dentists on the possible career pathways after completing their undergraduate dental education. The event has attracted a total of 84 participants. The committee members comprised two other academic staff: Miss Chua Kah Hoay (Secretary), Miss Teoh Chai Yee (Treasurer), and three undergraduate dental students: Foo Jia Yee, Khoo Chia Wee, Suzanna Abel Paul, and Tan Hung Jia.
National Level Yoga Tournament

Keshavani Tanabalan, year 4 BDS student coached by AIMST Yoga Master, Mr. Murugaya Ji has participated and won gold in the National level yoga tournament 21-30 Female category. This national tournament was held at Sri Subramaniya Swami Devasthanam, Sungai Petani, Kedah. The tournament was organized by Ashtangaa’s Yoga Federation of Malaysia Sungai Petani, Kedah in collaboration with Yoga Mind Centre Penang.

Dr. Galvin Sim Siang Lin, a lecturer from the Faculty of Dentistry, received the Best E-poster Award (Review Study Category) at the 2nd University of Malaya – China Medical University Joint Postgraduate Research Symposium, which was held virtually on November 25, 2021. Dr. Galvins presentation title was “Can Resin Infiltration Technique Arrest Non-cavitated Proximal Carious Lesions? An Umbrella Review” and one of the co-researchers was Dr. Daryl Chan Zhun Kit, who was an alumnus of the Faculty of Dentistry, AIMST University (graduated in 2020).
The Faculty of Engineering and Computer Technology of AIMST University presented the intention for business collaborations with College Vocational Batu Lanchang of Penang. This meeting was held at the 1st Floor Dental Meeting Room of AIMST University on 22nd March, 2022. A team of College Vocational Batu Lanchang officials elaborated on the criteria and possibilities of student education pathways to the Premier University in the Northern Region of Peninsular Malaysia, AIMST University to pursue the Engineering Degree and Diploma program as well as visited the Analogue and Digital Electronics Laboratory, which was demonstrated by Dr. Mohammad Nur Afnan.
Dean, Faculty of Medicine, Confirmed the ‘Lifetime Achievement Award’ by MEU India

Dean, Faculty of Medicine, Senior Professor K.R. Sethuraman, was conferred the ‘Lifetime Achievement Award’ by MEU India. The award recognized his substantial and meaningful contribution to medical education in India. MEU India is also indebted to his efforts, knowledge, and wisdom, which will help produce better physicians and ultimately a better health status. The organization aims at connecting teachers and students on a digital platform for education and learning.
The Director of Hospital Sultanah Bahiyah Alor Setar, Dr. Zaiton Binti Udin, visited AIMST University during the MBBS Professional Examination V (year 5 examination). She was invited as an external observer for the examination conducted by the Faculty of Medicine. In addition, consultant specialists from Hospital Sultan Abdul Halim Sungai Petani and Hospital Sultanah Bahiyah Alor Setar served as examiners.
Medical Camp Organized for Sungai Petani Police Force

Medical Camp along with blood donation and Eye Examination was conducted for the “Police Force” in Sungai Petani of Ibu Pejabat Polis Daerah Kuala Muda, on March 24, 2022. It was organized by the unit Peru-batan Transfusi Hospital Sultan Abdul Halim under the guidance of Dr. T Novalan; in Dewan Serbaguna Ibu Pejabat Polis Daerah Kuala Muda, Sungai Petani. YDH Tuan ACP ADZLI BIN ABU SHAH Ketua Polis Daerah Kuala Muda, was the chief guest of the event. The Head of the unit of Ophthalmology, FOM, AIMST University, Dr. Christina Gellknight along with Dr. Adarsh Bhardwaj helped in the Medical Camp by performing the eye examination with funduscoppy, and counseling about the eye care.
Clinical Skill Center Conducted American Heart Association Courses

Clinical Skill Center (CSC) conducted numerous American Heart Association (AHA) courses since 2019 and generated more than RM100K in revenue. The training was disrupted by the COVID-19 pandemic lockdowns from 2020 to 2021. However, CSC has resumed the training courses since September 2021. Most of the training classes were conducted over the weekends since CSC facilities was fully utilized during the weekdays. More than 50 Batch 23 students have successfully completed both AHA BLS and ACLS to date.
New Intake for School of Nursing

On 4th October 2021, 24 students for Diploma in Nursing and 18 students for Bachelor of Nursing registered online. Most of them are being sponsored by private hospitals and the rest are under PTPTN. The Vice-Chancellor & Chief Executive Officer Prof. Datuk Dr. John Antony Xavier welcomed them with a brief introduction of the university, as well as briefed them on the rules and regulations with special emphasis on Covid-19 SOP. Students’ Admission & Records Division, Student Affairs Division, and Counseling Unit also carried out admission and orientation online due to the pandemic.

The School Orientation Program via Zoom online scheduled from 4th to 8th October 2021 started with a welcoming speech by the Dean, Associate Prof. Dr. Yu Chye Wah, and Deputy Dean School of Nursing, Madam Rajeswari Sinnasamy. Those who joined in welcoming them were Program Coordinator Diploma in Nursing, Ms. Ooi Saw Geok, Bachelor of Nursing Coordinator of Cohort 5, Madam Noralene Binti Osman, and Batch Coordinator of B23, Ms. Wong Lai Kun.

Students participated actively and enthusiastically during which they got better acquainted with their fellow students and the School of Nursing staff. Throughout the orientation program, icebreakers and many relevant online activities were introduced to help students adjust to the social and academic aspects of university life. The event ended with the students participating in various performances. Even though all the activities were handled online, it was a great new learning experience where the students and staff acquired an excellent opportunity to better adapt to digital learning in volatile situations.
Certificate in Health Care Assistant

On October 11 2021, 22 students enrolled for the certificate in Health Care Assistant program for a three-month duration. Most of the students were sponsored by private Hospitals with some students were self-sponsored. Admission and orientation by Student Admission and Records Division, Student Affairs Division, and Counselling Unit were conducted online due to the pandemic.
Island Hospital Penang Stakeholder Engagement Visit with Sponsored Nursing Students

On October 10, 2021, the Island Hospital Penang stakeholder had an engagement visit with the students. The main objective of the visit was to monitor the sponsored students’ progress in terms of academic performance. Below are the photographs of the respective groups of students.
Prof. Dr. V. Ravichandran and Assoc. Prof. Dr. S. Parasuraman from AIMST University's Faculty of Pharmacy (FOP) were ranked among the top 2% of scientists in the World by Stanford University from the United States. Stanford University has recently released (Version 3; Published on 20 October 2021) a list that represents the top 2 percent of the most-cited scientists in various disciplines. Scientists are classified into 22 scientific fields and 176 sub-fields. The selection is based on the top 100,000 by c-score (with and without self-citations) or a percentile rank of 2% or above.

Dr. A. Muthuraman, received award for World Top 1% Neuroscientist of "Expert in Neuralgia-2021" with rank of 0.37% out of 1% of neuralgia experts analyzed based on ExpertScape's PubMed-algorithms over the past 10 years and announced in regular "Daily Experts" in New York Time on December 8, 2021. He also received Badge for reward of "Neuralgia Expert" for the World Top 1% of Neuroscientist-2021 (Neualgia; Pain Management Expert). India Rank: 4th level; Asia Rank: 25th level.
Bachelor of Dental Surgery and Bachelor of Pharmacy students, Miss Keshavani Tanabalan and Miss Yoghinni Manogaran, have won the Gold Medal and Bronze Medal, respectively, in the National Level Yoga Tournament Championship 2022. The tournament was held at Sungai Petani, Kedah, on 5th March 2022, organized by the Ashtangaa’s Yoga Federation of Malaysia. Congratulations to both of them.

Faculty of Pharmacy Student Mr Chui Jun Hao, representing Malaysia, has won the 1st prize in the international online interactive patient counseling competition held from 17/12/2021 (preliminary round) to 3/1/2022 (final round)
Malaysian Business Student Summit (MBSS) 2022

Students from Faculty of Business and Management participated in the Malaysian Business Student Summit (MBSS) 2022 organized by University of Malaya.

Best Stellar Award – Second Place
Diploma in Business Management
Community Service

Students from Faculty of Business and Management pursuing Diploma in Management programme has participated in a community service organized at the Pusat Khidmat Setempat OKU in Bedong on 9th January 2022. The activity was part of their project for the course Introduction to Business. The students shared that the most valuable experience from the event was the smiling faces of the children especially when they shared their designed lanterns for their family members. That moment really touched the students’ hearts. The lecturer in charge is Dr. Yeoh Shwu Chyi. Lim Yan Yee, Lee Gee Mian, Shanmuga Priya and Jami Hussain (International student) participated in this activity. The activities involved were coloring, paper craft and handicraft with the children in the center.
Faculty of Business and Management
Student Activity

A team consisting of five students participated in the MonsoonSIM Enterprise Resource Management Competition (MERMC 2021) and the team ranked top 10 in the regional level. The students were from the Finance and Management, Accounting and Finance.

(Far from left: Teoh Ke Ying, Chew Teng Wong, Goh Siew Pei, Ooi Chia Chee and Tan Jun Wen)

Lecturer in charge: Ms. Phoon Lee Yong
FAS Postgraduate Students Share their Experience at AIMST

“I enjoyed pursuing my MSc Pharmacy at AIMST University. It is a great platform for me to explore my field of interest. I would say choosing AIMST is a worthwhile deal since it provides me with accessible resources (lecturer, environment, facilities, courses, etc).” – Ms Ng Yee Mei, MSc Pharmacy, currently working as a lecturer at Faculty of Pharmacy, AIMST University

“AIMST PhD programme is beyond doubt one of the most rewarding, confidence-building course. During my doctoral studies, I was fortunate to interact with brilliant lecturers from different disciplines. My supervisors prepared me for a successful career in academia by constantly pushing me, but gently. I do not know if I could have found a more supportive environment at any other institution. Finally yet importantly, I would like to express my gratitude to Ministry of Higher Education for providing MyPhD Scholarship to complete my studies successfully.” – Dr Gobinath Ramachawolran, PhD Biotechnology, currently working as a lecturer at RCSI & UCD Malaysia Campus (RUMC).
“AIMST University is an internationally oriented, comprehensive University. High quality research environment with well experienced professional supervision facilitate long-term scientific career leading to collaboration with science world for better human life. AIMST University provided me a valuable professional scientific environment for learning.” – Dr Mahin Ghorbani, PhD Biotechnology, currently a post-doctoral researcher at Karolinska Institute Sweden

“We constantly learn through experiences. I had a very positive experience in AIMST during my PhD. It was often exhausting, stressful, and humbling. My perspective on life has become much more understanding and curious. I had an excellent relationship with my supervisor who was immensely supportive both intellectually and personally. By the end, I had co-authored two papers, and presented in two international conferences, and the faculty (FoM) had grown substantially as well.” Dr Somnath Panda, PhD Medical Microbiology, currently working as a Clinical Research Coordinator at Clinical Research Centre, Hospital Sultan Abdul Halim
Eight B.Sc. (Hons) Bioinformatics students from Faculty of Applied Sciences completed their 12-week virtual internship at Florida International University (FIU), Miami, USA. The 12-week internship programme was supervised by Prof. Kalai Mathee and Prof Dr. Trevor Cickovski from the Herbert Wertheim College of Medicine, FIU. The internship programme was coordinated by Assoc. Prof. Dr Venkata Suresh Babu Chinni, FAS. The students were introduced to diverse areas of bioinformatics research undertaken by faculty and students at Florida International University. The projects include, Microbiome analyses, Comparative Genomics, Protein evolution, Protein structure and machine learning, Molecular modelling, Cancer biomarkers, Multiomics data analyses and Differential gene expression analysis. Aside from the research assignment, the students received professional development training in areas such as excellent slide preparation and engaging presentations, writing a review article, manuscript writing, and creating a conference poster.

Following are the details of our students with their respective research titles, Faculty and student mentors during the internship programme
Virtual Internship Training of Bsc (Hons) Bioinformatics Students at Florida International University, USA

Project: Causal Inferences in Microbiomes & Change in Resistome
Faculty Mentors: Dr. Kalai Mathee & Dr. Giri Narasimhan
Student Mentor: Vitali Steblinikin (PhD Scholar, FIU, USA)
Students:
- Hrinya Selvaraju (Undergrad, AIMST U, Malaysia)
- Vivien Lim Zhi Ling (Undergrad, AIMST U, Malaysia)
- Tejendra Sharma (PhD Scholar, FIU, USA)

Project: Machine-Learning to Identify Breast Cancer Biomarkers
Faculty Mentors: Dr. Kalai Mathee & Dr. Ananda Mondal
Student Mentor: Abdullah Al Mamun (PhD Scholar, FIU, USA)
Student: Praveen Raj Subramaniam (Undergrad, AIMST U, Malaysia)

Project: Molecular Simulation and Modeling
Faculty Mentor: Dr. Kalai Mathee & Dr. Trevor Cickovski
Student Mentor: Prabin Baral (PhD Scholar, FIU, USA)
Student: Shaaiveen Chandra Kumar (Undergrad, AIMST U, Malaysia)

Project: Cloud Computing & Containers
Faculty Mentor: Dr. Trevor Cickovski
Students:
- Muventhaler Param Lingam (Undergrad, AIMST U, Malaysia)
- Fantayzia Polanco (Grad, FIU, USA)
FAS Alumnus Won the 2022 Agrifutures Australia Science and Innovation Award

FAS alumnus, Dr. Ashiwin Vadiveloo won the 2022 Science and Innovation Award, sponsored by AgriFutures Australia. He graduated with a BSc (Hons) in Biotechnology from AIMST University in 2012. Currently, he is a postdoctoral fellow at Murdoch University.
FOM AIMST alumna Dr. Chong Pei Wen joined Columbia Asia Hospital - Petaling Jaya as a Consultant Internal Medicine Physician. Dr. Chong Pei Wen graduated from Faculty of Medicine, AIMST University, Malaysia, in 2013, and did her attachment at the National University of Singapore (NUS). She worked and served at multiple hospitals across Malaysia, both small scale district hospitals and large multi-disciplinary hospitals. She has been exposed to a variety of sub-specialties including Pulmonology, Nephrology, Gastroenterology, Endocrinology, Neurology, Dermatology, Cardiology, Palliative Medicine, Hematology, Respiratory, Rheumatology, Infectious Disease, Covid-19, Cardiology and General Internal Medicine.
The faculty organized the following webinar session with alumni as the speakers.
Introduction

Healthcare systems throughout most parts of the world have faced severe disruptions and been constantly overwhelmed since SARS-CoV-2 infections developed into a pandemic in early 2020.

The high infectivity and the ability of the virus to mutate to survive in the human body causing varying degrees of severity of infection, increasing requirement for hospitalization and intensive care support, has been beyond the capability of the most healthcare infrastructure. Personnel, beds, equipment, oxygen, morgues and even cemeteries, have all seen major shortages. This was further compounded by healthcare staff themselves being infected and unable to serve. The resultant healthcare crisis has been of a magnitude not seen in the history of modern healthcare system. Governments have scrambled to increase their national treatment capabilities. However, despite best efforts, mortality due to the pandemic has been high irrespective of the degree of development of a nation.

How did we get here?

Healthcare systems vary from country to country depending on the overall wealth of the nation and how much of that wealth is allocated to its healthcare. Many countries’ healthcare systems are reasonably effective and equitable systems where the public healthcare system is complimented by the private healthcare system. However, the world was not prepared with the necessary surge capability required by the pandemic, as the last pandemic a century ago had been prior to the age of modern medicine.

In response to its needs, China built a 1000 bedded hospital at the epicentre of its pandemic in a short period to treat Covid-19 patients. Other countries have set up similar temporary facilities to meet their pandemic requirements. Other factors which contributed to the rapid increase in Covid infection include:

1. Poverty and unequal distribution of wealth (both individual and national) which affects availability / access to healthcare and vaccines. Wealthier nations have accessed and stockpiled Covid vaccines beyond their immediate needs, thereby reducing the vaccine supply to poorer nations.
The Pandemic & Healthcare Sustainability

1. Ignorance due to lack of education, personal beliefs.

2. Misinformation – via media and insufficient dispersion of scientific information to counter misinformation. This has led to a significant unvaccinated population which apart from being a danger to society, also drains the already challenged healthcare budget.

3. Pharma industry reluctance to renounce huge profits by refusal to waive patents. The promise to substitute patent waivers with vaccine donations to the third world countries has not materialized.

We have to relook and re-organize the healthcare system in order to be sustainable during crisis. The government of the day must ensure that all citizens have access to equal and equitable healthcare services by increasing the budget, build more hospitals with sustainable infrastructure and technological support and create more jobs for healthcare workers.

Nations around the world allocate/spend different percentages of their Gross Domestic Product (GDP) on healthcare. Pre Covid pandemic, healthcare expenditure around the world (% of GDP) was – Malaysia 2.9% (WHO estimate), Singapore 2.1% in 2018, Australia, UK, Europe 10-12%, US 17.7%. This expenditure did not necessarily indicate the quality of the healthcare services. Every State Healthcare Authority must ensure that all the healthcare facilities in the state understand and embrace the practice of integrated sustainability initiatives which address three important pillars namely economic, environment and people.
The Pandemic & Healthcare Sustainability

Economic Sustainability

Each healthcare facility needs to manage the financial aspect of sustainability which includes obtaining funding through proper strategic planning exercises. This is followed by accountability and transparency in managing the funds and creation of funds. Collaborating with private medical institutions in both undergraduate and postgraduate courses will generate revenues. The facility can also be used to train potential hospital quality and safety surveyors. Creating a wing for affordable private patient care is doable but challenging. Specific criteria and rules must be set up to make this service possible in areas where there is no private hospital. Public hospitals must not be seen to compete with private hospitals but to compliment them and vice versa.

Investing in technology will facilitate the operational management which in the long run will save lives and save costs. When the healthcare facility has created surplus revenue, it can further improve the infrastructure, equipment, staff development, engaging the community and most importantly to meet and avoid a crisis during pandemic.

Environmental Sustainability

The second pillar addresses the environment, the world continues to suffer from the wrath of global warming causing drastic climate change resulting in unprecedented destructive flooding, winds and fires which have brought much suffering to humanity, loss of lives, loss of property, damage to infrastructure, disruption of economic activities, loss of livelihoods, altering the ecosystem and disabled the healthcare system. Human disregard for the preservation of the environment for financial gain has polluted the land, sea and air resulting in increasing carbon footprint and damaging the water footprint. Healthcare services is one of the main contributors to environmental pollution.
Healthcare facilities must embrace sustainability practices through the 6 “R’s” (Reduce, Reuse, Repair, Recycle, Rethink and Refuse). Installing solar panels to generate renewal energy will help reduce the use of electricity generated by fossil fuel and at the same time the electricity generate can be sold to produce income for the facility. Rainwater harvesting will help reduce water supply from outside supply and will be cost effective. The use of environmental-friendly disposable medical items must be adopted to facilitate waste management. Biohazard materials can be incinerated to produce usable energy which will supplement energy supply. The use of nitrous oxide in the operation theatres must be stopped because nitrous oxide has a very long half-life and being the third most important long-lived greenhouse gas, it substantially contributes to global warming. Recycling of paper and reduce the use of paper will help safe the trees which are earth green lungs that help to reduce carbon footprint.

Protecting the environment will protect the ecosystem and prevent disruption which cause migration of microbes looking for new hosts and spreading diseases. Finally, to achieve environmental sustainability, healthcare facilities must champion the practice of environmental sustainability by engaging its staff, patients and the community through education and social programs.

People Sustainability

Third pillar of achieving healthcare sustainability depends on understanding the power of people working together towards a common sustainability goal. Covid-19 pandemic has challenged the healthcare facility, especially the healthcare frontliners to the limit beyond human capability to handle physical, mental and emotional stress. The rapid surge in infections causing the overwhelming of healthcare facilities has been contributed primarily by human social behavior, contradicting information easily available through social media and inconsistent decision-making process.
The Pandemic & Healthcare Sustainability

Human behavior has contributed greatly to the scale of the pandemic. This in turn has been due to the lack of clarity and direction in the dissemination of correct and trustworthy scientific information regarding the SARS COV 2 virus, the possible patterns of infection in different segments of the population, the treatment modalities, the preventive measures including vaccination and most importantly, the capabilities of the healthcare infrastructure in areas. Armed with such knowledge, the public would be more inclined to follow healthcare advice, whereas without it every self-styled ‘specialist’ can create chaos with spread of misinformation as is the case now.

To address these challenges, top government management working through the public healthcare authority need to adopt one common goal to contain the virus by engaging all stakeholders such as public healthcare workers and leaders in the community which include business owners, leaders of public agencies, public enforcement agencies, NGOs, religious groups and top management of private healthcare facilities. To contain the pandemic, directives must come from only one source of authority who represents the expert in pandemic management and the directives are applicable to all with no exemption.

All stakeholders must be provided with necessary information and proper and adequate equipment to face the pandemic. Business owners hiring foreign workers need to provide safe living environment, accessibility to daily requirement without compromising the rules to control the spread of the virus which by itself cannot move. If healthcare authority is able to educate all members of the society and enforce rules without fear or favour, the virus can be contained and with the vaccination program, coronavirus will have nowhere to go. As WHO has rightly said, “no one is safe until everyone is safe”.

Not only does the world have to contain the present pandemic and recover from its effects, but also needs to future proof itself against future calamities. A template for universal disaster management needs to be created which can move into action smoothly in future such disruptions to minimize costs to lives and livelihoods.
When the pandemic is over and if all the members of the society have the right health-related information and use it to stay healthy, there will be less strain to the healthcare system. There will be more saving of resources for future rainy days and healthcare providers will have more time to train and be prepared for any future challenges.

**Conclusion**

Healthcare sustainability is the responsibility of today’s generation to ensure that the needs of our future generation are not compromised by what we do today. We must ensure that our descendants can live in a clean environment with less natural disasters, less diseases, more excess to good health-related information and equitable healthcare services with job opportunities in a healthy economic environment. We must act today to achieve healthcare sustainability.

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