

Annual Report 2023

Research & Innovation | Central Research Laboratory
USM-Cochrane Network | KPI & MyRA





**“IF WE KNEW WHAT WE WERE DOING, IT
WOULD NOT BE CALLED RESEARCH,
WOULD IT?”**

Albert Einstein

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Forewords

Deputy Dean
Research & Innovation



Assalamualaikum WBT & Salam Sejahtera

It is with great pleasure and excitement that I welcome you to the latest edition of our Research and Innovation Yearly Report (2023). This publication stands as a testament to our collective commitment to share our achievement, challenge of innovation, and addressing the research culture in our organization.

Research and innovation are not solitary endeavors but rather collaborative journeys that involve countless hours of dedication, collaboration across disciplines, and a relentless pursuit of excellence. This bulletin reflects the spirit of collaboration and interdisciplinary exchange that defines our institution, bringing together experts from diverse fields to present a meaningful information.

One of the great achievements in 2023 was the establishment of the new Research Cluster in PPSP. After series discussion and workshop, we concluded with 9 Research Clusters to play a pivotal role in advancing knowledge, fostering innovation, and addressing complex challenges in various fields. We hope that collaboration among research clusters facilitates regular knowledge exchange and networking opportunities researchers' community. This exchange not only accelerates the dissemination of research findings but also stimulates new ideas and collaborations.

As we navigate an increasingly interconnected world facing unprecedented challenges, the role of research and innovation becomes ever more crucial. It is through our collective efforts that we can harness the full potential of human creativity and intellect to build a better future for all.

I extend my heartfelt congratulations to all the contributors and committee members whose work graces these pages. Your passion and commitment inspire us all to reach new heights and push the boundaries of what is possible.

I invite you to delve into the pages of this bulletin, engage with the information presented, and join us in sparking the power of research and innovation to transform our institutions.

Thank you.

Assoc. Prof. Dr. Asrenee Ab. Razak
Deputy Dean (Research & Innovation)
School of Medical Sciences

Our School

School of Medical Sciences

The School of Medical Sciences – Pusat Pengajian Sains Perubatan (PPSP), University Sains Malaysia (USM) at the initial stage of its establishment (June 1979) was located at the USM Penang Campus. PPSP has been fully operational at USM Health Campus, Kubang Kerian, Kelantan since June 1990 which meets the pre-clinical and clinical study requirements of the Medical Science (MD) program. The USM Health Campus in Kubang Kerian was developed on a 220-acre land that includes PPSP and USM's teaching hospital (USM Hospital; HUSM) which was established in October 1983, which in turn catalyzed the establishment of the School of Dental Sciences (PPSG) and the School of Health Sciences (PPSK).

During this 40-year period of existence, PPSP has put its efforts and dedications in various fields related to academia, research and networking at the local and international levels, in line with its pure and sustainable mission and vision.

Vision

Medicine for Sustainable Tomorrow

Mission

To provide internationally recognized medical science studies, the highest quality services and lead translational research for a sustainable ecosystem

Motto

Compassionate Professional

Research by Numbers

54
RESEARCH GRANTS

3.0mil
RESEARCH FUNDS

491
TOTAL PUBLICATIONS

162
Q1 & Q2 PUBLICATIONS

32,132
ACCUMULATE CITATION

45
PATENTS

“RESEARCH IS CREATING NEW KNOWLEDGE”

Neil Armstrong

Division of Research & Innovation

ACCELERATE RESEARCH EXCELLENCE



OUR TEAM



ORGANISATIONAL CHART RESEARCH & INNOVATION DIVISION SCHOOL OF MEDICAL SCIENCES



Research Committee 2022-2023

Chairperson

Assoc. Prof. Dr. Asrenee Ab. Razak
Deputy Dean (Research & Innovation)

Committee Members

Prof. Dr. Azidah Abdul Kadir
Dept. of Family Medicine

Prof. Dr. Rosline Hassan
Dept. of Hematology

Prof. Dr. Liza Sharmini Ahmad Tajudin
Dept. of Ophthalmology

Prof. Dr. Chan Yean Yean
Dept. of Microbiology & Parasitology

Prof. Dr. Kamarul Imran Musa
Dept. of Community Medicine

Assoc. Prof. Dr. Wan Mohd Zahiruddin Wan Mohammad
Dept. of Community Medicine

Assoc. Prof. Dr. Muzaimi Mustapha
Dept. of Neurosciences

Assoc. Prof. Dr. Tuan Hairulnizam Tuan Kamauzaman
Dept. of Emergency Medicine

Assoc. Prof. Dr. Mahaneem Mohamed
Dept. of Physiology

Assoc. Prof. Dr. Rosediani Muhamad
Dept. of Community Medicine

Assoc. Prof. Dr. Wan Faiziah Wan Abdul Rahman
Dept. of Pathology

Assoc. Prof. Dr. Kirnpal Kaur Banga Singh
Dept. of Microbiology & Parasitology

Assoc. Prof. Dr. Kueh Yee Cheng
Biostatistics & Research Methodology Unit

Assoc. Prof. Dr. Norhafiza Mat Lazim
Dept. of Otorhinolaryngology

Dr. Rohimah Mohamud
Dept. of Immunology

Dr. Nazihah Mohd Yunus
Human Genome Centre

Dr. Zefarina Zulkafli
Dept. of Hematology

Secretariate

Mr. Che Ismail Che Lah
Research & Innovation Division

Mr. Zulkefli Sanip
Central Research Laboratory

Mdm. Abdah Karimah Che Md Nor
Central Research Laboratory

Mdm. Wan Roslizawane Wan Yusuf
Research & Innovation Division

Research Committee Meeting

***26 January
2024***

Scheduled Meeting

***31 May
2024***

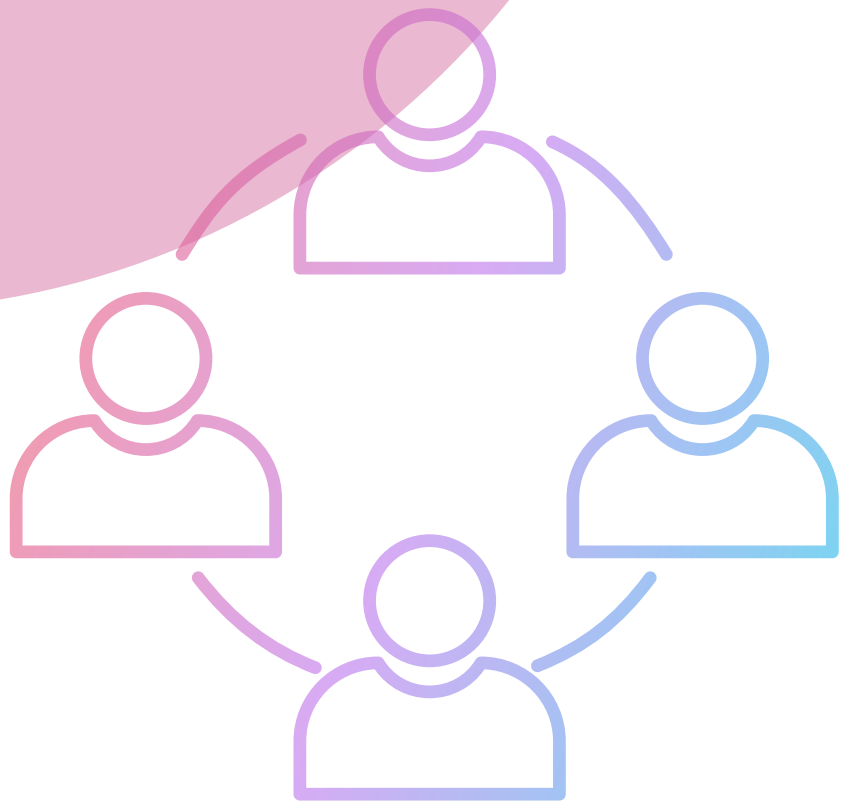
Scheduled Meeting

***24 August
2024***

Special Meeting

***11 November
2024***

Scheduled Meeting



Grant Application & Approval

Type of Grants	International	National	Industry	University	Total Application	Approved Grants	Total (RM)
FRGS		13			53	13	1,720,586.00
External	4	8	15			18	406,130.00
RU Team				2		2	143,620.00
Short Term				25	25	20	632,076.60
APEX Era				1		1	100,000.00
TOTAL	4	21	15	28	78	54	3,002,414.60

Grant Final Report

Type of Grant	Total Number
Short Term	7
RUI	6
Bridging/Bridging Incentive	3
External	9
GIPS-PHD	6
TOTAL	31



KPI MyRA Activities/Programs

Year-round activities/programs to boost our KPI and MyRA achievement.

- ▶ WOS indexed journal APC payment assistance Q1 Q2.
- ▶ Payment assistance for the publication of JCR/ISI Q3/SCOPUS Indexed Journals (RM2000.00/per article).
- ▶ Payment assistance for journal services (Enago/Scribendi).
- ▶ Incentive assistance for the purchase of research materials and subject/patient honorarium payments for lecturers who do not yet have a research grant (maximum RM5000.00).
- ▶ PPSP Graduate Publication Incentive.
- ▶ Maintenance and repair of laboratory equipment for research use (service and spare parts).
- ▶ Activities to support the achievement of KPIs under the Research & Innovation Division.
- ▶ Complementary projects of the Central Research Laboratory (CRL).
- ▶ Assistance for activities/programs to improve KPI MyRA Departmental assistance for activities/programs at the department level (RM1000.00 per department).
- ▶ PPSP Research Excellence Award Program 2023.
- ▶ Research & Innovation Division management/operation allocation (Vot 23000 & Vot 27000).

Publication Payment Incentive WOS Q1 & Q2

Distribution	Amount (RM)
Mac 2020	180,000.00
April 2021	150,000.00
August 2021	250,000.00
February 2022	300,000.00
July 2022	350,000.00
November 2022	150,000.00
March 2023	800,000.00
TOTAL	2,180,000.00

Total Payment: RM 206,383.81 (Year 2023)
Allocation Balance: RM 593,616.19

Q1 & Q2 Publication (Year 2023)

Application	Q1	Q2	Total
46	25	27	52

**Average Payment:
RM 3,968.91/Article**

Graduate Publication Incentive

Year	Accepted Allocation (RM)	Total of Recipient	Distribution (RM)	Total Publication
2019	100,000.00	17	27,000.00	20
2020	150,000.00	68	106,000.00	86
2021	-	94	162,000.00	116
2022	250,000.00	129	186,000.00	192
2023	250,000.00	106	110,000.00	144
TOTAL	750,000.00	414	591,750.00	558

Customer Satisfaction

PPSP Research & Innovation Division customers rated the service on a scale of 4 & 5 (Good & Very Good). It is indicating that they were very satisfied or extremely satisfied with the service they received. This high rating suggests that the division is performing well in meeting customer expectations and delivering quality service, such as:

- ▶ Fast reviewing process of the final grant report.
- ▶ Good and professional in research management services.
- ▶ Quick response and feedback on possible article processing fees.

Achievement of Quality Objective (MS ISO 9001:2015)

At least 95% of the research certificate applications sent to Research & Innovation Division, PPSP will be forwarded to the reviewer (JKP) within 2 weeks from the date the completed application form is received.

92.5%

100%

Ensure that at least 80% of the order form (LPO) for the purchase of VOT 27000 can be returned to the researcher for action within 7 working days after being signed by the Deputy Dean of Research & Innovation.

Ensure that at least 80% of VOT 35000 asset purchase applications directly worth RM1000 < RM20,000 can be returned Official Order Form (LPO) to the researcher for action within 10 working days from the date the application is received.

100%

100%

Ensure that at least 90% of the USM Short Term Grant Final Report received (complete) can be sent to the RCMO within 6 weeks.

Achievement of Quality Objective (PPSP Level)

- At least 60% of eligible academic staff will be involved in the research as Principal Investigator (PI).

(283/321 x 100)
(Achieved)

88.2%

- At least 75% of qualified lecturers have published at least one paper in an indexed journal as main author or correspondence author.

53.3%

(171/321 X 100)
(Not Achieved).

Corrective Action has been done appropriately.

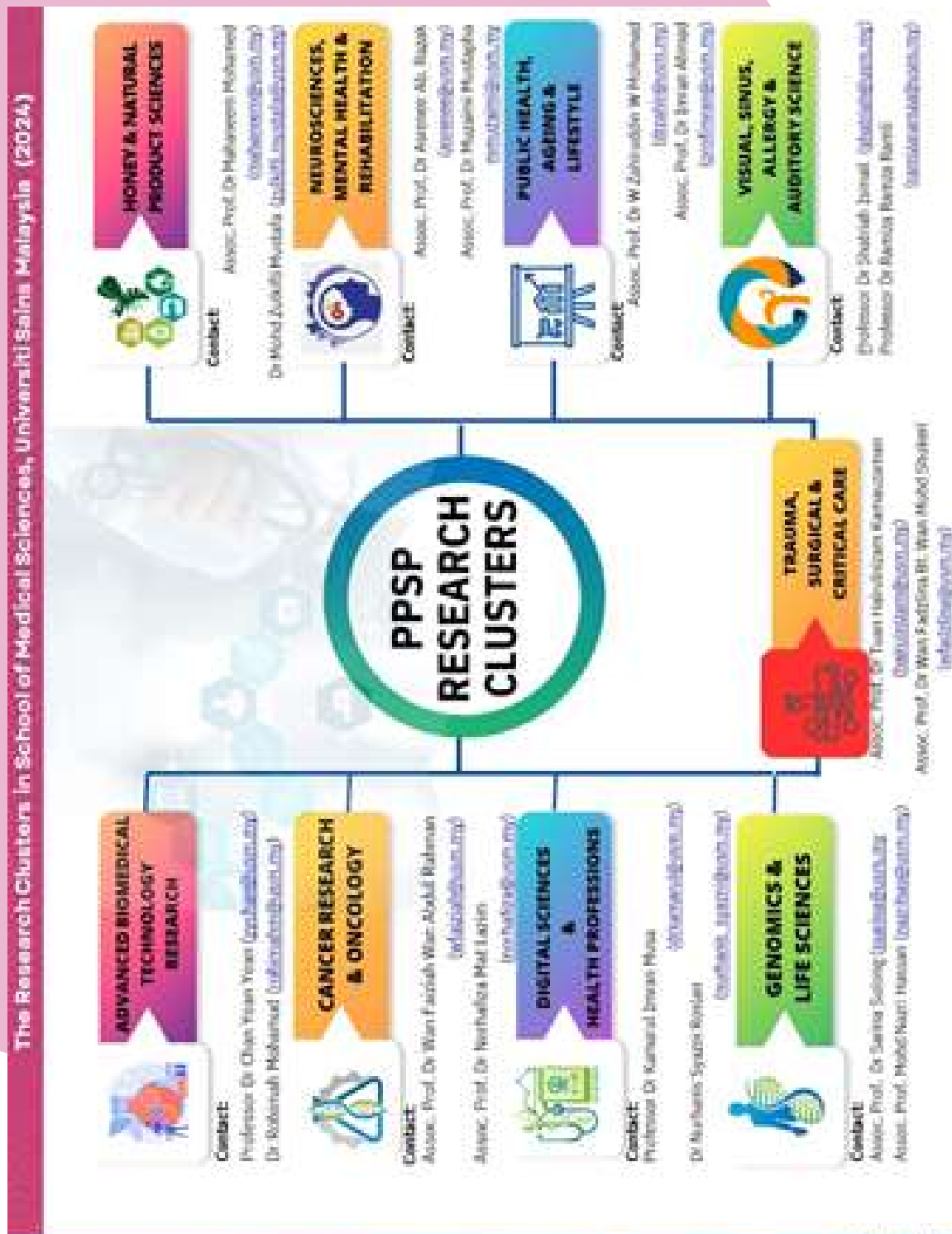
Monthly Research Presentation (MRP)

Month	Presenter	Title
January	AP Dr. Norsarwany Mohamad	Cancer-Associated Fibroblast In Colorectal Cancer (CrC): Friends Or Foes?
	Dr. Marahaini Musa	Challenges in Managing Children with Leukaemia in Hospital USM.
February	Dr. Nik Adilah Nik Othman	The Effect Of Quranic Rhythm Therapy For Tinnitus Patients.
	Dr. Sanihah Abdul Halim	End Epilepsy
March	AP Dr. Zaharah Sulaiman	Qualitative Assessment of Sexual and Reproductive Health and Rights And Access to Health Care Services Among Women Living with HIV within the Context of Prevention Of Mother-To-Child Transmission of HIV In Malaysia.
	Dr. Ahmad Aizat Abdul Aziz	Down Regulated Expression Levels of Mir-27b And Mir- 451a As Potential Biomarkers for TNBC Patients.
Mei	AP Dr. Zul Izhar Mohd Ismail	Virtual Anatomy Museum.
	AP Dr. Tuan Hairulnizam Tuan Kamauzaman	Simlearningspace (Slace): Sistem Pengurusan Simulasi bagi Pendidikan Perubatan.
June	Dr. Siti Nurma Hanim Hadie	Reimagining Anatomy Core Competency: From Ancient To Avant-Grade.
	Dr. Ainul Bahiyah Abu Bakar	Role of <i>Heterotrigona Itama</i> Bee Bread on Obesity-Induced Male Reproductive Impairment in High-Fat Diet Obese Rat Model.

Monthly Research Presentation (MRP)

Month	Presenter	Title
July	Dr. Mohd Zulkifli Mustafa	Moonshot Approach in Transformation Program: A Case Study of National Artsience Prize 2022 Champion.
	AP Dr. Khairil Amir Sayuti	Myocardial Mapping in Non-Ischaemic Cardiomyopathy.
August	AP Dr.Tengku Alina Tengku Ismail	Men and Health-Seeking Behaviour: Findings from The State of Kelantan.
	AP Dr. Azhany Yaakub	Effects of Intracameral Ranibizumab in Experimental Trabeculectomy.
September	Dr. Rohimah Mohamud	A Novel Approach on Targeting Tnfr2 for Immunotherapeutics.
	Dr. Wan Nor Arifin Wan Mansor	Partial Verification Bias Correction in Diagnostic Accuracy Studies.
October	Dr. Nik Nor Izah Nik Ibrahim	Endothelial Microparticles as Potential Biomarkers for Endothelial Dysfunction in Hypercholesterolemia and Its Correlation with Pulse Wave Analysis.
	AP Dr. Mohd Zulfakar Mazlan	The Accuracy of Point of Care Test Procalcitonin in Intensive Care Unit.
November	Dr. Aini Ismafairus Abd Hamid	Unlocking The Mind: Exploring Cognitive Functions Through FMRI .
	Dr. Rosnani Zakaria	The Effectiveness of TB Education Program Among Secondary School Student in Kelantan.

Research Clusters in School of Medical Sciences



School of Medical Sciences
Universiti Sains Malaysia

RESEARCH CLUSTER

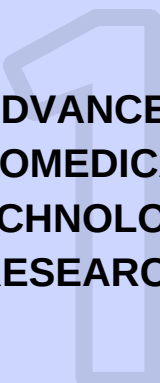
Nine (9) Research Clusters have been established to be a platform for researchers who are experts in their respective fields to formulate strategies and improve a more systematic, high quality and sustainable research ecosystem.

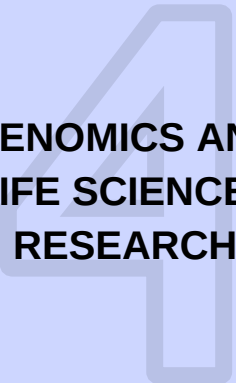
This initiative is expected to improve the performance and visibility of impactful research in PPSP and USM.

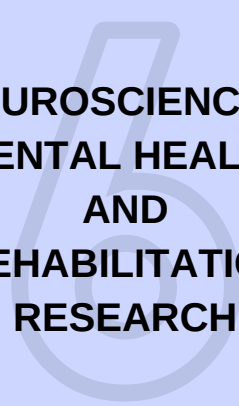
Please contact the respective Head and Co-Head of the research clusters for info and further collaboration.

Division of Research and Innovation
School of Medical Sciences, Health Campus
Universiti Sains Malaysia
Email: research@hsn.usm.my Tel: 05-7570604

9 Research Clusters in School of Medical Sciences

Cluster	Sub-Cluster	Contact Person
 ADVANCED BIOMEDICAL TECHNOLOGY RESEARCH	1. Infectious Diseases 2. Immune Response Analysis 3. Molecular & Proteomic Analytical Detection 4. Biosensors and Nanotechnology 5. Bioassay Diagnostics Technology Platform 6. Advanced Digital Technologies in Biomedical Diagnostics	Head of Cluster: Professor. Dr. Chan Yean Yean Co-Head of Cluster: Dr. Rohimah Mohamud
 CANCER RESEARCH & ONCOLOGY	1. Cancer prevention, detection and biomarker discovery 2. Cancer genetics and precision medicine 3. Clinical and translational cancer research 4. Cancer therapeutics 5. Artificial intelligence and machine learning development in cancer care	Head of Cluster: Assoc. Prof. Dr. Wan Faiziah Wan Abdul Rahman Co-Head of Cluster: Assoc. Prof. Dr. Norhafiza Mat Lazim

Cluster	Sub-Cluster	Contact Person
 DIGITAL SCIENCES AND HEALTH PROFESSIONS RESEARCH	1. Curriculum Design and Development 2. Assessment and Test Development 3. Teaching and Learning 4. Faculty Development 5. Ethics, Professionalism & Quality Assurance 6. Well-Being in Medical & Health Professions Education 7. Technology in Medical & Health Professions Education 8. Medical Machine Learning 9. Health Information System 10. Big Data Analytics 11. Security and Ethics in Digital Sciences	Head of Cluster: Professor Dr. Kamarul Imran Musa Co-Head of Cluster: Dr. Nurhanis Syazni Roslan
 GENOMICS AND LIFE SCIENCES RESEARCH	1. Human Cytogenetics and Molecular Genetics 2. Pharmacokinetics, Pharmacogenetics & Drug analysis 3. Translational physiology 4. Biochemistry & cell biology 5. Evolutionary technology in stem cell and tissue engineering	Head of Cluster: Assoc. Prof. Dr. Sarina Sulong Co-Head of Cluster: Assoc. Prof. Dr. Mohd Nazri Hassan

Cluster	Sub-Cluster	Contact Person
 HONEY & NATURAL PRODUCT SCIENCES RESEARCH	1. Honey Research 2. Bee pollen & Propolis research 3. Apitheraphy 4. Virgin coconut oil & Olive oil 5. Natural & Herbal Medicine Research	Head of Cluster: Assoc. Prof. Dr. Mahaneem Mohammad Co-Head of Cluster: Dr. Mohd Zulkifli Mustafa
 NEUROSCIENCES, MENTAL HEALTH AND REHABILITATION RESEARCH	1. Clinical psychiatry/psychology, 2. Cognitive, Degenerative and ageing 3. Developmental and Educational Psychology 4. Molecular, Computational & System Neurosciences 5. Social and Health Psychology 6. Rehabilitation Science	Head of Cluster: Assoc. Prof. Dr. Asrene Ab. Razak Co-Head of Cluster: Assoc. Prof. Dr. Muzaimi Mustapha
 PUBLIC HEALTH, AGEING AND LIFESTYLE RESEARCH	1. Public Health Medicine 2. Family Health (Maternal-Child-Adolescent-Women-Men) 3. Health Management 4. Occupational Health 5. Environment Health 6. Aging 7. Lifestyle	Head of Cluster: Assoc. Prof. Dr. Wan Zahiruddin Wan Mohammad Co-Head of Cluster: Assoc. Prof. Dr. Imran Ahmad

Cluster	Sub-Cluster	Contact Person
TRAUMA, SURGICAL & CRITICAL CARE RESEARCH	1. Pre-hospital and disaster medicine 2. Older adult falls 3. Violence 4. Sepsis 5. Unintentional and intentional injury prevention 6. Geriatric critical care 7. Imaging in trauma	Head of Cluster: Assoc. Prof. Dr. Tuan Hairulnizam Tuan Kamauzaman Co-Head of Cluster: Assoc. Prof. Dr. Wan Fadzlina Wan Muhd Shukeri
VISUAL, SINUS, ALLERGY & AUDITORY SCIENCES RESEARCH	Ophthalmology 1. Ocular Wound Healing 2. Ocular Imaging & Genetics 3. Refractive & Ocular Surface Diseases 4. Ophthalmic Epidemiology 5. Ocular Pathology & Vascular 6. Children Visual Research 7. Neuro-ophthalmic & Electrophysiology 8. Retinal Research 9. Glaucoma Research ORL-HNS, Audiology and Vestibular. 1. Allergy & Smell Rhinology and Skull Base 2. Surgery 3. Airway, Voice, and Dysphagia 4. Ear & Hearing 5. Head & Neck Sciences 6. ORL Innovations 7. Paediatric ORL disorders 8. Obstructive Sleep Apnea 9. Vestibular	Head of Cluster: Professor Dr. Shatriah Ismail Co-Head of Cluster: Professor Dr. Ramiza Ramza Ramli

Central Research Laboratory

A LABORATORY FOR ALL



OUR TEAM

1 Mdm. Abdah Karimah Md. Nor
Research Officer

2 Mdm. Che Nurrul Hidayu Che Ismail
Medical Lab Technologist

3 Mdm. Norhanani Abdul Halim
Operation Assisstant

4 Mdm. Marini Sidek
Medical Lab Technologist

5 Mdm. Fatin Nabila Zulkefli
Medical Lab Technologist

Prof. Dr. Chan Yean Yean
Coordinator



6 Mr. Mohd Zamani Mat Zain
Medical Lab Technologist

7 Mdm. Wan Nur Izzah Wan Yusuff
Administration Asisstant

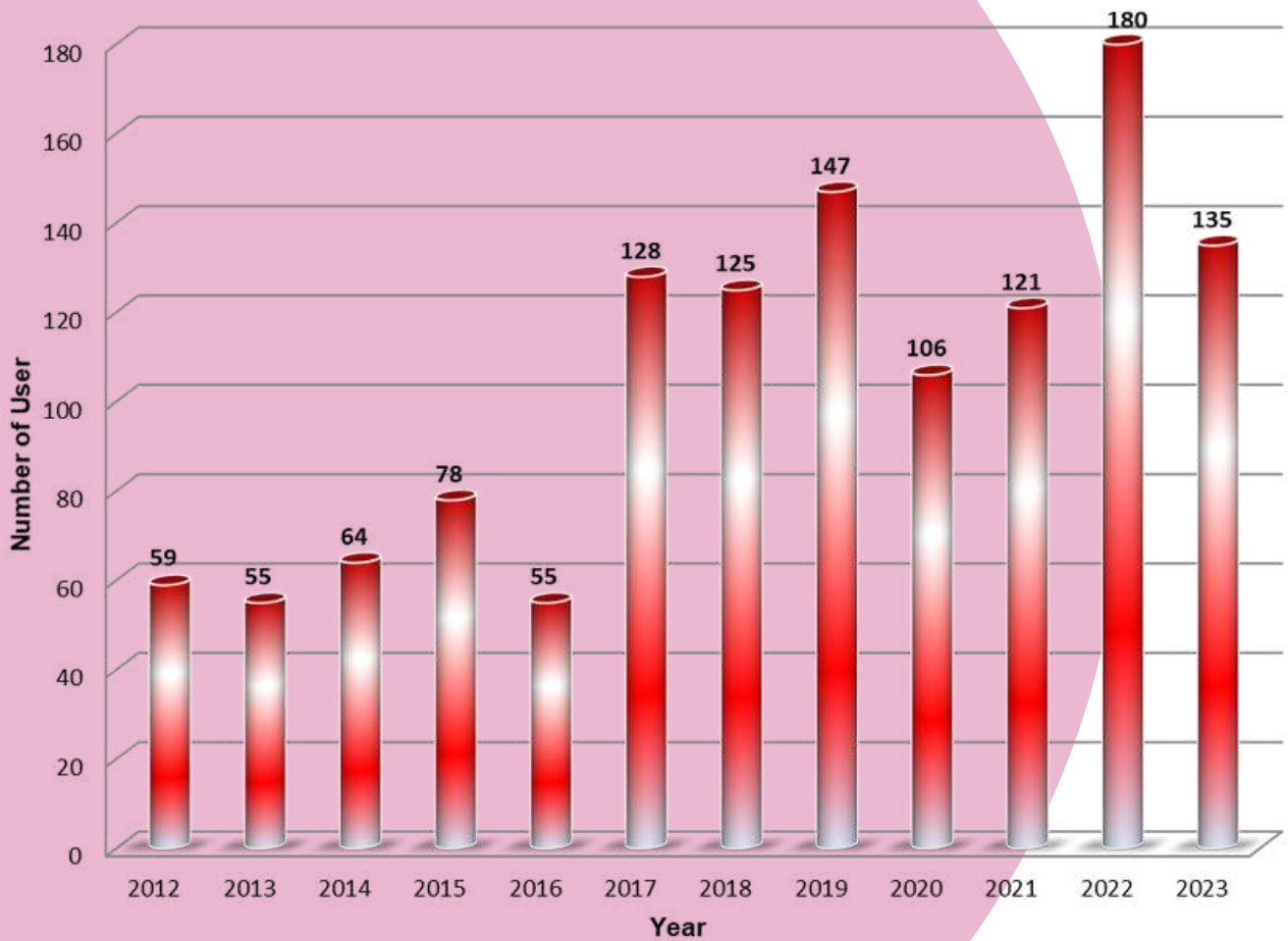
8 Mr. Mohd Nizam Muhamad Isa
Assistant Science Officer

9 Mdm. Afzan Hawani Alias
Medical Lab Technologist

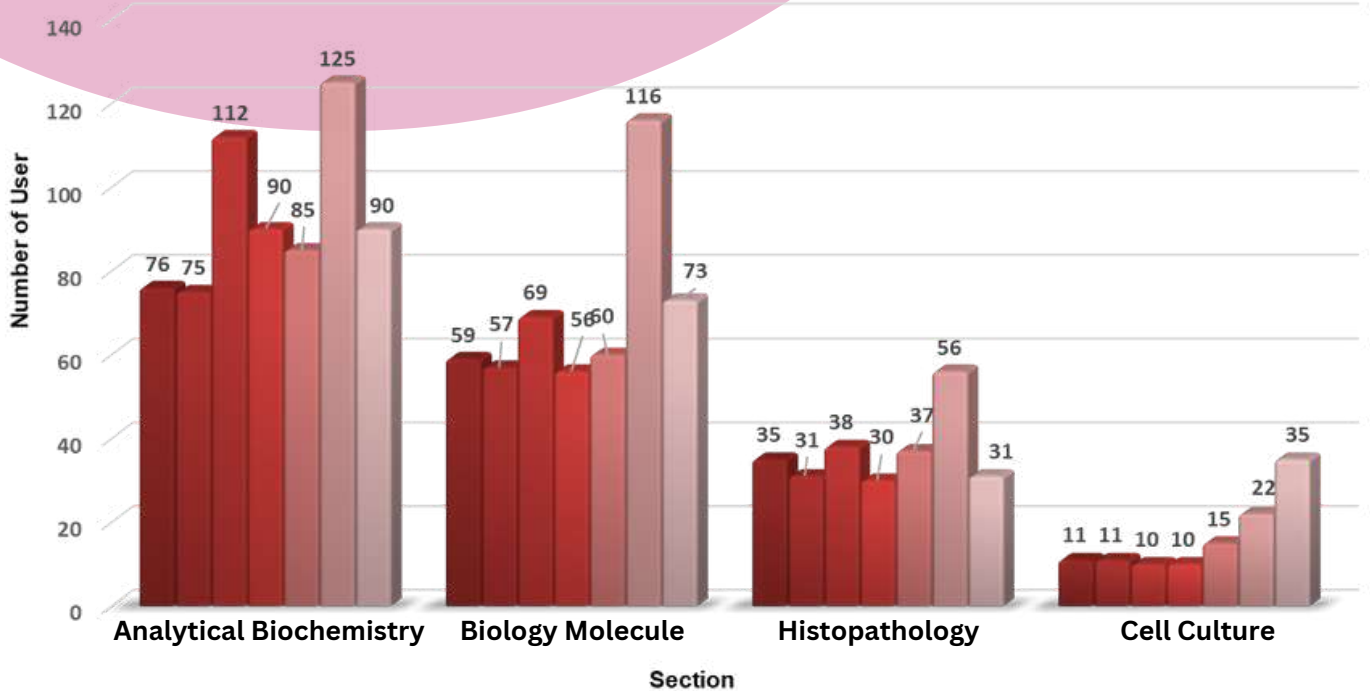
10 Mr. Zulkefli Sanip
Research Officer

11 Mr. Muhamad Faris Irfan Che Yusoff
Science Officer

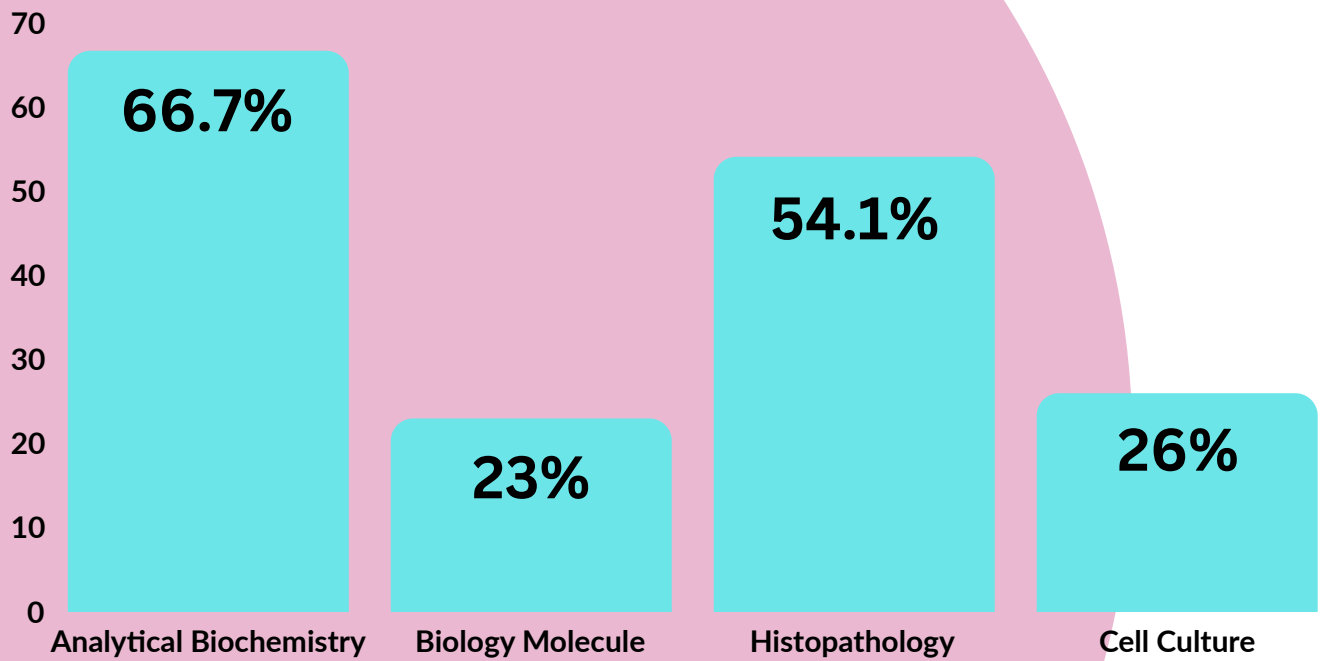
Registered User in CRL (2012-2023)



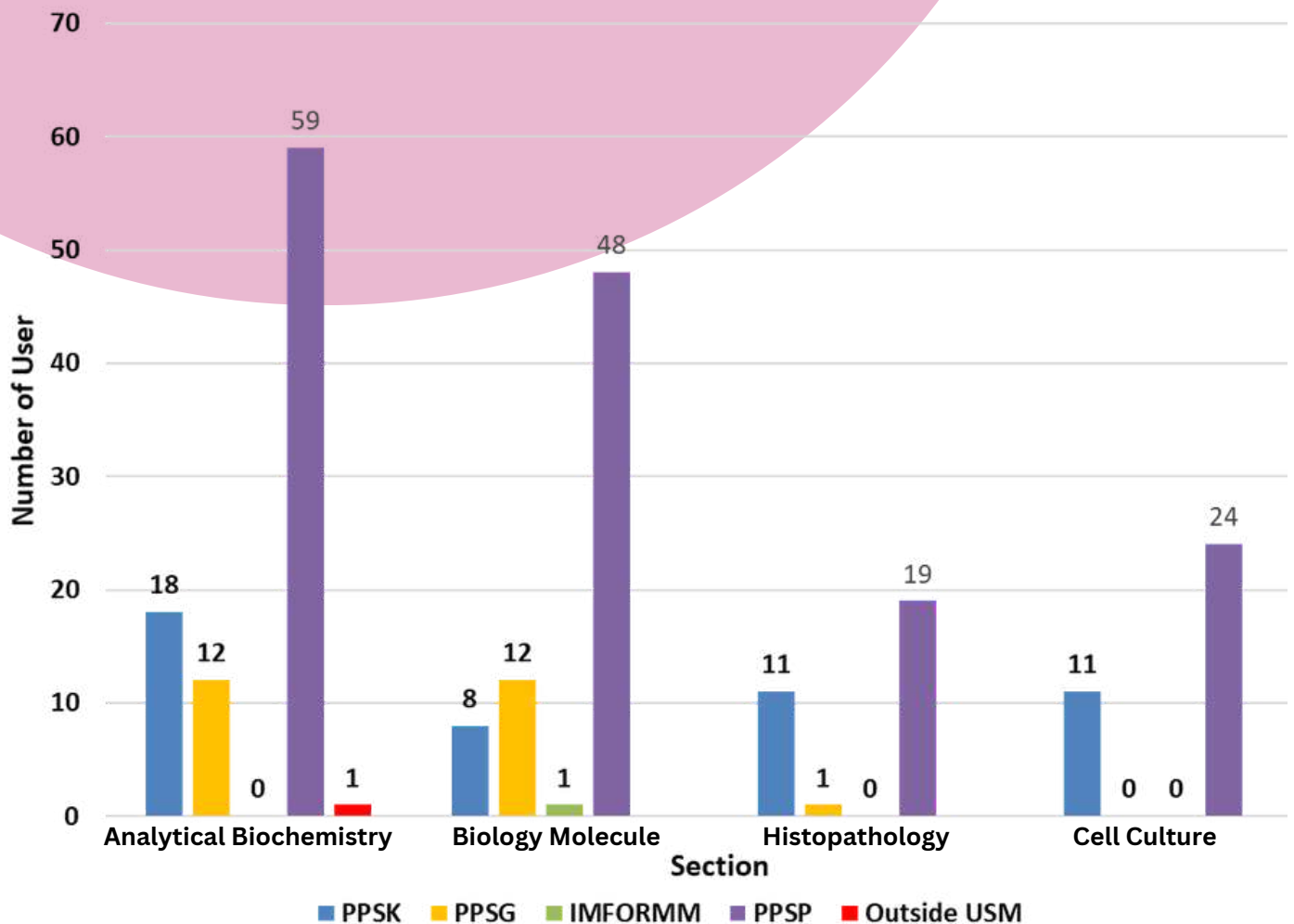
Registered User based on Section (2012-2023)



Percentage of Registered User in CRL (2023)



Registered User based on Section and Schools (2023)



New Equipment

TOTAL AMOUNT: RM 1,062,135.00 (2023)



qPCR



Spectrophotometer



Ultracentrifuge



Flowcytometer



Microtome



Waterbath

Ice Maker

Mini Centrifuge

Multichannel Pipette

Ultrasonic Bath

Laptop & Accessories

Analytical Balance



pH Meter

Equipment Maintenance

**TOTAL AMOUNT:
RM 89,229.00**

Customer Feedback

96.7% Respondents agreed the facilities offered are appropriate for research laboratory.

Respondents agreed equipment provided is relevant and accessible to researchers. **90.2%**

95.0% Respondents agreed staffs provided good cooperation to researchers .

Respondents agreed registration process and booking system are easy and accessible to researchers. **96.7%**

SUGGESTION FOR IMPROVEMENT

- Improve cooperation between staffs and students.
- Improve booking slot system to cater researchers equally. Some equipment need to limited booking slot while other need frequent slot.
- Need additional unit for frequently used equipment, old equipment need for replacement, and upgrade equipment specification based on the research requirement.
- Equipment should be located at the proper section to improve the workflow in the lab.

Audit finding:

1 NCR, CLAUSE 10.2
2 SFI

Objective Quality

**At least 90% application for
laboratory usage is approved
within 3 working days.**

100%

**“WITHOUT CONTINUAL GROWTH AND PROGRESS, SUCH WORDS AS
IMPROVEMENT, ACHIEVEMENT, AND SUCCESS HAVE NO MEANING”**

Benjamin Franklin

Competency Training

Mac

Good Laboratory Pipetting



May

Webinar on qPCR



July

Webinar on New Technology in qPCR, PCR and Western blotting

Seminar series

Session 1:
Stain-Free PAGE, Save 80% of your time

Session 2:
Low Yield? Poor Sensitivity? High Background?
Say Goodbye to These Problems With PCR BIOSYSTEMS!

Speaker

Nadia Darmadi
Product Specialist
Impresso P.T.

Edmund Lein
Product Specialist
Impresso P.T.

Join Us

If your research involve:

- PCR & Real-Time PCR
- Western Blot (Save 80% of your time)

Event Details

Date: 10th July 2023
Time: 11.00AM - 12.00PM
Mode: Cisco Webex Meeting
**Link to webinar will be sent 1 week before the event

Organisers

U-M CRL
UNIVERSITI SAINS MALAYSIA

Register Now

marketing@myimpac.com | +60 16-990 6293 | www.myimpac.com

Demonstration on QIAquant 96 Real-time PCR System

Demonstration:
QIAquant 96 Real-Time PCR System

26th July 2023 (Monday)
10.00 am - 1.00 pm

Jointly organized by:
Central Research Laboratory, School of Medical Sciences, USM &
Analisa Resources Sdn Bhd

U-M CRL
UNIVERSITI SAINS MALAYSIA

everlife
AnalisaResources

QIAGEN



August

CSE on Microplate Reader

The 1st Continuous Scientific Education (CSE) Series in CRL.

U-M CRL
UNIVERSITI SAINS MALAYSIA CENTRAL RESEARCH LABORATORY

1ST CSE SERIES:
TECAN NANOQUANT INFINITE M200
BASIC PRINCIPLE & TECHNICAL DEMONSTRATION

● 9th August 2023 10am - 12pm

TECAN nanoQuant™ infinite M200 is a micro-volume spectrophotometer. It is the ideal choice for many research and clinical applications, as it enables rapid, low-volume measurements with maximum accuracy. The key features of TECAN nanoQuant™ infinite M200 are its excellent light stability, low background noise, and wide dynamic range. It enables measurements of DNA, oligonucleotides, proteins, and other biochemical compounds, in volumes as low as 15 µl. It can measure the absorbance (optical density) of samples in various configurations, including 96-well plates and cuvettes.

Zulkifli Sanip
Research Officer

Ghe Nurput Hidayu Ghe ismail
Medical Lab Technologist

September

CSE on Chemical Spillage & PPE

CME@CRL
TUMPAHAN BAHAN KIMIA & ALAT LINDUNG DIRI
Kaedah & Langkah Mengatasi Tumpahan Bahan Kimia serta Penggunaan Alat Lindung Diri di Makmal

TARIKH
25 September 2023

MASA
10.00 pg - 11.30 pg

TEMPAT
Makmal Penyelidikan Pusat, PPSP

AGENDA
10 pg - 10.30 pg: Pengenalan & Teori
10.30 pg - 11.30 pg: Demonstrasi & Hands on

PENGENALAN, TEORI & DEMONSTRASI OLEH:
En. Muhd Nizam Muhamad Isa
Penolong Pegawai Sains Makmal Penyelidikan Pusat, Pusat Pengajian Sains Perubatan

U-M CRL
UNIVERSITI SAINS MALAYSIA



October

CSE on Microtome

U-M CRL
UNIVERSITI SAINS MALAYSIA

CME@CRL
ON SITE TRAINING
LEICA HISTOCORE MULTICUT MICROTOME

10 AM - 11 AM
INTRODUCTION, PRINCIPLE & OPERATION

11 AM - 12 PM
HANDS-ON & MAINTENANCE

CONDUCTED BY:
MR. ALBASER
APPLICATION SPECIALIST
HISTOCENTER (M) SDN BHD

3 OCTOBER 2023
TUESDAY

HISTOPATHOLOGY LABORATORY
CRL, PPSP

Staff Digitalization Meeting

U-M APEX
UNIVERSITI SAINS MALAYSIA

Mesyuarat Digitalisasi Staf Penyelidikan PPSP
Pengisian SKT & LPP 2023

25 OKTOBER 2023
10:00 AM
BILIK MESYUARAT R&I

ANJURAN BERSAMA
NORHELIZA BINTI MUKRAM @ SULAIMAN
PEGAWAI TADBIR

BAHAGIAN PENYELIDIKAN & INOVASI PPSP
CRL
CENTRAL RESEARCH LABORATORY



November

CSE on Microtome

U-M CRL
UNIVERSITI SAINS MALAYSIA CENTRAL RESEARCH LABORATORY

CME@CRL HISTOPATHOLOGY
WHAT YOU NEED TO KNOW IN PRACTICE

Wednesday
15 November 2023

Time
10:00am

WITH
Mohd Zamani Mat Zin
Senior Medical
Lab Technologist

10:00 - 10:30 AM OVERVIEW OF HISTOPATHOLOGY
10:30 - 11:00 AM TISSUE PROCESSING TECHNIQUE



CSE on UV-Vis Spectrophotometer

U-M CRL
UNIVERSITI SAINS MALAYSIA CENTRAL RESEARCH LABORATORY

CME@CRL ON SITE TRAINING

SHIMADZU UV-VIS SPECTROPHOTOMETER

19 & 20 NOVEMBER 2023
SUNDAY & MONDAY

CENTRAL RESEARCH LABORATORY, PPSP

CONDUCTED BY:
Nur Anisa Mohd Rashid
Application Chemist
Analytical & Measuring
Instruments Division
Shimadzu (M) Sdn Bhd

DAY 1 (9 AM - 4:30 PM)
Theory, Maintenance, Hardware
Features, Sample handling

DAY 2 (9 AM - 4:30 PM)
Software usage, Hands on different
modes, Resources in LabSolutions,
Report printing

Refreshment & CPD point provided



CSE on Real-time PCR

U-M CRL
UNIVERSITI SAINS MALAYSIA CENTRAL RESEARCH LABORATORY

ON SITE DRY & WET LAB TRAINING
BioRad CFX Opus 96 Real-time PCR Detection System

This Real-time PCR training is designed to equip participants with the understanding of BioRad CFX Opus 96 Real-time PCR Detection System. The course structure will consist of theory and practical session which include system hardware demo, software and application of cloud connectivity using 3i-Dr.

WEDNESDAY
22 November 2023

CENTRAL RESEARCH LABORATORY PPSP

SPEAKER
Dr. Nurul Adila Azemi
Field Application Specialist
Carvivo Sdn Bhd

AGENDA

9.30 am - 12.30 pm Registration, Theory & Practical Session
2.15 pm - 04.00 pm Software, Maintenance, Q&A Session



December

CSE on ICT: Website Development

 **CSE@CRL**
UNIVERSITI SAINS MALAYSIA
Continuing Scientific Education Series

MEMBINA LAMAN WEB: SEMUDAH A B C

RABU, 13 DISEMBER 2023
09:30 PAGI - 12.00 TGHARI
MAKMAL INFORMATIK PERUBATAN, PPSP

Laman web merupakan satu platform untuk menyampaikan informasi dan idea kepada umum. Pada era digital ini, laman web telah menjadi salah satu elemen penting dalam kehidupan manusia.

Sesi latihan ini akan mendedahkan peserta kepada pembinaan laman web yang interaktif, inovatif dan kreatif seiring ledakan *Artificial Intelligence (AI)* masa kini.

AGENDA

- Pengenalan
- Platform laman web
- Aplikasi AI dalam laman web
- Hands-on membina laman web
- Tip-tip membina laman web yang menarik

FASILITATOR
En. Muhamad Faris Irfan Che Yusof
Pegawai Sains
Makmal Penyelidikan Pusat
Pusat Pengajian Sains Perubatan



Continuous Improvement Air Quality Test



Laboratory Risk Assessment

Visit by OSH Officer and Engineers for assessing the risks in CRL and facility improvement plans.



Asset Disposal

Disposal of assets that not economical to repair.



Visit to Anatomy Laboratory

Exploring the opportunity for equipment sharing between Anatomy Laboratory and CRL.



Chemical Health Risk Assessment (CHRA)

CHRA done by certified officer in order to improve the chemical safety and awareness in CRL.



Other Activities

Eid Mubarak



Staff Day



OSH Day



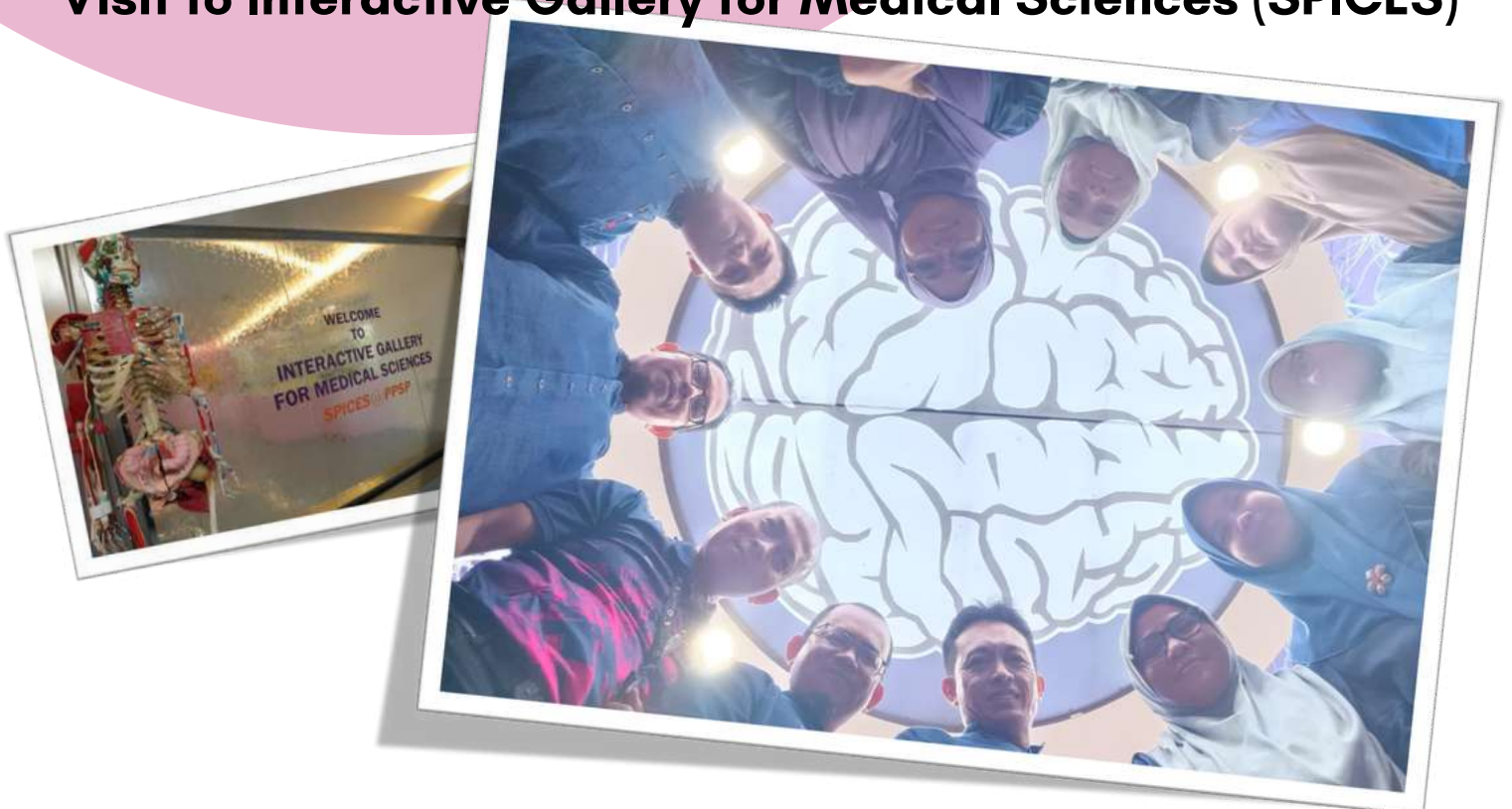
Lab Housekeeping



Fire Drill & We Stand for Palestine



Visit to Interactive Gallery for Medical Sciences (SPICES)



Annual Lunch



Birthday Celebration



CSE@CRL

CONTINUOUS SCIENTIFIC EDUCATION

Tecan NanoQuant infinite M200 Microplate Reader
Chemical Spillage & Personal Protective Equipments
Leica Histocore Multicut Microtome
Rotary & Automated Tissue Processor
Shimadzu UV-Vis Spectrophotometer
BioRad CFX Opus 96 Real-time PCR Detection System
Website Development

UoM CRL
UNIVERSITI SAINS MALAYSIA CENTRAL RESEARCH LABORATORY

1ST CME SERIES:
TECAN NANOQUANT INFINITE M200
BASIC PRINCIPLE & TECHNICAL DEMONSTRATION

9th August 2023 10am - 12pm

TECAN NanoQuant infinite M200 is a microplate spectrophotometer. It is the ideal choice for many research and clinical applications. As it enables rapid, low volume measurements with maximum accuracy. This new feature of TECAN NanoQuant infinite M200 are to ensure light stability, low background noise, and wide dynamic range. Features: Measurement of dual, single-wavelength, kinetics, and colorimetric, chemiluminescence, fluorescence, and ELISA. It can measure the absorbance of 1536 wells in 15 seconds. It also has a built-in thermal control system to reduce evaporation, including 96 well plates and microtiter.

Zulkelli Sanip
Research Officer

Ghe Nurul Hidayu (She Ismail)
Medical Lab Technologist

CME@CRL
TUMPAHAN BAHAN KIMIA & ALAT LINDUNG DIRI
Kaedah & Langkah Mengatasi Tumpahan Bahan Kimia serta Penggunaan Alat Lindung Diri di Makmal

TARIKH
25 September 2023

MASA
10.00 pg - 11.30 pg

TEMPAT
Makmal Penyelidikan Pusat, PPSP

AGENDA
10 pg - 10.30 pg: Pengenalan & Teori
10.30 pg - 11.30 pg: Demonstrasi & Hands on

PENYENALAN, TEORI & DEMONSTRASI OLEH:
En. Muhd Nizam Muhammad Isa
Penolong Pegawai Sains
Makmal Penyelidikan Pusat
Pusat Pengajian Sains Perubatan

UoM CRL
UNIVERSITI SAINS MALAYSIA CENTRAL RESEARCH LABORATORY

CME@CRL
ON SITE TRAINING
LEICA HISTOCORE MULTICUT MICROTOME

10 AM - 11 AM
INTRODUCTION, PRINCIPLE & OPERATION

11 AM - 12 PM
HANDS-ON & MAINTENANCE

CONDUCTED BY:
MR. ALBASER
APPLICATION SPECIALIST
HISTOCENTER (M) SDN BHD

3 OCTOBER 2023
TUESDAY

HISTOPATHOLOGY
LABORATORY
CRL, PPSP

UoM CRL
UNIVERSITI SAINS MALAYSIA CENTRAL RESEARCH LABORATORY

CME@CRL
HISTOPATHOLOGY
WHAT YOU NEED TO KNOW IN PRACTICE

Wednesday
15 November 2023

Time
10:00am

WITH
Mohd Zamani Mat Zin
Senior Medical Lab Technologist

10:00 - 10:30 AM OVERVIEW OF HISTOPATHOLOGY
10:30 - 11:00 AM TISSUE PROCESSING TECHNIQUE

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CME@CRL
ON SITE TRAINING
SHIMADZU UV-VIS SPECTROPHOTOMETER

19 & 20 NOVEMBER 2023
SUNDAY & MONDAY

CENTRAL RESEARCH LABORATORY, PPSP

CONDUCTED BY:
Nur Anisa Mohd Rashid
Application Chemist
Analytical & Measuring Instruments Division
Shimadzu (M) Sdn Bhd

Refreshment & CPD point provided

DAY 1 (8 AM - 4:30 PM)
Theory, Maintenance, Hardware Features, Sample handling

DAY 2 (9 AM - 4:30 PM)
Software usage, Hands on different modes, Resources in LabSolutions, Report printing

UoM CRL
UNIVERSITI SAINS MALAYSIA CENTRAL RESEARCH LABORATORY

CME@CRL
ON SITE DRY & WET LAB TRAINING
BioRad CFX Opus 96 Real-time PCR Detection System

This Real-time PCR Training is designed to equip participants with the understanding of the BioRad CFX Opus 96 Real-time PCR Detection System. The course structure will consist of theory and practical session which involve system hardware demo, software and application of cloud connectivity using 4G/LTE.

WEDNESDAY
22 November 2023

CENTRAL RESEARCH LABORATORY
PPSP

SPEAKER
Dr. Nurul Adila Azem
Field Application Specialist
Cervico Sdn Bhd

AGENDA
9.30 am - 12.30 pm Registration, Theory & Practical Session
2.15 pm - 04.00 pm Software, Maintenance, Q&A Session

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UNIVERSITI SAINS MALAYSIA CENTRAL RESEARCH LABORATORY

CSE@CRL
MEMBINA LAMAN WEB: SEMUDAH A B C

RABU,
13 DESEMBER 2023

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MAKMAL INFORMATIK PERUBATAN, PPSP

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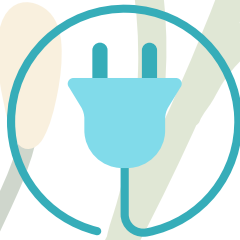
Sustainability@CRL

Lestar**@CRL**

Recycling papers



Electricity saving



Water saving



Sustainability awareness



USM- Cochrane Network

WHERE REVIEW MATTERS



OUR TEAM



PROF. DR. JACQUELINE HO
Cochrane Malaysia Advisor



PROF. DR. ABDUL RAZAK SULAIMAN
School Advisor



PROF. DR. HANS VAN ROSTENBERGHE
Cochrane USM Advisor



ASSOC PROF. DR. ASRENEE AB. RAZAK
Research Advisor



ASSOC. PROF. DR. NORHAYATI MOHD NOOR
Coordinator



NORAIDA HASAN
Study Search Officer



AP DR. YEE CHENG KUEH
Committee



NURUL AZURAH MOHD RONI
Committee



NOR SHUHADA AB RAHIM
Committee



AFZAN HAWANI ALIAS
Committee



ZULKEFLI SANIP
Committee

2023 Activities

1 Systematic Review and Meta-analyses of Interventional Studies Workshop

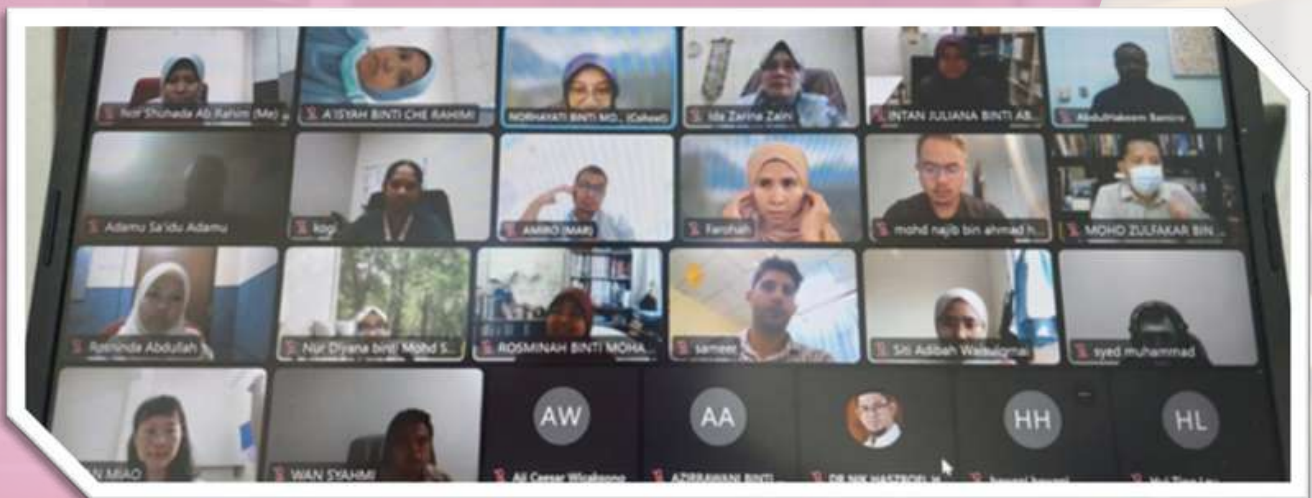
Aim:

To impart knowledge on systematic review and meta-analyses of interventional studies.

To provide skills in developing protocols and manuscripts for systematic review.

To provide skills to analyze meta-analyses data.

Date	12 July 2023, Wednesday
Time	8.45 am – 5.00 pm
Venue	Virtual conference via Webex, 40 participants
Organiser	1. USM Cochrane Network Site, School of Medical Sciences 2. Women's Health Development Association
Speaker	Assoc. Prof. Dr. Norhayati Mohd Noor
Content	Lectures & Hands-on 1. Introduction to systematic review and meta-analyses 2. Defining a review question 3. Writing a protocol 4. Searching for studies 5. Selecting studies 6. Assessing quality: ROB2 7. Analysing data & undertaking meta-analysis 8. RevMan web practical exercise 9. Assessing reporting biases 10. Assessing certainty of evidence



“RESEARCH IS SOMETHING THAT EVERYONE CAN DO, AND EVERYONE OUGHT TO DO. IT IS SIMPLY COLLECTING INFORMATION AND THINKING SYSTEMATICALLY ABOUT IT”

Raewyn Connell

2 The Art of Scientific Writing Workshop: Systematic Review

Aim:

To impart overall knowledge on writing a systematic review.

Date	14 July 2023, Friday
Time	8.30 am – 12.30 pm
Venue	Auditorium Sains@Bertam, 40 participants
Organiser	1. Advance Medical and Dental Institute, Bertam, USM 2. USM Cochrane Network Site, School of Medical Sciences
Speaker	Assoc. Prof. Dr. Norhayati Mohd Noor
Content	Lectures 1. Systematic Review of Interventional Studies 2. Systematic Review of Observational Studies 3. Systematic Review of Qualitative Studies



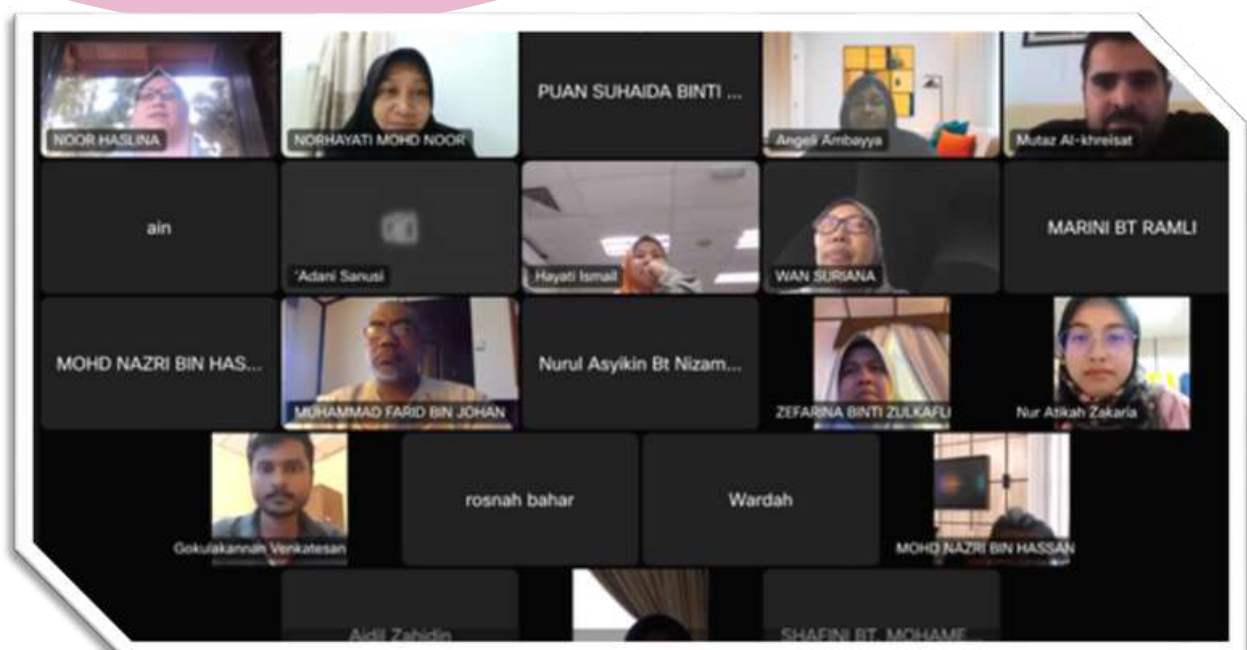


3 How to Write Review Article Workshop

Aim:

To impart overall knowledge on writing a systematic review.

Date	27 August 2023, Sunday
Time	3.00 pm – 5.00 pm
Venue	Virtual conference via Webex, 30 participants
Organiser	1. Haematology Department, School of Medical Sciences, USM 2.USM Cochrane Network Site, School of Medical Sciences
Speaker	Assoc. Prof. Dr. Norhayati Mohd Noor
Content	Lectures 1. Systematic Review of Interventional Studies 2. Systematic Review of Observational Studies

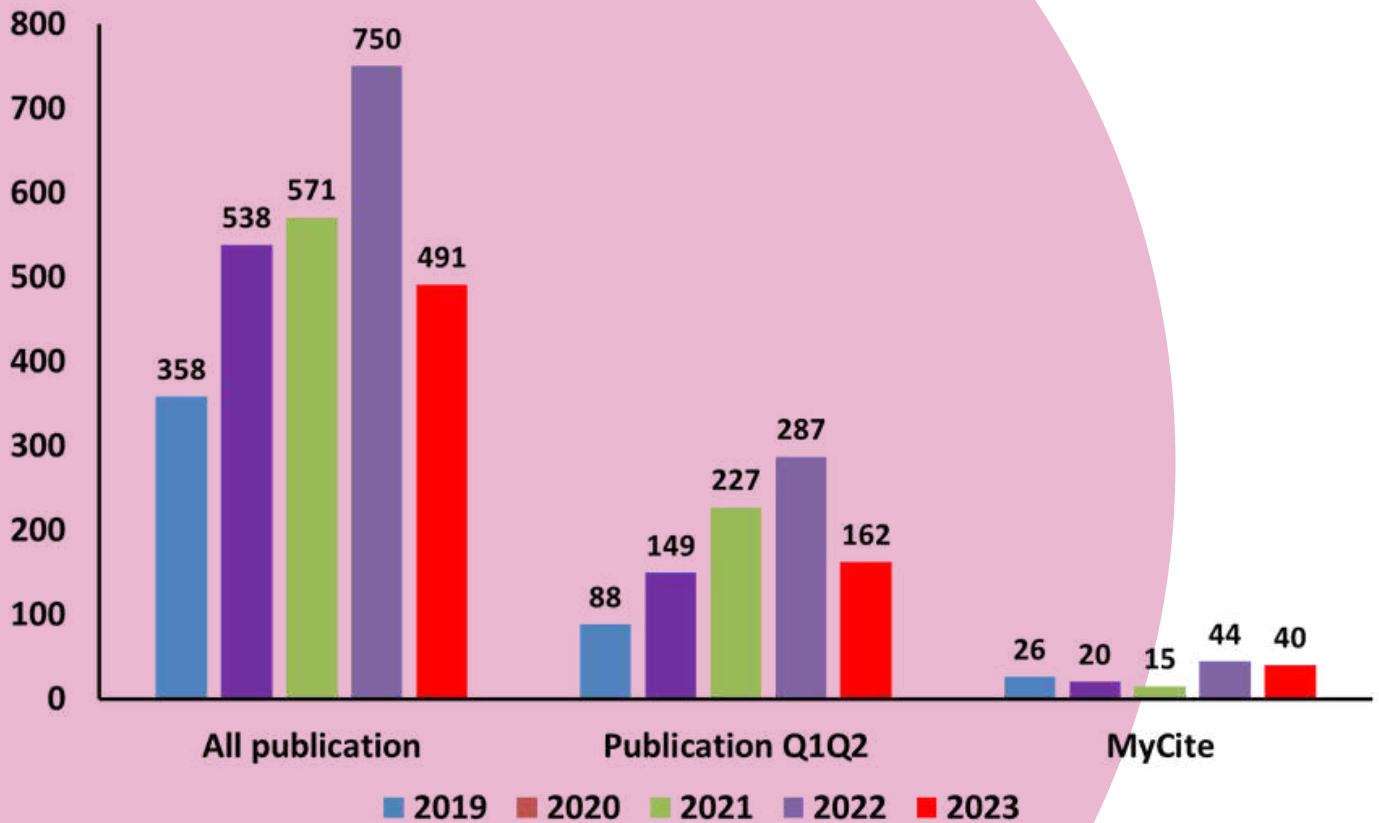


KPI & MYRA

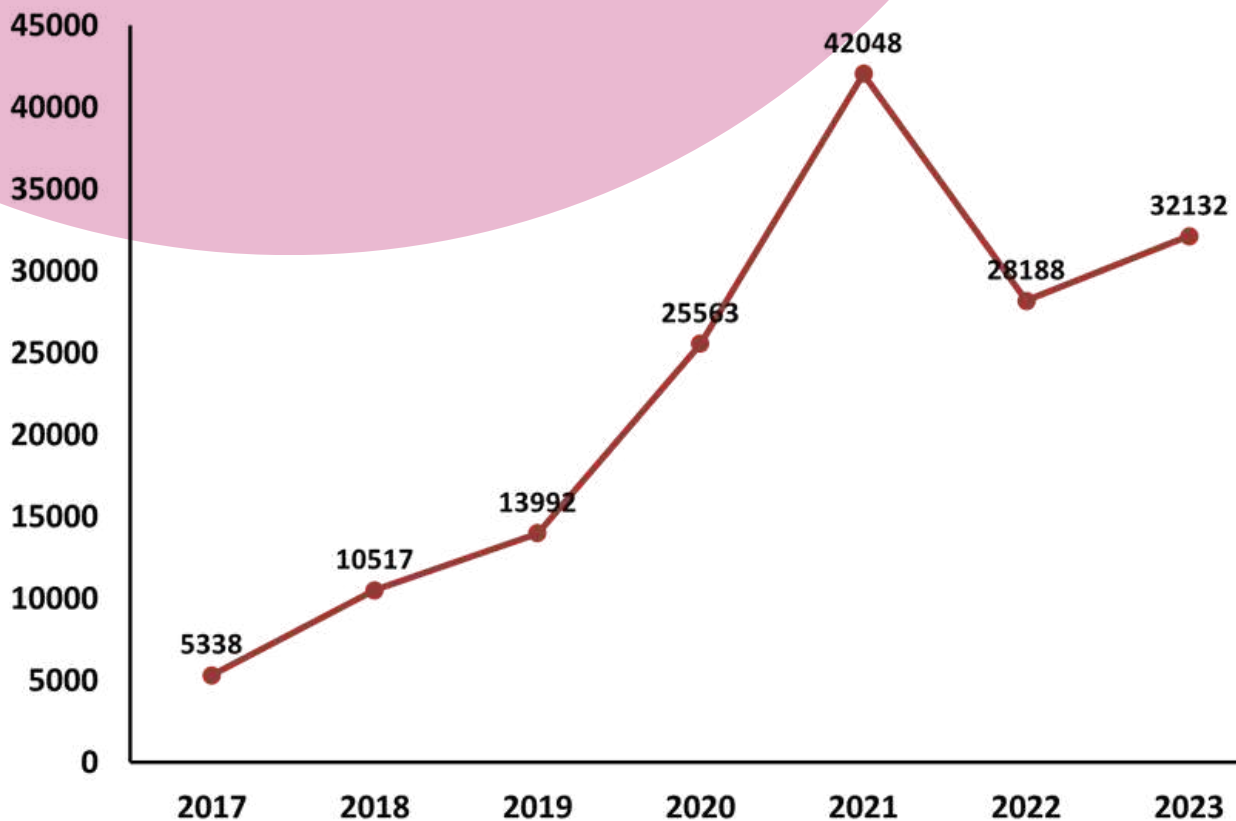
ACHIEVEMENT & RESPONSIBILITY



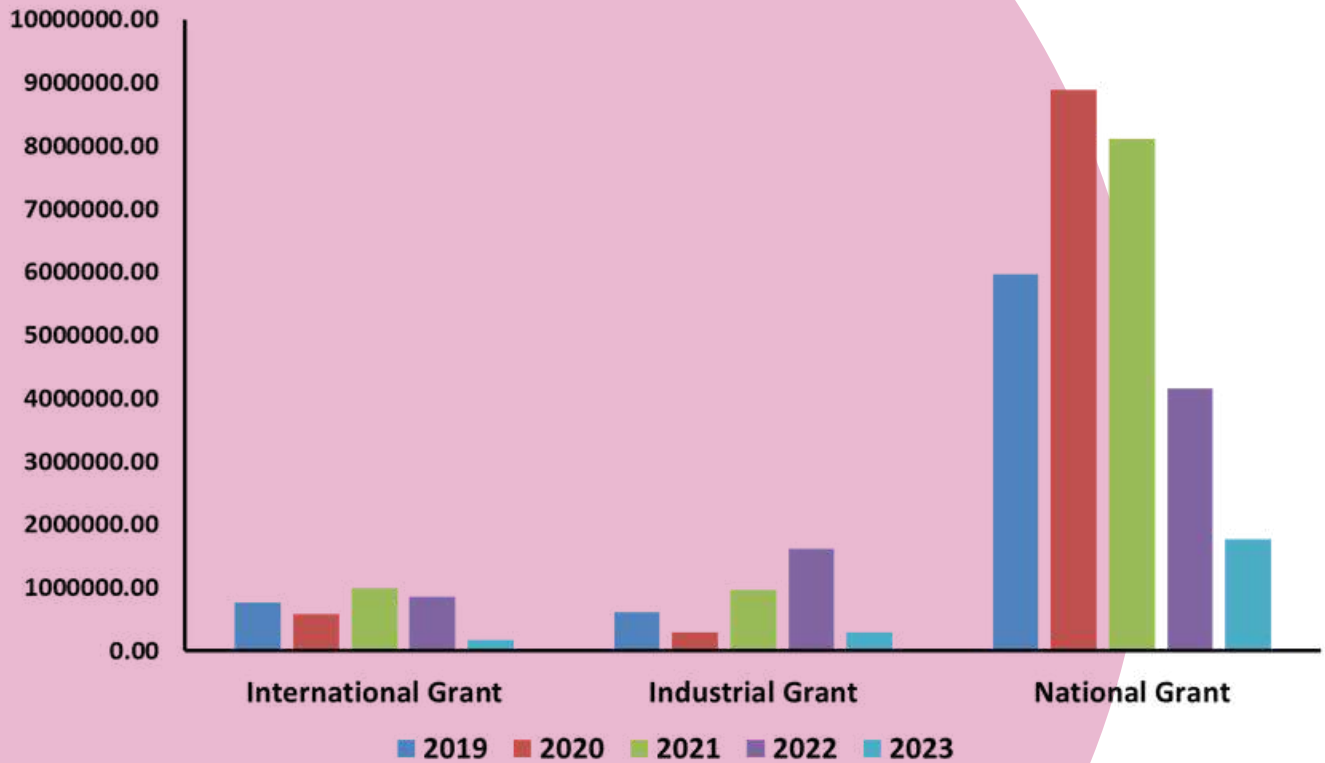
Total Number of Publication (2019-2023)



Total Citation of Publication (2017-2023)



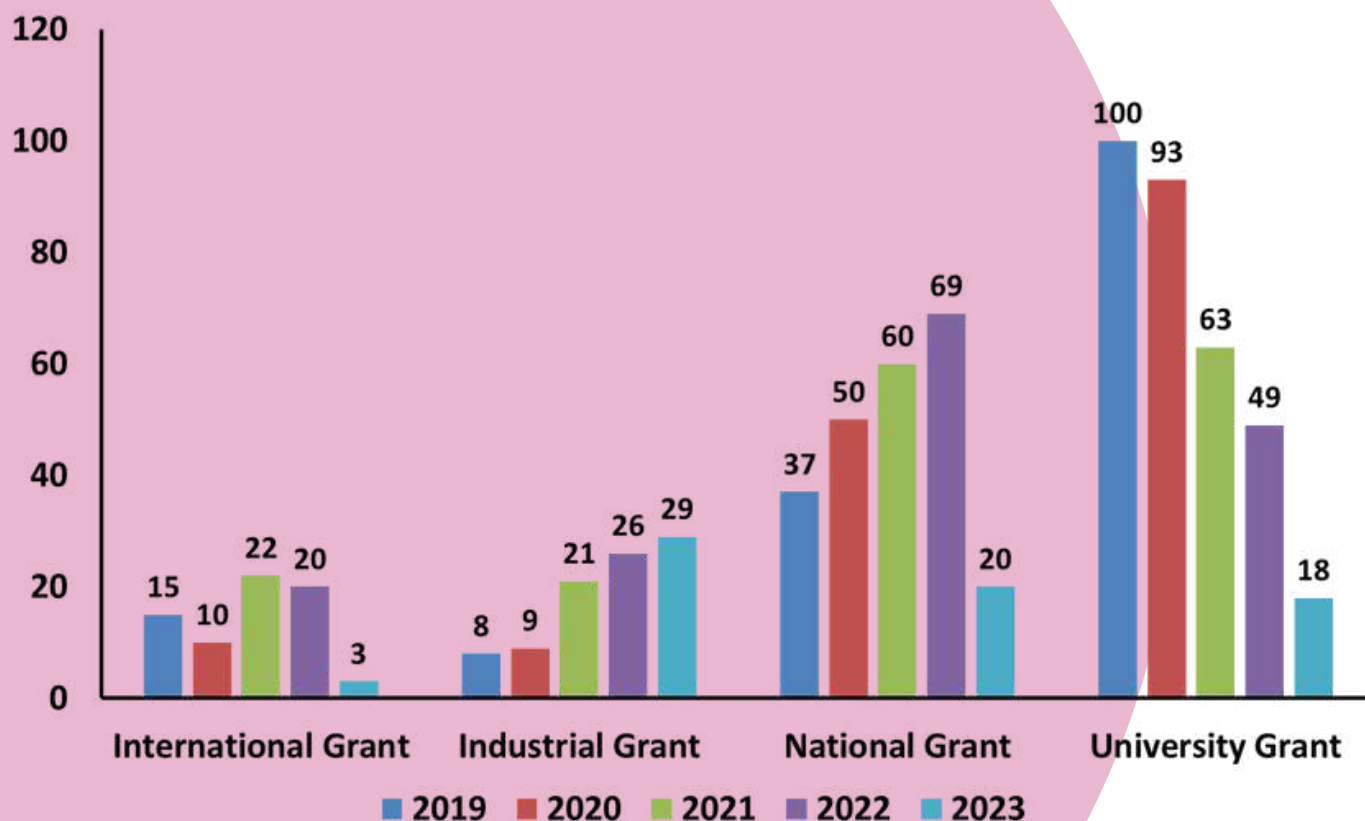
Total Amount of Grants Received for Active Project (RM)



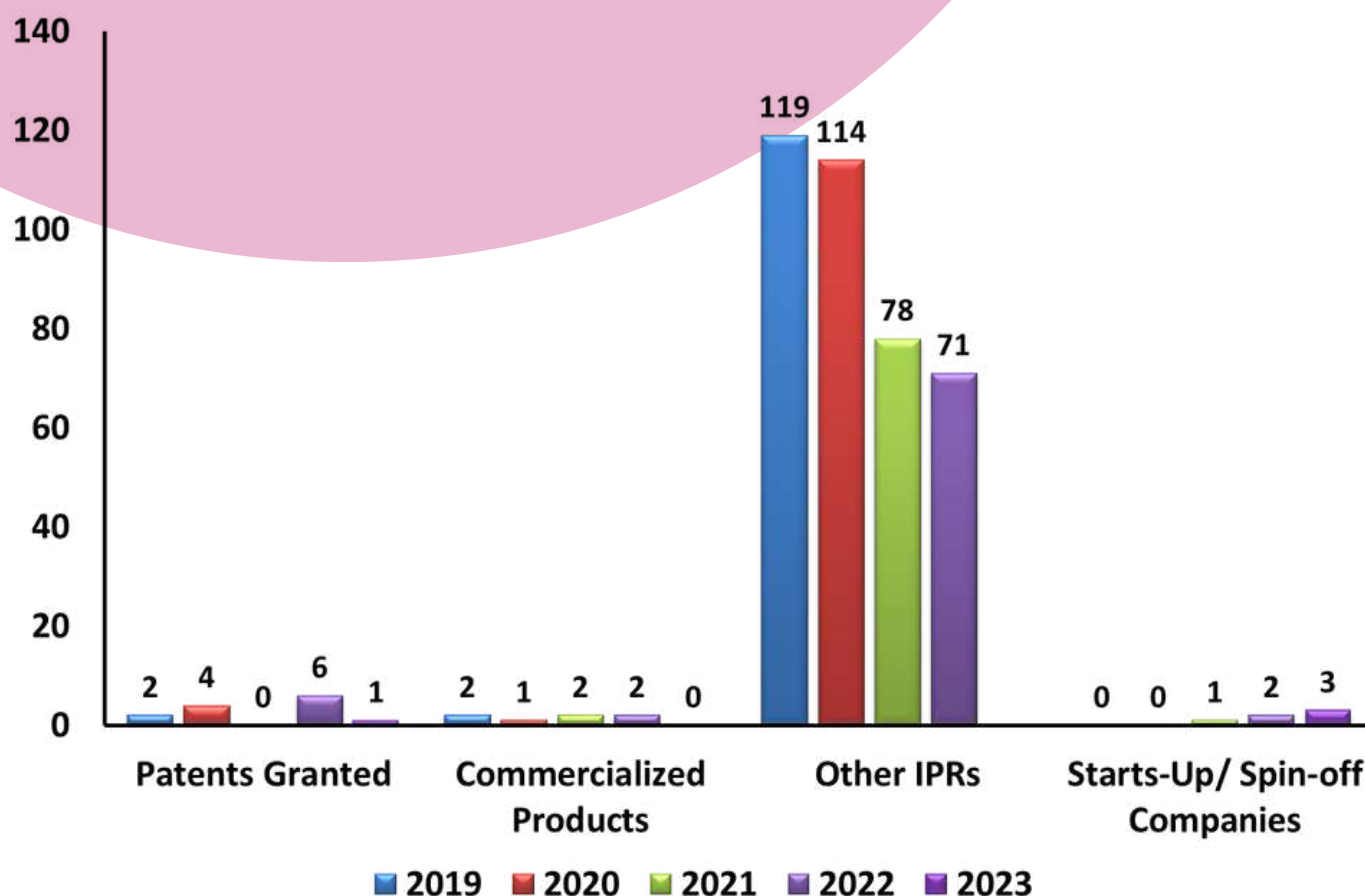
	International Grant	Industrial Grant	National Grant
2019	768,009.29	607,780.63	5,966,873.59
2020	575,444.09	295,473.00	8,893,253.64
2021	998,621.34	965,408.04	8,104,381.49
2022	855,707.38	1,620,044.72	4,157,236.00
2023	167,597.00	291,670.00	1,771,656.00

**University Grant : RM 767,047.00*

Number of Academic Staff involved as Principal Investigator of Research Grants



Innovation



ACKNOWLEDGEMENT

PATRON

Prof. Dr. Abdul Razak Sulaiman
Dean of PPSP

ADVISOR

Assoc. Prof. Dr. Asrenee Abdul Razak
Deputy Dean (R&I)

RESEARCH & INNOVATION REPORT

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cismailcl@usm.my

CENTRAL RESEARCH LABORATORY REPORT

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faris@usm.my

USM COCHRANE- NETWORK REPORT

Assoc. Prof. Dr. Norhayati Mohd Noor
hayatikk@usm.my

KPI & MYRA REPORT

Mr. Muhamad Faris Irfan Che Yusoff
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ARRANGEMENT & COMPILATION

Mr. Zulkefli Sanip
zulkefli@usm.my

All staffs under Research Division
of School of Medical Sciences

**Office of Deputy Dean
(Research & Innovation)**
School of Medical Sciences
Universiti Sains Malaysia
609 767 6005
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**“RESEARCH IS SEEING WHAT EVERYBODY ELSE
HAS SEEN AND THINKING WHAT NOBODY ELSE
HAS THOUGHT.”**

Albert Szent-Györgyi



RESEARCH & INNOVATION
School of Medical Sciences