

*President's
Report
2015*

23 Years of Innovation & Excellence



CONTENTS

Message from the President	002	EDUCATION	029
Vision	006	Centre for Pre-University Studies	030
Education Mission		School of Medicine	031
Quality Policy		School of Dentistry	035
Core Values		School of Pharmacy	039
Chancellor and Pro-Chancellor	008	School of Health Sciences	049
Board of Governors	009	School of Postgraduate Studies	053
Senate	010	Academic Achievements and Awards (Students)	056
Academic Council (AC)	011	Convocation	062
Professional Education Advisory Committee (PEAC)	016	Enhancing Services and Resources	
Student Population	018	– Library	067
Staff Population	019	– Medical Museum	075
University Day 2015	020	– e-Learning	078
ASPIRE: The IMU Strategic Plan 2011 - 2015	022	– Centre for Education	083
University Highlights 2015	026	– Centre for Lifelong Learning	086
		– Quality Improvement	087
		– Student Development and Services	090
		– Staff Development	108
		HEALTHCARE	111
		RESEARCH	115
		SERVICE TO THE COMMUNITY	129
		IMU in the World	139





President

**YBhg Tan Sri Dato'
Dr Abu Bakar Suleiman**

MDBS (Monash), MMed (S'pore),
DMedSc (UKM), DSc Hon (UPM),
PhD Hon (UMS), FRACP, FAMM,
FAMS, FACP (Hon), FRCP, FRCPE,
FRCP (Glasgow), FRCPI, FRCSI
(Hon), FRCSE (Hon), FAFPM,
FASc, AMP (Harvard),
Hon DSc (Soton)

MESSAGE FROM THE PRESIDENT

IMU, a University of the Future?

Thank you for being part of the IMU family. Your commitment to IMU's vision of achieving excellence has contributed enormously to our great performance over the years. IMU has grown and our focus has always been on the students, serving the community and on the future. The wonderful staff that makes IMU what it is, has been instrumental in our success, and will remain the critical force in meeting the challenges of the future.

We are undergoing a period of immense turmoil around the world, politically, socially and economically. Coupled with rapid developments in science and technology, the level of complexity is rising very rapidly. Globally, higher education continues to undergo fundamental change, not least because the world itself undergoes unprecedented change. Universities face the huge challenge of remaining relevant and influential in the societies they seek to serve and to inform.

In 2015, IMU has had a good year by continuing to do what it has always done, the pursuit of excellence in teaching, research, healthcare and service. We are proud of our achievements, the success of graduands, alumni and staff; and continuing endorsement of our educational programme quality by the Malaysian Qualifications Agency.

We will continue our drive for excellence in education and research. We will continue to innovate, to ensure that our teaching and learning framework supports the use of the best global developments in health professions education.

The growth in research funding and publications; the expansion of IMU Healthcare with the opening of the first IMU Community Centre; and the number of community service initiatives are testimony of our progress. Our partnerships with other universities remain robust and evolving, as do our collaborative partnerships with industry, especially for student workplace learning.

We will continue our drive for excellence in education and research. We will continue to innovate, to ensure that our teaching and learning framework supports the use of the best global developments in health professions education. We will continue to practice and develop team-based patient-centred healthcare. We will continue to scan the horizon, to imagine, to seek insight.

We will seek answers to some questions. *What is the University of the future?* Many questions come to mind under this over-arching theme: What is scholarship in the 21st century? What is the role of the professoriate? How will technology enabled learning continue to fundamentally change higher education? Will institutions of higher learning continue to exist at all, and if so, in what form? What of university teachers of the future?

What of the professionals who will offer the healthcare of the future? Will the human become more or less important? What qualities are to be expected of these humans? How will competence be defined and measured? In an age of technologically enabled healthcare, how will traits of humanity – assume greater importance? Or will our major drive – to ensure that the University's people embrace and *live* its values, become irrelevant? IMU has gained a significant reputation as a University wholly focussed on health professions and health sciences education. It must continue to reinvent itself in all its key aspects. I would like to end by thanking all students, alumni and staff for their participation and contribution to 2015. I trust that we all look forward to contributing to the University's growth and evolution in 2016 and beyond.



Tan Sri Dato' Dr Abu Bakar Suleiman
President

Accolades to a distinguished leader

*YBhg Tan Sri Dato' Dr Abu Bakar Suleiman has been
President of the International Medical University
from 2001 – 2015.*

*In that position he held the responsibilities
of Vice-Chancellor of the University as well.*

*For 2016, he has stepped down
from the responsibility of Vice-Chancellor.*

*Prof Abdul Aziz Baba will occupy
the post of Vice-Chancellor and its roles
and responsibilities from 2016.*

VISION

IMU shall be an innovative global centre of excellence in learning and research, supporting a community of scholars and professionals committed to serving society, promoting the development of students to reach their true potential in becoming competent, ethical, caring and inquiring citizens; and visionary leaders. IMU is committed to academic freedom and the principles of equal opportunity in the pursuit and application of knowledge, the highest standards of intellectual, educational and research productivity; and the establishment of a learning organisation that respects the individual.

EDUCATIONAL MISSION

As an educational institution, our mission is:

- To further strengthen the IMU as a centre of excellence for undergraduate programmes in medicine, pharmacy and other health sciences programmes
- To establish the IMU as a centre for higher education providing training through multidisciplinary programmes
- To establish the IMU as a centre for postgraduate training and Continuing Professional Education
- To train knowledgeable and skilful professionals with high ethical standards who will be dedicated to serve and improve the quality of life of the community
- To train competent professionals with the use of innovative technologies of knowledge especially ICT in the teaching - learning process

QUALITY POLICY

We aim to be an innovative centre of excellence in learning and research, producing competent, caring and ethical professionals who are lifelong learners. We are committed to achieving the highest standards of intellectual, educational and research productivity.

CORE VALUES

Our organisational culture is to be based on our value system:

We will be an organisation driven by its values.

These core values, encapsulated in the acronym **TRUST**, are:

- T**rustworthy – we are trustworthy and stand for integrity, reliability and commitment
- R**esponsive – to change, and to the needs of individuals and communities
- U**nity – of vision and in working towards the achievement of common goals
- S**ervice – a commitment to providing outstanding service
- T**enacity – in the pursuit of excellence

We expect staff and students to embrace, live and demonstrate these values, so that they may become role models. These values are integral to our culture: They underpin our work, communication and interaction, and explain why we do business in the way that we do. Our culture and its embedded values will help us realise our vision of becoming a great organisation, and of producing graduates capable of being leaders.

CHANCELLOR AND PRO-CHANCELLOR



Chancellor
YBhg Dato' Dr Amir Abbas

(DPMP), Dr Med Sc (Hon) (UKM),
FRCP, DTM&H (L'pool), FAMM, MBBS (UM-S'pore)



Pro-Chancellor
YBhg Dato' Dr Gan Ee Kiang

PhD (U Western Australia), PKT, BCN, JMN, DSPN

BOARD OF GOVERNORS



1. **Chairman**

YBhg Tan Sri Dato' Dr Yahya Awang

MBBS (Monash), FRCS (Glasgow), SMJ, KMN, DPMJ, DMPN, DSAP, PSM, Hon Doct (UKM)

2. **YBhg Tan Sri Dato' Dr Abu Bakar Suleiman**

MDBS (Monash), MMed (S'pore), DMedSc, Hon (UKM), DSc, Hon (UPM), PhD, Hon (UMS), FRACP, FAMM, FAMS, FACP (Hon), FRCP, FRCPE, FRCP (Glasgow), FRCPI, FRCSI (Hon), FRCSE (Hon), FAFPM, FASc, AMP (Harvard), Hon DSc (Soton)

3. **YBhg Dato' Dr Gan Ee Kiang**

PhD (U Western Australia), PKT, BCN, JMN, DSPN

4. **YBhg Prof Datin Paduka Dr Aini Ideris**

DVM (UPM), MVSc (Liverpool), PhD (UPM), DSIS, PSK, KMN, FASc, FIAS, FMCVS, FMSA

5. **YBhg Datuk Dr Yeoh Poh Hong**

PJN, MBBS (Mal), MChOrth (Liverpool), FRCS (Eng), FRCS (Edin), FRCP (Glasgow), FACP (Hon), Hon.FCS (S.Africa), FAM (Mal), FAM (S'pore)

6. **Dr Mei Ling Young**

BA, MA (Hons) (Auckland) PhD (ANU)

7. **Prof Victor Lim**

MBBS (Malaya), MSc (London), MRCPPath, FRCPath, FAMM, FASc



SENATE



YBhg Tan Sri Dato' Dr Abu Bakar Suleiman (Chairman)

President

Dr Mei Ling Young

Provost

Prof Peter Pook

Vice President

Prof Abdul Aziz Baba

Vice President

Prof Victor Lim

Vice President, Education

Prof Mak Joon Wah

Vice President, Research

YBhg Prof Dato' Dr (Mrs) Kew Siang Tong

Dean, School of Medicine

Prof Toh Chooi Gait

Dean, School of Dentistry

Prof Yeoh Peng Nam

Dean, School of Pharmacy

Prof Chu Wan Loy

Dean, Postgraduate Studies and Research

Prof Vishna Devi A/P V Nadarajah

Dean, Teaching and Learning

Prof Ong Kok Hai

Director, External Affairs

YBhg Prof Dato' Kandasami A/L Palayan

Professor, Surgery

YBhg Prof Dato' Sivalingam A/L Nalliah

Professor, Obstetrics and Gynaecology

YBhg Prof Dato' Jai Mohan A/L C.A Nayar

Professor, Health Informatics and Paediatrics

Prof Hematram Yadav

Professor, Community Medicine

Prof John Tilagachandran Arokiasamy

Professor, Community Medicine

Prof Peter Michael Barling

Professor, Human Biology

Prof Ammu Kutty A/P

K Radhakrishnan

Professor, Pathology

Prof Stephen A/L Periatnamby Ambu

Professor, Pathology

Prof Taufik Teng Cheong Lieng

Professor, Family Medicine

Prof Lim Pek Hong

Professor, Nursing

Prof Peter Roman Paul Diakow

Professor, Chiropractic

Prof Davendralingam

A/L Sinniah

Professor, Paediatrics

Prof Allan Pau Kah Heng

Professor, Dentistry

Prof Khoo Suan Phaik

Professor, Dentistry

Prof Winnie Chee Siew Swee

Acting Dean, School of Health Sciences

Ex-Officio Members

Christy Chiu

Vice President, Finance and Admin

Noraidah Yusoff

Registrar (Secretary)

Zuhanariah Mohd Nordin

Chief Librarian

ACADEMIC COUNCIL (AC)



The Academic Council comprises the deans or senior representatives of the University's Partner Medical and Dental Schools. The Council is a consultative body to the MBBS Programme, advising on admissions, curriculum, assessment, student transfer to Partner Schools; faculty appointment and development. Council Members also serve as contact persons between the University and Partner Schools. The Council meets yearly with IMU staff and students. This gathering of deans and senior academics of medical schools from different countries is something very special, with a great sense of camaraderie between individuals who meet for a unique purpose in a unique setting.

The remit of Council includes:

- Advising and recommendations on matters pertaining to admissions processes, curricula, assessment and faculty appointments and development, as well as research and postgraduate training in medicine and dentistry;
- Monitoring and evaluating curriculum implementation, especially in the pre-clinical phases;
- Advising on and monitoring the transfer of students to Partner Medical and Dental Schools; and
- Monitoring student performance at the University and Partner Schools and reporting on student progress at Partner Schools.



In 2015 the Academic Council met on 10 and 11 April, with concurrent Medical School and Dental School meetings. At the Dental School meeting, Prof Toh Chooi Gait updated Council on developments in the School of Dentistry and in the BDS programme for 2014. These developments included:

- Use of the MAHARA platform for student self-evaluation records and portfolios; students are guided by the Expected Progressive Clinical Competencies of the BDS Programme, accessible to students via MAHARA;
- Introduction of student-led case-based learning into the final year, with final year students using their own cases as starting points for discussion by Year 4 and Year 5 students;
- Introduction of an online database of clinical and histopathological images for staff and student use; and
- Modifications to the Professional Practice Assessment using feedback received from the Council.





26th ACADEMIC COUNCIL MEETING, APRIL 2015





The Dental School meeting also discussed revisions to the Dental Practice 1 module to enhance student preparedness (Dr Mandakini Mohan), and proposed changes to the Dental Science module in the revised curriculum (Dr Vimi Mutalik).

At the Medical School meeting, breakout sessions discussed technology-led assessment (A/Prof Kang Yew Beng, and A/Prof Er Hui Meng, and Dr Sunil Mutalik; Patient Safety (A/Prof Ranjit De Alwis and Dr Sneha Ravindranath), and experiential learning (A/Prof Sharifah Sulaiha and Prof Allan Pau).

The 2015 Council Meeting included a forum on the assessment on professionalism, chaired by Prof Amir Sharifuddin Mohd Khir, Dean of Penang Medical College. Prof Lakshman Samaranayake spoke on the detection and management of unprofessional student behaviour, and promoting professionalism in a university environment. Prof Rona Patey spoke on ethics in professional practice and the assessment

of professionalism, whilst YBhg Dato' Sivalingam Nalliah spoke on ethics and professionalism at IMU. These presentations were followed by a breakout group discussions of the aspects of professionalism presented. Groups were led by A/Prof Nazimah Idris (Ethics in professional practice); A/Prof Chen Yu Sui (Detecting and managing unprofessional student behaviour); Prof Khoo Suan Phaik (Promoting professionalism in a university environment); and Prof Seow Liang Lin (The assessment of professionalism).

PROFESSIONAL EDUCATION ADVISORY COMMITTEE (PEAC)



The Professional Education Advisory Committee (PEAC) provides advice and guidance to the University on all matters relating to professional education and training, including continuing professional development. More specifically PEAC advises on:

- Exit learning outcomes, particularly in terms of the needs of Malaysia;
- Student selection and admissions;
- Programme (syllabus) content; its organisation and sequencing;
- The progression of students through different phases of the curriculum;
- Educational strategies, including student-centred approaches, problem and task-based learning, integrated teaching and learning, technology-based learning and community-orientated education;
- Instructional formats and methods including the role of lectures, small group events and individualised learning; clinical and practical instruction;
- The role of technology assisted or enhanced learning, including the role of computers, the internet and technology enabled simulation
- Assessment principles, the timing and form of assessments, the instruments used, the role of self-assessment, the role of external examiners and the provision of feedback to learners;
- The learning environment and climate, e.g. research and scholarship orientation, co-operative or competitive orientation;

- Student support systems and issues relating to student welfare;
- Communication to students and staff about the curriculum, including the role of the curriculum brochures and handbooks, study guides, and electronic databases;
- Curriculum management, including the roles of committees, working groups and individuals in the development, supervision and management of the curriculum; educational, administrative, technical and secretarial support; and procedures for quality assurance and curriculum evaluation;
- Faculty development for teaching, the expected roles of the teacher; the expectations, incentives and rewards of teaching; and
- Educational research.

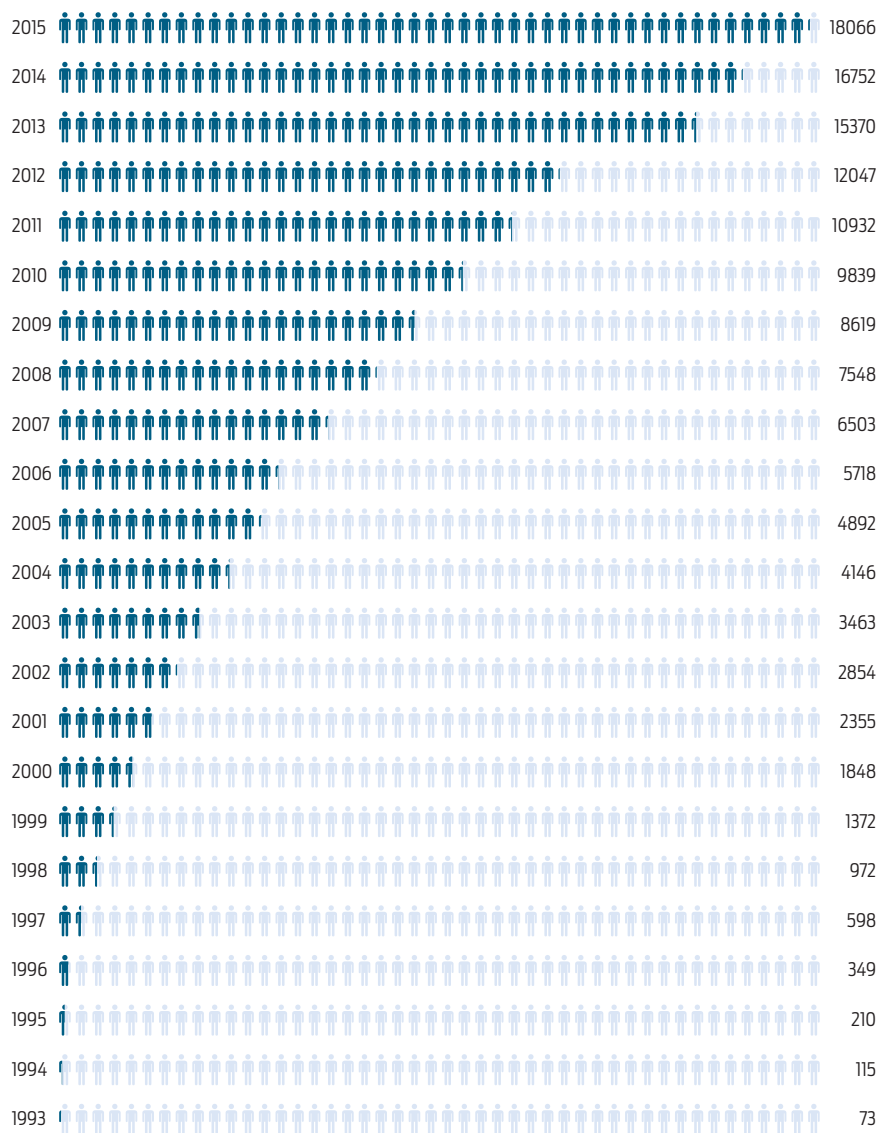
PEAC may also address issues raised by the Academic Council. Each year PEAC normally conducts one meeting at the University, and undertakes two or three reviews, carried out by three-member panels. For 2015, PEAC conducted reviews of the degree programmes in Pharmaceutical Chemistry (March - April); and Chinese Medicine Programme (August). Additionally there was a University-wide review of competency based education, in September - October. The main meeting, convened after this review, considered a number of items:

1. Internal audit reports from the Academic Quality Committees of all Schools
2. Report on the Review of Implementation of Competency Based Education 2015
3. Report on the Review of Bachelor of Science (Hons) Chinese Medicine 2015
4. Progress Report on the Review of Bachelor of Science (Hons) Chinese Medicine 2015
5. Report on the Review of Bachelor of Science (Hons) Pharmaceutical Chemistry 2015
6. Progress Report on the Review of Bachelor of Science (Hons) Pharmaceutical Chemistry 2015















































7. Progress Report on the Review of Medical Programme 2014 and update on MQA Accreditation Visit 2015
8. Progress Report on the Review of Psychology 2014
9. Progress Report on the Review of Learning Through Social Responsibility 2014
10. Progress Report on the Review of Assessment 2013
11. Progress Report on the Review of Dietetics with Nutrition 2013
12. Progress Report on the Review of Dentistry 2014
13. The new IMU Academic Quality Management System
14. Investing in people
15. Recruiting strategies in an increasingly challenging environment
16. Addressing the challenges of high attrition rates in shared modules through Outcomes Based Education
17. Recent developments in research at IMU

Feedback from PEAC on these items is communicated to persons-in-charge for further action, and where needed, action taken to address issues is reported back to PEAC at the next annual meeting.

STUDENT POPULATION (1993 – 2015)



STAFF POPULATION (1993 - 2015)

	Administration	Academic	Total Staff
2015	 338	 342	680
2014	 305	 341	646
2013	 267	 298	565
2012	 286	 293	579
2011	 259	 259	518
2010	 229	 235	464
2009	 190	 203	393
2008	 173	 189	362
2007	 163	 164	367
2006	 145	 128	273
2005	 140	 108	248
2004	 179	 100	279
2003	 167	 91	258
2002	 101	 76	177
2001	 101	 66	167
2000	 78	 47	125
1999	 74	 41	115
1998	 52	 28	80
1997	 54	 28	82
1996	 46	 25	71
1995	 44	 28	72
1994	 44	 18	62
1993	 13	 5	18



UNIVERSITY DAY 2015



In 1999 the then International Medical College was conferred university status, becoming the International Medical University. Since 1999, University Day has been celebrated every year to commemorate this milestone, but also to take stock of our development and direction.

University status bestowed prestige on a very young institution, but more importantly enabled it to offer our own degree programmes, providing students the option of completing their degree studies entirely in Malaysia. At the same time, our unique model of credit transfer continued to be available to those students wishing to transfer to one of a network of excellent partner schools abroad. In 1999, IMU offered degree programmes in medicine and pharmacy, the latter under twinning arrangements. Today it offers its own programmes in Medicine, Pharmacy, Nursing, Nutrition, Dietetics, Pharmaceutical Chemistry, Psychology, Biomedical Science, Chinese Medicine, Chiropractic, Dentistry and Foundation in Science; and both Research and taught Postgraduate degrees.

In 2015 University Day was celebrated on Friday, 13 March, attended by staff, students, alumni, and members of the Board of Governors and Board of Directors. The President YBhg Tan Sri Dato' Dr Abu Bakar Suleiman, reflected on The State of the University and presented the President's Report for 2015 to Dr Mei Ling Young, Executive Director of IMU Education. A forum themed Science and Tomorrow's Society, was chaired by Prof Chu Wan Loy, Dean of Postgraduate Studies; with presentations from Prof Winnie Chee, Prof Azizi Ayob and Prof Allan Pau, followed by a lively audience and panel discussion. The video presentation after the forum highlighted key University achievements of 2015.

It is customary at University Day to acknowledge and reward students and staff achievement that contribute to University life and development. Individual student recipients of the 2014 Aflame Student Awards spoke on their experience, followed by a cheque presentation ceremony to the Non-Governmental Organisation nominated by the overall student winner. This was followed by Long Service Award presentations to long serving members of staff, and the presentation of the Teaching Excellence and Research Awards.

This year, the Student Representative Council ran a Treasure Hunt on the Saturday following University Day, to foster team work between staff and students. Several teams, each made up of equal number of students and staff, participated in this activity.



ASPIRE: THE IMU STRATEGIC PLAN 2011 - 2015

This Report summarises highlights, achievements and milestones of ASPIRE, the University's Strategic Plan for 2011 – 2015. ASPIRE completed its 5-year implementation with some 65% of planned initiatives operationalised. The remaining initiatives are on hold for reasons including timing and the need for further evaluation before implementation.

Student Experience Framework

5 Key Objectives

1. Enhancing the total student experience by promoting active, meaningful learning
2. Creating awareness of career ambitions and long term professional goals
3. Inculcating and nurturing leadership and humanistic values, and providing opportunity for individuals to develop and demonstrate their potential
4. Creating a campus environment that support students' needs, including pastoral care
5. Increasing student participation in the quality



EDUCATION

The heart of the Strategic Plan 2011 – 2015 was a commitment to enhance the student experience, and to promote continuing academic growth and development.

The Student Experience Framework articulated five key objectives and set forth what we believed would assist our students in their journey. The Framework was supported by a feedback system that facilitates continuing improvement.

One notable effort in enhancing student learning experience is the Student Mobility Programme. It was formalised with funding that enables students to undertake learning periods at the workplace and abroad. These learning experiences broaden horizons and strengthen work readiness. The Programme has also benefitted students from other institutions and countries who undertake study periods at IMU.

Besides the emphasis on enhancing the student experience, IMU has diversified its educational offerings into new market segments:

 ICL CENTRE FOR LIFELONG LEARNING	 IMC INTERNATIONAL MEDICAL COLLEGE	Foundation in Science
2011	2012	2014
Set up of IMU Centre of Lifelong Learning Provides continuing professional learning and development	Acquisition of a nursing and health sciences college Offers diploma level programme, complementing existing degree and post basic courses in nursing	Launch of IMU Foundation in Science Provides pre-university education that enhances the assimilation of pre-university students into IMU

Numbers of courses offered under ICL:

	2012	2013	2014	2015
Medicine	8	12	4	7
Dentistry	2	1	4	5
Pharmacy	-	1	1	2
Health Sciences	5	4	3	3
Research	9	2	3	1
Others	3	1	1	2

HEALTHCARE

The concept of an Academic Health Centre integrates healthcare with education and research, for better patient outcomes. In the past 5 years IMU Healthcare has increased the types of service it offers, and has extended to locations outside the University. We have currently 7 facilities at 4 locations. The highlight of 2015 was the establishment of the IMU Community Centre at Salak Park Plaza, in the Salak South township. The primary purpose of the Centre is to support the surrounding community with affordable good quality healthcare. Less-privileged members of the community can request subsidised treatment. The Centre offers Chiropractic treatment, Chinese Medicine, and individualised nutrition and dietary counselling.

An encouraging development for 2014 was a joint venture with Advance Renal Care (Asia) Pte Ltd, of Singapore, to establish a dialysis centre in Sri Petaling.

Moving forward, the Healthcare team will continue to develop out network of clinics and services, leveraging on our multi-disciplinary expertise and strategic partnership.



RESEARCH

SCHOOL OF POSTGRADUATE STUDIES

- PG Programmes (by Research) MSc and PhD
- PG Taught Programmes
- BMedSc

RESEARCH AND DEVELOPMENT

Research Centres:

- Biomolecules and Drug Delivery
- Environmental and Population Health
- Cancer and Stem Cell Research
- Health Professional Education Research

COMMERCIALISATION AND SUPPORT

- Commercialisation and Services
- Training and Statistical Support
- Research Lab (obtained ISO/IEC 17025:2005 accreditation)
- IJSME and Editorial Support

The Institute of Research, Development and Innovation (IRDI) continues to provide research direction and oversight. The Institute is responsible for three key areas which are postgraduate education and training (via the School of Postgraduate Studies), research and development, and commercialisation and support. There have been significant achievements in all three areas since the Institute was established in 2012.

The University's Joint Research and Ethics Committee was formed to assure the rigour, quality and integrity of research at the University. The Committee comprises experts in different disciplines, including the legal profession and in religion. The Committee is accredited by the National Pharmaceutical Control Bureau of the Ministry of Health to serve as one of several national Institutional Review Board for clinical trials.

In August 2015, a Memorandum of Understanding was signed with the clinical research organisation IndiPharm. This strategic collaboration enables IRDI to tap into IndiPharm's wide experience and network, with the aim of providing training on practical clinical research management.

IRDI Achievements	2012	2013	2014	Sept 2015
Indexed publications (ISI/SCI)	121	162	203	76
Percentage of indexed papers in Tier 1 and 2 journals	N/A	65.7%	68.2%	63%
Masters and PhD graduands	7 MSc 3 PhD	9 MSc 4 PhD	12 MSc 7 PhD	6 MSc 5 PhD

KEY ENABLERS

The enablers identified in the 2011 - 2015 Strategic Plan included the innovative use of ICT to differentiate IMU's service delivery; capability and capacity growth for performance improvement, and enhancing the working environment. Core values were defined as essential tenets which guide members of the University and define how we conduct our affairs, ethically and professionally. The University's five core values of Trustworthiness, Responsiveness, Unity, Service and Tenacity continue to be embedded into staff and student activity.

Two important information management systems, the Student Lifecycle Information Management and the Finance Information System were introduced as part of organisation-wide business process improvement. Human Resource frameworks and policies to strengthen the manpower and talent pipeline included the Individual Development Plan, Succession Planning, Talent Management, Staff Mobility and Conducive Work Environment. In faculty development, mandatory training has been implemented in the form of the Foundation in Teaching and Learning course, and the e-Learning license.

The Next 5 Years

We are finalising the strategic plan that will help chart the University's direction from 2016 to 2020. The guiding aims are to maintain relevance and sustainability, and to extend our leadership in health professions education. Focus areas include graduand work readiness, ongoing internationalisation of educational programmes, providing learning for adults at work; the implementation of team-based practice, and the expansion of healthcare.

UNIVERSITY HIGHLIGHTS 2015

LEADERSHIP

16 December 2015

On 16 December at a simple ceremony, outgoing President YBhg Tan Sri Dato' Dr Abu Bakar Suleiman officially handed over his role and responsibilities as Vice-Chancellor to Prof Abdul Aziz Baba. Prof Aziz was previously the Vice-President responsible for the Medical and Dental programmes. At the ceremony, he shared the vision on the various challenges and strategies to take IMU to the next level and the need to prepare our students to meet the changing landscape and needs of the medical and healthcare industry while nurturing ethical and caring professionals to deliver safe and effective healthcare in the communities we live in.



EDUCATION AND RESEARCH

2014 - 2015 marks the tenth year of our groundbreaking BPharm programme which was launched in 2004. The chief events celebrating this Anniversary were a Pharmaceutical Sciences Conference on 1 - 2 August 2015, and a celebratory dinner in 15 June 2015, at which the School of Pharmacy was able to renew its association with many alumni, including graduates, staff and faculty who have retired or left the University.





13 June 2015

The first cohort of students to undertake the Chinese Medicine programme graduated at the first Convocation of 2015. At this ceremony Prof Chris Stephens, Director of Education and Associate Dean at the University of Southampton was honoured with an Honorary Doctorate in Medicine for his significant contributions to the University's growth and development during his long association with IMU.



12 September 2015

The second convocation ceremony of 2015 saw the graduation of the first students to undertake the Master of Science in Molecular Medicine. In recognition of his contribution to research excellence, Professor Mak Joon Wah, Vice President for Research and Director of the Institute for Research, Development and Innovation, was awarded an Honorary Doctorate in Science.



SERVICE TO COMMUNITY

19 September 2015

The University's charity run and fair 'Chariofare 2015: Live. Run. Love.' achieved a new high, raising more than RM170,000 to be shared between the Penang Hospice Society, the Ti-Ratana Welfare Society, Rumah Victory and the IMU Cares Disaster Fund. The University's Eco Friends used Chariofare to host an Eco-Friendly International Fashion Show and a Rubbish Separation Programme.

University Highlights 2015

21 November 2015

The University's inaugural Humanitarian Medical Mission Conference at the Clinical School in Seremban attracted 200 participants. The Conference discussed medical humanitarian missions and was aimed to promote and enhance the spirit of volunteerism and encourage others to work for a better and more peaceful world. Sharing of experience in organising, managing and executing humanitarian medical missions is also part of this conference.



HEALTHCARE

6 September 2015

IMU continues its efforts in the use of complementary medicine by launching its IMU Community Centre at Plaza Salak Park. The Centre offers Chiropractic and Chinese Medicine treatments, and personalised nutrition and dietary counseling. Dental and oral health services are being planned.



21 November 2015

An inaugural IMU Chiropractic Seminar with the theme "Developing Malaysia's Chiropractic Future" was held at the University's campus in Bukit Jalil.



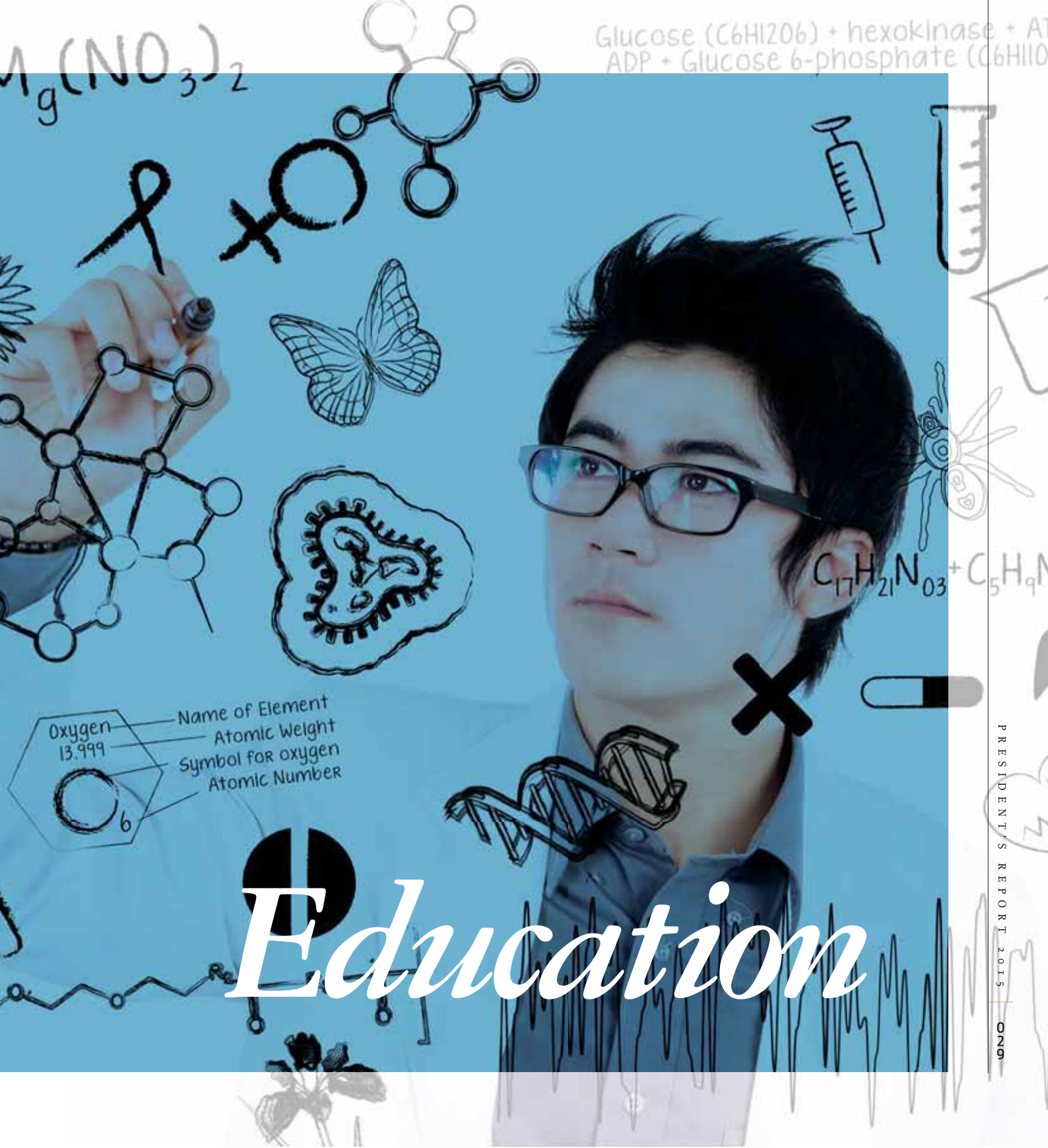


Diagram illustrating the components of an element's name and symbol:

- Name of Element: Oxygen
- Atomic Weight: 13.999
- Symbol for oxygen: O
- Atomic Number: 6

Education

CENTRE OF PRE-UNIVERSITY STUDIES: Foundation in Science Programme

Enrolments and Progress

In 2015 the Foundation in Science (FiS) Programme enrolled three cohorts of students totalling 239 individuals; 44 in the January intake, 150 in May and 45 in September. The projected growth in student numbers for 2016 is 9%.

The cohort which enrolled in May 2014 completed the programme in May 2015. Of 109 students, 15 were awarded distinctions (cGPA above 3.7). The third cohort completed the programme in September 2015. Out of 42 students, 11 students obtained distinctions. Graduands of the 2014 cohorts successfully enrolled into various University degree programmes in the February and August - September intakes, with conversion rates of 76% and 87.5% respectively.

In February the first cohort of Foundation in Science graduands – the January 2014 intake - enrolled into the University's undergraduate programmes in medicine, dentistry, pharmacy, chiropractic and psychology, with a 76% conversion rate. The second cohort of Foundation in Science students, who had enrolled in May and September 2014, enrolled in the August - September 2015 University intakes, with an 87.5% conversion rate.

Teaching, Learning and Assessment

The revised curriculum was implemented in 2015, having been accredited by the Malaysian Qualifications Agency. The revised curriculum is modular, better enabling students to fully grasp the fundamentals of a module before progressing to the next. Online assessments are increasingly used in the summative in-course assessment scheme and an online question bank is being built. The e-Learning portal is used for submission and online grading of assignments, whilst FiS faculty have received training in technology enhanced learning from the e-Learning department.

Co-curricular Activity and Service

Through their Cross Boundary Studies, students participated in two IMU Cares events with the Dignity for Children Foundation (DFC). In the first activity, students organised a Chinese New Year celebration for toddlers and pre-schoolers of DFC, with the aim of promoting and enhancing inter cultural diversity. In the second activity, in November, students ran soft skills workshops for high school students.

In conjunction with the University's annual Festival of Arts, Programme staff ran an inter-cohort drama competition for the FiS students. Students from all three cohorts enrolled in 2015 participated in the competition, with the champion emerging from the January 2015 cohort. FiS students have also participated in the IMU Cup, taking part in various events.

SCHOOL OF MEDICINE

HIGHLIGHTS:

- Full re-accreditation awarded by the Malaysian Qualifications Agency (MQA) and Malaysian Medical Council (MMC)
- Implementation of revised assessment scheme by Medical Sciences to benchmark against current global trends
- Expansion plans for IMU Clinical School underway to enhance and support the teaching and learning facilities

Key events for 2015 included receiving 5-year re-accreditation from the Malaysian Qualifications Agency and the Malaysian Medical Council. The School also contributed significantly to the University self-accreditation exercise in the later part of the year, which resulted in a very positive verbal exit report. The written report is awaited pending.

In 2015 the School implemented a revised assessment scheme for Medical Sciences, with the five assessment domains aligned with University learning outcomes, and strengthened assessment of professionalism, consistent with the best global trends in medical education. The decrease in student recruitment has been partly attributed to an uncertain economic climate. The School is working to make the MBBS Programme more attractive to potential students, Malaysians or international.

At the Clinical School in Seremban planning has begun for expansion, based on the planned acquisition of nearby land for new buildings that will better cater for an increasing number of students and faculty. The additional space and facilities are needed to develop and support simulation and virtual learning, interactive teaching, peer group learning, and extra-curricular activity.

Development of the MBBS Programme

Assessment

The School undertook a review of assessment in the Medical Sciences component of the MBBS Programme. The review aligned assessment domains with University learning outcomes. Care was taken to ensure that patient safety features in all learning outcome and assessment domains. The assessment of professionalism has been strengthened. Other major developments included:

- The implementation of a competency framework throughout the MBBS Programme, and the simultaneous introduction of an online log of clinical competency.
- Assessments using selected-item responses (multiple choice questions) are now conducted online for Semesters 1 through 5 are conducted online.

- Online assessment has also been introduced for the Community Oriented Report; community field visit reports, and student research, employing assessment rubrics and feedback.
- Online lectures being made available together with all other learning content via the University's virtual learning environment.

Teaching Hospitals

The School continues to work with the Ministry of Health in undergraduate clinical teaching; postgraduate training; clinical research and the provision of clinical services at our teaching hospitals. These are Hospital Tuanku Ja'afar, Seremban; Hospital Port Dickson; Hospital Tuanku Ampuan Najihah, Kuala Pilah; Hospital Sultanah Nora Ismail, Batu Pahat; and Hospital Enche' Besar Hajjah Khalsom, Kluang. The School has obtained Ministry permission to use Hospital Jempol, Negeri Sembilan as a clinical placement site for Semester 4 students. Previously these students were placed only at Hospital Kuala Kubu Baru.

Student and Alumnus Achievement

Students continued to achieve recognition of their ability in research, academic performance, in sports, and in community service.

Living the values, Chen Lian Ee is actively serving as Area Staff Office of St John Ambulance Malaysia for Selangor Selatan since 2014. She has also received the 5-Year Service Medal of St John Ambulance Malaysia for service from 2008 to 2012 and the Pingat Jasa Terpuji St John Ambulance for 2013. Alumnus Dr Albert Ling Chuan Kai, was conferred the Meritorious Service Medal (PJK) by the Government of Negeri Sembilan.

For more student and alumnus academic Achievements and Awards, please refer to page 056.

Faculty Achievement

Prof Lum Siew Kheong was appointed Chair of the Advanced Trauma Life Support Program in Malaysia

by the American College of Surgeons. In May Prof Lum was awarded the Distinguished Service Medal of the College of Surgeons Malaysia at the Annual Scientific Meeting of the College of Surgeons of the Academy of Medicine. Prof Lum has been instrumental in both bringing the Advanced Trauma Life Support course to Malaysia, and in nurturing and leading this course for the last 5 years.

YBhg Prof Dato' Dr. N Sivalingam (Head, Division of Human Development and Population Health) received the Malaysian Gynae-oncological Society Honorary Award 2015 at the National Gynae-Oncology Conference 2015. This award acknowledges Prof Sivalingam's distinguished contribution to the development of gynae-oncology services in Malaysia. Prof Hematram Yadav has been honoured for his work in public health. At the 34th International Congress of Non-Resident Indians in January, he received an award for Outstanding Services, Achievements and Contributions in Public Health, from the NRI Welfare Society of India.

Dr Vasudeva Challakere (Pathology) became a Fellow of the Royal College of Pathologists Australasia, in clinical forensic medicine. Dr Niusha Shafi Abady (Psychology) became a Fellow of the United Kingdom Higher Education Academy, after receiving a Post Graduate Certificate in Higher Education from the University of Nottingham. A/Prof Nazimah Idris (Associate Dean, Clinical School) received her Masters in Medical Education from the University of Dundee. YBhg A/Prof Datuk Dr Sethuraman Nagappan (Internal Medicine) became a Fellow of the Royal College of Physicians, London.

Wong Pak Fong (Nursing), Nicole Chen Lee Ping (Psychology) and Chen Yu Sui (Medicine) received a Merit Award for their poster *Help seeking behavior among healthcare students*, at the Hong Kong University 2015 Conference themed Frontiers in Medical and Health Sciences Education. Dr Erwin Khoo Jiayuan (Paediatrics) won the Young Investigator Award 2015 from the Perinatal Society of Malaysia. At the Annual Congress of the Perinatal Society in March Dr Khoo's paper *A modified approach of*

medical students' neonatal resuscitation programme won the best free paper award. In June Prof Teng Cheong Lieng's (Family Medicine) presentation *General and URTI-specific antibiotic prescribing rates in the Asia-Pacific region: a systematic review* won one of the top three prizes at the International Primary Care Respiratory Group Scientific Meeting in Singapore.

At the University Teaching and Learning festival for 2015, the Best Poster award went to Dr Priyadarshi Sahu, Dr Vasudeva Challakere and Dr Arun Kumar for *Plastinated Museum Specimens: Great Learning Tools in Medicine, Dentistry, and Health Sciences*. Dr Vasudeva Challakere and Dr Sufyan Akram won the First Prize in the flipped classroom challenge for Physiology of hearing. The students choice award went to Dr Priyadarshi Sahu, Dr Vasudeva Challakere and Dr Arun Kumar.

Continuing Professional Development (CPD) Events

CPD events were run throughout the year.

January	Workshop: Clinical Reasoning and Assessment
April	The Membership of the Royal College of Physician (UK) PACES Examination 2015
June	Alumnus Dr Amirahwaty Abdullah shared her experience: Getting through the USMLE
	Workshop: E-Medicine
August	The 1 st IMU – Hospital Tuanku Ja'afar MRCPCH Clinical Examination Preparatory Course
September	Organ transplantation in Malaysia in conjunction with the MAPCU Organ Donation Campaign 2015-16
	The 11 th IMU – Hospital Tuanku Ja'afar MRCP PACES Preparatory Course
October	Alumni talks: Updates on Diabetes Mellitus and Specialty Training and Working in the US
	The Annual Clinical School Student Research Day
	CPD Talk: The Route to Becoming a Family Physician, Department of Family Medicine
November	The 1 st IMU Humanitarian Medical Mission Conference
	Antibiotic Awareness Week 2015
	The 2 nd International Conference on Bioethics and Professional Practice

2016 and Beyond

A focus on patient safety

Patient safety will continue to be given prominence in teaching and learning. Developments include co-organising, with the Ministry of Health, a National Patient Safety Conference for Students in the Healthcare Professions. We are formulating research into patient safety, and looking at guideline development and implementation, for example in Aseptic Non-Touch Techniques (http://anntt.org/ANTT_Site/home.html).

IHH hospitals as placement learning sites

The University is part of the IHH Healthcare Berhad, which runs a network of hospitals in Malaysia, Singapore, Vietnam, India and Turkey. These hospitals are rich sources of clinical learning and equally importantly, can be used to sensitise students to practise in the private healthcare sector, with its different culture and strategies of healthcare delivery.

Increasing the enrolment of international students into the Partner School track

The School will work with International Marketing on promoting the Partner Medical School option to non-Malaysian students. We are also exploring the possibility of securing Malaysian Medical Council recognition of non-Malaysian pre-university certification to ease the difficulty of enrolling international students, focusing our efforts on specific countries such as Hong Kong, Indonesia and India.

Postgraduate programmes and continuing professional development (CPD)

We are considering the development of diploma, certificate and Masters courses in Patient Safety, in collaboration with the Ministry of Health. Other CPD courses will be re-thought and redesigned to better cater for working practitioners. Ideas include the development of engaging online learning resources, supplemented by weekend face-to-face sessions.

Alumni engagement

Alumni engagement is to be a major developmental focus from 2016. Apart from renewing and fostering ties, potential benefits for alumni and University include the recruitment of skilled, expert practitioners into IMU Healthcare, and as teaching and research faculty.

A Charity Clinic

Community service is to be extended by operating a clinic that offers medical help to needy and marginalised individuals. School of Medicine will work in collaboration with other schools in IMU in running Charity Clinic.

SCHOOL OF DENTISTRY

HIGHLIGHTS:

- Full re-accreditation awarded by the Malaysian Qualification Agency (MQA)
- University of Glasgow joins IMU as new Partner School for dentistry
- MoU signed with Hiroshima University

2015 has been a busy and fruitful year for the School, with the achievement of 5-year re-accreditation of the BDS programme, and significant School contributions to the University's quality assurance development, and to the Malaysian Qualifications Agency review of the University for self-accreditation status. Dentistry students and faculty continued to fly the IMU flag high by winning awards at scientific meetings and professional competitions, both nationally and internationally.

The Bachelor of Dental Surgery (BDS) Programme

University Academic Quality Governance

In 2015 the University established Programme Quality and School Quality Committees to monitor and periodically report on quality governance to the University Academic Quality Committee. The first Academic Quality Committee (AQC) meeting was held in September, at which 2014 – 15 Dentistry Programme and School reports were presented. Feedback from the AQC review panel was very positive and encouraging. It was proposed that some of the best practices identified should be shared with other Schools.

Re-accreditation

A Panel of Assessors from the Malaysian Qualifications Agency visited in April to reaccredit the BDS Programme. Panel members were YBhg Prof Dato' Dr Ishak bin Abdul Razak (Universiti Malaya; chair), A/Prof Adam Husein (Universiti Sains Malaysia), Dr Kamariah binti Omar (Klinik Pergigian Tanjong Karang), Dr Haslinda binti Ramli (Universiti Sains Islam Malaysia), with Ila Nadia Ali Badaruddin as the MQA Representative. Strengths of the School identified by the Panel included academic leadership and a strong research culture. The Panel recommended full accreditation for the maximum allowable period of five years.

A New Partner School

The University of Glasgow has joined our Partner Dental School network, and will be able to admit up to 5 students who have completed Phase 1

of our BDS programme into their third year. Thus we were able to increase our 2015 enrolment for the Partner Dental School track from 25 to 30 students.

A Memorandum of Understanding with Hiroshima University

In October the University signed a Memorandum of Understanding with Hiroshima University at the Ana Crowne Plaza Hotel in Hiroshima. The signatories were Dr Mitsuo Ochi, President of Hiroshima University, and YBhg Tan Sri Dato' Dr Abu Bakar Suleiman, President of IMU. The Memorandum was witnessed by Dr Motoyuki Sugai, Dean of the Faculty of Dentistry, and Prof Toh Chooi Gait, Dean of the IMU School of Dentistry. The Memorandum is a basis for research collaboration, and for staff and student mobility between our two universities. Discussions leading to the agreement were initiated by Prof Takashi Takata with Prof Toh, when Prof Takata was Dean of the Faculty of Dentistry. In his address YBhg Tan Sri Abu Bakar said that IMU students would be able benefit from study periods at Hiroshima University as their Faculty of Dentistry had established dual language classes. Hiroshima University students could benefit from undertaking patient treatment when they visit IMU. YBhg Tan Sri Abu Bakar hoped that the collaboration would extend to the medical and other health science schools. Dr Ochi affirmed that this would be encouraged and supported. As an orthopaedic surgeon, Dr Ochi had visited the University of Malaya and operated on a patient, and said that Hiroshima University had a mission of international collaboration and promoting global peace.

The signing ceremony coincided with Hiroshima University's 50th Anniversary Commemoration Celebration of the Faculty of Dentistry, and with the 6th Hiroshima Conference on Education and Science in Dentistry. At the Conference IMU final year dentistry student Tan Wei Hong presented his paper *Rugoscopy in the Malaysian Chinese Population: A Pedigree Analysis* in the category of Young Investigators in Frontier Biodental Science.

Student Achievement

Research

The Special Study Module from Semesters 7 through 9 requires each student to undertake a research study and to submit a written report of its results. Students continued to present their work at conferences, winning various international and local awards. In addition some of the students' research were published in journals.

Publications co-authored by students

Chong JA, Chew JKY, Ravindranath S, Pau A. Clinical Audit Teaching in Record-Keeping for Dental Undergraduates. *J Dental Education* 2014;78(2):206-12. (IF:1.04)

Chua EG, Parolia A, Ahlawat P, Pau A, Amalraj FD. Antifungal effectiveness of various intracanal medicaments against *Candida albicans*. An ex-vivo study. *BMC Oral Health* 2014; 14:53. (IF:1.128)

Tan JME, Parolia A, Pau A. Intracanal Placement of Calcium Hydroxide: A Comparison of Specially Designed Paste Carrier Technique with Other Techniques. *BMC Oral Health* 2013; 13(1):52. (IF:1.128)

Omar H and Tai YT. Perception of smile esthetics among dental and non-dental students. *Journal of Education and Ethics in Dentistry* 2014; 4(2): 54

Chen CL, Parolia A, Pau A. Comparative Evaluation of Effectiveness of Desensitizing Agents in Dentin Tubules Occlusion Using Scanning Electron Microscopy. *Aust Dent J.* 2015; 60(1):65-72. (IF: 1.104)

Goh SY, Tan BS, Mathew T. Perception of pain for different orthodontic elastomeric separators. *J Pharm Biomed Sci* 2015; 05(04): 332-337. (IF: 2.979)

T Pei Shian, Pulikkotil SJ. Comparison and Agreement among Various Case Definitions of Periodontitis: A Secondary Data Analysis. *Journal of Periodontology and Implant Dentistry* 2015; 6 (2): 1-8

For more student and alumnus academic Achievements and Awards, please refer to page 056.

Faculty Achievement

Specialist Qualification

Dr Thomas Matthew passed the Membership in Orthodontics examination that was conjointly run by the Royal College of Surgeons of England and the Royal College of Physicians and Surgeons of Glasgow at University Malaya in September. This is an internationally recognised professional specialist qualification in orthodontics.

Teaching Innovation

Dr Sherif Zahra organised a webinar on Cleft Lip and Palate for Semester 8 and 10 students, linking faculty participation with faculty from Radboud University (Nijmegen, the Netherlands), and University Malaya.

Submissions from Dr Shekhar Bhatia and Prof Seow Liang Lin were shortlisted for the Ron Harden Innovation in Medical Education award at IMEC 2015. These submissions showcased the web-based gamified mobile application of script concordance testing in odontogenic pain, and the International Benchmarking Online Programme student generated questions for formative assessment, a collaborative project with the University of Adelaide. Initiatives presented by Dr Vimi and Dr Sneha, on service learning in an IMU adopted community home, and on student-led case based learning, won awards at IMEC 2015.

University Awards

At the 2015 e Learning Festival themed *Rethinking Medical Education to Survive the Second Machine Age* the School won numerous awards:

- First Prize for Best Showcase Award: *Script concordance testing using Storyline*, A/Prof Dr Hanan Omer
- Third Prize for Best Showcase Award: S Mutalik, S Bhatia, S Bilal, PG Patil, Z Hasnain, Allan Pau: *Development of validation of an interactive game-based script concordance test for assessing clinical reasoning in odontogenic pain*.

- Third Prize in the Flipped Learning Challenge: The School of Dentistry
- Third Prize in the Best Poster category: A/Prof Hanan Omer: *The Use of Storyline to develop interactive online assessment for a communication skills course*.
- Students' Choice Awards, Best Poster and Best Showcase: Dr Spoorthi Ravi Banavar *Plastinated Museum Specimens: Great Learning Tools in Medicine, Dentistry, and Health Sciences*.

For the second consecutive year Dr Shekhar Bhatia won the students' Best Lecturer Award from the students.

Scientific Meetings

School faculty have been invited speakers at a number of events in 2015:

In November, A/Prof Christopher Vincent was a keynote speaker and facilitator at the Impacted Molar Surgery Course for Dental Officers run by Universiti Sains Islam Malaysia. At the Ho Chi Minh Dental Association meeting, also in November, A/Prof Vincent presented on *Management of Dental Emergencies*.

In May Dr Sham Kishor Kanneppady spoke on *Dental Management Considerations in Patients with Altered Medical Conditions* in the Continuing Dental Education Program 'Yen to Aspire' of Yenepoya University Alumni Association in Mangalore, India. In November, Prof Swati Rawal presented *Innovation in Periodontics: A medley of interesting cases* at a conference in King Khalid University, Saudi Arabia themed *New trends in Dentistry: An international perspective*. Prof Toh Chooi Gait spoke on *Predictable posterior composite restorations utilising bulk filling technique* at the Hong Kong International Dental Expo and Symposium in August. Dr Venkateshbabu spoke on *Endodontic Biofilms* at the Finish Line 2015 postgraduate program at Sri Ramachandra University in Chennai. Dr Pravinkumar Patil was invited to conduct a full day pre-conference course on *Maxillofacial Prosthodontics: Novel Ways of Practice* at

the 17th Indian Prosthodontic Society's Post-Graduate Convention, Nagpur, in July.

Prof Toh Chooi Gait was invited to conduct a full day Continuing Dental Education Course on *Aesthetic Direct Composite Restorations – simplified techniques for daily practice*. The course was organised by the Faculty of Dentistry, University of Hong Kong. Prof Toh was also appointed as Chairman of the Professional Qualification Examination Committee of the Malaysian Dental Council. She conducted training workshops and courses on assessment, for members of the Malaysian Dental Council Pro-tem Examination and Question Setting Committees. The topics were *One Best Answer Question Setting, and Objective Structured Clinical Examination Station Construction*.

Looking Ahead

Postgraduate Programme Development

The School is designing taught postgraduate programmes with the flexibility to appeal to full time dental practitioners. The first programme to be introduced is a Postgraduate Diploma in Implant Dentistry. Programme documentation had been submitted and approval to start the programme is awaited from the Malaysian Qualification Agency.

Collaboration with the Royal College of Surgeons of Edinburgh

There is continued high demand to take the Part 2 OSCE for Membership of the Faculty of Dental Surgery. This examination has been run in IMU in March and September. Examiners from the School faculty include Prof Toh Chooi Gait, Prof Khoo Suan Phaik, Prof Seow Liang Lin, Prof Allan Pau Kah Heng and Prof Frederick Smales.

The School plans to host the Royal College Diploma in Implant Dentistry Examination. The standards of the Postgraduate Diploma in Implant Dentistry are benchmarked to the Royal College Diploma in Implant Dentistry. Prof Toh Chooi Gait, Dr Naresh Shetty and Dr Pravinkumar Patil have been trained as examiners for the Royal College Diploma in Implant Dentistry examination. In December, a preparatory course for the examination was and conducted by Prof Vince Bissel of the University of Glasgow, and Prof Toh Chooi Gait.

Oral Healthcare Services

2015 saw a steady increase in the numbers of patients seeking treatment at the Oral Health Centre. Students at the Centre continued to provide free treatment to residents of a number of adopted charity homes. This work is in part funded by the Malaysian Dental Association Foundation, Subang Jaya Lions' Club and Khazanah. Thirteen additional dental chair units were installed in the Center, catering for an increased number of students who are treating patients at the Centre.

SCHOOL OF PHARMACY

HIGHLIGHTS:

- The School celebrated its 10th anniversary with various events highlighting the pharmacist's role as a healthcare provider
- BPharm students sat for the Pharmacy Board's Fitness to Practice as a Pharmacist National Examination for the first time
- Memorandum of Understanding (MoU) signed with the University of Tasmania
- Strong collaborations with industry partners for study visits, student placement and internship

The School of Pharmacy offers the Bachelor of Pharmacy (Hons), the Bachelor of Science (Hons) in Pharmaceutical Chemistry and the IMU-University of Strathclyde collaborative MPharm programme. The School has a faculty strength of 81 lecturers. In 2015 the School ceased enrolment of students into the MPharm programme; instead there was an additional intake of students into the BPharm (Hons) in February. The School also conducts two taught (mixed mode) Masters programme, the MSc in Molecular Medicine and the MSc in Analytical and Pharmaceutical Chemistry. An additional Masters programme, in Pharmacy Practice, is to be launched in 2016.

The Dean of School was Prof Yeoh Peng Nam while the Associate Dean was Prof Malikarjuna Rao Pichika. The School has four Departments, Life Sciences (headed by Dr Gan Sook Yee), Pharmaceutical Chemistry (headed by Dr Ooi Ing Hong), Pharmaceutical Technology (headed by Prof Malikarjuna till July, then succeeded by Dr Nagashekhara Molugulu), and Pharmacy Practice (headed by Dr Wong Pei Se till September then succeeded by David Chong). Five faculty members of the School hold university level positions. These are A/Prof Er Hui Meng, Associate Dean for Teaching and Learning; A/Prof Kang Yew Beng, Associate Dean for e-Learning; Prof Leong Chee Onn (Head, Cancer and Stem Cell Research Centre), A/Prof Tan Eng Lai (Head, Bioactive Molecules and Drug Delivery) and Prof Peter Pook (Vice President).

The Bachelor of Pharmacy (Hons) Programme

In 2015 147 students graduated from this programme. The programme has credit transfer options with the Universities of Queensland, Australia, and of Otago in New Zealand. The University of Tasmania became a new credit transfer partner in 2015.

For the first time, Year 3 and 4 BPharm students sat the Pharmacy Board's *Fitness to Practice as a Pharmacist* National Examination, formerly the Pharmacy Jurisprudence Examination, taken after graduation. Students achieved pass rates of 100% (8/8), 91.4% (161/175) and 100% (25/25) at the three separate examinations held in 2015. Passing the examination enables the graduate to apply for Provisionally Registered Pharmacist (PRP) positions in the government.

The Malaysian Qualification Agency (MQA) visited IMU to reaccredit the BPharm and the MPharm programmes in November 2014. Whereas the MPharm received full accreditation until the last cohort graduates, the BPharm received a 1-year re-accreditation. The School is working hard to address the recommendations for reaccreditation in 2016. In September the School successfully participated in the Professional Education and Advisory Committee review of competency based education, and in the MQA University Self-Accreditation in October.

Curriculum Review

Since the Ministry of Health has allowed provisionally registered pharmacists to train in the private sector, the BPharm (Hons) curriculum has been revised to strengthen preparation for practise in community and primary care, and in corporate pharmaceutical and industrial settings. In November the revised curriculum was reviewed by Prof Rosnani Hashim (Dean, Faculty of Pharmacy, Cyberjaya University College of Medical Sciences), Prof Toh Chooi Gait (Dean, School of Dentistry) and Prof Chin Beek Yoke (Associate Dean, School of Health Sciences). The panel commented that the structure and content of the curriculum were in line with the expected form and comparable to other institutions offering undergraduate pharmacy programmes. The revised curriculum has been submitted to the MQA for approval.

2014-2015 BPharm Tenth Year Anniversary Activity

The School marked the Tenth Anniversary of the BPharm with a programme of events highlighting the pharmacist's role as a healthcare provider. Continuing professional development events, jointly organised with IMU Alumni and the Malaysian Pharmaceutical Society Young Pharmacists Chapter, were held throughout the year. Associated events included health screening, a pharmacy professional day, and celebration of World Pharmacists Day. The Gala Anniversary Dinner at the Hotel Istana in June served as a reunion for pharmacy alumni, faculty members, industrial partners, members of the Malaysian Pharmaceutical Society and students.

In August the inaugural Pharmacy and Pharmaceutical Sciences Conference provided an excellent opportunity to explore and discuss innovations, development and directions in pharmacy. The conference included speakers from Scotland, Thailand and Malaysia and participants from a number of countries. The programme featured workshops, plenaries, forums on issues of public interest, research papers presentations and posters, and a small trade exhibition. Abstracts from the research presentations will be published in a peer reviewed journal.

The Master of Pharmacy Collaborative Programme

This collaborative programme with the University of Strathclyde in Glasgow ceased student enrolment in 2014, in view of fundamental changes in the structure of the Strathclyde MPharm, mandated by the General Pharmaceutical Council (GPhC). A GPhC team visited the School in May 2014 to reaccredit the MPharm programme and granted accreditation until the last cohort graduates in 2017. In November 2014 the Malaysian Qualifications Agency also re-accredited the MPharm programme until the last cohort graduates.

The 88 students in the last cohort have performed well in both academic and other activity, including community service. The cohort transfers to Scotland in two groups, one in June 2015 and the other in June 2016. The School celebrated students' completion of their IMU portion of the programme with a farewell tea for students transferring in June 2015. Before they transferred, these students took the Pharmacy Board *Fitness to Practice* National Examination achieved a 100% pass rates, as did the rest of their cohort, in the November 2015 examination.

Student mobility has been a strong area of collaboration between our two universities. Two BPharm Year 3 students and a Masters student spent research periods at the Strathclyde Institute of Pharmacy and Biomedical Sciences, whilst six Strathclyde undertook research at IMU, supervised by Dr Ivan Yap and Dr Lee Choy Sin. These students

were the sixth group from Strathclyde to undertake research at IMU.

Visiting faculty from Strathclyde in 2015 included Prof Emeritus Brian Furman, Prof Sandy Gray and Derna Campbell. Profs Furman and Gray were plenary speakers and conducted workshops at the Pharmacy and Pharmaceutical Sciences Conference. Prof Furman continued to contribute to building research at the University, particularly in diabetes and cardio-metabolic disease. In September the School had a number of productive research and education meetings with Dr Susan Currie, (Director of the collaborative programme), Dr Marie Boyd (Director of Research), and Prof Robin Plevin, Acting Head of the Institute of Pharmaceutical and Biomedical Sciences. The School is working to map the content of the BPharm against the revised Strathclyde MPharm, for credit transfer, thus creating a further transfer option for BPharm students. The mapping process is expected to culminate with GPhC accreditation.

The BSc (Hons) in Pharmaceutical Chemistry

The Programme graduated its fifth cohort in September, awarding one First Class Honours, eight Second-Class Honours Upper Division and twenty Second-Class Honours Lower Division degrees. For her excellent academic performance Hovah Marie Emilie Leitia was in Dean's List. Hovah was the recipient of the YBhg Tun Dato' Seri Dr Mohamed Zahir Merit Award, and of the 2015 Institute Kimia Malaysia Graduate Chemistry award. At the time of writing, all graduates of the fifth cohort have found employment in pharmaceutical industry or have registered for postgraduate study, attestation to their preparation, training and competence.

In March the Programme was reviewed by a Professional Education Advisory Committee panel comprising Prof Paul Groundwater (Faculty of Pharmacy, University of Sydney), YBhg Prof Dato' Mafauzy Mohamad (Director of Campus, Universiti Sains Malaysia), and Dr Mohd Zulkefeli Mat Jusoh (Faculty of Pharmacy, Universiti Teknologi MARA).

Students continue to undertake internship in industry, including one in Uganda and one at CCM Pharma, Malaysia. One student had an enriching internship at the Consumer Regulatory Affairs Department of Johnson and Johnson Sdn Bhd in Petaling Jaya. One graduate has enrolled in the MPharm programme at Curtin University with credit exemptions. Graduates of the Curtin programme are eligible to undertake registration training in Australia and Singapore. In December the Department of Pharmaceutical Chemistry with the Royal Society of Chemistry ran the ChemCareers webinar aimed at creating awareness of academic and industrial career paths, and providing guidance on writing effective curriculum vitae.

The MSc in Analytical and Pharmaceutical Chemistry

In 2015 two cohorts completed this programme. At the Pharmacy and Pharmaceutical Sciences Conference 2015 students presented posters on their research, and attended the post-conference workshop. One final year research project was published in the International Journal of Pharmacy and Pharmaceutical Sciences. Alumnus Ahmad Junaid, secured a full scholarship to undertake PhD study at Monash University Malaysia.

The MSc in Molecular Medicine

The first cohort of students graduated in 2015. Students also distinguished themselves in other areas. Amy Chong Siew Peng presented a poster on her research at the University Learning Festival, won the best poster award in the biopharmaceutical sciences and pharmaceutical biotechnology category at the ASEAN Conference on Pharmacy Education and Research in Bangkok. Amy also won the Bronze Medal in the IMU Fittest Female Alumni category! Ten Yi Yang presented a poster at the Pharmacy and Pharmaceutical Sciences Conference 2015 whilst Shaza Ahmed presented a poster at the Palm International Nutra-Cosmeceutical Conference 2015.

Collaborations and Consultancy

Pharmaceutical companies CCM, Kotra Pharma and Abbvie continue to participate in introducing Year 3 BPharm students to work activity in regulatory affairs, production, marketing and human resource management. In May a Memorandum of Understanding (MoU) was signed with the University of Tasmania, providing another credit transfer option for BPharm students. Under the University's Partnership with Industry programme an MoU was signed with Novartis Malaysia. This enables students to undertake study visits, placements and internships at various Novartis facilities in Malaysia. Novartis is a global company, ranked first in its sector by sales in 2015. The School continued to collaborate with Zuellig Pharma, Abbott Malaysia, GlaxoSmithKline and Innovax Sdn Bhd for student placements.

The Department of Pharmaceutical Technology started research collaboration with InQPharm, a company which specialises in natural product based dietary supplements and medical devices. In May a MoU was signed with the University of Strathclyde, to foster and enhance collaboration in research collaboration, taught and research postgraduate degree programmes.

Community Service

Under the IMU Cares programme, the School's staff and students were able to reach out to various community partners namely:

- Taman Megah Handicapped and Disabled Children's Home
- Pusat Penjagaan Kanak-Kanak Cacat Klang
- Rumah Orang Tua Charis
- Beautiful Gate Foundation for the Disabled
- Rumah Victory Elderly Home
- Pusat Jagaan Orang-Orang Kurang Upaya and Terbiar (Lovely Nursing Home)
- Pusat Jagaan Kanak-Kanak Sayang

- Rumah Sejahtera Seri Setia
- The IMU-Malaysian Parkinson's Disease Association (MPDA)

Staff and students also collaborated with other Schools to serve My Father's Home, the Ti-Ratana Community, and Dignity for Children. School services to homes focuses on safe medicines management and administration, including educating carers about medication, providing health screening, and providing health education. Detailed activities include management of medication inventory, storage and administration; preparation of resident medical and medication profiles; blood pressure and blood glucose measurements; dental screening; and health talks (diabetes awareness; self-care; healthy eating; personal hygiene). Staff and students interact with residents, provide entertainment, promote exercise, and help secure or donate needed items.

School students and staff also provided health screening for the Sri Petaling Community, at the University's Chariofare, and jointly with the Malaysian Pharmaceutical Society at other events during the year.

World Pharmacists Day 2015

In Malaysia World Pharmacists Day, themed *Kenali Ubat Anda* (Know Your Medicines) was hosted by the Ministry of Health at the Shah Alam Convention Centre on 19 September. Minister of Health YBhg Datuk Dr Subramaniam opened proceedings, which included a National Pharmacy Skit Competition. A skit by our Year 3 BPharm students was placed fourth out of 10 skits by teams from other universities and the Ministry.

The School celebrated World Pharmacists Day on 30 September using the theme *Pharmacists: Your Partners in Health*, aimed at increasing consumer awareness of the need for safer medicines use. The event started with an inspiring address from John CP Chang, Council Member and Immediate Past President of the Malaysian Pharmaceutical Society (MPS). John is also a past President of the Federation

of Asian Pharmaceutical Associations, and a strong advocate of pharmacy education. The next speaker, Andrew Tan, Vice President of the MPS, highlighted career opportunities and challenges of pharmaceutical industry, calling on students to join the industry and help address these challenges. Year 3 students again performed their interesting skit *Know your medicines*, and there were performances and a poster display from Year 1 and 2 students, emphasising pharmacists' collaborative role in healthcare. The celebration was brought to a conclusion by an invitation from the pharmacy students to guests and faculty to stand with them when they repeated their Pledge of Professionalism.

Student Mobility and Achievement

Under the Student Mobility scheme several Year 4 BPharm students undertook research projects at universities outside Malaysia. Lim Ai Wei was at the University of Copenhagen, Nur Diyana binti Zazali and Nur Syazwani binti Azeran at Hacettepe University in Ankara; Gan Chew Hong, Wong Pui Yee and Cheu Ling were at Queen's University in Belfast, one of the oldest universities in the United Kingdom.

In May two pharmacy student teams competed in the Malaysian Pharmacy Student Association National Pharmacy Quizat Cyberjaya University of Medical Sciences.

For more student and alumnus academic Achievements and Awards, please refer to page 056.

Staff Achievement in Research and Publications

In 2015 the School secured RM1,062,600 in research funding. RM976,100 was received from three sources - The Ministry of Science, Technology and Innovation eScience Fund; the Ministry of Education Fundamental Research Grant Scheme, and the Ministry of Agriculture NR Grant Scheme. RM86,500 University funding was received. School faculty obtained two educational research grants from the IMU Centre for Education. At October 2015 School faculty had published 36 papers with a cumulative impact factor of 67.65.

Faculty members Keivan Ahmadi, Jithendra Paneerselvam, Mari Kannan Maharajan, Piyush Mittal and Syed Imran Ahmen completed their PhD studies. A summary of research achievements of School faculty follows:

Dr Norman Chieng

E-Science grant (Ministry of Science, Technology and Innovation) of RM233,000 for *Dry State Preservation of Mesenchymal Stem Cells, as principle investigator*.

University Learning and Teaching Innovation Grant (RM3,000) for "Instructional Briefing Video: An Approach to Enhance Students Self-directed learning for Laboratory Practical Sessions", as co-investigator.

Investigation of physical properties and stability of indomethacin-cimetidine and naproxen cimetidine co-amorphous systems prepared by quench cooling, co-precipitation and ball milling. *Journal of Pharmacy and Pharmacology* (in press).

Dr Chong Chun Wei

Peer reviewer for Polar Science (Elsevier). FRGS grant RM162,000 as co-investigator, for 'System biology comparison between mice with single and co-infection from *Toxoplasma gondii* and/or *Trypanosoma evansi*.' International Society of Infectious Diseases Research Grant (USD 7000) – for a longitudinal study of the impact of changing trends in genotypes and phenotypes of carbapenem-resistant *Klebsiella pneumoniae* infection in a tertiary teaching hospital in Malaysia.

Supervisor for two PhD and five Masters students.

Publications

- Chong C.W., Pearce, D.A., Convey, P (2015) Emerging spatial patterns in Antarctic prokaryotes. *Frontiers in Microbiology* 6: 1058.
- Chong, C.W., Ahmad, A.F., Lim, Y.A.L., The, C.S.J., Yap, I.K.S., Lee, S.C., Chin, Y.T., Chua, K.H (2015) Effect of ethnicity and socioeconomic variation to the gut microbiota composition among pre-adolescents in Malaysia. *Scientific Reports* 5: 13338.

- Lim, P.K.C., Yamasaki, H., Mak, J.W., Wong, S.F., Chong, C.W., Yap, I.K.S., Ambu, S., Kumarasamy, V (2015) Field evaluation of a rapid diagnostic test to detect antibodies in human toxocariasis. *Acta Tropica*, 148: 32-37.
- Shaufi M.A.M., Sieo C.C., Chong C.W., Gan H.M., Ho Y.W (2015) Deciphering chickens gut microbial dynamics based on high-throughput 16S rRNA metagenomics analyses. *BMC Gut Pathogen* 7: 4.
- Yap I.Y.K., Kho M.T., Lim S.H.E., Ismail N.H., Yam W.K., Chong C.W (2015) Acclimatisation-induced stress influenced host metabolic and gut microbial composition change. *Molecular BioSystems* 11: 297-306.

Dr Dinesh Kumar Chellapan

PhD examiner at NITTE University, Mangalore, India.

Publications

- Kamal Dua, Ravi Sheshala, Haider A. Al-Waeli, Gaurav Gupta, Dinesh K Chellappan, Antimicrobial efficacy of extemporaneously prepared herbal mouthwashes, *Recent Patents on Drug Delivery and Formulation*, Vol. 9(3): 201-205 (2015).
- Gaurav Gupta, Tay Jia, Lim Yee Woon, Dinesh Kumar Chellappan, Mayuren Candasamy, Kamal Dua, Pharmacological evaluation of antidepressant like effect of Genistein and its combination with Amytriptyline: An acute and chronic study, *Advances in Pharmacological Sciences* [Article in Press] 2015.
- Dinesh Kumar Chellappan, Sivamalar Ganasen, Shaminiswary Batumalai, Mayuren Candasamy, Purushotham Krishnappa, Kamal Dua, Jestin Chellian, Gaurav Gupta, The Protective Action of the Aqueous Extract of *Auricularia polytricha* in Paracetamol Induced Hepatotoxicity in Rats, *Recent Patents on Drug Delivery and Formulation* [Article in Press] 2015.
- Dinesh Kumar Chellappan, Siva Malar Ganasen, Shaminiswary Batumalai, Mayuren Candasamy, Purushotham Krishnappa, Gaurav Gupta, Kamal Dua, Jestin Chellian. The protective effect of the aqueous extract of *Auricularia polytricha* on paracetamol induced hepatotoxicity in Sprague-Dawley rats, In: *Conference Proceedings; Malaysian Journal of Pharmacy (Suppl.)*, Vol. 2 (Issue 1), Nov 2015; PP 172.

Conference presentations

- Nadarajah VD, Lee XY, Chellapan D and Wong PS, Medical general practitioners' perceptions of interprofessional collaboration, roles and competencies of healthcare professionals; insight for practice and education, The 47th Annual Meeting of the Japan Society of Medical Education, July 2015, Niigata, Japan.
- Verma RK, Wong PS, SK Balakrishnan, Deb PK, Sheshala R, Lim WM, Chatterjee LA, Chellappan DK, Diabetes screening, co-morbidities identification and risk assessment in elderly population living in old folk homes in Klang Valley, Malaysia: Pharmacy students led 3 year screening outcomes, *Pharmacy and Pharmaceutical Sciences Conference 2015*, Kuala Lumpur, Malaysia.
- Chellappan DK, Batumalai S, Ganasen S, Candasamy M, Krishnappa P, Gupta G, Dua K, Chellian J. Effect of aqueous extract of *Auricularia polytricha* on the histopathology of paracetamol induced hepatotoxicity in Sprague-Dawley rats, *Pharmacy and Pharmaceutical Sciences Conference 2015*, Kuala Lumpur, Malaysia (best presentation award).
- C Dinesh Kumar, G Sivamalar, B Shaminiswary, C Mayuren, K Purushotham, G Gaurav, D Kamal, C Jestin, The protective effect of the aqueous extract of *Auricularia polytricha* on paracetamol induced hepatotoxicity in Sprague-Dawley rats, 12th MPS Pharmacy Scientific Conference, 2015, Malaysia.

Dr Keivan Ahmadi

Published the first peer reviewed manuscript on "e-cigarettes" from Malaysia.

Dr Keng Pei Sin

Learning and Teaching Innovations Grant for *Instructional Briefing Video: An Approach to Enhance Students Self-Directed Learning for Laboratory Practical Sessions*

Jithendra Paneerselvam

Peer reviewer for Process Biochemistry (Elsevier)

Dr Mai Chun Wai

Received the Sultan Mizan Antarctic Research Foundation Research Fellowship with the British Antarctic Survey, Cambridge, United Kingdom with RM49,950 funding.

Dr Mari Kannan Maharajan

Invited member of the Review Committees of 21st Annual International Meeting, May 2016. Member of review panel for research poster presentations at ISPOR 18th Annual European Congress, Italy, November 2015. Invited speaker at the national level seminar *Exploring Innovative Practices in Pharmacy Education*, Kakatiya University, India, August 2015.

Certifications in Management in health; Good Clinical Practice (Ministry of Health Malaysia).

Publications

- Mari Kannan M, Kingston R, Kelly Num SF, Lui Lai Y. Cervical Cancer prevention in Malaysia: Knowledge and attitude of undergraduate pharmacy students towards human papillomavirus infection, screening and vaccination in Malaysia DOI: 10.1007/s13187-015-0957-2.
- Kingston R, Mari Kannan M, Sue Chin N, Kelly Num SF, Awareness and acceptance of human papillomavirus vaccination among health sciences

students in Malaysia, VirusDisease pp 1-7
doi:10.1007/s13337-015-0287-3.

- Maharajan MK, Rajiah K, Num KS, Yong NJ. Knowledge of human papillomavirus (HPV) infection, cervical cancer and willingness to pay for cervical cancer vaccination among ethnically diverse medical students in Malaysia, Asian Pac J Cancer Prev. 2015;16(14):5733-9.
- Rajiah K, Maharajan MK, Nair S, Pharmacy students' knowledge and perceptions about adverse drug reactions reporting and Pharmacovigilance. Saudi Pharmaceutical Journal (2015),
<http://dx.doi.org/10.1016/j.jsps.2015.03.021>

Conference presentations

- Health professional students' willingness to pay for human papillomavirus vaccination and factors influencing their decision in Malaysia. At ISPOR 18th Annual European Congress. Value in Health 18(7), 2015 A475–A476
- Students' perspectives regarding Career Opportunities in Pharmacy Academia; A study from International Medical University, International Medical Education Conference April 2015. (Best poster award)
- Pharmacy students' knowledge and perceptions about adverse drug reactions reporting and Pharmacovigilance, Asian Conference on Clinical Pharmacy, October 2014.

Dr Mayuren Candasamy

Fundamental Research Grants of RM99,000 as co-investigator. MSc student supervision.

Publications

- Pharmacological Evaluation of Antidepressant-Like Effect of Genistein and Its Combination with Amitriptyline: An Acute and Chronic Study.

Advances in Pharmacological Sciences. Article ID: 164943, 2015. (Q1 – Pharmacology, Toxicology and Pharmaceutics)

- The protective action of the aqueous extract of *Auricularia polytricha* in paracetamol induced hepatotoxicity in rats. Recent Patents on Drug Delivery and Formulation, Volume 9, 2015.

Conference presentations

- The protective effect of the Aqueous Extract of *Auricularia polytricha* on Paracetamol Induced Hepatotoxicity in SD rats. Malaysian Journal of Pharmacy. Vol 2, Issue 1, 2015.
- Effect of Madecassoside on the Antioxidant Status of Streptozotocin-Nicotinamide Induced Diabetes in Sprague-Dawley Rats. ICAPT 2015:17th International Conference on Advances in Pharmacology and Toxicology, Bangkok 2015
- *In vivo* Antiulcer and Anti-*Helicobacter pylori* activity of Geraniol on Acetic acid plus *Helicobacter pylori* induced ulcer in rats. ICAPT 2015 :17th International Conference on Advances in Pharmacology and Toxicology, Bangkok 2015
- Effect of aqueous extract of *Auricularia polytricha* on the histopathology of paracetamol induced hepatotoxicity in Sprague-Dawley rats. Pharmacy and pharmaceutical sciences conference 2015 - Innovation and Future Directions in Pharmacy and Pharmaceutical Sciences, 2015 Malaysia. (Best oral presentation)
- Development and Validation of Kaempferol Nanosuspension (KNS) For Bioavailability Enhancement. International Students Congress of Medical Sciences, University of Groningen, the Netherlands, June 2015. (Best oral presentation)

Dr Murugesh Kandasamy

In vitro metabolic stability study of tert-butyl 2-(3-chloro-2-methylphenylsulfonamido)-6,7-dihydrothiazolo [5, 4-c] pyridine-5(4H)-carboxylate in mouse liver microsomes using RP-HPLC. Pharmacy and Pharmaceutical Sciences Conference 2015

Dr Ooi Ing Hong

Conference presentations

- Tay JS, Chong BL and Ooi IH. Effects of fluoride-containing monomethacrylate monomer content on water sorption, fluoride release, degree of conversion and solubility of Bis-GMA/TEGDMA/ UEDMA based dental restorative composite. Asia Pacific Dental Student Association Conference 2015, Taipei.
- Wong SK and Ooi IH. Synthesis and characterization of star branched Poly (L-lactide) by ring opening polymerization. Pharmacy and Pharmaceutical Sciences Conference 2015, Kuala Lumpur. (Best oral presentation)

Dr Palanisamy Sivanandy

- Palanisamy S. A cross sectional study on drug use evaluation of antihypertensives. Pharmacy and Pharmaceutical Sciences Conference 2015, Kuala Lumpur. (Best poster award).
- Sivanandy Palanisamy, Tan Tyng Wei, Tan Wee Loon, Lim Chong Yee. Evaluation of retail pharmacists' perceptions on patient safety. The Asian Federation for Pharmaceutical Sciences Conference. Bangkok, November 2015.

Dr Punniyakoti Thanikachalam

University grant (RM20,000) as principal investigator for *Determination of the Efficacy of Tetrahydrothiazolopyridine Derivative, Novel 11beta-HSD1 inhibitor for the reversal of cardiac remodelling in a mouse model of heart failure*

Dr Saif Saad Abdul Majeed

Publications

- Saxena, A. K., Abdul-Majeed, S. S., Gurtu, S. and Mohamed, W. M. (2015). Investigation of redox status in chronic cerebral hypoperfusion-induced neurodegeneration in rats. Applied and Translational Genomics, 5:30-32.

- Kolsoom Parvaneh, Mahdi Ebrahimi, Mohd Redzwan Sabran, Golgis Karimi, Angela Min Hwei Ng, Saif Abdul-Majeed, Zuraini Ahmad, Zuriati Ibrahim, and Rosita Jamaluddin. (2015). Probiotics (*Bifidobacterium longum*) increase bone mass density and upregulate Sparc and Bmp-2 genes in ovariectomized-induced bone loss rats. *BioMed Research International* 2015.
- Abdul-Majeed S., Mohamed N. and Soelaiman IM. (2015). The use of Delta-Tocotrienol and Lovastatin for Anti-Osteoporotic Therapy. *Life Sciences*, 125:42-8.

Conference presentation

- Hepatoprotective Effect of Annatto Tocotrienol against Acetaminophen-Induced Hepatotoxicity in Rat: a Biochemical Study. At the 3rd International Conference on Chemical, Agricultural and Medical Sciences Singapore, 2015.

Rohit Kumar Verma

Balakrishnan J, Appalasamy JR, Kumar Verma R. Skin infection: An association between awareness and quality of life among adults in Petaling district, Malaysia. The European Pharma Congress, Spain, August 2015. (Best poster award)

Dr Ravi Sheshala

Editor for the Austin Journal of Analytical and Pharmaceutical Chemistry (Austin Publishing Group), and Journal of Drug (Verizona)

Publication

- Venkata K. Yellepeddi, Ravi Sheshala, Hannah McMillan, Chirag Gujral, David Jones and Thakur Raghu Raj Singh. Punctal plug: a medical device to treat dry eye syndrome and for sustained drug delivery to the eye. *Drug Discovery Today*, 20(7):884-889; 2015.

Conference presentation

- Design and evaluation of gentamicin sulfate in situ gels for sustained ocular drug delivery. Pharmacy and Pharmaceutical Sciences Conference 2015 Malaysia (Best poster award).

Sajesh Kalkandi Veettil

Best Academic Award (Pharmacy) at University Faculty Appreciation 2015. Learning Innovation Award 2015.

Publications

- Veettil SK, Chaiyakunapruk N, Saokaew S, Ghee LK, Mooi CS. Comparative effectiveness of chemopreventive interventions for colorectal cancer: A protocol for a systematic review and network meta-analysis. PROSPERO 2015; CRD42015025849. [Internet]. 2015. Available from: http://www.crd.york.ac.uk/PROSPERO/display_record.asp?ID=CRD42015025849
- Veettil SK, Rajiah K, Suresh Kumar BR. Author reply: comment on the drug utilization pattern in chronic obstructive pulmonary disease. *J Fam Med Prim Care*. 2015;4(2):289.
- Kumar S, Rajiah K, Veettil SK, Wei NS. A cross-sectional study on knowledge and attitude toward Traditional Chinese Medicine (TCM) among adults in selected regions of Malaysia. *J Complement Integr Med*. 2015 Dec;12(4):317–23.

Prof Yeoh Peng Nam

Masters student examiner at Universiti Malaya. Member of National Pharmaceutical Control Bureau Committee on Herbals, and THE National Committee for Clinical Research. Malaysian Qualifications Agency auditor.

Recipient of NRGs grant of RM408,900 as principal investigator for *Efficacy of Andrographis paniculata in preventing the systemic inflammation, metabolic dysfunction and atherosclerosis induced by cholesterol-enriched high-fat diet in animal models*.

Co-investigators are Dr Sreenivasa Rao Sagineedu, Prof Mallikarjuna Rao Pichika, Dr Subashini Thambiah, and Dr Thirumurugan Rathinasabapathy

Continuing Professional Development (CPD) Events

A continuing programme of CPD events, jointly organised with University Alumni and the Malaysian Pharmaceutical Society-Young Pharmacist Chapter, was held at the Bukit Jalil campus. The speakers included visiting faculty, and clinical pharmacists, many of whom are University alumna.

CPD Talks 2015:

- Siti Nadiyah Rusli, Pharmaceutical Services Division: *Management of Acute Coronary Syndrome: An update on pharmacotherapy*, March.
- Anitha Ramadas, Clinical Pharmacist, Hospital Kuala Lumpur: *Heart and HAART for HIV*
- Munira, Clinical Pharmacist, Hospital Kuala Lumpur: *Essential Pain Management: A RAT Approach*, April.
- A/Prof Neil Cottrell, University of Queensland: *Integration of pharmacists into General Practice Medical Centres: The emerging role of the practice pharmacist*.
- Charlene Tay, Clinical Pharmacist, Hospital Kuala Lumpur: *Critical Care Pharmacy: FAST HUG in the ICU*.

Dr Ravi Sheshala led the joint organisation of a drug delivery seminar with the Malaysia Chapter of the Controlled Release Society. Held in September, the seminar saw good participation from researchers at Universiti Malaya, Universiti Kebangsaan Malaysia, Universiti Teknologi Malaysia, Monash University and Taylors University. Speakers included Prof Benjamin Boyd (Monash University Australia) and Allan Coombes (IMU).

In November Pharmacy Alumni won the PhAMA President's Award 2015 for a deworming project led by alumni Yvonne Lim Mei Fong, Elaine Kan Mei Ying, Thomas Chew Hue Kin and Dr Mai Chun Wai. The award was presented at the PhAMA Annual Dinner in November, officiated by the Minister of Health, YBhg Datuk Seri Dr S Subramaniam.

SCHOOL OF HEALTH SCIENCES

HIGHLIGHTS:

- Malaysian Qualification Agency (MQA) full accreditation was awarded to the Chinese Medicine Programme and the Post Basic Certificate in Teaching Methodology) for Nurses Programme
- Chiropractic Programme received extended international accreditation from the Council of Chiropractic Education Australasia
- Strong industry partnerships with renowned companies for practicum
- Launch of the IMU Community Centre at Desa Petaling to support the community with affordable and quality healthcare services

2015 has been another successful year for the School of Health Sciences (SoHS). With the retirement of Prof Khor Geok Lin, Prof Winnie Chee took over as Dean. Prof Chin Beek Yoke was appointed Associate Dean. The School has made significant progress in curriculum delivery, research and publications and in the flagship community service programmes. The School continued to graduate students from all its programmes, including its inaugural cohort of graduates from the Chinese Medicine programme. In June, the Nursing Division launched its Post Basic Certificate in Teaching Methodology (CTM) for Nurses. Other highlights included the winning of the University's Aflame Student Award by a student from the Nursing Programme, and the organisation of the Inaugural Science Discovery Challenge on 25 July 2015 by faculty and students of the Medical Biotechnology programme. 2015 also saw the opening of the IMU Community Centre in Desa Petaling, providing Chiropractic, Chinese Medicine and Dietetics services to the local community. The Masters in Acupuncture Programme was submitted to Malaysian Qualifications Agency approval in December.

Developments in Teaching, Learning and Assessment

In September, the Chinese Medicine Programme was granted perpetual accreditation by the Malaysian Qualifications Agency. The first cohort of students graduated in the June convocation. The Programme also successfully underwent PEAC review and are currently enhancing their curriculum to meet improved standards and to enhance the clinical experience of students.

The Chiropractic Programme received an extension of its international accreditation from the Council of Chiropractic Education Australasia, which is another testimony of the quality of the IMU programme. The Chiropractic programme is undergoing curriculum review to enhance the delivery and assessment. The Dietetics with Nutrition Programme had its second curriculum review, with the revised curriculum receiving Senate approval in August. The revised curriculum will start to be used from October 2015. The Psychology Programme also began a curriculum review in 2015.

In November the 6-month Post Basic Certificate in Teaching Methodology for Nurses (CTM) programme received Malaysian Qualifications Agency accreditation. In the Biomedical Science Programme revised credit transfer arrangements with the University of Otago now enable students to transfer after their first two years at IMU. These students spend another 2 years in New Zealand. Medical Biotechnology students undertook a the 4-day Graduate Employability, Adaptability and Reshaping programme offered by the BiotechCorp, aimed at enhancing their communication skills and professionalism.

Ongoing School-Employer Collaborative Training

The IMU Healthcare Clinics, including the newly opened Community Centre at Desa Petaling, continue to provide Chiropractic students with vital, extensive clinical training. Faculty members in Chinese Medicine have begun treating patients at the Community Centre, and the Centre also caters for Dietetics student training.

In Nutrition and Dietetics, significant collaborative agreements have been made with major companies in the food industry. Nestle (M) Sdn Bhd provided grants for the Dietetics Book Prizes for 2015, and discussed the placement of Nutrition students for their practicum. The Institute Sukan Negara will now also provide placement experience for final year Nutrition students, and final year Dietetics students will undertake clinical dietetics placements at hospitals in the IHH group. Students in Medical Biotechnology have undertaken placements with organisations such as Biocon, BiotechCorp, and the Universiti Kebangsaan Malaysia tissue engineering department.

Psychology students this year gained good experience through work placements at Wisma Harapan Special School in Kuala Lumpur; Hospital Sungai Buloh; HL Management Corporation Sdn Bhd, Petronas Carigali Sdn Bhd, Sime Darby Medical Centre and Mercy Malaysia. In the Nursing programme, discussions have begun on enabling Nursing students to be posted to IHH hospitals in the Klang Valley. The Nutrition and Dietetics Division renewed their Memorandum of

Agreement with the Ministry of Health that enables student workplace learning at Ministry facilities.

This year the University's Student Mobility Programme enabled Biomedical Science students to undertake study periods in the United Kingdom, New Zealand, Taiwan, Australia, Singapore and Denmark. Similarly, students in Dietetics with Nutrition will undertake their clinical placements in Taiwan, Thailand, Brunei and Indonesia.

Continuing Education and Professional Development

The Chiropractic Division successfully conducted a seminar entitled 'Developing Malaysia's Chiropractic Future' on 21 November 2015. With this inaugural chiropractic seminar, IMU hopes to establish itself as a Continuing Professional Development (CPD) and Transfer of Technology (TOT) center of excellence.

The Chinese Medicine Division conducted a public talk on 'Dry Eye Syndrome and Neck Pain' on 20 August 2015. There were approximately 100 participants for this talk. A field trip has also been organised to expose students to actual herbs and private Chinese Medicine hospitals in Ipoh on 17 October 2015. This is part of the planned experiential learning activities for students.

The N&D Division successfully conducted a CPD on 'Vegetable Oils for Health' on 9 October 2015. The CPD was organised in collaboration with the Malaysian Palm Oil Board (MPOB) and attended by 100 healthcare professionals.

The Nursing Division successfully carried out several CPD programmes throughout the year including 'Qualitative Research – Research Design to Publication' in collaboration with QRAM, 'Workshop on Academic Excellence' for IMC Staff (Subang Jaya and Ayer Keroh, Melaka) and 'Manuscript Writing Workshop'.

Faculty from the Psychology Division was involved in organising the CPD on 'Qualitative Research' and also conducted an Ethics Forum for students with the theme 'Professional and Ethical Practice among Psychology Graduates: Challenges and Rewards'.

One of the highlights for the Medical Biotechnology programme in 2015 was the involvement of the faculty and students in collaboration with Marketing Department of IMU to organise the inaugural IMU Science Discovery Challenge on 25 July 2015.

The objective was to create greater awareness on biotechnology among secondary and pre-university students in Malaysia and cultivate interest in health sciences careers. A quiz competition with questions from biology, chemistry and physics was held and there were 110 teams competing for the prize.

Community Service

In the Chiropractic programme, 15 students went on international outreach missions to Myanmar and Philippines. Chinese Medicine students participated in the MAPCU Organ Donation campaign. The Nutrition and Dietetics Division was very active, participating in IMU Cares projects, including those for PPR Salak Selatan, Ti-Ratana, Rumah Victory Elderly Home, the Malaysian Association for the Blind and My Father's Home. Nursing faculty were also very active, including leading the Ti-Ratana IMU Cares project.

The 2-day inter-professional community service event at Kampung Sebir, Labu was jointly run by Medical Biotechnology faculty and students, and medical students from the Clinical School. This event was looked at the microbes and toxicants in the community with the aim of increasing childrens' health awareness and preventing disease associated with poor hygiene. Students from the Biomedical Science programme organised two community service projects to Spastic Children's Association Of Selangor & Federal Territory (SCAFST) and The National Autism Society of Malaysia (NASOM) as part of their MPU4 module. Many students and faculty of the School were also involved in Chariofare 2015, and in health screening during the launch of the IMU Community Centre at Desa Petaling.

Student Activity and Achievements

Nursing student Low Chia Yen of NU1/11 bagged the Aflame Student Award 2015, with two

Biomedical Science students shortlisted. Nursing students (NU1/11) once again achieved a 100% pass rate in the Malaysian Nursing Board Registration examination. All graduands of this cohort have been employed.

A Chiropractic student participated in the World Dodge Ball competition and another won medals at a martial arts competition. In October the Year 2 Chiropractic students ran a very successful World Spine Day with the theme "Your Back at Work" and took first place in the international competition.

Chinese Medicine students successfully organised a Chinese Medicine Week in early December, in which staff, students and members of the public were invited to learn more about Chinese Medicine. In July three students attended the Shanghai Summer School under the Student Mobility programme. 2015 saw the graduation of the pioneer cohort of students to undertake the BSc Chinese Medicine programme. Four graduands of the Nursing Science programme obtained First Class Honours, which is a major achievement for this programme which caters to working nurses.

For more student and alumnus academic Achievements and Awards, please refer to page 056.

Alumni Activity

The Nutrition and Dietetics reunion night on 7 November was attended by alumni from cohorts ND1/08 through ND1/11, faculty members, and the current cohorts of Dietetics with Nutrition and Nutrition students. Graduates from partner schools were also able to attend the event.

Faculty Achievement

2015 saw the appointment of two new Heads of Division, Prof Lin Xun in Chinese Medicine, and A/Prof Ho Siew Eng in Nursing. New Programme Directors are Dr Tan Seok Shin, Nutrition; Dr Kok Yih Yih, Medical Biotechnology; and Dr Ebenezer Chitra, Biomedical Science.

Faculty continue to be recognised for their teaching and scholarly achievements:

Name	Achievement / Award
Anil Philip Kunnath Jananezswary Kanapathy	Awarded PhD
Prof Fatimah Arshad	Fellow of Malaysia Dietitians' Association
Dr Liow Sook Mee	Completed a collaborative International Chinese Medicine project and returned from WHO, Geneva
Dr Tan Sue Yee	IMU John Simpson Teaching Excellence Award 2015
Dr Jeevathayaparan Sithamparappillai and team	IMU ELearning Innovation Award (<i>online workshops, lectures and assessment</i>)
Dr Ebenezer Chitra Dr Sangeetha Shyam Dr Tan Sue Yee Siew Wei Fern Wong Zhi Hang	School of Health Sciences' Annual Appreciation Week Best Academic Award
Prof Khor Geok Lin	Nutrition Society of Malaysia Publication Prize 2015
Dr Ebenezer Chitra	2 nd International Conference on Agriculture, Environment and Biological Sciences (ICAEBS) August 16 – 17, 2015, Bali <i>Best Session Paper</i>
Prof Winnie Chee Swee Siew	Academy of Nutrition and Dietetics Foundation at the Food and Nutrition Conference and Expo (FNCE) October 3 - 6, 2015, USA <i>International Lecture Award</i>
Kavitha Ramanathan	4 th Global Summit Expo on Healthcare 2015 November 9-10, 2015, Dubai <i>Best Poster Award</i>
Wong Pak Fong	Frontiers in Medical and Health Sciences Education Conference: Learner Wellbeing Across the Continuum November 27-28, 2015, Hong Kong <i>Merit Award</i>
Dr Nicole Chen	Frontiers in Medical and Health Sciences Education Conference: Learner Wellbeing Across the Continuum November 27-28, 2015, Hong Kong <i>Merit Award – Presentation on "Help Seeking Behaviour in Healthcare"</i>

2016 and Beyond

The School Strategic Plan for 2016 – 2020 focuses on enhancing work readiness in its graduands, on educational innovation; research quality, and service that fosters inter-professional collaborative care. The immediate focus, for 2016, is to enhance graduand competency through implementation of the revised

University Learning Model, to secure continual quality improvement in our curriculum delivery, and to enhance our continuing professional development programme. Subsequent plans to obtain international accreditation from the UK for the Biomedical Science programme in 2016 are also in progress.

SCHOOL OF POSTGRADUATE STUDIES

HIGHLIGHTS:

- Launch of the Master of Science in Environmental Health
- MSc in Molecular Medicine received perpetual accreditation from the Malaysian Qualifications Agency (MQA)
- Pioneer cohort in MSc in Molecular Medicine graduated in September

The School of Postgraduate Studies is the academic wing of the Institute for Research, Development and Innovation. The School coordinates all the University's postgraduate degree programmes, whether by research (the MSc and PhD in Medical and Health Sciences) or largely taught (MSc in Public Health, in Analytical and Pharmaceutical Chemistry, and in Molecular Medicine). The Master of Science in Environmental Health was launched in September. The School also coordinates the intercalated Bachelor of Medical Sciences (BMedSc) programme.

The postgraduate programmes by research which started in 2004 have to date graduated 25 PhD and 51 MSc holders, with 5 PhD and 6 MSc graduations in 2015 (Table 1 and Table 2). In terms of new enrollment, 9 MSc and 6 PhD candidates registered in 2015, of which three are University faculty. Postgraduate research projects are funded both externally and internally. The main external funding agencies continue to be the Ministries of Education and of Science, Technology and Innovation.

Graduand	Thesis
PhD in Medical and Health Sciences	
Anil Philip Kunnath	Induction of intracellular death of breast cancer cells through combined intracellular delivery of a tumor-suppressor gene and small interfering RNAs against growth factor receptor and anti-apoptotic genes
Dr Supathiratheavy Rasiah	The role of electronic medical records in improving the management of Type 2 diabetes mellitus at the primary healthcare level in Malaysia
Mehru Nisha Muhamad Haneef	Determining the pattern of gastrointestinal parasitic infections among the Orang Asli at Kampung Serendah, Selangor, Malaysia using molecular and parasitological methods
Shantakumari Rajan	Use of antioxidants to counter the adverse effects of bisphenol A in a mouse model
Tan Boon Shing	Mechanism of p53 mutants 'gain-of-function' effects in human cancer cells

Table 1. 2015 PhD graduands

Graduand	Thesis
MSc in Medical Sciences and Community Health	
Chin Yin Yien	Assessment of the toxicity of pharmaceuticals in the microalgae <i>Pseudokirchneriella subcapitata</i> and <i>Dunaliella tertiolecta</i> based on cell viability and oxidative stress biomarkers
Dang Nguk Ling	Effects of the heavy metals copper, cadmium and nickel on the induction of cell death and oxidative stress in <i>Dunaliella tertiolecta</i> and <i>Pavlova gyrams</i>
Ng Kay Lee, Haema	The elucidation of molecular targets regulated by tocotrienols (delta and gamma) and beta-carotene in human chronic myelogenous leukaemia (K562) cells
Shamala A/p Nadaraju	Formulation and characterization studies of doxorubicin and cyclosporine-A co-encapsulation in polymeric nanoparticles for oral chemotherapy
Siti Aisya Bt Saud Gany	Anti-oxidative and anti-neuroinflammatory activities of three Malaysian seaweeds, <i>Caulerpa racemosa</i> , <i>Padina australis</i> and <i>Sargassum polycystum</i>
Tan Yann Jean	Formulation, characterisation and in vitro studies of palm-based lipid nanoparticles for topical delivery of griseofulvin

Table 2. 2015 MSc graduands

Findings of postgraduate research which have been published in indexed journals include:

1.Nisha M, Kumarasamy V, Ambu S, Davamani F, Mak JW. Factors associated with intestinal parasite infections in a resettled indigenous community in Malaysia. *International Journal of Tropical Disease and Health*, 2015; 12(3): 1-7.

2.Saw PS, Pui, Nissen LM, Freeman C, Wong PS, Mak V. Health care consumers' perspectives on pharmacist integration into private general practitioner clinics in Malaysia: A qualitative study. *Journal of Patient Preference and Adherence*, 2015; 9: 467-477.

3.Subramaniam S, Radhakrishnan A, Chakravarthi S, Palanisamy UD, Haleagrahara N. Antihyperglycemic effects of *Nephelium lappaceum* rind extract in high fat-induced diabetic rats. *International Journal of Pharmacology*, 2015; 11(6): 542-551.

4.Tan BS, Tiong KH, Choo HL, Chung FFL, Hii LW, Tan SH, Yap IKS, Pani S, Khor NTW, Wong SF, Rosli R, Cheong SK, Leong CO. Mutant p53-R273H mediates cancer cell survival and anoikis resistance through AKT-dependent suppression of BCL2-modifying factor (BMF). *Cell Death and Disease*, 2015; 6: e1826.

5.Toh SWH, Ng TKW, Tee VP, Lee VKM, Nesaretnam K. 1,3-dipalmitoyl-2-oleoylglycerol, 1,3 distearoyl-2-oleoylglycerol and trioleoylglycerol do not differ in their effects on postprandial levels of plasminogen activator inhibitor-1 (PAI-1) and markers of inflammation in healthy Malaysian adults. *Journal of Palm Oil Research*, 2015.

6.Voon PT, Ng TKW, Lee VKM, Nesaretnam K. Virgin olive oil, palm olein and coconut oil diets do not raise cell adhesion molecules and thrombogenicity indices in healthy Malaysian adults. *European Journal of Clinical Nutrition*, 2015.

In the internal review of the research MSc and PhD programmes in October, overall favourable comments were received from the reviewers, particularly with regards to the high standards, which meet both Malaysian Qualifications Framework and Agency Standards, and are consistent with best practice in other universities. In May the taught MSc in Molecular Medicine received perpetual accreditation from the Malaysian Qualifications Agency (MQA). The five members of the pioneer cohort in this Programme graduated in September. Three of these graduates have gone on to PhD study.

In 2015 student research generated two publications in peer-reviewed journals:

1. Junaid A, Deb PK, Ooi IH, El-Rabie D, Shuaib, FO and Rajasingam R. Design, Synthesis and Pharmacological Properties of Peptidomimetics. *Asian Journal of Chemistry*, 2015, 27(9): 3137-3142.
2. Nalaiya J, Sagineedu SR, Rajasingam R, Kassim Z, Pichika MR. A Stability-indicating RP-HPLC method for simultaneous determination of simvastatin and niacin in a combined dosage form. *International Journal of Pharmacy and Pharmaceutical Sciences*, 2015; 7: 262-268.

Rajakumari Rajasingam (MAPC 2/13) presented her research at the University's Pharmacy and Pharmaceutical Sciences Conference in August 2015.

The MSc in Public Health programme has now been running for four years. This Programme is fully accredited by the MQA and is recognised by the Public Services Department of Malaysia. IMU is the first and only private university in Malaysia to conduct a fully recognised Public Health masters programme. The current enrolment is 13 students, and to date the programme has graduated 19 individuals. To provide experiential learning we continue to collaborate with the Ministry of Health, Dewan Bandaraya Kuala Lumpur; Hospital Tuanku Ja'afar, Seremban, and with our industrial partners.

In 2015 fourteen MBBS students enrolled into the intercalated Bachelor of Medical Sciences (BMedSc) programme. This Programme enables students to acquire a research ethos and to learn research methodology, whilst gaining the qualifications to transfer to our partner medical schools which offer only graduate entry. Students in the BMedSc programme undertake a one-year research study and write a thesis based on their findings.

BMedSc research has also contributed to publications in refereed journals:

1. Chen JXJ, Lim PKC, Wong SF, Mak JW. Determination of the presence and levels of heavy metals and other elements in raw and commercial edible bird nests. *Malaysian Journal of Nutrition*, 2014; 20(3): 377-397.
2. Chen JXJ, Wong SF, Lim PKC, Mak JW. Culture and molecular identification of fungal contaminants in edible bird nests. *Food Additives and Contaminants: Part A*, 2015; 00(00): 1-13.
3. Chong KT, Wong SF, Mak JW, Loh LC, Ho TM. Sero-prevalence study of IgE responses to allergens from Malaysian house dust (HDM) and storage mites (SM). *Tropical Biomedicine*, 2015; 32(3): 1-17.
4. Kew PE, Ling SJ, Wong SF, Lim PKC, Mak JW. Isolation and identification of mites associated with raw and commercial farm edible bird nests. *Tropical Biomedicine*, 2015.
5. Wang CYD, Chu WL, Kok YY. Assessment of paracetamol (acetaminophen) toxicity in microalgae. *Polish Journal of Environmental Studies*, 2015; 24(2): 735-741.
6. Yew SQ, Ravindran HK, Meka VS, Dharmalingam SR. Preparing kaempferol nanosuspension (KNS) using high pressure homogenization (HPH) technique. *BMC Proceedings*, 2015; 9(Suppl 7): A22.

Overall, 2015 has been a very successful year for the School in terms of training MSc, PhD and BMedSc students.

ACADEMIC ACHIEVEMENTS AND AWARDS

(Students)

Date	Faculty	Level (Local / Regional / International)	Country	Description (Event)	Award Category	Title of Presentation	Name of Winner/s	Supervisor/s
10 - 15 Jan 2015	Medical	International	Indonesia	28 th East-Asian Medical Students' Conference (EAMSC) 2015	2 nd Place (Movie Making Competition)	Hear Me (The movie is on social stigma and insensitivity towards the needs and well-being of HIV patients)	Danial Hakim	-
18 Apr 2015	Medical	National	Malaysia	Jeremy Tan Ern Hwei	Top 10 finalist at Basic Surgical Skill Workshop	The Effectiveness of Peer Tutoring on Basic Surgical Knowledge for Preclinical Students	Heng Hian Hee (Semester 9)	Prof Hanafiah from UKM
22 - 24 Apr 2015	Medical	International	Malaysia	June Lee Pui Yin	Best Oral Poster Presentation	Preparing Medical Students for Work and for Society Through a Journey in Rural Health	Moi Zjen Pang (Semester 10)	-
5 - 6 May 2015	Medical Biotechnology (Post Graduate)	National	Malaysia	Tan Sue Fen "	Finalist (National Level)	-	Haema Thevanayagam Wong Ying Pei	A/P Dr Shar Mariam Mohamed
16 May 2015	Medical	National	Malaysia	Intervarsity Medic Olympiad 2015	Champion	-	Amir Shareza Patel Goh Kah Man Tan Sze Kiat Tan Sze Mann Brandon (Semester 4)	-
17 May 2015	Dentistry	National	Malaysia	7 th National Dental Students' Scientific Conference (NDSSC)	2 nd Prize (Poster Presentation)	Rugoscopy among the Malaysian Chinese population: A Pedigree Analysis	Tan Wei Hong (DT1/11)	Sami Abdo Radman Vasudeva Murthy Vimi Mutalik
17 May 2015	Dentistry	National	Malaysia	7 th National Dental Students' Scientific Conference (NDSSC)	3 rd Place Overall Trophy Champion	-	Auleep Ganguly Cheng Kang Ian Choong Bing Liang Lau Kherr Siong Lim Wei Gin Tan Wei Hong Tan Yen Yee Tay Jean Sean Wong Bi Wei	-

Date	Faculty	Level (Local / Regional / International)	Country	Description (Event)	Award Category	Title of Presentation	Name of Winner/s	Supervisor/s
23 May 2015	Dentistry	National	Malaysia	7 th Annual 3M ESPE-Malaysian Association for Prosthodontics Fixed Prosthodontics Case Presentation Competition	1 st Prize and Best Presenter	-	David Gu Jian Yee (final year student)	Prof Seow Liang Lin co-supervised by Dr Rohit Pandurangappa
29 - 31 May 2015	Medical	National	Malaysia	Annual and General Scientific Meeting Penang	Top 10 Poster	Optimizing Patient Outcomes	Heng Hian Hee (Semester 9)	YBhg Dato Kanda Prof Lum Prof Lim Prof Yushak Dr Ismail
11 - 12 June 2015	Nutrition and Dietetics	National	Malaysia	21 st Malaysian Dietitians' Association Conference 2015	2 nd place for Best Overall Dietetics Student Award	-	Aaron Ang (N&D Alumni)	-
11 - 12 Jun 2015	Nutrition and Dietetics	National	Malaysia	21 st Malaysian Dietitians' Association Conference 2015	1 st place for Best Case Study Oral presentation (Dietitian)	Tube-rific: to initiate now or later?	Charmaine Lavinia (N&D Alumni)	-
11 - 12 Jun 2015	Nutrition and Dietetics	National	Malaysia	21 st Malaysian Dietitians' Association Conference 2015	1 st place for Best Poster Presentation (Research)	Diet Quality and calcium intake among elderly in Klang Valley	Chong Jia Chee Kelly Num Wong Jie Ying	-
11 - 12 Jun 2015	Nutrition and Dietetics	National	Malaysia	21 st Malaysian Dietitians' Association Conference 2015	1 st place for Best Case Study Poster Presentation	Refeeding in Cachexia and Malnutrition	Ang Hui Inn	-
11 - 12 Jun 2015	Nutrition and Dietetics	National	Malaysia	21 st Malaysian Dietitians' Association Conference 2015	3 rd place for Best Case Study Oral Presentation	Diabetic Foot Ulcer : Challenges in Meeting Protein and Energy Requirement	Wendy Wong Hui Yi	-
13 Aug 2015	Dentistry	Asia Pacific	Taiwan	42 nd Asia Pacific Dental Students Association Scientific Conference 2015	2 nd Prize (Poster Presentation)	Effects of Diabetes Mellitus on Gingival Mesenchymal Stem Cells (gMSCs) in Patients with Periodontitis	Tham Ru Yueh	Dr Shahidul Ahsan Dr Pullikotil Shaju Jacob Prof Khoo Suan Phaik
13 Aug 2015	Dentistry	Asia Pacific	Taiwan	42 nd Asia Pacific Dental Students Association Scientific Conference 2015	2 nd Prize (Oral Presentation)	Effects of Gingivitis on Gingival Mesenchymal Stem Cells	David Gu Jian Yee	Dr Shahidul Ahsan Dr Pullikotil Shaju Jacob Prof Khoo Suan Phaik

Date	Faculty	Level (Local / Regional / International)	Country	Description (Event)	Award Category	Title of Presentation	Name of Winner/s	Supervisor/s
13 Aug 2015	Dentistry	Southeast Asia	Indonesia	SEAADE-GC Dental Asia Student Prevention Table Clinician Programe 2015	2 nd Prize	Developing Oral Health Promotion Skills for Caregivers in a Residential/ Nursing Care Home for Elders in Malaysia	Lim Wei Gin	Prof Allan Pau Kah Heng
14 Aug 2015	Dentistry	Southeast Asia	Indonesia	IADR-SEA DENTSPLY Student Clinician Program	1 st Prize	Effect of Bonding Agents and Aging Process on Shear Bond Strengths of Porcelain Repair	Wong Bi Wei (DT1/11)	Prof Seow Liang Lin
25 - 27 Aug 2015	Pharmacy	International	Spain	3 rd European Pharma Congress hosted by OMICS International Conference from 25 – 27 August 2015 at Valencia, Spain. European Pharma Congress 2015 with its theme "Conscientious awareness of Pharmacists and Pharmaceutical Sciences"	Best Poster Award	Skin Infection: An Association between Awareness and Quality of Life Among Adults in Petaling District, Malaysia	Jayshalene Balakrishnan (Alumnus)	Jamuna Rani Appalasamy Rohit Kumar Verma
3 - 4 Jun 2015	Medical	International	Netherlands	22 nd International Students Congress of Medical Sciences	Best Oral Presenter	Development and Validation of Kaempferol Nanosuspension (KNS) for Bioavailability Enhancement	Yew Sheng Qian	Dr Venkata Dr Srinivasan Dr Mayuren
9 - 10 Sept 2015	Medical	National	Malaysia	Upper GI Society Meeting	Top 10 best posters	Can Laparoscopic Appendicectomy Replace Open Appendicectomy?	Ho Yuen Teng Lim Koo Koon (Bachelor of Medicine and Bachelor of Surgery)	YBhg Prof Dato' Dr P Kandasami
22 - 26 Sept 2015	Dentistry	International	Bangkok	62 nd Annual World Dental Congress of the International Association of Dental Students (IADS) held jointly with the FDI World Dental Federation and the Young Dentists Worldwide	1 st Prize	The 3 rd Dental Olympics Dental Olympic Competition that comprises gruelling dental challenges as follows: 1) Orthodontic wire bending exercise 2) Oral pathologic quiz 3) Tooth waxing 4) Suturing on artificial leather	Lim Wei Gin Tan Yen Yee Tey Shwu Yee	-

Date	Faculty	Level (Local / Regional / International)	Country	Description (Event)	Award Category	Title of Presentation	Name of Winner/s	Supervisor/s
7 Oct 2015	Medical	State	Negeri Sembilan	Negeri Sembilan 2015 Annual Research Day - Poster Presentation	1 st Prize (Poster Presentation)	Prevalence of Needle Stick Injuries and Their Under Reporting Among Healthcare Workers In The Department Of Obstetrics And Gynaecology	Devalagan a/l Muthalagan (TL) Amit Bhardwaj Chan Yi-Min Krishna Kumar Lee Wei Lun Nurul Izzati B. Abd Razak Wong Wei Shi	-
7 Oct 2015	Medical	State	Negeri Sembilan	Negeri Sembilan 2015 Annual Research Day - Poster Presentation	2 nd Prize (Poster Presentation)	Patient Perception about the Use of 'Spacer Device' in Obstructive Lung Disorders	Tan Yew Jie (TL) Avineshwaran Balasandiren Darvena Pillay Sashideran Lam Chuan Zheng Nirmal Sukumaran	-
7 Oct 2015	Medical	State	Negeri Sembilan	Negeri Sembilan 2015 Annual Research Day - Poster Presentation	3 rd Prize (Poster Presentation)	Are Body Mass Index and Waist over Hip Ratio Associated with Gastro Esophageal Reflux among outpatients in Hospital Tuanku Jaafar?	Son Wei Da (TL) Aslinah Binti Velayit Hussein Hun Zi Ling Kuang Ting Shiuian Ng York Hang	-
22 Oct 2015	Medical	Local	Malaysia	IMU Clinical School Annual Research Day 2015	Oral presentations winners (Team A1)	A Cross-Sectional Study on the Relationship Between Patients' knowledge of HBA1C and Diabetes Control	Chua Yen Zhen Khoo Hui Ping Ng Yang Jein Syahidah Binti Mohd Noh	-
22 Oct 2015	Medical	Local	Malaysia	IMU Clinical School Annual Research Day 2015	Oral presentations winners (Team A3)	Relationship between Patient's Knowledge on Asthma with Patient's Control of Asthma	Chong Xin Yee Karen Kaur Manocha Low Chun Heng Intan Sabreena Binti Mohamad Sopian Teng Yi Han	-

Note: TL = Team Leader

Date	Faculty	Level (Local / Regional / International)	Country	Description (Event)	Award Category	Title of Presentation	Name of Winner/s	Supervisor/s
22 Oct 2015	Medical	Local	Malaysia	IMU Clinical School Annual Research Day 2015	Oral presentations winners (Team B2)	Incidence of Vaginal Erosion with Different Synthetic Materials for Suburethral Sling Used in the Treatment of Stress Urinary Incontinence: A Systematic Review	Aruna Kumarasamy Ho Ming Hui Lim Zhi Kai See Jie Siang Tan Wei Jun	-
22 Oct 2015	Medical	Local	Malaysia	IMU Clinical School Annual Research Day 2015	Oral presentations winners (Team B5)	Uptake of Colorectal Cancer Screening Among Healthcare Professionals in Seremban, Malaysia	Chew Sze Yen Valerie Kam Ee Von Lim Sean Yee Shwetambra Vythialingam Vinod Kumar a/I M. Manoharadas	-
22 Oct 2015	Medical	Local	Malaysia	IMU Clinical School Annual Research Day 2015	Best oral presentation (Team A6)	Depression among Medical Inpatients – A cross-sectional study in Hospital Tuanku Ja'afar Seremban	Chan Jensen Lim Fang Chan Moo Yong Hoong Foong Reena Prihya Toh Chong Rui	-
?	Dentistry	National	Malaysia	Dentsply University Endodontic Case Competition (National)	1 st Prize	-	Michelle Anne Leong (DT1/12)	Dr Sekthar Batia
31 Oct 2015	Dentistry	Regional	Hong Kong	Dentsply University Endodontic Case Competition Asian Region	2 nd Prize	-	Michelle Anne Leong (representing Malaysia)	Dr Sekthar Batia
6 - 8 Nov 2015	Pharmacy	National	Malaysia	2 nd National Pharmacy Debate Competition 2015	Semi-finals	Access to medical resources should be prioritized to individuals with longer life expectancy	Ai Ven Tee Jordy Wong Michelle Fernandez Tyng Wei Tan	Rohit Kumar Verma
9 - 10 Nov 2015	Nursing	International	Dubai, UAE	4 th Global Summit Health Care 2015 International Conference	Best Poster Award	Pre-Gravid Food Intake Among Gestational Diabetes Mellitus Mothers In A Selected Hospital In Malaysia	Liew Wai Han See En (NU111)	Kavitha Ramanathan

Date	Faculty	Level (Local / Regional / International)	Country	Description (Event)	Award Category	Title of Presentation	Name of Winner/s	Supervisor/s
13 - 15 Nov 2015	Pharmacy	National	Malaysia	12 th Malaysian Pharmaceutical Society Pharmacy Scientific Conference 2015	Best Poster Presentation in Pharmacology	In vitro evaluation of the anticancer properties of the N-(1S,2S)-1,3-dichloro-1-phenylpropan-2-yl) aniline derivative	Nicole Lim Xiu Fern	Prof Leong Chee Onn Dr Mai Chun Wai Dr Wong Lai Chun Her research team also included Lim Xiang Yin, Yew Chow Ping, Tay Shun Ern
13 - 15 Nov 2015	Pharmacy	National	Malaysia	12 th Malaysian Pharmaceutical Society Pharmacy Scientific Conference 2015	Best Poster Presenter in Pharmaceutical Chemistry	In silico pharmacophore elucidation for bicyclic antagonists of human A3 adenosine receptor and its comparison with A2A adenosine receptor bicyclic antagonists	Joyce Wong Xin Yi	Dr Cheong Siew Lee Dr Pran Kishore Deb Joyce was undertaking this project with Jong Yi Wen
21 Nov 2015	Pharmacy	National	Malaysia	Developing Malaysia's Chiropractic Future Conference	1 st Prize - Poster	Evidence based care	Audrey Lee Ling Wei Brendon Teo Chee Yee Chan Siew Ng Qi Wei Tan Nin Kee	Andrew Brian Dane
21 Nov 2015	Chiropractic	National	Malaysia	Developing Malaysia's Chiropractic Future Conference	Runner up - Poster	Evidence based care	Ezra Lu Xih Kaylee Gan Ju Tshin Lim Bin Nurul Amalina Bt Rosli Tay Huei Minn	Andrew Brian Dane
2 - 4 Dec 2015	Postgraduate	International	Bangkok	1 st International Conference on Pharmacy Education and Research Network of ASEAN	Best Poster Award	-	Amy Chong	-
17 Dec 2015	Chiropractic	International		WFC World Spine Day Competition 2015	First Prize - Chiropractic Educational Institution	Your Back at Work	Semester 4 students	Elizabeth Dane



CONVOCATION 2015



The 2015 Convocations took place in June and in September. At the Convocation on 13 June degrees were conferred upon more than 300 graduands, including the first cohort to undertake the Chinese Medicine degree programme. Pro-Chancellor YBhg Dato' Dr Gan Ee Kiang, Members of the Board of Governors, Senate, Faculty, staff and guests were in attendance. The Convocation was held over two sessions to cater for the large number of graduands, and the mood was one of enthusiasm and joy. The ceremony was streamed live from the Auditorium to other lecture theatres in the University for family members and friends unable to be in the Auditorium. At the Prize Presentation Ceremony on 12 June prizes for academic excellence were bestowed on graduands.

At the Convocation, Prof Chris Stephens, Associate Dean for Education and Student Experience at the University of Southampton, received an Honorary Doctorate in Medicine. It was noted in the citation Prof Stephens' long association with IMU, marked by significant contribution to our University's growth

and development. Prof Stephens served as the Deputy Chair of the Academic Council from 2010 to 2012, and then Chair from 2013 to 2015. In his capacity as Associate Dean for the Faculty of Medicine at University of Southampton, Prof Stephens is responsible for leading the development and implementation of faculty educational strategies, student recruitment, educational innovation, quality assurance and enhancing student experience. In recognition of his expertise, he has been appointed a consultant to medical schools in Brunei, Malaysia and Sri Lanka. He has also worked with the senior teams of six medical schools in Kazakhstan to help develop educational leadership capacity. In 2003, Prof Stephens was appointed a General Medical Council visitor and is part of a team assessing the quality of undergraduate medical education in the United Kingdom.



At the Convocation of 12 September Prof Mak Joon Wah, IMU Vice-President for Research and Director of the Institute for Research, Development and Innovation, received an Honorary Doctorate of Science, in recognition of his immense contribution to promoting research at the University. Under his dedicated stewardship the University has made significant progress in research, as evidenced by increases in numbers of peer-reviewed publications, external research funding, and numbers of postgraduate research students. Prof Mak has helped direct research into the four thrust areas of environmental and population health; cancer and stem cells; bioactive molecules and drug delivery, and health professions education. Under the University's strategic plan for 2011 – 2015, Prof Mak helped establish the Institute for Research, Development and Innovation in 2012.

Throughout his research career, Prof Mak's main interests have been in tropical medicine, infectious disease, and bioactive molecules. A globally recognised expert in filariasis and malaria, he has been appointed a World Health Organisation consultant

in 17 countries. He has published more than 345 papers in refereed journals and was the Foundation Editor of the Tropical Biomedicine the first biomedical ISI journal in Malaysia. Prof Mak has supervised 13 PhD and 11 Masters students. Recognising the urgent need for a good learning resource on medically important parasites, he produced an Atlas of Medically Important Parasites together with his wife, Dr Choong Mooi Fai. This book is currently in its third edition, with more than 5000 copies being sold worldwide. The book has been adopted as a university text for medical and health science undergraduates and postgraduates.



For his contributions to science, Prof Mak was the joint recipient of the first National Science Award (Anugerah Sains Negara) in 1985, and was awarded the Sandosham Gold Medal in 1989. In 2011 he was the winner of the prestigious Merdeka Award for Outstanding Scholastic Achievement, in recognition of his contributions to fundamental and applied research in parasitology and parasitic diseases, public health and pathology. Prof Mak was instrumental in influencing the Ministry of Science, Technology and Innovation (MoSTI) to include private universities in the allocation of research funds, a milestone for the progress of scientific research in Malaysia.

The September Convocation also marked the graduation of the first cohort to complete the MSc programme in Molecular Medicine. Dr Yam Wai Keat, the Programme Coordinator said "Today is a special day as we witness the inaugural graduation of our Master of Science in Molecular Medicine students. We are very proud of them as they have completed the mixed mode study programme, comprising 20 credits of coursework and 20 credits of research, in one and a half years. The course was designed

to meet stringent Malaysian Qualifications Agency requirements and international standards. The modular study programme allows students to grasp the fundamentals of molecular medicine while still being able to commit to work. Our interactive and engaging curriculum delivery style enables students to be focused, creating a conducive environment for experiential and lifelong learning. The research project module further enhanced students' critical thinking and problem solving skills, promoting their professional development to better prepare them for today's challenging workplace. We congratulate our graduates and we are confident that they will excel in their future endeavours."

The Convocation celebrated the graduation of more than 200 students. The academic performance of the University's best graduands was recognised at the Prize Presentation Ceremony on 11 September. One such graduand, Liew Jun Yong, the recipient of the Dr John Joseph Bosco Memorial Gold Medal, spoke of his passion for interacting with people and making a positive impact on their lives. Jun Yong said, "I was really happy and grateful when I was awarded



the Gold Medal. This award serves as a recognition of my hard work, achievement and of course as an encouragement for me to work hard in the future. I would like to take this opportunity to express my million thanks to my family, my girlfriend, my lecturers and my fellow comrades for their endless support. Not forgetting, I want to thank all the patients that I learnt from throughout my medical school journey."

"I started my journey as a medical student with the aim of graduating as a competent doctor. My love for medicine was cultivated during my clinical training at the IMU Clinical School in Seremban and Hospital Tuanku Ja'afar where all the patient interactions took place. However, what drove me the most are the love for medicine and patient care. Nothing beats the feeling when I am able to provide proper care or counselling to my patients, and most importantly to see the patients' health improved, satisfied with the care. Love for the job is the main motivation for me to work hard in order to excel in the things I do."

Hovah Marie Emilie Leiticia, a graduand from Mauritius and winner of the Tun Zahir Merit Award was conferred a Bachelor's degree in Pharmaceutical Chemistry at the Convocation. She said "I was definitely happy when I heard I was an award winner. It is a great achievement and a stepping stone for my future plans and dreams. I'm grateful for everything IMU has given me, be it in terms of knowledge or values. I'm happy that I didn't disappoint my mother

and my lecturers. The lecturers in the pharmaceutical chemistry programme are very approachable, always willing to give an extra helping hand. For me, the lab sessions were enjoyable as this was the time to gain hands-on experience and put the theoretical knowledge acquired in class into practice. There was also an extensive list of projects for the final year projects from which you could easily choose your field of interest. Choosing a final year project on organic synthesis research gave me an insight of what I might want to do in the future. Our lecturers also made it possible for me to do my internship in India, an opportunity that I sincerely appreciate."

Prize winner Joanna Emmanuel Vijayan, who was in the Dean's List in the Bachelor of Nursing Science programme said, "Studying this programme while working was indeed very tough for me. While working and studying, I had lots of sleepless nights as I have to keep up with the due dates of my assignments. What I have learnt helps me in all aspects of nursing care, including ethics, leadership, teaching, management and assessment. In ethics, I learned how to behave, talk, act and solve any situation when needed. As for leadership and management, it has taught me to be a competent and independent leader at work. Being a senior in my department I have to educate my juniors, teaching and learning course has helped to create a suitable environment for this learning process to take place."



LIBRARY

The Library aims to provide efficient and welcoming services for all University members. 2015 saw a variety of activities at the Main Library and at the libraries of the Clinical Schools, including campus outreach and promotions to raise student awareness of Library services and resources, to create a welcoming environment in the Library, and to teach information literacy and informatics skills. The Library links the digital collections and the e-Learning environment. This Report summarises the activities of 2015.

Engaging Users: Promotional Events 2015

The Library highly values its users and continues to engage and build strong working relationships with them. The overarching aim is to increase awareness and use of library resources, facilities and services, particularly in members of the University community not using the Library, or who are unaware of how Library use can benefit their learning and work. The Library's part time student librarian programme also saw 32 individuals playing a vital role in promoting the Library activities and resources. The student librarians were also actively involved in the Library Mini Engagement Days and the Learning Resources Festival. They helped in designing promotional activities and games which contributed to the success of the events. Other events included activities such as book exhibitions to promote the use of our collections, to support curriculum development and faculty research. The book exhibitions included

- Recommended books for Semester 1; 6 May – 30 June
- A book exhibition at the inaugural Pharmacy and Pharmaceutical Science Conference; 1 – 2 August
- Exhibition of books on medical and health professions education; 28 October – 30 November



The Pharmacy and Pharmaceutical Science Conference book exhibition



1	1. Recommended books for Semester 1
2	2. and 3. Publications on medical education
3	

Games and Competitions

There were competitive games and interactive activities in the form of simple quizzes, conducted to engage Library users through product showcases. Details are as follows:

Date	Event	Location	Activities
13 February	1 st Library Mini Engaging Day Mini Library Valentine Day 2015	Bukit Jalil	i. Memorisation game ii. Know your Love iii. Info. Love Game
12 August	2 nd Library Mini Engaging Day Gamification	Bukit Jalil	i. Crossword Puzzle ii. Library Info Wheel iii. Book Hunting iv. Library Kahoot
23 - 25 November	Library Week	Seremban	i. Library Info Hunt ii. Puzzle Game iii. Kahoot Quiz iv. IMU library moments
2 - 3 November	Library Week	Bukit Jalil	i. Library Info Hunt ii. Kahoot Library Quiz iii. Citation Game
30 November - 1 December	Learning Resources Festival 2015	Bukit Jalil	iv. Snakes and Ladders v. Kahoot Game vi. Library Info Hunt vii. Learning Resources Festival Mega Challenge
16 December	Library 3 rd Mini Engaging Day Christmas	Bukit Jalil	i. I want to build the snow man ii. Throw your Dice iii. Citation Puzzle
9 November – 31 December	Elsevier Online Quiz	Online	Quiz related to Science Direct database



1	2
3	4
6	7
8	9

1. The first Library Mini Engagement Day at Bukit Jalil
2. The second Library Mini Engagement Day at Bukit Jalil
3. Library Week at the Clinical School, Seremban
4. Library Week at the Clinical School, Batu Pahat
5. Screenshot of the Elsevier Online Quiz linked through the Library portal
6. and 7. The 2015 Learning Resources Festival at Bukit Jalil
8. and 9. The third Library Mini Engagement Day at Bukit Jalil

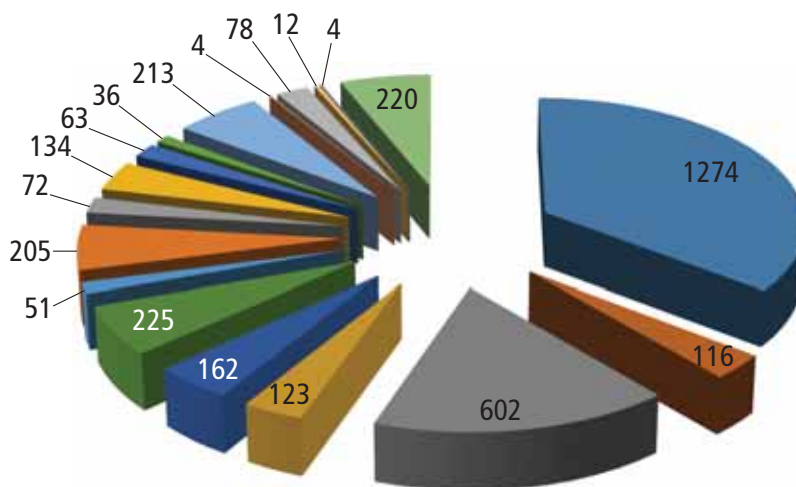
Reaching Out To Communities

The Library extended its expertise to communities in Kelantan as part of its contribution to the IMU Cares projects. In April, seven Library staff from Bukit Jalil, and one each from Seremban and Batu Pahat participated in setting up the library in SK Laloh and SK Karangan in Kuala Krai. This initiative included designing and installing computerised Open Source Library systems, rearranging the Library furniture and books using appropriate shelving arrangements, and training the teachers in charge of the school libraries.



- 1 and 2.
Work at SK Laloh,
Kuala Krai Kelantan
- 3 and 4.
Work at SK Karangan,
Kuala Krai, Kelantan
- 3
- 4

Enhancing Information Literacy



Information Literacy Participants, 2015

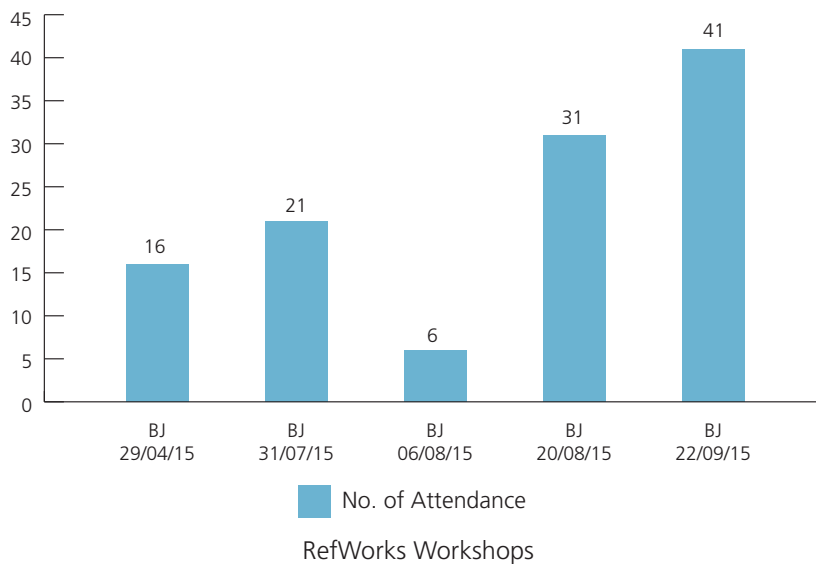
- | | | |
|-------------------------|----------------------------|----------------------------|
| ■ MBBS | ■ Nursing Science | ■ Biomedical Sciences |
| ■ B.Pharmacy | ■ Psychology | ■ Pharmaceutical Chemistry |
| ■ Chiropractic | ■ MPH | ■ Nursing |
| ■ Nutrition | ■ Dentistry | ■ Nursing Post Graduate |
| ■ Medical Biotechnology | ■ M.Pharmacy | ■ MAPC and MMM |
| ■ Chinese Medicine | ■ Dietetics with Nutrition | ■ Foundation |

Some 3,600 students from various programmes attended the monthly Information Literacy sessions conducted by Librarians and Library Officers, at Bukit Jalil and Clinical Schools. Topics taught are relevant to students' Semester subjects such as Anatomy and Physiology for Semester 1 and 2, and hands-on training on how to retrieve papers effectively using various searching techniques. Students were also shown how to calculate Journal

Impact factor and its importance. From September we have used gamification methods such as Kahoot! and Socrative in each session, as these platforms create a fun learning experience for the students. The reduction in student enrolment in 2015 has led to the slightly lower attendance than in 2014 (3,787 attendees).

Semester 10 medical students at the Batu Pahat and Kluang Clinical Schools were guided on how to cite references in their portfolio writing. Emphases were on the Vancouver Referencing style and the use of evidence-based and peer reviewed publications.

Workshops and Training: RefWorks



The Reference Librarian at Bukit Jalil conducted five RefWorks workshops, which were attended by 115 students and faculty members. Recommended techniques for using the database were demonstrated during hands-on sessions covering five methods:

- Manually adding and importing reference to the database through Pubmed
- Importing references using Library subscribed e-resources Ebscohost, Proquest and Science Direct
- RefGrab from websites
- Import citations from Google Scholar
- Preparing citations

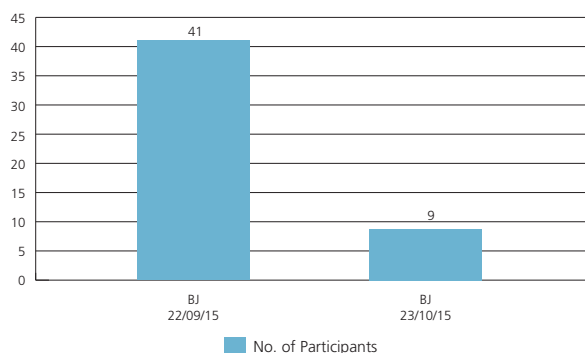


- | | |
|---|-----------|
| 1 | Kahoot! |
| 2 | Socrative |

Enhancing Services and Resources

Journal Impact Factor and Vancouver Citation Workshop

The September and October workshops covered Journal Impact Factors, their importance and the formula used to calculate Impact Factor, and other relevant contents such as Immediacy Index and H-Index.



Journal Impact Factor and Vancouver Citation Workshop

Library Clinics and Database Training

Library Clinic workshops were conducted for new faculty members as an introduction to the Library and its online system and how to access IMU Intellectual works held in the Central Digital Repository via the IMU Library Portal. The Workshop also discussed distinctions between 'publishers' and 'aggregators'. Special training sessions were also held in June, September and October for faculty members to familiarise with the newly subscribed databases such as the Mosby's Nursing Skills, LWW Nursing Procedure and Skills, and LWW Nursing Advisor, Wizfolio, Turnitin and CKNI.

Document Delivery Services

2015 saw an increase of 6.5% in article requests, from 1,373 in 2014 to 1,463 in 2015 (until November 2015). This increase was generated mainly by users in the clinical schools at Seremban and Kluang who needed access to Wiley and Taylor and Francis publications recently restricted by the publishers. Non-accessible publications were made available by the Librarian through the Medical Librarians Group and other networks throughout Malaysia and overseas.

User category	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Total
Academic	72	25	59	68	93	136	112	128	57	51	80	881
Undergraduate	59	17	35	31	52	44	45	18	12	26	20	359
Postgraduate	1	0	3	0	0	0	1	0	0	0	0	5
Alumni	2	9	14	1	0	1	0	1	0	0	2	30
External	15	7	10	17	9	5	5	10	17	23	2	120
Management	1	0	0	0	0	33	1	4	0	1	0	40
Other	4	1	2	12	1	4	1	0	0	3	0	28
Total	154	59	123	129	155	223	165	161	86	104	104	1,463

Collection Development: Additions and Culls

In 2015 the Library purchased 3187 books, bringing the total collection to 68,967 books. The table shows books held by location.

New books	Bukit Jalil	Seremban	Batu Pahat	Kluang	Total
Titles	1049	392	192	158	1791
Copies	1934	773	235	245	3187

Concurrently, the Library added 100 e-books from Elsevier.

We continued to cull the old and least useful items from the collection, as an essential part of collection maintenance. Criteria for culling include accuracy, currency, and relevance to users; redundancy and duplication; degree of use; condition and appearance; optimal use of shelf space. Culled books are usually replaced by new editions, e-versions or substitute titles.

Culled books, overall	Bukit Jalil	Seremban	Total
Titles	575	338	913
Copies	628	434	1062
Estimated cost (RM)	43,783	77,807	121,590

Electronic journals, databases, and other online resources represent a significant and growing percentage of the Library collections. At November 2015 we had 136,806 electronic resources as of, compared to 68,985 printed copies. All electronic resources are licensed subscriptions, rather than outright purchases, and are renewed on an annual basis.

The usage statistics for 2014 and 2015 indicate an overall increase for 2015, even though there are decreases in the use of some individual resources. Usage includes full text article requests per journal or volume, searches and sessions per database and abstracts viewed when full text is not available. The apparent decrease in usage is attributed to the use of the EBSCO Delivery Service (EDS) search engine acquired in 2014, which allows users to execute a single search across many databases.

e-Book Package	2014	2015
Access Medicine	106,316	111,435
Access Pediatrics	552	3,399
Access Pharmacy	23,297	42,029
Access Surgery	3,397	5,708
ACS Surgery	16	87
ASHP	499	488
ClinicalKey	31,480	35,734
CRCNetBase	1,215	98
e-brary	42,273	84,271
FA Davis	8,967	561
IGI InfoSci-Medical	1,392	825
Karger	99	30
Medicines Complete	55,566	51,006
Nursing Consult	1,404	1,885
Ovid	25,308	6,201
Oxford Medicine Online	3,467	3,104
People's Medical Publishing House	641	483
ScienceDirect	1,889	3,050
Springer	13,598	18,724
Thieme	2,058	2,103
Thieme Clinical Collection	1,488	1,506

e-Journal Package	2014	2015
Clinical Key	15,249	13,017
CNKI	-	23,398
EbscoHost : CINAHL	32,584	23,623
EbscoHost : Dentistry and Oral Sciences Sources	12,563	26,012
EbscoHost : Medline	28,837	35,858
EbscoHost : Psychology and Behavioral Sciences	17,002	27,783
Nursing Consult	479	544
Ovid : LWW Journals	18,625	16,814
Ovid : Evidence-Based Medicine Review (EBMR)	92,232	99,874
Ovid : Medline	38,558	34,477
Paediatrics in Review	1,271	360
Science Direct	62,410	86,507
Springer-Humana Press	3,131	8,350

Database Package	2014	2015
Access Science	-	1,795
BMJ Best Practice	7,853	9,541
Clinical Key : Clinical Trials	243	207
Clinical Key : Drugs Information	1,798	3,146
Clinical Key : Image	1,336	-
Clinical Key : Multimedia	-	1,081
Clinical Key : Guidelines	-	434
Clinical Key : Medline	-	11,813
Clinical Key : Patient Education	-	997
Clinical Key : Expert Consult	89	-
Clinical Key : First Consult	11,242	6,368
Clinical Key : Procedure Consult	254	301
Ebscohost : Dynamed	11,559	22,074
Mosby Nursing Skills	923	1,512
OnExamination	325	349
Primal Pictures : Anatomy and Physiology	3,740	2,261
Proquest	48,762	166,815
RefWorks	1,202	2,356
Springer Image (Publisher Discontinued)	810	-
UpToDate	122,154	149,397
USMLE	714	1,334

Moving Forward

The Libraries at Batu Pahat and Kluang were renovated to a new look that is better aligned with 21st century Library concepts. 2016 will see the introduction of the Basic Information Literacy License. Another key initiative for 2016 is to undertake collection assessment and analysis by studying the length and depth of use of electronic resources. Results should better inform management decisions about the collection. The overarching aim continues to be active partnership of the University learning community.

075

A group of students are seated at round tables in a computer lab, working on laptops. They are focused on their screens, and the room is filled with the sound of typing and occasional conversations.

The screenshot displays the Nessus dashboard with a left-hand navigation menu and a main content area. The navigation menu includes sections like 'Groups administration', 'Hosts', 'Assets', 'Reports', 'Scans', 'Settings', 'Help', and 'My profile settings'. The main content area is titled '2017-2018 Module evaluation report - Nessus scans' and lists several scans with their status and completion dates. The scans are: 'Nessus System (MSB): Blood Scan Server - headache', 'Nessus System (MSB): Blood Scan Server - headache', 'Nessus System (MSB): Blood Scan Server - headache', 'Nessus System (MSB): Blood Scan Server - headache', 'Nessus System (MSB): Blood Scan Server - headache', 'Nessus System (MSB): Blood Scan Server - headache', 'Nessus System (MSB): Blood Scan Server - headache', 'Nessus System (MSB): Blood Scan Server - headache', 'Nessus System (MSB): Blood Scan Server - headache', 'Nessus System (MSB): Blood Scan Server - headache'. Each scan entry shows a status icon (green for success, red for failure), a title, a description, and a completion date. The bottom section of the dashboard is titled 'Automation Assessment' and shows a table with columns for 'Assessment', 'Status', and 'Score'. The table contains three rows: 'Formative Assessment (MSB)', 'Formative Assessment (MSB)', and 'Formative Assessment (MSB)'. Each row has a status icon and a score.

Mondays to Fridays	0800 to 2200
Saturdays	0830 to 1700
Sundays	1200 to 1800

During examination periods Saturday operating hours are extended to 8pm.

Physical Improvements

The appearance and utility of the Museum have been improved with new large and attractive signage and labelling for body systems material, and labelling of display shelves to indicate model placement. This helps users with the study material, and Museum staff responsible for the inventory. For added security a smart card system and four additional closed-circuit cameras have been installed.

Community Service. Learning and Promotional Activity

Museum staff took part in IMU Cares community service projects, Chariofare; the IMU Learning Resources Festival, the eLearning Retreat; Student Exploratory Workshop and Open Days. At the January Open Day we used the online platform ‘Kahoot’ to run an enjoyable quiz for visitors, who took part using their own mobile devices.

As part of the IMU Cares Indoor Science Camp co-organised with IRDI, Museum staff designed an interactive activity for children from Rumah Victory, in which they were taught about the human body using a mannequin in the Museum. The children learnt about body structure and function. In October children from Home of Peace (HOP) also spent an enjoyable educational time at the Museum.

The Museum also took part in the IMU Learning Resources Festival by designing and running activities such as the ADAM online resource training, showcasing the plastinated specimens and giving an overview of plastination technique. Museum staff ran chairyobics, a workout that you can do at your desk, in a lecture hall, or whenever you are sitting. These activities were very well received and the team of Museum and academic staff won the best showcase and poster prizes in the Students’ Choice Awards.



- | | |
|---|--|
| 1 | 1. Kahoot Quiz participants |
| 2 | 2. We have a winner! |
| 3 | 3. IMU Cares Project- Children from Rumah Victory in the Museum. |
| 4 | 4. IMU Cares Project – A little girl from Home of Peace poses with a Museum exhibit. |

In the Student Exploratory Workshop, Museum staff and faculty from Microbiology ran activities for pre university students visiting the University. These students were introduced to parasitology, worm infestation and allergies. Students were briefed on basic concepts and were able to opportunity to view microscope specimens of protozoans, mites and worms.

2016 and Beyond

Through its Working Group the Museum plans to develop study guides for health sciences programmes such as Chiropractic, Chinese Medicine and Pharmacy. By engaging with students the Museum is exploring more innovative and engaging activities for Open Days and for the annual IMU Learning Resources Festival. Most significantly, and in response to the take home message from the 2015 e-Learning Retreat, the Museum is moving towards developing a Virtual version of itself. This will be achieved with the contribution and commitment of faculty members and students, and will enhance engagement with today's learners.



1	1. Participants viewing the plastinated specimens.
2	2. Medical Museum showcase winners at the Learning Festival.
3	3. and 4.
4	Student Exploratory Workshop activity poses with a Museum exhibit.

e-LEARNING UNIT

Redesigning Technology Enhanced Learning (TEL) for the Future

The year’s main focus has been on building a University-wide e-Learning Strategy, which incorporates individual School and Programme plans. More academics were trained to design interactive and simulated content, develop Android apps, design infographics for learning, and rethink MOOCs in the form of Nano Open Online Courses (NOOCs), which could be the way forward for offering free (and paid) online courses to the world in 2016 and beyond.

IMU e-Learning Implementation Summary

The table gives an overview of the University’s existing use of e-Learning, and what it is planning.

WHERE ARE WE NOW?								
e-Learning	ME1	ME2	PHA	DEN	HS	NS	PG	FIS
1. Strategic Plan								
2. MOOCs / NOOCs								
3. Online Courses (80% + online)								
4. Blended Learning (30% - 79% online)								
5. Flipped Classroom								
6. Classroom Engagement Tools								
7. Web-Conferencing (webinars)								
8. i-Lectures								
9. Lecture Capture (recording lectures)								
10. Instructional Videos								
11. Student Video Projects								
12. Interactive Simulation (e.g. Storyline)								
13. Online Assessment (Formative)								
14. Online Assessment (Summative)								
15. E-PBL / e-TBL								
16. Online Rubrics								
17. E-Peer Assessment								
18. E-Portfolio								
19. E-Assignment								
20. E-Forum								
21. Mobile Apps								
22. Social Media / Web 2.0								

Implementing

Planning

None / Not Applicable

* ME1: Medicine

* ME2: Clinical School

* PHA: Pharmacy

* DEN: Dentistry

* HS: Health Sciences

* NS: Nursing Science

* PG: Post Graduate

* FIS: Foundations in Science

Strategic e-Learning Plans

This year various Schools have developed their strategic e-Learning plans for 2016 - 2020. Common strategies across Schools include the use of technology enhanced learning to:

- enhance student engagement, the learning experience and self-directed learning;
- intelligently use assessment to direct learning;
- train teaching staff to use eLearning tools; and to
- enhance research

Workshops

Besides the regular e-Learning workshops facilitated in 2015 (i-Lecture development, instructional design, creating quiz, etc.), here are a list of the new ones introduced:

- *Android App Development workshop*
In collaboration with HR, a 2-day App Development workshop for Android devices (facilitated by an external expert) was organised from 27 - 28 August 2015 at IMU. This workshop was to create awareness and encourage more IMU staff and students to develop learning and healthcare apps for mobile devices.
- *Infographics*
Faculty was introduced on how to design infographics using PowerPoint.
- *Super Memory and Reading*
IMU Students (16 April 2015) and staff (6 May 2015) were introduced to creative techniques on how to improve recall memory and speed read.
- *CSSC workshop*
CSSC staff were introduced to Instructional design concepts, IMU e-Learn Portal, and Social Media for audience engagement at IMU ICE meeting room on 21 September 2015.
- *e-PDP Workshop*
e-PDP refresher workshop for Facilitators of School of Pharmacy 12 November 2015.

- In addition to internal workshops, members of the e-Learning team also hosted or facilitated several external events, including: *The Super MRT (Memory-Reading-Thinking) Workshop at USM* 2 day workshop at Universiti Sains Malaysia (USM) on 4 - 5 June 2015.
- *Learning Innovation Talks 05*
Organised a 1-day online seminar on 9 June 2015.
- *Social Media for Research Webinar for SNET Women's University (India)*
Two hour online seminar on 12 July 2015.
- *Designing 21st Century Flipped Learning Experiences at UKM*
Half day workshop at Universiti Kebangsaan Malaysia (UKM) on 27 August 2015.
- *NOOCify the MOOC at IMETC 2015*
Keynote speaker at the International Malaysian Educational Technology Convention (IMETC) 13 - 15 September 2015.

Research

In 2015, five e-Learning related internal research grants were awarded (worth together approximately RM20,000):

- Live Online Virtual Electronic Problem Based Learning (LOVE-PBL) As Alternative to Face-to-Face PBL.
- The Use of Guided Instructional Teaching Material to Introduce Cultural Competence to Healthcare Students.
- Development and Validation of an Interactive Game-based Script Concordance Test (SCT) for Assessing Clinical Reasoning in Odontogenic Pain.
- Thinking Like a Dentist: Utilization of Video Clinical Scenarios to Improve Dental Students' Clinical Reasoning Skills.
- Instructional Briefing Video: *An Approach to Enhance Students Self-Directed*.



Learning Resources Festival 2015

Learning Resources Festival

The annual Learning Resources Festival, held at the end of November 2015, was themed *Rethinking Medical Education to Survive the Second Machine Age*. Activities included talks, learning showcases, 30-minute nano workshops, panel discussions involving students and academics, and gamified learning. This yearly event allows faculty and students to showcase how they use technology to enhance and inspire learning.

Key highlights of the festival included a talk by YBhg Tan Sri Dato' Dr Abu Bakar Suleiman, who shared his observations and insights on the theme, and Prof Abd Karim Alias's (USM) talk on *Envisioning the Future of Learning*. For more details about the Learning Resources Festival 2015, see <http://imulrf.wix.com/festival2015>.

e-Learning Awards

This award programme is designed to inspire and drive academics to innovate learning and teaching using technology. This year 11 nominations were received, covering a variety of learning innovations including creative content development, online collaboration, flipped classroom and social media activities. The winners will be announced at University Day in 2016.

e-Learning Awards

This year's e-Learning (TEL) Strategy Retreat was held in December at the Pullman, Putrajaya. The retreat enabled e-Learning lead persons from Schools, ICE, ITS and Learning Resources to reconsider e-Learning strategic plans, and align them to the University's aspiration to become an innovative global centre of excellence in learning and research. The Retreat also enabled us to share our experiences and challenges, and empowered us to stretch our minds to imagine a more disruptive learning innovation future facilitated by technology (using the Disney Thinking Method), to which we aspire. The Retreat enabled us to bond and get to know one another better, which is very important as we move forward.



IMU e-Learning (TEL)
Strategy Retreat 2015

Nano Open Online Courses (NOOCs)

In 2015, a new approach to designing MOOCs entitled Nano Open Online Courses (NOOCs) was conceptualised by the e-Learning team. A NOOC empowers learners to explore, learn and be assessed (certified) on the essentials of one competency, skill or area of knowledge, within 20 learning hours or less. The first NOOC prototype was offered online in early October on the Open Learning Platform, and as of December 18 had attracted learners from 59 countries. See <https://www.openlearning.com/courses/sm101/>

Interactive e-Learning Content

Over the last two years, University academics have been increasingly trained on how to design more interactive and simulated e-Learning content using tools such as Articulate Storyline. Here are some of the interesting projects that have bloomed from this initiative:

- *Clinical Reasoning*

Scenario based learning where script concordance is used to show the difference between the answer selected by the students and the expert clinicians. There are engaging interactions, animated scenarios with voice over and quiz with comprehensive feedback.

- *Script Concordance Test*

Designed and developed using Storyline, this tool helps improve dental students' clinical problem solving skills, and their ability to make sound clinical judgments.

- *Depression as an Illness: A Smartphone App*

This app helps create awareness and understanding of Depression as an Illness, and make people more accepting of seeking treatment and support from mental health professionals such as psychiatrists and psychologists. The app thus helps de-stigmatise depression, and educates patients and their carers about the common counselling issues and challenges. The app was developed using Blendspace and PowToon as infographics on the Appsgeyser mobile apps platform (<http://www.appsgeyser.com>).

- *Neuroradiology for Medical Students*

This covers undergraduate level medical imaging of the nervous system which includes the brain, spinal cord and the cranial nerves. The project includes images of common neurological conditions with case scenarios.

- *Dementia*

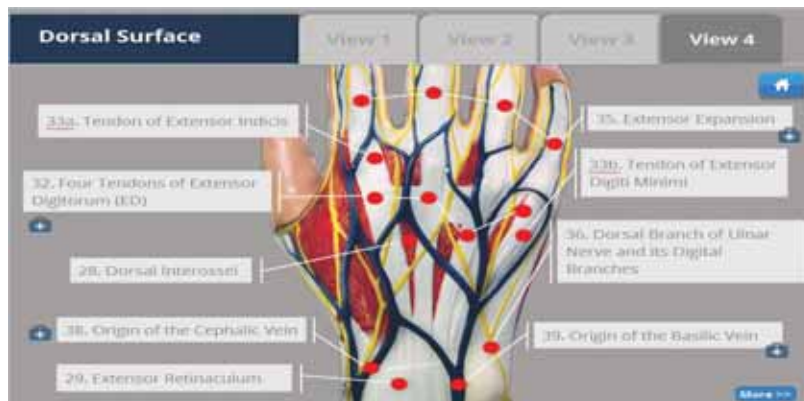
Developed using Articulate Storyline and a movie clip, which was developed by National Health Service Foundation Trust, with the aim of raising awareness about dementia in healthcare staff.



- | | |
|---|--|
| 1 | 1. Screenshot: IMU's First NOOC |
| 2 | 2. Screenshot: Clinical Reasoning |
| 3 | 3. Screenshot: Script Concordance Test |
| 4 | 4. Screenshot: Neuro Radiology |

• Digital Medical Museum

Enables real-time, online access to information related to the models and specimens held at the Medical Museum. In 2015, two modules were developed, and these pilots will be tested with students early in 2016.



Screenshot: Digital Medical Museum

Infographics

Infographics can be used to enhance learning, simplifying complex information by graphically representing it using graphs, pictures, diagrams, narrative, timelines or checklists.

Two workshops on Infographic Design for Beginners, were run for faculty and corporate staff in October. Participants were taught how to design infographics using PowerPoint.

Moving Forward

As we move forward in this disruptively evolving learning world of MOOCs, blended learning, flipped learning, gamification, etc., more strategic e-Learning related programmes need to be developed to train faculty and to drive change. We need to empower more academics with competencies to curate, reuse, remix and create Open Educational Resources (OER). Academics from various Schools have also indicated interest in developing and launching NOOCs. To improve the online learning services, Moodle and Mahara will be moved to cloud-based services in 2016 to ensure better back-end support. This development will free up time for e-Learning staff to focus more on supporting users, improving front-end management and innovations. Finally, we need to refocus and explore more opportunities to empower University students with personalised learning, using learning analytics and big data.



Infographic: IMU Learning Model

CENTRE FOR EDUCATION

The year began with a series of meetings on restructuring the Centre. In January there was a change of Centre leadership, with Prof Abdul Aziz Baba appointed acting Director and Prof Victor Lim appointed Advisor. As part of this leadership change a new Director is being sought.

Faculty Development Highlights

2015 has been another busy year with 67 faculty development events held throughout the year, with events continuing to be well attended and well received. The IMU Ron Harden Visiting Professor, Emeritus Professor Joseph Gonnella visited from 20 April to 13 May. Prof Gonnella conducted workshops and consultations and presented lessons from the ground breaking research: *The Jefferson Longitudinal Study of Medical Education Outcomes*. Prof Mohamed Amin Embi from the Faculty of Education of Universiti Kebangsaan Malaysia provided updates on Malaysian Qualifications Agency guidelines and gave an e-Learning workshop.

The Centre's main focus of faculty development continues to be in assessment, with a number of visiting experts providing in-depth input on developing assessment items, analysis of items, evaluation and standard-setting. The inaugural clinical education workshop was conducted in November. This is a mandatory programme for all IMU clinicians.



Type	Topics	Participants
Mandatory training events	<ul style="list-style-type: none"> Fundamentals of Teaching and Learning Mentoring Clinical Education (workshop) Admissions Interview Training Problem Based Learning tutor training 	271
Visiting expert events	<ul style="list-style-type: none"> Selected response assessment item construction University of Adelaide adjunct professors Educational Leadership Course Interprofessional education Ron Harden Visiting Professor 	466
Workshops	<ul style="list-style-type: none"> Lunch time workshops in technology enhanced learning Learning and teaching training 	846
Conferences	IMEC 2015	313
Total: 67 sessions with 1896 University participants, and 37 external participants		

Table 1: Faculty Development Events in 2015

Fundamentals in Teaching and Learning in Health Professions Education

Three courses were conducted for IMU's faculty, where 76 staff participated.

Educational Leadership Courses

Prof Judy McKimm (Dean of Medical Education at Swansea University and Director of the ASME Educational Leadership Programme) conducted the Fundamentals in Leadership and Management in Education (FLAME), and the Change, Adaptability, Leadership and Management (CALM) courses for University faculty. These were very well received.

Research

With keen interest in qualitative research, the Centre ran two qualitative research workshops covering methodology, instruments and data analysis. Faculty also took the opportunity to improve their qualitative research proposals through one-on-one consultations at the research clinics.

Learning and Teaching Innovation Grants

The seven grants approved are listed below. The findings from two projects were published and presented.

1. Development and validation of an interactive game-based script concordance test (SCT) for assessing clinical reasoning in odontogenic pain led by Dr Sunil Subhash Mutalik
2. The use of guided instructional teaching material to introduce cultural competence to healthcare students led by Dr Hanan Omar
3. Instructional Briefing Video: An Approach to Enhance Students Self-Directed Learning for Laboratory Practical Sessions led by Dr Keng Pei Sin
4. Thinking like a dentist: Utilization of video clinical scenarios to improve dental students' clinical reasoning skills led by Dr Hanan Omar
5. Live Online Virtual Electronic Problem Based Learning (LOVE-PBL) As Alternative to Face-to-Face PBL led by Dr Hazwanie Bt Hashim
6. Incorporation of Clinical Reasoning into PBL led by Dr Vasudeva Challakere
7. Webinars, a tool to blend dental education with health professions education led by Dr Tan Bee

The IMU Masters in Health Professions Education

The University has obtained approval from the Ministry of Education in September 2015 for Masters programme to be conducted in conventional instructional format for one cycle before the programme is delivered in blended learning mode. The programme is structured such that students may exit at postgraduate Certificate and Diploma levels, or proceed to Masters level.

The International Medical Education Conference, April 2015

The annual conference attracted 313 participants, the largest number to date, and brought together international and local health professions educators. The speakers include Prof Ronald Harden and Prof Judy McKimm of the United Kingdom; Prof Joseph Gonnella, USA; Prof Richard Hays and Prof Ian Wilson, Australia; and Prof Victor Lim, Malaysia.

Educational Environment, Course and Faculty Evaluations

The Review of Students and Module Evaluation Committee, continues to bring together Programme Directors, ICE and TLC together to discuss issues related to the timing, meaningfulness of the analysis of the data collected and improvement of the process of evaluations.

Evaluation focus	Frequency	Surveys in 2015	Status of at 31 December 2015
Module	Every module, once a year	560	Analysis completed and reports circulated
Faculty teachers	Each faculty member, for one large group teaching event and two small group teaching events, annually	1727	
Learning environment	Once in the first half of the year for each Programme *I-barometer October 2015	48 IMU-REEM (conducted only for first half of 2015) I-Barometer	

Table 2: Summary of the 2015 Faculty, Module and Learning Environment Evaluation

CENTRE FOR LIFELONG LEARNING



In 2015, the Centre conducted sixteen short courses and two international conferences, with participation by more than 900 healthcare professionals from various countries. The success of both conferences demonstrates the Centre's ability to handle large events. Additionally, we ran healthcare related courses in collaboration with more than ten industrial partners, both local and international. These events were in research, medicine, dentistry, pharmacy, health sciences and public training.

The Centre's Standard of Service is designed to meet clients' expectations of content currency, relevance and quality; and event convenience and value. The Standard covers five points of Centre-client interaction, namely responding to enquiries about courses; course registration and payment; client participation and clients becoming alumni.

Course content includes technical, professional and research skills; preparation for professional examinations; and personal enrichment or empowerment learning. Delivery formats included face-to-face sessions, technology assisted learning, or a blended approach.

- **Professional skills courses** included phlebotomy training; the Implant Dentistry Workshop; a workshop on Medical Emergencies ('*Face them Equipped*'); and the annual Family Medicine Clinical Skills Course.
- **Research skills courses** included *Qualitative Research: Design to Publication*; *Statistical Approaches for Integrative Omics Data Analysis*; and the 12th Good Clinical Practice (GCP) Seminar.
- **Preparatory events** included the Family Medicine FRACGP Part 2 Examination Preparatory Course; the 11th IMU-Hospital Tuanku Ja'afar Seremban MRCP PACES Preparatory Course; the Membership of the Faculty of Dental Surgery (MFDS) Part 2 Preparatory Workshop; and the MRCPCH Clinical Mock Examination.
- The Centre ran our the University's first International Pharmacy and Pharmaceutical Sciences Conference, the Second International Conference on Bioethics and Professional Practice; and a seminar on *Developing Malaysia's Chiropractic Future*.
- Other courses included one on Solution Focused Leadership, and one on 'Vegetables Oil for Health'.

QUALITY IMPROVEMENT

Continual Quality Improvement

The University's quality governance structure and initiatives support its Quality Policy (Figure 1). The goals are continual improvement in the quality of educational provision and research activity and output. Periodic evaluation informs this improvement.

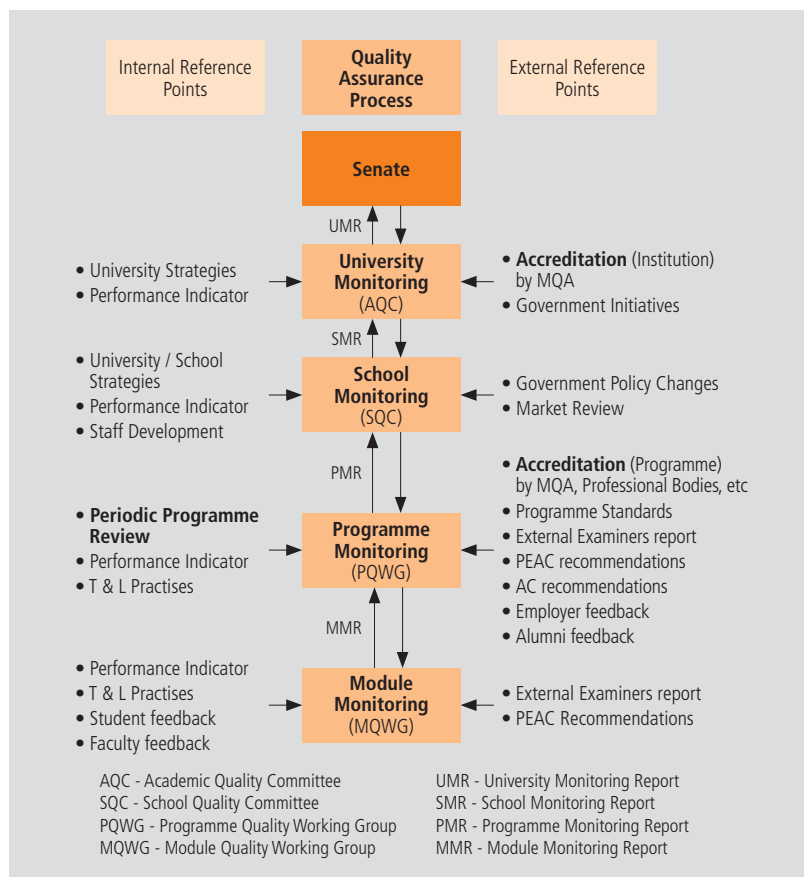


Figure 2: The University quality governance structure, 2015



Figure 1: IMU Quality Policy



Figure 4: Linking Quality to Performance, 2015

Inclusive Quality Structure, Processes and Practice

In 2015 the University established an integrated governance structure for academic quality assurance and improvement, working with the existing academic administration. Quality governance operates at Module, educational Programme and School levels, and is overseen by the University Academic Quality Committee. School and Programme Quality Committees and Working Groups are mandated to share good practice across the University. The governance structure should promote more holistic consideration of educational programme quality by involving stakeholders (Figure 2), including students, employers, alumni, the Professional Education Advisory Committee, and Partner Schools represented by the Academic Council.

ISO 9001:2008 Certification of the Quality Management System

The University was accorded ISO 9001 Certification in 2006. Continuing Certification signifies that academic support, corporate, and teaching and learning processes comply with the international standard represented by ISO 9001, and to University policies and guidelines. Certification is maintained by a programme of quality assurance activity that includes management review, internal audits, and student surveys. Since 2006, University Certification has been renewed three times by Lloyd's Register Quality Assurance Limited, the certification body, which undertakes periodic surveillance audits (Figure 3). These external audits are preceded by periodic internal audits by a trained staff team.

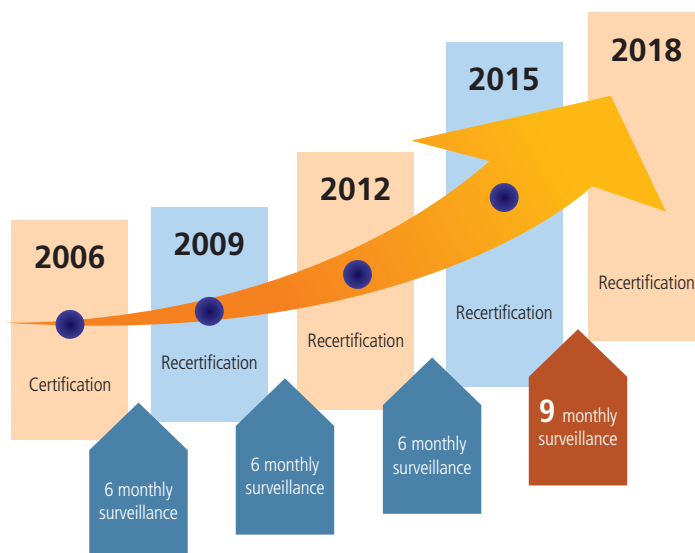


Figure 3: ISO 9001:2008 Recertification Milestones

In 2015, all the quality objectives were reviewed to link quality to performance, in line with the University's core values of trustworthiness, responsiveness and service. Four main areas of operational excellence were identified (Figure 4).

ISO / IEC 17025:2005 Research Laboratory Management System

In 2014 the Research Laboratory was accorded International Standard MS ISO/IEC 17025:2005 accreditation by Skim Akreditasi Makmal Malaysia (SAMM). The three tests certified under this accreditation scheme are the inductively coupled plasma mass spectrometry for metals; and photometric tests for nitrate in water, and for chemical oxygen demand. In February the Laboratory underwent its first SAMM surveillance audit, without any non-conformances detected.

Awareness and Training

The University operates on the principle that every individual in the organisation is responsible for quality. The importance of quality assurance is clearly communicated through briefings, training and committee work. This University wide engagement is aimed at producing a strong culture of quality awareness, and staff buy-in. Staff are involved in compilation of data on quality, its analysis and interpretation, and in planning and implementing improvements. In 2015, awareness and training events included periodic Fundamentals of Programme Quality Workshops. These faculty development events are aimed at enhancing compliance with educational regulatory standards, and enhancing continual improvement in educational programme delivery.

Month	Event
June	ISO 17025:2005 Awareness training
July	ISO 17025:2005 Internal audit training
September, November and December	Workshop: Fundamentals of Programme Quality



Figure 5: The MS ISO/IEC 17025:2005 Certificate

STUDENT DEVELOPMENT AND SERVICES



Career Day 2015

Introduction

The Student Services Department is tasked with encouraging and supporting all students in the non-academic aspects of their personal development. These aspects are vital to students' development into competent and efficient professionals, and effective members of cohesive teams. Student Services help promote acquisition of organisational and leadership skills, inter-personal and communication skills, caring, empathy and community service. The Department administers the financial, administrative and infrastructural support systems for student clubs, societies and the Student Representative Council. Financial support is provided for students to present their research findings at local and international conferences. Students are also supported in providing emergency relief in Malaysia and other parts of the world, reflecting the University's mission to develop caring individuals. We are very pleased that the students at all our campuses have been particularly active in charity and community services this year as reflected by this report.

The Department provides strong administrative support for students who seek financial assistance from various government and non-government sources. The Department also administers the IMU scholarships. Other assistance provided to our student body includes funding for participation in inter-university co-curricular activities, rental of sports facilities, facilitating hostel accommodation and counselling services. As a young university, IMU realises the need for establishing the university Alumni. As such, we have a very active Alumni office to provide the necessary assistance to create an effective alumnus, in the longer term.

Student Conference Participation

The University programmes develop student research and presentation skills. The Department supports this with funding for participation at conferences.

Listed below are the students who have presented at conferences in 2015.

Students from the Bukit Jalil campus	Presentation	Event
Andrea Tseli Tze Nyun Goh Ser Yee (Bachelor of Dental Surgery)	Perception of pain for different orthodontic elastomeric separation, and efficacy of different orthodontic elastomeric separators	Association of Orthodontics (Singapore) Congress, February 2015, Singapore
Lam Kit Ying (Masters in Medical and Health Science)	Orientin protects neuronal cell line from hydrogen peroxide induced oxidative damage via up-regulating PI3K/AKT survival while down-regulating the MAPK/ERK apoptosis pathway	12 th International Conference on Alzheimer's and Parkinson's Diseases, March 2015
Haema Thevanayagam (Masters in Public Health Science)	Photoprotective effects against UVB-induced extracellular matrix damage in keratinocytes	3 rd International Conference on Genetics, Agriculture, Ecological and Biological Sciences, 2015
Hii Ling Wei (Masters in Health Science)	Targeting breast cancer stem cells and non-stem breast cancer cells through combination therapies.	American Association for Cancer Research Annual Meeting, April 2015
Ahmed Ikhwan Mohamad Farah Syazana Lau Kit Mun Nur Hazirah Siti Aisyah (Bachelor of Medicine and Bachelor of Surgery)	When did medical students learn to use abbreviations in clinical practice?	International Medical Education Conference, April 2015
Cheng Kang Ian Choong Bing Liang Ganguly Auleep Lau Kher Siong Lim Wei Gin Tan Yen Yee Tan Wei Hong Tay Jean Sean Wong Bi Wei (Bachelor of Dental Surgery)	Rugoscopy in the Malaysian Chinese population: A pedigree analysis. Effect of fluoride-containing monomethacrylate monomer content on the water sorption, fluoride ion release rate, degree of conversion and solubility of Bis-GMA/TEGDMA/UEDMA based dental restorative composite. Formulation, characterisation and antimicrobial evaluation of periodontal gels containing natural gums. Effect of bonding agents and aging process on shear bond strengths of porcelain repair. Participation in Quiz Competition	7 th National Dental Student's Scientific Conference, May 2015

Students from the Bukit Jalil campus		Presentation	Event
Aruna Kumrasamy Heng Hian Ee Ho Ming Hui Ho Yan Zheng Meroshini A/P Sundaran	Selina Tee See Meng Shwetambra Vythialingam (Bachelor of Medicine and Bachelor of Surgery)	The effectiveness of peer tutoring on pre-clinical medical students' basic surgical knowledge.	Annual General Meeting and Annual Scientific Meeting - Optimising Patient Outcomes, May 2015
Ho Yuen Teng Lim Koo Koon (Bachelor of Medicine and Bachelor of Surgery)		Can laparoscopic appendicectomy replace open appendicectomy?	
Wong Wei Seng (Masters in Medical and Health Science)		Synthesis and characterization of polyesteramide from palm-based alkanolamide.	7 th International Conference on Medical, Biological and Pharmaceutical Sciences, Thailand, June 2015
Yew Sheng Qian (Bachelor of Medicine and Bachelor of Surgery)		Development and validation of kaempferol nanosuspension for bioavailability enhancement.	International Student Congress of Medical Sciences, June 2015
Ang Hui Inn (Nutrition and Dietetics)		Refeeding in cachexia and malnutrition.	21 st Malaysia Dietitians' Association National Conference 2015
Ang Hooi Sin (Nutrition and Dietetics)		Night Eating Syndrome and Anthropometry Measurements among individuals attending a health screening clinic.	
Chong Jia Chee (Nutrition and Dietetics)		Diet quality and dietary calcium intake in the elderly in Klang Valley, Malaysia.	
Heah Li Yin (Nutrition and Dietetics)		Night eating syndrome, Body Mass Index and dietary intake in individuals attending a health screening clinic.	
Maathini A/P Vasanthan (Nutrition and Dietetics)		Knowledge, attitude and practice in healthy food preparation among chefs in the Klang Valley, Malaysia.	
Oo Yong Yii Siew (Nutrition and Dietetics)		Association between food and beverage consumption during screen time, and cardiometabolic risk factors among university students.	
Wendy Wong Hui Yi (Nutrition and Dietetics)		DFU - Challenges in meeting protein and energy requirements.	
Yee Kar Wyai (Nutrition and Dietetics)		Dietary calcium and vitamin D intake, physical activity and sunlight exposure in secondary school adolescents in the Klang Valley, Malaysia.	

Students from the Bukit Jalil campus	Presentation	Event
Chen Wai Choo (Nutrition and Dietetics)	Assessment of hydration status and hydration practices among male club cyclists.	Nutrition Society of Malaysia 30 th Annual Scientific Conference, June 2015
Gan Wei Xin (Nutrition and Dietetics)	Association between screen time usage and calorie intake, sleep quality, body weight and physical activity in university students.	
Lee Jo Ee (Nutrition and Dietetics)	Assessment of total body water, fat-free mass, fat mass and calf circumference among male club cyclists.	
Mabel Tew Zhi Wei (Nutrition and Dietetics)	Infant feeding practices and the national status of infants (0-12 months) attending the Health Clinic at Desa Sikamat, Seremban.	
Lee Khong Wee (Bachelor of Medicine and Bachelor of Surgery)	A systematic review of the effectiveness of pelvic floor exercises in treating genuine stress Incontinence in women.	The 24 th Asian and Oceanic Congress of Obstetrics and Gynaecology, June 2015
Teng Yi Han (Bachelor of Medicine and Bachelor of Surgery)	Determining vaginal erosion incidence when using synthetic materials for suburethral slings in the treatment of stress incontinence: A systematic review.	
Yong Zen Zuan (Bachelor of Medicine and Bachelor of Surgery)	Chief delegate	Asian Medical Students Conference, Singapore, July 2015
Saw Pui San (Master of Science in Medical and Health Sciences)	A new role for pharmacists in private primary healthcare clinics in Malaysia: Views of General Practitioners	PSA'15: Leading Pharmacy Innovation, July 2015
David Gu Jian Yee (Bachelor of Dental Surgery)	Effects of gingivitis on gingival mesenchymal stem cells.	Improving Quality of Life Through Dental Research, August 2015
Kweh Tung Jing (Bachelor of Dental Surgery)	Effects of diabetes mellitus on gingival mesenchymal stem cells in patients with periodontitis.	
Lim Wei Gin (Bachelor of Dental Surgery)	Developing oral health promotion skills for caregivers in a residential/nursing care home for elders in Malaysia.	
Foo Keat Hong (Medical Biotechnology)	<i>Neuroprotective role of Centella asiatica</i> extract on hydrogen peroxide-induced SH-SY5Y Cells	33 rd Australian Winter Conference on Brain Research, 2015
Chan Chee San (Master of Science in Medical and Health Sciences)	Tolerance of Malaysian adults to isomaltulose: A Pilot Study	Pharmacy and Pharmaceutical Sciences Conferences, August 2015
Masnah Banu Bt Kamal (Doctorate of Philosophy in Medical and Health Sciences)	Docking studies and synthesis of new generation broad spectrum antibiotics against multi-drug resistant bacteria.	
Teo Siew Yong (Master of Science in Medical and Health Sciences)	Evaluation of alkyds as biomaterials for drug nanocarrier systems.	Controlled Release and Drug Delivery Symposium, August 2015
David Gu Jian Yee (Bachelor of Dental Surgery)	Effects of gingivitis on gingival mesenchymal stem cells.	APDSA, Taiwan, August 2015
Tham Ru Yueh (Bachelor of Dental Surgery)	Effects of diabetes mellitus on gingival mesenchymal stem cells in patients with periodontitis.	

Students from the Bukit Jalil campus	Presentation	Event
Jagraj Singh Dhillon (Bachelor of Medicine and Bachelor of Surgery)	Comparing the cytokines related to T-helper subsets and T-regulatory cells in rheumatoid arthritis patients with different DAS28 score : a pilot study	17 th Asia Pacific League of Associations for Rheumatology Congress, September 2015
Wong Tze Hao (Bachelor of Medicine and Bachelor of Surgery)	The relationship between plasma Vitamin D binding protein, bone mineral density and disease activity in Malaysian patients with rheumatoid arthritis. The relationship between plasma osteocalcin levels and disease activity in Malaysian patients with rheumatoid arthritis.	
Yamuna A/P Rajoo (Master of Science in Medical and Health Sciences)	Disease without Borders: Challenges and preparedness.	2 nd International Conference on Tropical Medicine and Infectious Disease, September 2015
Teo Siew Yong (Master of Science in Medical and Health Sciences)	Developmental of bio-alkyd nanoemulsions as novel hydrophobic drug-loaded polymeric delivery systems for potential pharmaceutical applications.	The 4 th Federation of Asian Polymer Societies - International Polymer Congress, October 2015
Yeoh Fang Hoong (Master of Science in Medical and Health Sciences)	Synthesis of high molecular weight polyester polyol from EPO.	
Tan Wei Hong (Bachelor of Dental Surgery)	Rugoscopy in the Malaysian Chinese population: A pedigree analysis	6 th Hiroshima Conference on Education and Science in Dentistry, October 2015
Jong Yi Wen, Joyce Wong Xin Yi (Bachelor of Pharmacy)	In silico pharmacophore elucidation for bicyclic antagonists of human A2A adenosine receptors and its comparison with 3 adenosine receptor bicyclic antagonists.	12 th Malaysian Pharmaceutical Society Scientific Conference, November 2015
Lim Thong	Effects of stress, anxiety and depression on quality of life in early adolescent secondary school girls.	1 st International Congress of Clinical and Health Psychology with Children and Adolescents, November 2015

Clinical School Students	Presentation	Event
Maryam Raya	Speaker: <i>Interactive Forum 1 - Preparing for the Workplace</i>	International Medical Education Conference, April 2015
Ahmed Ikhwan Nur Hazirah Farah Syazana Siti Aisyah Lau Kit Mun	Poster presentation	
Meroshini Tang Lik Xian	Organiser and demonstrator	
Jong Yi Wen, Joyce Wong Xin Yi (Bachelor of Pharmacy)	In silico pharmacophore elucidation for bicyclic antagonists of human A2A adenosine receptors and its comparison with 3 adenosine receptor bicyclic antagonists.	12 th Malaysian Pharmaceutical Society Scientific Conference, November 2015
Lim Thong	Effects of stress, anxiety and depression on quality of life in early adolescent secondary school girls.	1 st International Congress of Clinical and Health Psychology with Children and Adolescents, November 2015
Ho Yuen Teng Lim Koo Koon	Poster Presentation: Can Laparoscopic Appendectomy Replace Open Appendectomy	AMM Annual Scientific Meeting and Annual General Meeting, May 2015
IMU Surgical Society Committee: Aruna Kumarasamy Ng Chia Wen Goh Pei Li Raagini Lechumanan Heng Hian Ee Reena Priya Ho Ming Hui Ramasamy Ho Yan Zheng Selina Tee See Meng Leong Mei Fong Shwetambra Vythialingam Meroshini Sundaran Tiong Ing Ching Nadzirah Bee Mohd Abdul Kader Vaisnavi Sivanesarvan	Poster Presentation: The Effectiveness of Peer Tutoring on Basic Surgical Knowledge for Preclinical Students	
Intan Sabreena Shereen Kaur Teng Yi Han	Electronic Poster: Determining Vaginal Erosion Incidence Among Different Synthetic Materials For Suburethral Sling Used in the Treatment of Stress Urinary Incontinence: A Systematic Review.	The XXIV Asian and Oceanic Congress of Obstetrics and Gynaecology, June 2015
Bernice Lee Xin Er Nurul Atikah Binti Zakaria	Poster Presentation: Emotional Burnout and Perceived Stress in Pediatrics Practice in Malaysian Public Hospitals: A Multicenter Study	37 th MPA Congress and Asia Pacific Vaccinology Update, Malaysian Paediatric Association, September 2015

Enhancing Services and Resources

Clinical School Students		Presentation	Event
Devalagan a/l Muthalagan (Team Leader)	Krishna Kumar Lee Wei Lun Nurul Izzati B. Abd Razak	Poster Presentation: Prevalence of Needle Stick Injuries and Their Under Reporting Among Healthcare Workers in The Department Of Obstetrics And Gynaecology	Negeri Sembilan Annual Research Day, October 2015
Amit Bhardwaj	Wong Wei Shi		
Tan Yew Jie (Team Leader)	Darvena Pillay Sashideran	Poster Presentation: Patient Perception about the Use of 'Spacer Device' in Obstructive Lung Disorders	
Avineshwaran	Lam Chuan Zheng		
Balasandiren	Nirmal Sukumaran		
Son Wei Da (Team Leader)	Hun Zi Ling Kuang Ting Shiuan	Poster Presentation: Are Body Mass Index and Waist over Hip Ratio Associated with Gastro Esophageal Reflux among outpatients in Hospital Tuanku Ja'afar, Seremban	Negeri Sembilan Annual Research Day, October 2015
Aslinah Bt Velayit Hussein	Ng York Hang		
Nilofar Kutbuddin (Team Leader)	Jeremy Adam Kathleen Packianathan	Poster Presentation: Uncontrolled Blood Pressure in Primary Care: The Effect of Educating Doctors involved in Hypertension Management	
Fatin Nooramimi Johan	Lai Zhi Jun		
Celina Choo Ai Ling (Team Leader)	Lawrence Kong Sing Siong	Poster Presentation: Study of Usage of Desktops, Laptops, Tablets and Smartphones by Doctors in the Clinical Setting at Hospital Tuanku Ja'afar, Seremban	
Desmond Tay Nguan Kang	Nishantini Siva Subramaniam Vaisnavi Sivanavaran		Clinical School Annual Research Day, October 2015
Chua Yen Zhen	Ng Yang Jein	Oral Presentation Poster: A Cross-Sectional Study on the Relationship Between Patients' knowledge of HBA1C and Diabetes Control	
Khoo Hui Ping	Syahidah Binti Mohd Noh		
Chong Xin Yee	Intan Sabreena binti Mohamad Sopian	Oral Presentation Poster: Relationship between Patient's Knowledge on Asthma with Patient's Control of Asthma	
Karen Kaur Manocha	Teng Yi Hana		
Low Chun Heng			Clinical School Annual Research Day, October 2015
Aruna Kumarasamy	Lim Zhi Kai	Oral Presentation Poster: Incidence of Vaginal Erosion with Different Synthetic Materials for Suburethral Sling Used in the Treatment of Stress Urinary Incontinence: A Systematic Review	
Ho Ming Hui	See Jie Siang Tan Wei Jun		
Chew Sze Yen Valerie	Shwetambra Vythialingam	Oral Presentation Poster: Uptake of Colorectal Cancer Screening Among Healthcare Professionals in Seremban, Malaysia	
Kam Ee Von	Vinod Kumar a/l M. Manoharadas		
Lim Sean Yee			Clinical School Annual Research Day, October 2015
Chan Jensen	Moo Yong Hoong	Oral Presentation Poster: Depression among Medical Inpatients – A cross-sectional study in Hospital Tuanku Ja'afar, Seremban	
Lim Fang Chan	Foong Reena Priya Toh Chong Rui		

Clinical School Students	Presentation	Event
Andrea Goh Qui Cia Lim Fang Chan Angela Goh Qui Cian Lim Jian Liang Arshwin Nair Ling Way Ken Ashley Ho Yann Shyan Nurliyana Mardhiah bt. Bindhu a/p Ramalingam Mohd Fauzi Cheng Kang Ning Reena Priya Darren Jong Chee Ramasamy Hiung Rupashini Thangamuthu Heng Hian Ee Soh Wan Wen, Ho Ming Hui Stephanie Lai Ka Ming Irene Aw Mei Phing Wong Shin Ying Joash Choo Xuein Khye Yong Wee Kah	Organising Committee	1st IMU Medical Humanitarian Mission Conference, November 2015
Mak See Mun	Student speaker	
Heng Hian Hee	Poster presentation: The Effectiveness of Peer Tutoring on Basic Surgical Knowledge for Preclinical Students	National Basic Surgical Skills Competition, 2015

Financial Assistance

The Department provides strong administrative support to students in obtaining financial assistance, includes study loans and scholarships. In 2015 more than 2300 students received various financial assistance from organisations such as the National Higher Education Fund, MARA, Jabatan Perkhidmatan Awam, and Kuok Foundation. The Department engages with sponsoring organisations to discuss sponsored student progress, to obtain updated information and to help liaise between sponsor and student.



Career Day 2015

The Self Development Unit (SDU)

2015 has been a year of change for the Unit. As we grew, we saw that the Unit not only provides counselling but plays a major role in student development. As the stigma of counselling has decreased and the numbers of 'walk-in clients' have increased, the Counsellors realised that many students have sought counselling only as a last choice. To encourage students to seek guidance and counselling earlier, and to recognise the developmental work of the service, the University saw a need for a title that would encompass all the Unit's work, hence the new name Self Development Unit.

We are proud to be able to grow and change with the times. Our Mission is Journeying with Students to discover their Identity, Gifts and Potential, and our Objectives are to:

- empower and be a platform for students to discover their potential, develop their emotional intelligence and self-awareness
- equip students with the skills and knowledge to manage their life better and hence lessen the effects of the stressors in their life
- be a professional Unit that provides confidential and professional counselling services

Today the Unit emphasises self-development. The Unit's rooms are equipped with expressive art materials as a more creative and non-threatening way for self-discovery and insight into self. As students tend to reach out to their peers, the Unit has also developed the Peer Support Club which runs a Peer Support Email Service. To date, the Unit has developed 6 self-help brochures on topics ranging from Cyber Bullying to Anger Management. Besides this, we provide consultations regarding the need for counselling as well as providing input on student personal development to other Departments. Our main focus is to enable students to take advantage of their learning opportunities by attending to their emotional needs; and to enhance the quality of their experience by minimising performance anxiety in order to maximise achievement.

Overall, the unit had focused on making itself known among the students by promoting the services provided which includes:

- Student development
- Career development
- Peer support
- Student mentoring

We realised some students are reluctant to seek assistance from the unit as they may perceive help seeking as a sign of weakness. The Counsellors tackle this issue by disseminating all important information on the unit in a non-threatening way which will increase the confidence level of the students. The techniques used includes sand-tray, cards, Talk2Me (online peer support) and art. The aims are to facilitate students' self-exploration and to enable the students to acquire deeper understanding about themselves.

As we are aware IMU is geographically dispersed. Main campus being in Bukit Jalil and the clinical schools are in Seremban, Kluang and Batu Pahat. To support the different campuses, we outsource the counselling support. This is mainly due to the student numbers in the clinical schools and the support needed by them. Overall, each and every student of IMU has an access to counselling support regardless of which campus they are.

Talks and workshops organised by the unit in clinical schools are more focused on social preparedness, encompassing communication skills and managing emotional intelligence. This is mainly due to the factor that the students need to be work ready when they graduate.

Student development activity at Bukit Jalil in 2015: Summary			
Category	Activity	Duration & Sessions	Participant numbers
Self-Discovery	Sand Tray	1 hour X 10	10
	Cards	1 hour X 4	4
Orientation	My Behavioural Style	2.5hour X 8	652
	Introduction to Unit & Personal Safety	1 hour X 9	903
	Mindful relaxation strategies for Nursing Science	1.5 hours X 2	112
	Study Skills through seniors' sharing	1 hour X 12	407
Personal Development	Challenges & Adjustment of Studying Pharmacy	1 hour X 1	153
	What's your Journey- Study Skills (PC & CH)	1 hour X 2	29
	Super MRT: Memory, Reading and Thinking	4 hours X 2	66
	Conflict management	3.5 hours X 1	16
	BEAM: Breathe, Eat & Act Mindfully	1.5 hours X 1	578
		1 hour X 3	
	Managing Semester 7 (BPharm)	1 hour X 1	159

Student Development Activity at the Seremban, Kluang & Batu Pahat Clinical Schools

Student development activity at the clinical schools is aimed at helping students better manage stress and relationships. The BEAM (Breathe, Eat & Act Mindfully) workshop, on mindfulness-based stress management, is provided for all Semester 6 students as part of their orientation. A talk on understanding one’s personality is given at Semester 10. This year, A/Prof Nazimah, the Deputy Dean of the Clinical School requested that the Unit run workshops on social preparedness, encompassing communication skills and emotional intelligence.

Please find below a summary of the list of self-development activities for the year 2015.

Student development activity at the Clinical Schools in 2015: Summary				
Category	Activity	Duration & Sessions	Participant numbers	Semester
Communication Skills	Speak it well by Culture Dynamic.	3 hrs x 1	110	6
		3 hrs x 1	124	7
Emotional Intelligence	Mindfulness for Emotional Well-Being by Dr Ong Tien Kwan.	1 hr x 1	133	9
	Being a 3Q Doctor by Paul Tam.	2.5 hrs x 2	67	10
	Understanding Emotional Intelligence using the LP1 Model by Peter Soo.	2.5 hrs x 2	110	10
Stress Management	BEAM (breath, eat and act mindfully): A mindfulness-based stress management program by Yeoh Kim Yeok.	1 hr x 2	233	6

Career Support/Guidance

Partnership with Industry (PWI) programme under the leadership of Prof Ong Kok Hai works towards establishing collaborative links with industry. The aim is to secure internships and career opportunities for the IMU students and graduates. The counsellors are part of the PWI committee, providing career counselling including organising career development events.

The career support is crucial for the students as choosing the right career can be daunting and difficult at times. Besides help with career choice, the Unit runs workshops to enhance work readiness for graduating students, such as on resume writing, skills for interviews, reading body language, personal grooming and dressing appropriately for the workplace.

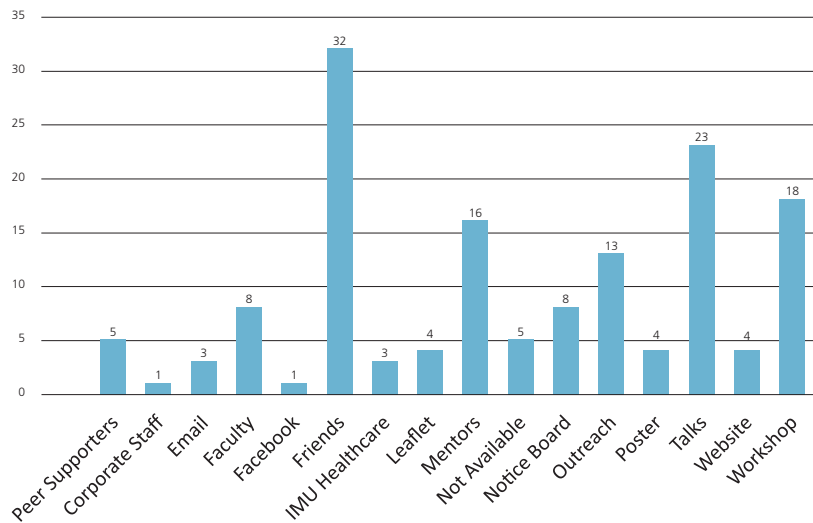
During University Open Days, counsellors offers career counselling to potential students as well. This helps the students to be very clear on what are the options available for them in future.

2015 Career Development Events	
January	<ul style="list-style-type: none">• Open Day: Career Test & Counselling Talk – How to choose your career• Foundation in Science Career Workshop
February	Personal Grooming, Interview Skills and Resume Writing Workshops
March	<ul style="list-style-type: none">• Dialogue sessions at Career Day: Allianz Malaysia Berhad; Pfizer; Natural Healings; Zuellig Pharma Sdn Bhd; Gleneagles Medical Centre Kuala Lumpur.• Social Media in Job Hunting• Postgraduate students’ meeting with employers
July & August	Open Days: Career Test & Counselling Talk – How to choose your career
October	Resume Writing Workshop

The Peer Support Club, by students for students

The Peer Support is a structured support programme by students for their peers. The programme is one preventive and outreach component of the whole counselling service, and was established in response to the observation that students tend to be more open to their peers. Mental Health Week which is organised and run by the Peer Support team, promotes awareness of mental health among the University community.

How did the Students know about the Counselling Services Jan - Dec 2015



Friends remain the main source of prompting students to seek counselling, followed by Unit talks, workshops, outreach; University staff, and 'media' including social media and printed material. There is a continuing need for outreach, to encourage individuals to seek counselling as early as possible.

Outreach, Publicity and Resources

The Unit publicises its services and resources through its website, a Facebook page, and the Unit notice boards at the Bukit Jalil campus. The notice board is located in an area of maximum student traffic, and provides information about Unit services, including Talk2Me email service; the Unit's six-month programme of events, and information on the 'book of the month'. Recommended books are available in the Library.

Student Ambassadors (SA) Training and Support

The IMU Student Ambassadors are trained to represent the University in various events. In 2015, there were 33 Student Ambassadors, drawn from all our educational programmes, interviewed by the SA staff team, using criteria that include personality and attitude, communications skills, academic performance, and potential for leadership. By doing so, the quality of the student ambassadors can be assured.

Student Ambassadors undertake a 1-year development programme designed and organised by the Unit. The development programme covers problem solving, decision making, team building and leadership; communications and public presentation skills; and course counselling skills. The programme enables these students to enhance their leadership and soft skills, and the chance to kick start their career development. As their role is to represent the University at events on and off campus, positive interactions and relationships among students, alumni, faculty and staff are developed.

Support for IMU Scholars

Student Services provides support to our IMU scholars in their development as well. In 2015 there were 41 scholars, 10 of whom attended Student Ambassador developmental events. These 10 individuals had enrolled at IMU from 2013 and later.

Extra Curricular Activities

The University fosters an atmosphere in which students can share ideas, interests, and concerns. Through involvement with co-curricular activities and attendance at programmes organised by themselves groups, students develop skills, knowledge, attitudes, and behaviour in regards to ethics, communications, management, vision and aesthetics. They find opportunities to confront and discuss ideas that may be new to them. Involvement in co-curricular activity is complementary to learning in the classroom and the University strongly supports student creativity and involvement in organisations. As such, the Department is responsible for all the extra-curricular activities organised or participated by IMU students. Most student involvement in extra-curricular activity occurs through student clubs and societies. These are of three general categories: social; cultural-religious; or games/sports.

Some of the IMU students had performed so well that they were later selected to lead various associations in different roles. Below are some to be mentioned:

Student and Alumni Achievements in Extra Curricular Activities

Associations and External Awards	
Lee Shean Woei (Bachelor of Dental Surgery)	Elected to be Treasurer of Malaysian Dental Students Association (MDSA)
Jonathan Goh Chong Ming (Bachelor of Dental Surgery)	Elected to be Academic and Research Officer of Malaysian Dental Students Association (MDSA)
Wong Hui Xim (Bachelor of Dental Surgery)	Elected to be Auditor of Malaysian Dental Students Association (MDSA)
Dheswindeep Kaur (Bachelor of Medicine and Bachelor of Surgery)	SPM Motivational Student Talk - <i>Best Student Presentation</i>
Kamalan Jeevaratnam	International Attachment - 2014 Merdeka Award Grant

When it comes to sports, IMU students had done equally well. This proves that the students are not only good academically but in sports as well.

Sports: MAPCU Games Track and Field Events, 2015	
Abel Tan Chun Tsen (Bachelor of Science (Hons) Chiropractic)	Long Jump (Men) - Bronze 4x400M (Men) - Gold
Cheah Dong Lum (Bachelor of Medicine and Bachelor of Surgery)	4x100M (Men) - Silver 4x400M (Men) - Gold
Lee Jo Rynn (Bachelor of Dental Surgery)	4x400M (Women) - Gold
Lim Kah Kit Christopher (Bachelor of Science (Hons) Chiropractic)	4x100M (Men) - Silver
Lim Li Vern (Bachelor of Medicine and Bachelor of Surgery)	4x100M (Men) - Silver 4x400M (Men) - Gold
Loh Chooi Shawn (Bachelor of Medicine and Bachelor of Surgery)	1500M (Women) - Bronze 4x400M (Women) - Gold
Kalaiyarasi Arujunan (Bachelor of Medicine and Bachelor of Surgery)	400M (Women) - Gold 800M (Women) - Gold 4x400M (Women) - Gold
Ng Ban Ling (Bachelor of Science in Dietetics with Nutrition)	200M (Women) - Bronze 4x400M (Women) - Gold
Ng Woon Woon (Bachelor of Medicine and Bachelor of Surgery)	100M (Women) - Bronze 4x400M (Women) - Gold

Sports: MAPCU Games Track and Field Events, 2015	
Onesh Charles De Silva (Bachelor of Medicine and Bachelor of Surgery)	100M (Men) - Bronze 200M (Men) - Gold 4x100M (Men) - Silver 4x400M (Men) - Gold
Pang Jing Han (Bachelor of Medicine and Bachelor of Surgery)	4x100M (Men) - Silver 4x400M (Men) - Gold
Radin Farizuan Bin Radin Baidrul Ikram (Bachelor of Medicine and Bachelor of Surgery)	800M (Men) - Bronze 1500M (Men) - Silver 4x400M (Men) - Gold
Tan You Qian (Master of Pharmacy)	4x100M (Men) - Silver
Tan Zhi Xin (Bachelor of Medicine and Bachelor of Surgery)	800M (Women) - Bronze 1500M (Women) - Silver
Yeam Sue Phin (Bachelor of Pharmacy)	4x400M (Women) - Gold
Other Sports Events	
Heng Hian Hee (Bachelor of Medicine and Bachelor of Surgery)	IMU Goodwill Games Futsal tournament 2015 First runner up
Chung Luo Bin (Bachelor of Medicine and Bachelor of Surgery)	Medic Intervarsity Game 2014 Table Tennis Champion
Lim Zhi Kai (Bachelor of Medicine and Bachelor of Surgery)	Medic Intervarsity Games 2014 Table Tennis Champion
Selina Tee Sze Meng	Medic Intervarsity Game 2014 Table Tennis Champion
Reena Priya Ramasamy (Bachelor of Medicine and Bachelor of Surgery)	MMA Negeri Sembilan 3rd Annual Badminton Tournament 2015 Second runner up in mixed doubles and women's doubles
Chen Xue Ruu (Bachelor of Pharmacy)	Nottingham University Malaysia Friendly Matches, 2014 Table Tennis (Female) - Gold
Khor Kai Lin (Bachelor of Medicine and Bachelor of Surgery)	Nottingham University Malaysia Friendly Matches, 2014 Table Tennis (Female) - Gold Medic Intervarsity Games 2014 Table Tennis - Champion
Yip Swee Yan (Bachelor of Medicine and Bachelor of Surgery)	Nottingham University Malaysia Friendly Matches, 2014 Table Tennis (Female) - Gold Medic Intervarsity Games 2014 Table Tennis Champion



Aflame Student Award

The annual Aflame Student Award aims to identify graduating students who had demonstrated high humane values throughout their course of study. Candidates are evaluated for their influence and impact, particularly of any activity that reflects care, compassion and teamwork. The Award winner nominates a beneficiary organisation that will share in the monetary benefit of the Award.

Nursing alumna Low Chia Yen, the Award Winner for 2015 has been involved in community service since she was 14. She chose the Malaysia Association for the Welfare of Mentally Challenged Children as the beneficiary, saying that she believes in its founder's vision of "never ever giving in when there is still a glimmer of hope." The Association provides an all-day comprehensive humane assistance in a safe-to-live environment for children with mental disabilities such as autism, down syndrome, cerebral palsy, ADHD, spastic paralysis, blindness and various learning disabilities. It aims to bridge the gap between social responsibilities and the public society by leading the children to seek more breakthroughs within their limited intelligence and to be embraced by society.

The Alumni Association

IMU Alumni was established in November 2002, coinciding with the University's Tenth Anniversary. The University has more than 6,000 alumni residing in most parts of the world, majority being in Malaysia. IMU organises various activity mainly focusing on knowledge sharing among the alumni. We encourage alumni to meet and share their experience with the current students.

Alumni Association Events for 2015

Dates, 2015	Event	Speaker	Organised by
4 Feb	Pharmacy Alumni Talk - Management of Acute Coronary Syndrome: Update on Pharmacotherapy	Siti Nadiyah Rusli	Pharmacy Alumni
25 Mar	Pharmacy Alumni Talk - Heart and HAART for HIV	Anitha Ramadas	Pharmacy Alumni
7 Apr	Postgraduate training in the USA and Thomas Jefferson University	Graduates from Thomas Jefferson University	Medical Alumni
22 Apr	Pharmacy Alumni Talk - Essential Pain Management: An Introduction to the RAT Approach	Munira Izat	Pharmacy Alumni

Dates, 2015	Event	Speaker	Organised by
25 May	Pharmacy Alumni Talk - Integration of a Pharmacist into General Practice Medical Centres: The Emerging Role of the Practice Pharmacist	Dr Neil Cottrell	Pharmacy Alumni
23 June	Pharmacy Alumni Talk - Critical Care	Charlene Tay Alias	Pharmacy Alumni
29 July	Pharmacy Alumni Talk - Updates on Common Traditional Chinese Medicine Products in Malaysia	Charles Ng Shih Chau	Pharmacy Alumni
20 Aug	Pharmacy Alumni Talk - Breaking Barriers and Improving Outcomes in Schizophrenia: A Pharmacist's Experience	Laura Kho Sui San	Pharmacy Alumni
29 Sept	Pharmacy Alumni Talk - Caring for the Terminally Ill: The Responsibilities of an Oncology	Elaine Kan Mei Ying	Pharmacy Alumni
7 Oct	Alumni Sharing - Updates on Diabetes Mellitus and Speciality Training and Working in the USA.	Dr Khoo Teck Kim	Medical Alumni
9 Oct	Alumni Talk - How to Handle USMLE Exams	Dr Khoo Teck Kim	Medical Alumni
9 Oct	Alumni Interview - Interview by NST, Berita Harian, Sin Chew, Urban Health and MIMS on Diabetes	Dr Khoo Teck Kim	Medical Alumni
30 Oct	Dental Alumni Homecoming Dinner		Dentistry Alumni
7 Nov	NDT Reunion Night 2015		N&D Alumni
23 Nov	Alumni Interview by STAR on Forensic Psychiatrist	Dr Siva Kumar	Medical Alumni
26 Nov	Alumni Talk - Developing Forensic Psychiatrist	Dr Siva Kumar	Medical Alumni

Conclusion

The Student Services Department has been particularly active in many aspects for the past year. The key factors continue to be the cooperation and excellent relationships between the Department and the student body, and with the Student Representative Council in particular. We are also very grateful to all sponsoring bodies and to the University management for their support.

STAFF DEVELOPMENT

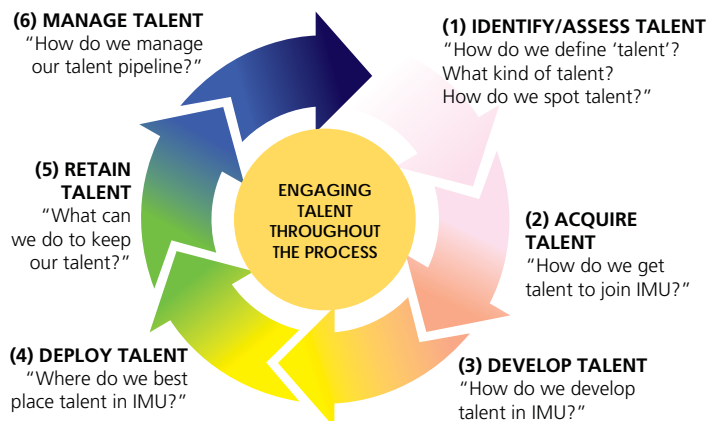


2015 marks the end of ASPIRE, the University's 5- year Strategic Plan for 2011 through 2015. The Human Resources aspect of this plan was a Five Year Human Capital Transformation Roadmap supporting the University's vision and mission. Overall, we have completed and operationalised 84% of our initiatives with 12% in progress and 4% to commence in 2016.

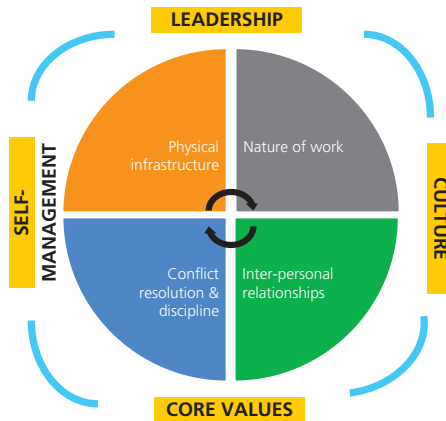
Key achievements of ASPIRE were:

1. The development and implementation of our Talent Management Framework to attract, retain and develop staff talent for succession planning.
2. Institutionalising our core values; ethics and professionalism.
3. Creating a conducive work environment. Staff engagement has been enhanced by a revamp of the on-boarding experience; continuing feedback from staff via engagement surveys, focus group discussions, and one-to-one conversations.
4. Establishing an attractive reward system. We have engaged consultants to periodically review our compensation model to remain competitive. A key outcome of this consultation is that more than 20 items in our benefits scheme have been enhanced, and new benefits introduced.

Talent Management Framework



Conducive Environment Framework



On staff development, continuing support is provided for development of both academic and non-academic staff. We have budgeted and spent more than 3% of our total staff payroll on staff development. This includes sponsorship of participation in regional and international conferences, workshops and retreats, and hosting or organising in-house training. Staff learning and development are based on the 70-20-10 conceptual framework, in which 70% of learning occurs on-the-job, 20% through mentoring, coaching and feedback, and 10% in classroom training. The larger picture is the University's continuing journey towards becoming a true Learning Organisation.

The five-year period of ASPIRE has been a significant achievement. Human Resources has seen transformational changes and more staff engaged with moving the University towards its vision of excellence. All markers of progress point to healthy growth and development: The University's financial performance; continuing improvement in employee and student satisfaction surveys; increasing community service by the entire University community; the recognition of staff as subject matter experts by educators and government agencies; the increase in research publications in Tier 1 and 2 journals; the growth in industrial partnerships; the many awards received by staff and students locally and internationally; the Tier 5 Excellent University status and re-accreditation of our educational programmes accorded by the Malaysian Qualifications Agency. We look forward to the next strategic plan period of 2016 to 2020.

What We Have Done





Healthcare

IMU HEALTHCARE IN 2015



As part of the Academic Health Center, IMU Healthcare comprises all IMU clinics in all locations that provide patient care services through faculty, professional staff and students. It is expected that a hospital will be added to these services. The primary mission of IMU Healthcare is the support of three academic goals:

1. The development of students' clinical skills to the highest standards
2. The support of faculty in maintaining and expanding their skills; and researching for the improvement of healthcare
3. The development of healthcare for the benefit of the community

IMU Healthcare is under the direction of the Vice-Chancellor and is managed by the CEO of Healthcare.

Since its inception in 2010, IMU Healthcare has since grown exponentially with satellite clinics to service the community. The setup of clinics for medical, dental, chiropractic and Chinese medicine services, including a dialysis clinic has seen a growth between 20 - 60% in both patient numbers and revenue.

In the dental and chiropractic clinics, students provide on average 50% of services and their charges are 10 - 20% of market rates. Student services to patients are closely supervised by faculty. The private professional services are provided by faculty and full time professional staff and are priced slightly below market rates. The professional staff provide continuing services to patients when students are not available.

2015 saw the addition of a clinic in the SPARK Mall in Desa Petaling, called the IMU Community Centre (IMUCC). The objective of this clinic is to provide integrated and affordable quality healthcare services and promote health awareness to improve the well-being of the community. The patient services are primarily traditional / alternative therapies of chiropractic and Chinese medicine and supported by dental screening, diet counselling with periodical health screenings which are mainly rendered by final year students. As these services are focused on the lower income community, the pricing is considerably below market rate and below that of other IMU Healthcare clinics. Patients with marginalised financial resources can apply for assistance from the Khazanah-IHH Healthcare Fund.

During 2015 all IMU Healthcare clinics and locations provided services to over 45,700 patient visits generating an increase of 21% revenue and decreasing expenses by 3% compared to 2014. The clinics losses, which is inevitable, are largely due to the training of students to meet the highest international standards.

The Clinics

Chiropractic Clinics

Located in three areas, the Bukit Jalil Campus, Setia Walk, and SPARK Mall, the Chiropractic Semester 7 and 8 students each see 300 patients with a range of services annually. Therefore, the number of patients per students do not vary, but the number of patients seen by students do vary depending on the number of enrolled students.

The Chiropractic clinics saw a major change as the services were primarily delivered for the first time by Malaysian Chiropractors who are graduates of IMU Chiropractic School. Previously, 7 of the foreign chiropractors either moved back to their home country or back into full time academic services. IMU Chiropractic added four graduates from 2014 to the clinic and quickly moved their part of the operation to profitable. Additionally, four IMU graduates from 2015 joined in August as residents and also moved their practice to profitable within 60 days. The clinic has developed a mentoring-training programme for the new graduates. It is expected these 8 graduates will allow IMU to develop a licensed chiropractic clinic programme in 2016. The clinic also projects an increase of future residents working in the programme.



Dental / Oral Health Centre

In 2015, 11 chairs were added to the Dental Clinic, bringing the total to 56 chairs, of which 5 are used for private practice. The Clinic in all saw a 23% increase in patient volume. The dental students join the clinic in Semester 4 through to Semester 10. Their involvement, time and expenses are relatively high. The number of patients seen by each student do not vary and are mandated by the educational programme. However the number of patients seen by students can vary depending on the number of students enrolled each year.

The private practice is largely provided by part time faculty with two full time staff. The full time staff refer and oversee the patients sent on to students. The faculty covers all students work on each patient. It is expected that the first dentist trained by IMU Dental School could join the IMU Dental Clinic in 2016.





Chinese Medicine

The Clinic is still primarily a faculty practice. The involvement of students is just beginning. The medications have moved from an expensive Taiwan based pre-packaged sachet system, to a locally prepared GNP prepared by a less expensive system. This has been part responsible for reduced operational costs and a 54% increase in volume.



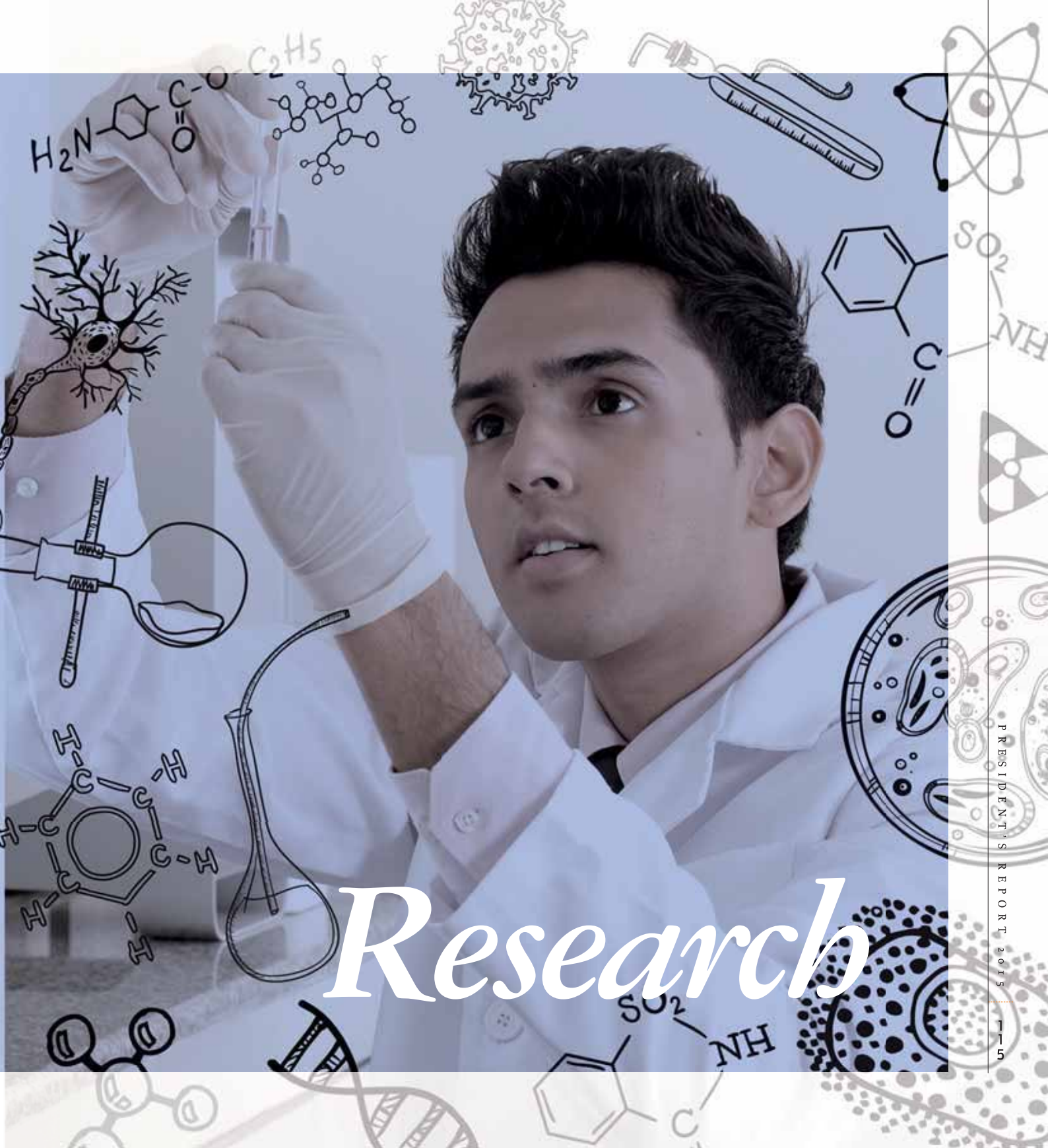
Medical Clinic

In 2011 Medical Clinic was the first private outpatient centre in Malaysia to be awarded the Malaysian Society for Quality in Healthcare (MSQH) accreditation and has received another full term re-accreditation from Nov 2015 to Nov 2019. The Medical Clinic is the central point for many services such as pharmacy/medicines, radiography, rehabilitation, laboratory, ultra-sound, ECG, vision screening, erectile dysfunction, etc. They provide the clinical back up for the Dental, Chiropractic, and Chinese Medicine clinics. During the last year, the Medical Clinic added rehabilitation and physical therapy services. The Medical Clinic also supports the psychology, podiatry, dietitian and diabetic clinic services. The Clinic has seen a growth of 15% in patients and 10% in revenue.



Dialysis Clinic

This is a totally independent clinic off campus. The patient base has grown to over 26 patients within 11 months and earnings before interest, taxes, depreciation and amortization have broken even. The Clinic is expected to cover all its expenses in 2016 and to become profitable.



Research

INSTITUTE FOR RESEARCH, DEVELOPMENT AND INNOVATION

HIGHLIGHTS:

- Establishment of the Patent Review Board to facilitate filing of patents and provide advice on intellectual property matters
- Published the book Learning for the Future - The IMU Experience in October 2015
- A series of public talks under the theme "The Future of Medicine" was conducted to enhance health literacy among the general public.

Research Activity and Output

In 2015, research continued to progress at a rapid pace under the coordination of the Institute for Research, Development and Innovation (IRDI) (<http://irdi.imu.edu.my/about/overview>). Our researchers were successful in securing external funding and generating a significant number of publications in indexed journals. Research continues to be driven by four Centres of excellence, focusing on the four thrust areas, namely cancer and stem cell research, bioactive molecules and drug delivery, environmental and population health, and health professions education.

There has also been significant development in commercialisation, as indicated by the increased revenue from consultancy and services. A Patent Review Board has been established to facilitate filing of patents by researchers, and to provide advice on intellectual property matters. In addition, IRDI continued to provide support to enhance the capabilities of our researchers through various continuing development courses. As part of the initiative to enhance health literacy amongst the general public, IRDI ran a series of public talks under the theme of *Future of Medicine*. In September, the School of Postgraduate Studies, as the academic arm of IRDI, obtained approval to launch a Masters programme in Environmental Health.

All targets set by IRDI under the IMU ASPIRE Strategic Plan for 2011-2015 have been achieved. The Institute has developed forward plans under ASPIRE 2 (2016 – 2020) to bring research at the University to greater heights. One strategy is to modify its research approach to reduce dependency on external funding, in view of the economic slowdown. In line with this, IRDI will facilitate enhancement of translational research by leveraging on data mining.

Funding

The total amount of external funding obtained decreased from RM3,398,193 in 2014 to RM1,056,400 in 2015 (Figure 1), with a scheduled disbursement of RM559,000 in 2015, RM418,600 in 2016, and RM158,800 in 2017. Most of the new external grants were awarded to principal investigators who did not hold grants in 2014. Seven new projects were supported by external grants, mainly from the Ministry of Higher Education (MOHE) under the Fundamental Research Grant Scheme (FRGS), and the Ministry of Science, Technology and Innovation (MoSTI Science Fund). Four FRGS projects (RM495,200), two Science Fund projects (RM313,000), one Long Term Grant Scheme (LRGS) project (RM312,200) and one Newton Fund project (RM16,000) were approved in 2015.

In 2015 the University continued to support research through internal funding amounting to RM1,426,648. These funds supported faculty, postgraduate (MSc and PhD) and undergraduate research. Substantial amounts were used to support the Bachelor of Pharmacy (RM531,000.00) and BMedSc (RM280,000.00) projects, with another RM60,000.00 for PhD and RM119,839.00 for faculty research (Figure 2).

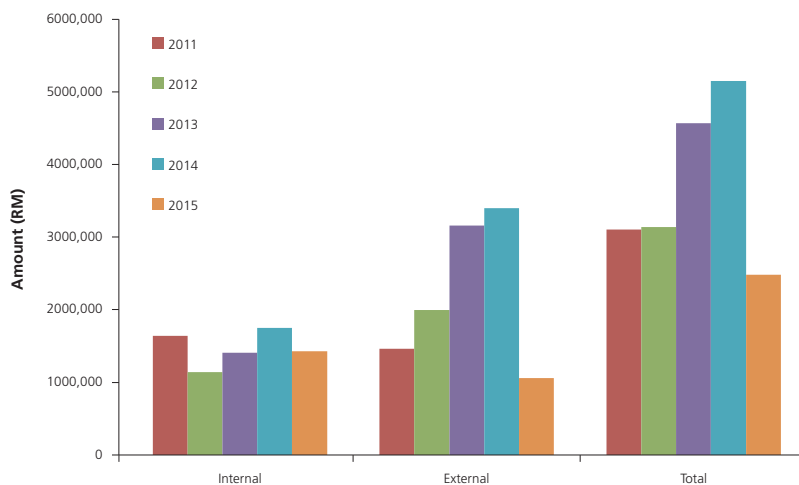


Figure 1: Research funding, 2011 through 2015.

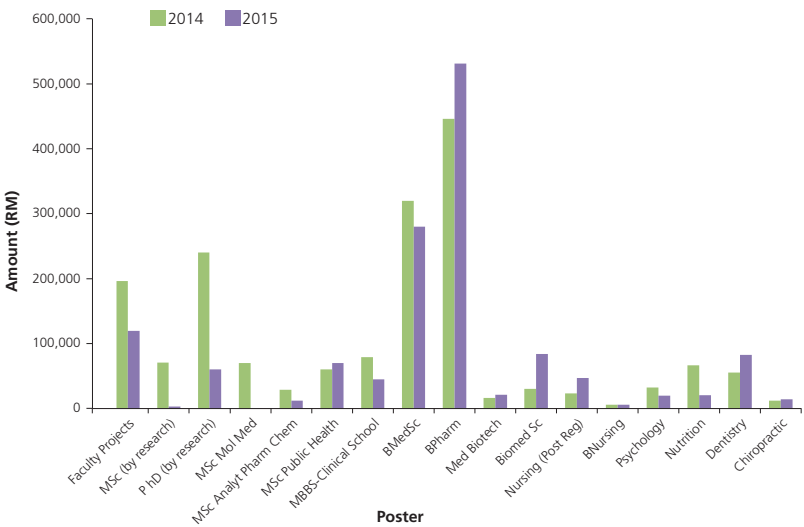


Figure 2: Distribution of internal funding in 2014 and 2015.

Publications

There were a total of 221 publications in 2015 compared to 289 publications in 2014 (Table 1). Of the total, 151 (68.3%) were in indexed journals and 20 were books and book chapters. Of the indexed papers, 48 were in Tier 1, 39 in Tier 2, 33 in Tier 3 and 9 in Tier 4 journals. The total impact factor (IF) obtained for the indexed papers was 227.143 compared to 340.180 in 2014. The average IF per indexed paper in 2015 was 1.231, compared with 1.676 in 2014. The total H-index value obtained for the papers was 6397 compared with 5871 in 2014. In 2015, there were a total of 234 scientific presentations, consisting of 131 oral and 103 poster papers.

	Presentations			Publications *Including books and book chapters			Impact Factor	
	Oral	Poster	Total	Indexed Papers with IF	Others*	Total	Total IF	IF/Indexed Paper
2010	130	71	201	81	65	146	206.006	2.543
2011	180	96	276	116	96	212	274.029	2.362
2012	78	55	133	82	67	149	148.298	1.809
2013	166	75	241	162	28	190	255.382	1.577
2014	143	65	208	203	86	289	340.180	1.676
2015	131	103	234	151	70	221	272.143	1.231

Table 1: Publications and presentations, 2010 through 2015.

Commercialisation and Support

The Commercialisation and Support arm continued to provide technical support to University researchers in various ways. The University intellectual property policy was revised and a process for application of patent filing was established. Based on these developments, a Patent Review Board has been established and approval has been given for the filing of a patent between IMU researchers and the Malaysian Palm Oil Board. A Technical Support Unit was set up to provide advice on project design and statistical data analysis to University staff and students.

The IMU Research Laboratory continued to provide a range of testing and analytical services and the income generated for 2015 amounted to RM51,862 (<http://irdi.imu.edu.my/products-a-services>). Income generated from contract research and consultancies totalled RM246,833 (Figure 3).

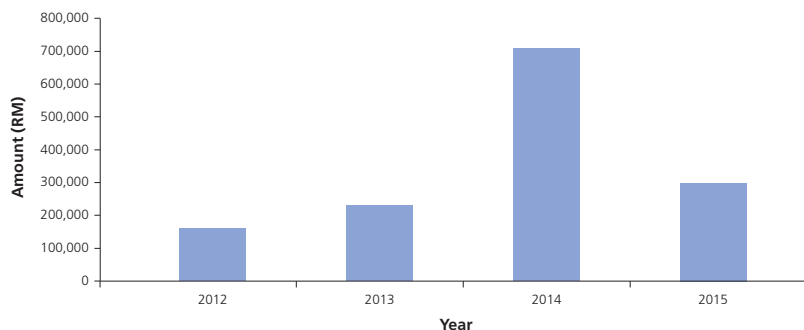


Figure 3: Revenue from services, testing, consultancies and contracts for 2012 – 2015.

For ISO 17025, the first surveillance assessment was conducted in February by the Department of Standards Malaysia for SAMM. The documents assessed included Laboratory Quality Manuals and Procedures, the test methods in use and specific criteria and technical requirements. A customer feedback survey showed that 82% of customers were satisfied with our laboratory services. Half of these respondents indicated they were 'very satisfied'.

To develop the research capabilities of our faculty, the Institute ran a range of continuing education and development events (Table 2). From 2015, all research supervisors are required to attend a series of mandatory workshops as part of their credentialing. These workshops are themed *Best Practices in the Supervisory Process*; *Research Project Management*; *Ethics and Professionalism in Research and Publications* and the *Good Clinical Practice Seminar* for those intending to conduct clinical research.

Event	Dates 2015
Best Practices in Supervisory Processes	7 February; 10 July 2015
Research Project Management	4 April; 5 September 2015
Ethics and Professionalism in Research and Publications	23 May; 31 October 2015
Good Clinical Practice	6 - 8 November 2015

Table 2: Continuing education and development events, 2015

Three issues of the University's International e-Journal of Science, Medicine and Educations were published in 2015 (<http://web.imu.edu.my/ejournal/>). In October we published Learning for the Future - The IMU Experience (<http://irdi.imu.edu.my/publications>), a book about consolidating the growth of the University and realising its vision. This book has been made available to University staff as a reference as we go into the next ASPIRE plan.

Community Service and Scientific Awareness

Under the IMU Cares Programme, the Institute has adopted a children's home run by Rumah Victory, a non-profit organisation caring for orphans and underprivileged children, troubled youth and juvenile delinquents, former drug addicts, and poor and needy elderly. The first activity themed *Health Awareness @ Rumah Victory* was held in May, in collaboration with staff and students of the School of Medicine and School of Dentistry (Figure 4). The activities include health talks, a Basic First Aid Course, Learning through Games and basic health assessment.

On 1 August, an Outdoor Science Camp was specially organised for the children and youth from Rumah Victory. They were brought to the National Botanical Garden at Bukit Cahaya, Shah Alam for a day of fun and learning. Following this, on 29 August, as part of our effort to enhance scientific awareness, the children were brought to IMU for an Indoor Science Camp, where they were shown some basic microbiology and chemistry experiments (Figure 5).

The Institute ran a series of public talks themed *The Future of Medicine* aimed at informing, creating curiosity and awareness, and improving health literacy. The talks also aim at promoting the University as a knowledge resource in biomedical science. The first talk, titled *Personalised Medicine - How do your genes affect the treatment of disease?* was held in April. The three panel speakers were Prof Leong Chee Onn, Dr Wong Ching Hoong and July Lee Mun Sun. The speakers at the second talk were YBhg Dato' Ted Mohr, Dr Milton Lum and John Chang. They discussed '*Managing Healthcare Costs of the Future*'.

An Industry Talk on '*Clinical Research and Life Science Ecosystem: Education and Training Opportunities*' was held in November. This was jointly organised by IRDI and IndiPharm Inc. with the aim of creating awareness of the potential of clinical trials in Malaysia, and exploring the opportunities for career development in this sector.



Figure 4: Health Awareness @ Rumah Victory, an IMU Cares activity run by IRDI in 2015

Highlights from the Research Centres

The Centre for Bioactive Molecules and Drug Delivery (CBMDD)

The Centre secured three new external grants from MoHE and MoSTI in 2015 (Table 3), receiving total funding of RM333,220. In 2014, ten grants totalling RM1,082,821 was received. Centre researchers were awarded two industrial consultancy grants worth RM66,000, for the development of drug formulations.

Project Leader	Project	Approved Amount (RM)
Venkata Srikanth Meka	Investigation on the mechanomutable properties of a biosourced polymer: Ceiba Pentandra (FRGS)	101,000
Subrat Kumar Bhattamisra	Antidiabetic activity of catalpol on high fat diet/ streptozotocin induced type-2 diabetes mice by improving insulin sensitivity and mitochondrial function (FRGS)	99,200
Rakesh Kumar Tekade	A novel strategy to overcome endosomal degradation of gene therapeutics (FRGS)	133,000
		Total 333,220

Table 3: Projects funded by external grants in 2015

A total of 63 indexed papers were produced in 2015, with a total impact factor of 104.757. This is an increase from 2014 in which the Centre produced 52 publications with total impact factor of 64.301. Selected publications are:

1. Ashwinder K, Kho MT, Chee PM, Lim WZ, Yap IKS, Choi SB, Yam WK. Targeting heat shock proteins 60 and 70 of *Toxoplasma gondii* as a potential drug target: In silico approach. *Interdisciplinary Sciences: Computational Life Sciences*, 2015; 1-14.
2. Chellappan DK, Ganasen S, Batumalai S, Candasamy M, Krishnappa P, Dua K, Chellian J, Gupta G. The protective action of the aqueous extract of *Auricularia polytricha* in paracetamol induced hepatotoxicity in rats. *Recent Patents on Drug Delivery and Formulation*, 2015; Volume 9.
3. Chikira M, Ng CH, Palaniandavar M. Interaction of DNA with simple and mixed ligand copper(II) complexes of 1,10-phenanthrolines as studied by DNA-fiber EPR spectroscopy. *International Journal of Molecular Sciences*, 2015; 16: 22754
4. Jacob A, Parolia A, Pau A, Davamani Amalraj F. The effects of Malaysian propolis and Brazilian red propolis on connective tissue fibroblasts in the wound healing process. *BMC Complementary and Alternative Medicine*, 2015; 15: 294.



Figure 5: Children from Rumah Victory got a taste of science and research during the Outdoor and Indoor Science Camp organised by IRDI.

5. Jeevanandam J, Danquah MK, Debnath S, Meka VS, Yen San, Chan S. Opportunities for nano-formulations in type 2 diabetes mellitus treatments. *Current Pharmaceutical Biotechnology*, 2015; 16(10): 853-870.
6. Md S, Mustafa G, Baboota S, Ali J. Nanoneurotherapeutics approach intended for direct nose to brain delivery. *Drug Development and Industrial Pharmacy*, 2015
7. Meka VK, Lim KT, Gorajana A, Kolapalli VRM. Formulation and optimization of gastric floating drug delivery system using central composite design and its biopharmaceutical evaluation. *Pakistan Journal of Pharmaceutical Sciences*, 2015; 28(4): 1373-87.
8. Murthy TEGK, Kumari M, Jithendra CH, Mayuren C. Influence of fenofibrate on the pharmacodynamic activity of glimepiride in rats and rabbits. *Journal of Chemical and Pharmaceutical Sciences*, 2014; 7(4): 345-350.
9. Naing C, Whittaker MA, Mak JW, Aung K. A systematic review of the efficacy of a single dose artemisinin-naphthoquine in treating uncomplicated malaria. *Malaria Journal*, 2015;
10. Nalائي J, Sagineedu SR, Rajasingam R, Kassim Z, Pichika MR. A stability-indicating RP-HPLC method for simultaneous determination of simvastatin and niacin in a combined dosage form. *International Journal of Pharmacy and Pharmaceutical Sciences*, 2015; 7: 262-268
11. Palanisamy UD, Sivanathan M, Subramaniam T, Radhakrishnan AK, Haleagrahara N, Sundralingam US, Gan SC. Refining ostrich oil and its stabilization with curcumin. *Journal of Nutritional Health and Food Engineering*, 2015; 2(2):
12. Subramaniam S, Radhakrishnan A, Chakravarthi S, Palanisamy UD, Haleagrahara N. Antihyperglycemic effects of Nephelium lappaceum rind extract in high fat-induced diabetic rats. *International Journal of Pharmacology*, 2015; 11(6): 542-551
13. Tekade RK, Maheshwari RG, Sharma PA, Tekade M, Chauhan AS. siRNA therapy, challenges and underlying perspectives of dendrimer as delivery vector. *Current Pharmaceutical Design* 2015; 21: 4614-36.
14. Teo SY, Rathbone M, Coombes AGA, Lee SY, Gan SN. Development and validation of a stability-indicating isocratic reverse phase-liquid chromatography assay for determination of phenytoin in bulk and pharmaceutical formulations. *International Journal of Pharmacy and Pharmaceutical Sciences*, 2015; 7(8): 258-263.
15. Yew SQ, Ravindran HK, Meka VS, Dharmalingam SR. Preparing kaempferol nanosuspension (KNS) using high pressure homogenization (HPH) technique. *BMC Proceedings*, 2015; 9(Suppl 7): A22

Two research clusters were established, namely the Diabetes Focus Group and the Drug Delivery Cluster. In addition, there have been several collaborative projects with the University of Strathclyde through joint supervision of BPharm student projects. The Centre also organised a research talk on '*Hot Topics in Diabetes Research*' in August, given by Emeritus Prof Brian Furman of the University of Strathclyde.

The Centre for Environmental and Population Health (CEPH)

Research thrust areas under this Centre include infectious disease, non-communicable disease, gastro-intestinal health, nutrition, toxicology and environmental pollution, and health policy and economics (<http://irdi.imu.edu.my/images/stories/pdf/ceph-strategic-plan.pdf>). In 2015, Centre researchers secured four external grants amounting to RM490,200 (Table 4). The projects cover various aspects related to microbes, especially parasites and bacteria.

Project Leader	Project Title	Approved Amount (RM)
Dr Ivan Yap Kok Seng	Identification of early diagnostic and prognostic biomarkers for human leptospirosis through systems biology approaches encompassing clinical, biochemical, proteomics, transcriptomics, metabolomics and immunological aspects (LRGS)	312,200
Dr Ivan Yap Kok Seng	System biology comparison between mice with single and co-infection from Toxoplasma gondiiand/or Trypanosoma evansi (FRGS)	162,000
Dr Chong Chun Wie	Upper respiratory tract pathogens carriage study in Kampung Sebir (Sub-project of a Newton Fund project)	6,000
Dr Ivan Yap Kok Seng	Prevalence and antibiotic susceptibility of microbial pathogens carried in the human upper respiratory tract in Sarawak, Malaysia (Sub-project of a Newton Fund project)	10,000
		Total 490,200

Table 4: Projects on environmental and population health funded by external grants in 2015.

Centre researchers generated 84 publications with a total impact factor of 99.949 and an average impact factor per paper of 1.514. Selected publications are:

1. Chen JXJ, Wong SF, Lim PKC, Mak JW. Culture and molecular identification of fungal contaminants in edible bird nests. *Food Additives and Contaminants: Part A*, 2015; 00(00): 1–13

2. Chong CW, Ahmad AF, Lim YaL, Teh CSJ, Yap IKS, Lee SC, Chin YT, Loke PN, Chua KH. Effect of ethnicity and socioeconomic variation to the gut microbiota composition among pre-adolescent in Malaysia. *Scientific Reports*, 2015; 5: 13338
3. Lim PKC, Yamasaki H, Mak JW, Wong SF, Chong CW, Yap IKS, Ambu S, Kumarasamy V. Field evaluation of a rapid diagnostic test to detect antibodies in human toxocariasis. *Acta Tropica*, 2015; 148: 32–37
4. Misra S, Khor GL, Mitchell P, Haque S, Benton D. A pilot study to determine the short-term effects of milk with differing glycaemic properties on sleep among toddlers: A randomised controlled trial. *BMC Pediatrics*, 2015; 15: 79
5. Naing C, Poovorawan Y, Mak JW, Aung K, Kamolratankul P. Cost-utility analysis of an adjunctive recombinant activated factor VIIa for on-demand treatment of bleeding episodes in dengue haemorrhagic fever. *Blood Coagulation and Fibrinolysis*, 2015
6. Saw PS, Pui, Nissen LM, Freeman C, Wong PS, Mak V. Health care consumers' perspectives on pharmacist integration into private general practitioner clinics in Malaysia: A qualitative study. *Journal of Patient Preference and Adherence*, 2015; 9: 467-477.
7. Shaufi MAM, Sieo CC, Chong CW, Gan HM, Ho YW. Deciphering chickens gut microbial dynamics based on high-throughput 16S rRNA metagenomics analyses. *BMC Gut Pathogens*, 2015; 7: 4.
8. Sinniah D. Magnesium deficiency: A possible cause of restless leg syndrome in haemodialysis patients. *Internal Medicine Journal*, 2015; 45(4): 467-8
9. Sinniah D. Rapid response. Asthma: Pathogenesis and novel drugs for treatment. *BMJ*, 2014; 349
10. Sumera A, Radhakrishnan A, Baba AA, George E. Beta-thalassemia and molecular chaperones. *Blood Cells, Molecules and Diseases*, 2015; 54: 348–352
11. Voon K, Tan YF, Leong PP, Teng CL, Gunnasekaran R, Ujang K, Chua KB, Wang LF. Pteropine Orthoreovirus infection among out-patients with acute upper respiratory tract infection in Malaysia. *Journal of Medical Virology*, 2015
12. Voon PT, Ng TKW, Lee VKM, Nesaretnam K. Virgin olive oil, palm olein and coconut oil diets do not raise cell adhesion molecules and thrombogenicity indices in healthy Malaysian adults. *European Journal of Clinical Nutrition*, 2015
13. Zalilah MS, Khor GL, Sariman S, Huang SL, Chin YS, Barakatun Nisak MY, Chan YM, Maznorila M. The relationship between household income and dietary intakes of 1-10 year old urban Malaysian. *Nutrition Research and Practice*, 2015; 9(3): 278-287.

In January, a Centre researcher, Dr Chan Kok Keong, visited Signy Island in Antarctica under the MoSTI Flagship Program on Antarctica. The main focus of the research programme is on the response of biomarkers of polar and lower latitudes microbes to heavy metal toxicity. The project is in collaboration with the British Antarctic Survey. The expedition collected soil, water and snow samples from pristine and human-impacted sites on Signy Island for the isolation of algae, bacteria and parasites (Figure 6).

In conjunction with the Asia Pacific Conference on Public Health, Diabetes and Cardiovascular Disease (Kuantan, September 2015), the Centre was a co-convenor of the symposium on '*Community - based Interventions Towards Reducing Risks of Non-communicable Diseases*'. In another line of development, the Centre has been collaborating with Institut Kesihatan Umum (The Institute of Public Health) in public health research. The primary aim of the collaboration is to assess the association of non-communicable diseases such as diabetes, cardiovascular diseases and obesity with air pollution, based on the Malaysia National Health and Morbidity Surveys for the Year 1996 - 2014.

The Centre for Cancer and Stem Cell Research (CCSCR)

The ultimate goal of research conducted by the Centre is to reduce the burden and eliminate the adverse outcomes of cancer. This is an ambitious goal, one that demands hard work, scientific excellence and breakthrough creativity. The accomplishments of the Strategic Plan for the Centre for 2013 - 2015 - *Advancing Basic, Translational, and Clinical Research on Cancer* include:

Funding

Research funding in 2013 - 2014 increased by 6% compared to 2011-2012, totalling more than RM1.9 million, of which 77.5% originated from external sources. The reliance on internal funding was reduced by 49%. In 2015, one new external grant worth RM233,000 under the Science Fund, MoSTI was awarded to the research team led by Dr Norman Chieng for a project titled 'Dry State Preservation of Mesenchymal Stem Cells'.

Publications

A total of 48 original and review articles were published in ISI-indexed journal with an cumulative impact factor of 142.542, an 85% and 136% increase over 2011-2012. The average impact factor per publication also increased from 2.448 in 2011-2012 to 3.020 in 2013-2014. Selected publications are:

1. Koh RY, Sim YC, Toh HJ, Liam LK, Ong RZL, Yew MY, Tiong YL, Ling APK, Chye SM, Ng KY. Cytotoxic and apoptogenic effects of *Strobilanthes crispus* Blume extracts on nasopharyngeal cancer cells. *Molecular Medicine Reports*, 2015; 12: 6293-6299.



Figure 6: Collection of snow, soil and water samples on Signy Island, Antarctica for the isolation of microbes for toxicity testing of heavy metals.

2. Low JH, Ramdas P, Radhakrishnan AK. Modulatory effects of mesenchymal stem cells on leukemic cells: A double-edged sword? *Blood Cells, Molecules and Diseases*, 2015; 55: 351-357.
3. Md Shahidul A, Cheng J, Maruyama S, Saku T. Intraductal papilloma of minor salivary glands: Its differential diagnosis from pleomorphic adenoma by immunohistochemistry. *Oral Surgery, Oral Medicine, Oral Pathology and Oral Radiology*, 2015; 119(3): e178
4. Nalliah S, Karikalan B, Kademane K. Multifaceted usage of HPV related tests and products in the management of cervical cancer - A review. *Asian Pacific Journal of Cancer Prevention*, 2015; 16(6): 2145-50.
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Collaborations

The Centre collaborates with 33 institutions around the world. Seven international grant applications were submitted as principal institute and an additional five invitations for international grant applications. Two international research grants were secured.

Contract Research

Seven collaborations with international pharmaceutical companies were established. Three technology transfer visits were carried out in Malaysia, UK and China. Six contract research projects were secured amounting to RM226,585 in revenue.

Core Facilities

Two core facilities (RNAi Core Facility and Biorepository and Cell Bank) were set up and operational. Additional two core facilities - Integrated Genomics Core Facility and Proteomics and Metabolomics Core Facility will commence in 2016. The facilities have attracted research collaborations totalling RM226,552.

Intramural and Extramural Programmes

The Centre conducted a number of activities to promote public awareness of cancer and to train early career scientists in cancer research:

- (i) A forum to raise public awareness on the overall cancer research movement
- (ii) Use of multimedia to raise cancer awareness among the general public
- (iii) IMU Postdoctoral Fellowship Program to attract outstanding young scientists

- (iv) Opportunities for training of individuals at career stages ranging from high school students, graduate students, scientists, clinicians to healthcare professionals
- (v) Foster talent, excellence and creativity at the research frontiers through FREE Seminar Series presented by distinguished scientists
- (vi) Provide research experience and mentorship to IMU faculty

The Centre for Health Professions Education Research (CHPER)

As the newest research centre under the Institute, the strategy for 2015 was to identify research themes and form researcher clusters around these themes. The University has also identified several key research projects including systematic studies into graduand work readiness, student self-directed learning and interprofessional learning.

With the Centre for Education CHPER also continues to plan and provide faculty development in specific areas of educational research methodology. We continue to enjoy the support of internationally recognised experts in developing research proposals, quantitative and qualitative data analysis and sound advice on publishing in the health professions educational literature. Although we generated fewer publications in 2015 compared to 2014, we expect to see an increase in publications from 2016 as studies begun in 2014 and 2015 are completed. We are also being invited to conduct faculty development events nationally and internationally sounds weird to evaluate the transferability of our faculty programmes to other institutions. Development strategies for 2016 include our engagement with the Ron Harden Visiting Professor for 2016, Prof Lambert Schuwirth, to develop medium and longer term strategies for enhancing the research output of the Centre.

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3. Win NN, Nadarajah VD, Daw KW. Implementation of the restaurant-type problem-based learning in a chiropractic program in Malaysia. *Journal of Educational Evaluation for Health Professions*, 2015; 12: 17. (published online). Doi: <http://dx.doi.org/10.3352/jeehp.2015.12.17>. (IF: NA).

4. Ariffin F, Chin KL, Ng CJ, Miskan M, Lee VKM, Isa MR. Are medical students confident in taking a sexual history? An assessment on attitude and skills from an upper middle income country. *BMC Research Notes*, 2015; 8: 248. [IMU Internal Grant – IMU CT18_2011 and UiTM FRGS Grant]. (SCI IF: 1.414; H-Index: 25; Tier: Q2).
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6. Naing C, Wai VN, Durham J, Whittaker MA, Win NN, Aung K, Mak JW. A systematic review and meta-analysis of medical students' perspectives on the engagement in research. *Medicine*, 2015; 94(28): e1089. DOI: 10.1097/MD.0000000000001089. (ISI IF: 5.723; SCI IF: 7.062; H-Index: 111; Tier: Q1).
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10. Siti F, Tan BS, Mathew T. Dental esthetic impact of malocclusion and orthodontic treatment need based on self-perception among university students. *International Journal of Dental Science and Research*, 2015; DOI: <http://dx.doi.org/10.1016/j.ijdsr.2015.04.005>. (IF: NA).
11. Saw PS, Pui, Nissen LM, Freeman C, Wong PS, Mak V. Health care consumers' perspectives on pharmacist integration into private general practitioner clinics in Malaysia: A qualitative study. *Journal of Patient Preference and Adherence*, 2015; 9: 467-477. (ISI IF: 1.676; SCI IF: 1.981; H-Index: 17; Tier: Q1).
12. Lim VKE, Suleiman AB, Young ML. How many medical students? Matching the number and types of students to a country's needs. In: Abdulrahman KAB, Mennin S, Harden RM, Kennedy C. *Routledge International Handbook of Medical Education (Eds)*, 2015, Routledge Oxford and New York. ISBN 978-0-415-81573-4.



Service to the Community

SERVICE TO THE COMMUNITY



17,621

*individuals from 50 organisations
have benefited from IMU Cares
outreach programme**

As of 2015,

1,547

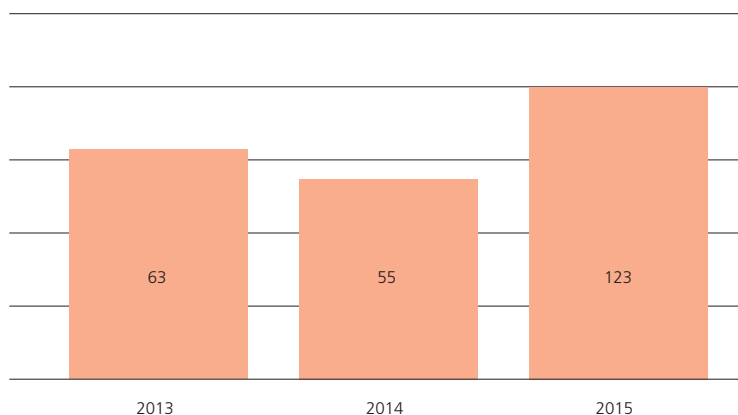
IMU staff

2,577

*IMU students
have been actively involved
in serving the community with
the support of 22 partners
and collaborators.*

The IMU Vision includes creating “a community of scholars and professionals committed to serving society, promoting the development of students to reach their true potential in becoming competent, ethical, caring and inquiring citizens and visionary leaders”. The IMU Cares Programme, begun in 2002, provides opportunities to help fulfil this vision. Since 2002 the Programme has evolved and grown in scope and impact. In 2015 the Programme achieved many new records, forged new partnerships and explored new opportunities. In 2014, our affiliation with Khazanah Berhad was strengthened by the formation of the IHH Healthcare Berhad in which IMU became the education flagship of this enlarged group. IHH Healthcare Berhad also provided access to the Khazanah-IHH Healthcare Fund (KIHf) for IMU Cares projects. This access has paved the way for novel approaches in community service.

Our Community Service Activities



As part of its outreach, IMU Cares has identified five focus areas: Healthcare, Education, Enhancement, Environment and Fund Raising. The overarching aims are to promote and improve the health and well-being of the communities we serve, for sustainable, self-sustaining change.

In line with the University's core values, IMU Cares strives to involve more staff and students each year. Service allows our main stakeholders – students – to develop professionalism and leadership, and foster inter-professional collaboration through shared efforts. Experiential service learning thus contributes significantly and holistically to student professional and personal development.

As a University wholly devoted to health professions education, the principal activity of the Programme is promoting health and well-being. The Programme seeks to empower underprivileged individuals and communities with skills that enable them to care for themselves. Caregivers, being the main people in contact with the underprivileged, are also included in order for them to become better nurturers and carers. Bringing primary care to communities, especially the underprivileged, is a top priority. Patients who require treatment are referred to IMU Healthcare clinics, and those who need financial support can have treatment costs covered by the KIHf. As prevention is better than cure, IMU Cares also allocates significant effort to health education.

As IMU Cares has many projects, this Report highlights the key achievement of 2015 rather than describing all IMU Cares activities.

Bringing Primary Healthcare to the Community

Since 2014, IMU Cares has periodically visited the low cost housing estates in the Salak Selatan township to provide primary care. Located in the suburb of southern Kuala Lumpur, the majority of residents are in the lower to middle income group, and many are elderly. Taking the initiative, we began to offer free health screening. Coordinated by Dr Tan Seok Shin, we now offer basic screening, that includes blood pressure, blood glucose and body mass index; dental screening; chiropractic assessment, Chinese medicine assessment and dietary counselling.

To date, we have screened more than 300 residents at various locations in Salak South. Individuals needing further evaluation or treatment are referred to the IMU Healthcare clinics at the Bukit Jalil campus. In September 2015 we launched the Community Centre at Salak Park Plaza to provide affordable healthcare to the Salak South community on a long-term basis.

Our students are also significant beneficiaries of community service because they have the opportunity to learn professionalism and practise inter-professional collaborative care. Enabling our students to interact with real patients from an early stage in their education enhances their real world communication and technical skills.

Moving from urban suburbs to villages, IMU Cares collaborates with villagers in Kampung Sebir to bring primary care to this small community



1. IMU's Community Centre in Plaza Salak Park, Desa Petaling was officially launched by Member of Parliament for Seputeh, YB Teresa Kok.
2. Health screening being conducted near Salak South's low-cost housing projects (PPR Salak Selatan)

Service To The Community



1. Primary healthcare is provided to the Kampung Sebir villagers on the first Sunday of every month.
2. An IMU medical student performing blood pressure measurement on a Laotian.
3. IMU Chiropractic student provided chiropractic assessment and treatment to the villagers in Myanmar.

of approximately 200 orang asli in the outskirts of Seremban in Negeri Sembilan. IMU Cares now provides longitudinal care to these villagers. This Project is led by a Committee of medical students supervised by faculty and staff of the Clinical School. The Committee collaborates with the School of Dentistry to provide dental services to villagers.

Students provide services to the villages on the first Sunday of each month, managing a variety of acute and chronic health conditions. In addition, regular health talks and training increase awareness and promote health. Topics covered have included hand hygiene, food hygiene, diabetes and dengue prevention. Since its inception in December 2013, the project has built a mutually beneficial relationship with the villagers based on compassion, trust, commitment and integrity. The project has enabled many villagers to access healthcare, a real difficulty before this. Students' experiential learning at Kampung Sebir enables them to reflect on their perspective of rural people, their needs and the challenges they face, and more importantly, students' perspective on serving the community. We hope that the IMU Cares project in Kampung Sebir will inspire others to do more for under-privileged, marginalised rural communities.

IMU Cares Abroad

Aside from local communities, IMU has extended its care to people outside Malaysia. In July, two groups of students and staff embarked on service missions to Laos and to Myanmar, focusing on rural communities. The IMU team for the Humanitarian and Love Mission to Laos comprised 27 students and was led by Prof Khoo Suan Phaik of the School of Dentistry, and Dachaini Karupiah from Student Services. They formed part of the team which also comprised experienced health professionals from Malaysia and Singapore. The IMU team included an IMU MBBS alumnus, Dr Sharmini Arasalingam, who trained as a surgeon.

The **Myanmar-IMU Collaborative Community Project (MICPP)** involved 30 students, 4 faculty members and one non-University volunteer. The project raises RM18,000 through donations and these funds were used to buy various household supplies for the villagers of Wet Chaung village in the Irrawaddy Delta.



led 2 International medical mission to provide healthcare services and education to rural communities.

Children are the Future

One of our noteworthy projects with childrens' homes is the collaboration with the Ti-Ratana Welfare Society in Salak South, Kuala Lumpur, a project steered by Madam Leela Chellamuthu, of the University's Nursing Division. In 2013 when the project was started the main health problem plaguing the children was head lice infestation. In addition to aggressive treatment, we have over time taught the caregivers how to administer anti-lice medication. The children were taught preventive measures. To date, there have been no complaints of head lice infestation among the children or their caregivers.

In 2015 IMU Cares has worked closely with a number of children's homes, including Precious Children Home, Pusat Jagaan Kanak-Kanak Sayang, The Dignity for Children Foundation, Rumah Charis (Home for the Children), Lighthouse Children Welfare Home, Rumah Victory Children and Youth Home, and Home of Peace.

Caring for the Aged

IMU Cares has partnerships with a number of homes for the elderly. One of these is **My Father's Home**, a care centre in Damansara Perdana. A team of staff and students led by Prof Allan Pau of the School of Dentistry have periodically visited the Centre since early 2013, to provide oral health screening for residents. Basic dental treatment, such as extractions and temporary fillings, are also provided during visits. The team has made contact with 60 residents and out of these, 21 were screened for dental needs and 16 were referred to our Oral Healthcare Clinic for more comprehensive evaluation and treatment.

As health education is a key objective, home residents and their caregivers were also taught about good dental and denture hygiene. Moving forward, the team is aiming to further empower caregivers by training them to undertake dental screening and identifying when referral is needed. Other initiatives to improve care of the elderly includes a video *Care for the Elderly*, produced by the Nursing Division, to be distributed to homes and conduct workshops for caregivers and the public that will held at IMU.



1. Rumah Victory Children and Youth Home, and Home of Peace.
2. Dental lecturers and students provided treatment for the residents at My Father's Home.
3. Residents of My Father's Home enjoying the students' performance.

72 health education and live skills training programmes have been conducted to improve health and well-being of communities

Over **6,000** individuals have benefited from these programmes.



1. A screenshot of the video which demonstrates to care givers how to carry out stretching exercises for the elderly.
2. Participants of the Basic Life Support course practicing chest compressions on a mannequin.
3. Children from Rumah Charis, Rumah Victory, Ti-Ratana, and Precious Children Home participated in the PowerPoint skills workshops organised by the IMU IT Department.

At Ti-Ratana, elderly members were taught exercise skills to improve their mobility and health. Shailaja Tholkabian, our Senior Physiotherapist, has produced a video manual which trains caregivers of homes on stretching exercises integrated with physiotherapy for the elderly. IMU Cares will share copies of the video with our community partners. We hope this will eventually develop into a healthy habit of physical activity and better health among the elderly.

Other homes for the elderly served by IMU Cares projects in 2015 were the Lovely Nursing Centre, Rumah Orang Tua Kampung Baru Sikamat, Rumah Charis (Home for the Aged), Rumah Sejahtera Jimah Lukut, Rumah Sejahtera Seri Setia, and Rumah Victory Elderly Home.

Empowering for Sustainability

"If you give a man a fish, you feed him for a day; if you teach him to fish, you feed him for a lifetime"

Knowledge and skills are the key to achieving lasting, meaningful impact on health. IMU Cares has taken baby steps to empowering our community partners with skills that improve quality of life. Empowerment projects include Basic Life Support courses, first aid training for caregivers, basic communication and presentation skills training, exercises and physical therapy, and PowerPoint skills workshops.

Lending a hand where it is most needed

When the East Coast was severely hit by floods in December 2014, IMU Cares organised the Kelantan Flood Relief Project for villages in Kuala Krai, including Kampung Laloh, Kampung Lela Jasa, Kampung Karangan, Kampung Pemberian, and Kampung Manjor. University staff and students, with help from the IMU Foundation and IMU Cares Disaster Fund, raised some RM53,000 to help people affected by the floods to rebuild. IHH Healthcare Berhad channelled a further RM200,000 through IMU for provisions, groceries and household essentials. We also received support CCM Bhd and My Hero Supermarket Sdn Bhd, who provided us with medical supplies and household items respectively. The non-governmental organisations i-Medik and Yayasan Ikhlas assisted in delivering the medication and distributing supplies to three schools in Kuala Krai used as flood evacuation centres.

With unstinting help from the Student Services Hub, staff and students, we packed relief supplies for 800 families and back-to-school supplies for 1,200 pupils. Four 2.2kva Generators, four water pumps and ten high-pressure washers were purchased for the villages. A temporary clinic was set up in Kampung Laloh to provide medical aid. The University's chief librarian, Zuhariah Mohd Nordin, led an effort to rebuild the libraries of

2 schools in Kuala Krai, Kelantan - Sekolah Kebangsaan Laloh and Sekolah Kebangsaan Karangan. Her team designed a simple library management system to computerise their libraries for effective resource management.

We also took this opportunity to contribute books to the schools to stimulate interest in reading and help inculcate the reading habit.

Following the **Nepal Earthquake** which struck in April, IMU Cares sent a medical relief team, led by Professor Dr Philip George, to Barghat, a small village approximately 436 kilometres west of Kathmandu. The team of 4 staff and 6 students spent 4 days in Nepal providing treatment to more than 400 villagers. They also donated water filters, medications and children's art materials to the villagers. In addition, USD7,000 was raised by University staff and students, and topped up with allocations from the IMU Cares Disaster Fund.



The University's Largest Annual Charity Event

For the fourth consecutive year, Chariofare continues to be the largest annual event in terms of numbers and aims. Its sole purpose is to raise funds for charity whilst having fun. Chariofare has attracted more than 3,000 participants each year.



1. IMU volunteers busy packing the relief supplies for the flood victims in Kuala Krai, Kelantan.
2. School supplies were handed out to 1200 students in SK Laloh, SK Lata Rek and SK Lelal Jasa in Kuala Krai.
3. IMU's Medical Team providing treatment to those affected by the Nepal Earthquake.

This year, we raised a record RM180,983, to be distributed to Penang Hospice Society, Rumah Victory Children and Youth Home, Ti-Ratana Welfare Society and the IMU Cares Disaster Fund (Table 1).

The table shows the total amount raised in past Chariofares and the beneficiaries of each Chariofare

Description	2012	2013	2014	2015
Total Amount Raised (RM)	138,000	150,000	170,000	180,893
Total Beneficiaries	6 <ul style="list-style-type: none">• Rumah Love and Care Kajang,• Pertubuhan Kebajikan Kristian Aman, Selangor• Precious Children Home• Yayasan Sunbeams Home• Persatuan Kebajikan Hope Worldwide KL• Association of Social Sciences and Community Development of Gombak District	2 <ul style="list-style-type: none">• Penang Hospice Society• National Stroke Association of Malaysia (NASAM)	4 <ul style="list-style-type: none">• Pertubuhan Hospice Negeri Sembilan• Pusat Penjagaan Kanak-Kanak Cacat Taman Megah• Dignity for Children Foundation• IMU Cares Disaster Fund	4 <ul style="list-style-type: none">• Penang Hospice Society• Ti-Ratana Welfare Society• Rumah Victory• IMU Cares Disaster Fund

Table 1: Beneficiaries of funds raised by Chariofare

The Penang Hospice Society is to use the funds to provide holistic care in the homes of patients with advanced life-limiting disease. Rumah Victory Children and Youth Home will utilise their allocation to support the rebuilding of their home, destroyed in a fire in April 2015, whilst the Ti-Ratana Welfare Society plans to use the money to support their children’s tuition fees. Lastly, the IMU Cares Disaster Fund is set aside to be expended for natural disaster relief efforts locally or abroad.

At the Chariofare Carnival there were more than 55 booths, operated chiefly by staff and students, and selling a large variety of food and drink, pre-loved items, books, crafts, games and even dental products. Dental and health check-ups were available, and there were a myriad of performances for everyone to enjoy. We also took the opportunity to invite 79 children from several children homes to join in the fun.

Apart from Chariofare, IMU has provided financial support for various organisations through its annual budget (Table 2).

Description	2013	2014	2015
Total Amount Donated (RM)	32,855.40	56,737.90	55,499.60
Total No. of Initiatives (projects / activitiesv Carried Out in IMU)	6	17	23
Total No. of Organisations (beneficiaries)	7	27	26
Total No. of States (list of states) in Malaysia	KL, Selangor and Johor	KL, Selangor and NS	KL, Selangor and Kelantan

Table 2: Direct donations from the IMU annual budget

Partnerships for Charity

In many IMU Cares community projects we have worked with industrial partners, professional bodies, non-governmental organisations, and government agencies. Partners include the Malaysian Dental Association, Lion's Club of Subang Jaya, Mead Johnson Nutrition Malaysia, Ajinomoto, PRIDE Foundation, Lembaga Penduduk dan Pembangunan Keluarga Negara (LPPKN), and the Ministry of Health. MSIG Insurance Malaysia is the main sponsor of Chariofare.

Consultancy and Training

IMU Staff continue to contribute back to society in their professional capacity as external examiners, facilitators, speakers and expert advisors, to other academic institutions, and the Ministry of Health Malaysia

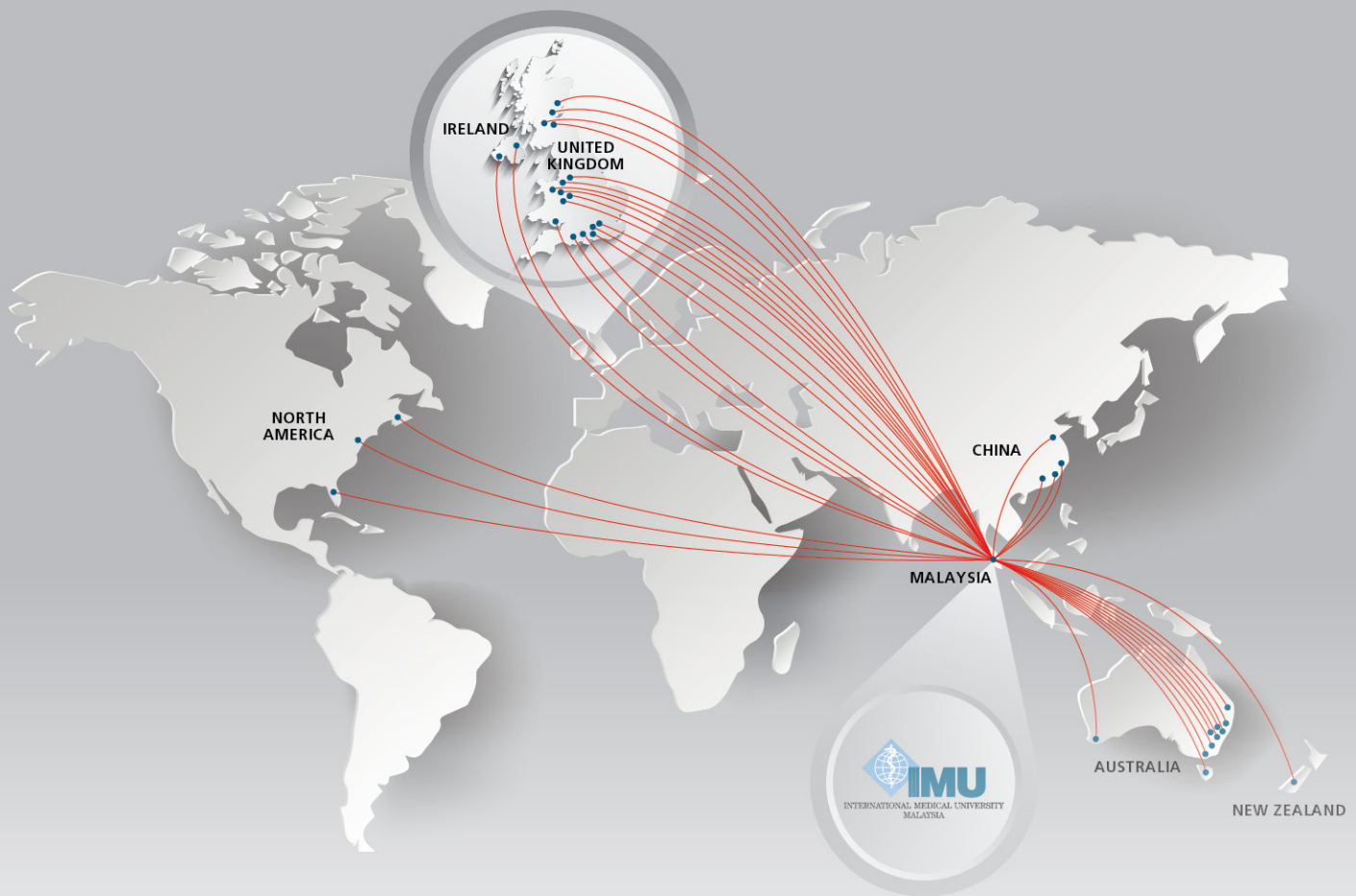
Moving Ahead

2015 saw an increase in project numbers and participation. In 2016, student participation is expected to significantly increase, through the introduction of a more structured approach to community service under the Malaysian Qualifications Agency mandatory studies modules. Therefore there is a need for community projects to be better planned, especially in clearly identifying the needs of community partners, and measurable outcomes that benefit community partners, students and staff. There is ongoing effort to streamline and simplify reporting by project leaders, with the aim of efficiently consolidating data and outcomes. Greater emphasis is to be placed on projects that empower, including using technology assisted learning to educate. 2016 will certainly be an exciting year for staff, students and for the IMU Cares office. We end by thanking all students, staff, industry and community partners for making 2015 an exciting year year for IMU community projects.

2015 IMU Cares Outreach Programme Summary

Focus Areas	Key Objectives	List of Activities	Unit	2013	2014	2015	Key Learnings / Impact
Healthcare Health Screenings and Education	<ul style="list-style-type: none"> * Provide regular health services and screenings to detect/ prevent non-communicable disease (NCD) * Changing lifestyles with healthcare awareness * Provide inter-professional learning and collaborative partnership 	<p>Types of health screenings (combination of service will vary depending on identified community needs) includes Basic Health Screening, Chiropractic Assessment, Chinese Medicine Assessment, Diet Counselling, Dental Screening, Hearing Test, Vision Test.</p> <p>Health education and awareness programmes includes Disease Awareness, Health Campaigns, Hygiene Education, Nutrition and Dietary Education and Reproductive Health.</p>	Students	1,131	1,126	1,412	Through the health screenings, individuals who require medical attention were identified and referred to IMU Healthcare clinics. Early detection allowed for early treatment and improve the life quality of the individuals. The health education activities helped to instil awareness on various diseases in the community, leading to prevention.
			Staff	615	489	789	
			People (recipients)	5,029	3,122	11,147	
			Hours	308	190	581	
Education Training and Life Skills	<ul style="list-style-type: none"> * Equip caregivers with enhanced skills to provide better care * Improve individual skills and social interaction to build self worth and confidence 	<p>Professional training for caregivers includes Basic Life Support, Basic First Aid, Care for the aged and disabled and Wound care to ensure proper care are given to the community.</p> <p>Life skills are also taught to various age groups to equip them with functional knowledge such as Arts and Crafts, Basic Computer Literacy, Communication Skills, Emergency Skills, Games and Sports, Mobility and Rehabilitation.</p>	Students	13	143	1,416	The caregivers will be able to provide better care to the residents of our community partners. Acquiring basic life support and basic first aid skills allow them to act appropriately in times of emergency. Children who participated in the life skills workshops are empowered with different skills that will make them well-balanced and useful citizens.
			Staff	2	38	198	
			People (recipients)	75	228	1,702	
			Hours	4	44	154	
Enhancement Providing physical improvements to enhance living conditions and safety	<ul style="list-style-type: none"> * Improve and create a comfortable and safe environment * Provide sustainable living * Create a positive environment for better care and well-being 	<p>Activities includes:</p> <ol style="list-style-type: none"> 1. Refurbishing (painting, etc) 2. Safety measures (installation of guide bars, etc) 3. Sustainability (installation of solar panels for renewable and sustainable energy) 	Students	-	-	74	Improvements to the living environment will provide better quality of living to the residents of our community partners.
			Staff	6	4	67	
			Organisations (beneficiaries)	2	2	9	
			Value (RM - contribution)	126.00	125.00	95,932.5	
Environment Conservation and Sustainability and Educational Activities	<ul style="list-style-type: none"> * Discovering and understanding nature and the environment * Conservation projects for sustainable living * Research and implementation 	<p>Conservation efforts includes beautification of environment, recycling projects, tree planting and earth hour observation. Educational outreach programmes includes animal welfare, education tours and environmental education.</p>	Students	34	213	310	Participating in environmental activities allowed us to play our part in conserving nature. Our involvement in environmental issues will help to raise awareness among our students and staff to be more actively involved in caring for the environment, adding more greens and beautification.
			Staff	13	62	38	
			Organisations (beneficiaries)	2	2	9	
			Projects	2	2	5	

IMU IN THE WORLD



The University has established a strong global network of 39 partner institutions of higher learning. These collaborations in health professional education cover most of the undergraduate programmes offered at the University. Indeed, the University is unique in fostering and establishing collaborations for the training of practitioners in complementary therapies. This reflects its historic commitment to opening doors to education and training opportunities outside Malaysia via credit transfer, opportunities that would not otherwise be available to Malaysians. Building and developing these worldwide relationships strengthens the University's ability to secure global talent, which in turn helps attract the brightest and the best to come and study at the IMU. Since 1995, IMU's Partner Schools have graduated more than 3,000 individuals. IMU has become a household name in Malaysia and is steadily gaining international recognition.

OUR PARTNER UNIVERSITIES

Australia

University of Adelaide, Australia
Australian National University, Australia
Curtin University, Australia
University of Newcastle, Australia
University of New South Wales, Australia
University of Queensland, Australia
RMIT University, Australia
University of Sydney, Australia
University of Tasmania, Australia
University of Western Sydney, Australia
University of Wollongong, Australia

China

Beijing University of Chinese Medicine, China
Guangzhou University of TCM, China
Shangdong University of TCM, China
Shanghai University of TCM, China

Ireland

National University of Ireland, Galway

New Zealand

University of Otago, New Zealand

North America

Dalhousie University, Canada
Sidney Kimmel Medical College, United States
University of Miami, United States

United Kingdom

University of Aberdeen, Scotland
Anglo-European College of Chiropractic, England
University of Dundee, Scotland
University of Edinburgh, Scotland
University of Exeter, England
University of Glasgow, Scotland
Keele University, England
University of Leeds, England
University of Liverpool, England
University of Manchester, England
University of Nottingham, England
Queen Mary, University of London, England
Queen's University of Belfast, Northern Ireland
University of Southampton, England
University of South Wales, England
University of Strathclyde, Scotland
St George's University of London, England
University of Swansea, Wales
University of Warwick, England

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83000 Batu Pahat, Johor
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IMU Clinical School, Kluang

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**Delivering the future
of better healthcare**



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