

ANNUAL REPORT

**DOCTOR OF
PATHOLOGY
(MEDICAL
MICROBIOLOGY)
UKM
2024-2025**

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Editorials

Greetings,

The 2024–2025 academic year marked a significant phase for the Doctor of Pathology (Medical Microbiology) programme at UKM. This period witnessed major progress in governance, assessment, and curriculum review, reflecting our continuous effort to uphold high academic and professional standards in specialist training.

Notable milestones include the enhancement of workplace-based assessment (WPBA), improved supervision mechanisms, and expansion of teaching and learning approaches to include case-based and team-based methods. Collaboration across training centres also strengthened the programme’s depth and consistency in trainee experience.

As we move forward, our focus remains on sustaining quality improvement, fostering the best practices in medical microbiology education, and preparing our trainees to serve as competent and ethical specialists.

Editorial Team

Doctor of Pathology (Medical Microbiology)

Faculty of Medicine, Universiti Kebangsaan Malaysia

1. Foreword

Bismillahirrahmanirrahim

Assalamualaikum, Salam Sejahtera, Salam MADANI dan Salam Universiti Watan.

This year has been an exciting and meaningful one for our programme. We've been busy introducing new ideas and refreshing many aspects of our work — from strengthening governance and updating assessments to expanding training opportunities and preparing for the new curriculum.

As we move forward, our hope is to continue building on this progress. We aim to create an even stronger learning environment and support our trainees in reaching their full potential.

I would like to express my gratitude to all faculty members, trainers, and partner hospitals for their commitment and teamwork. With continued collaboration, I am confident that our programme will keep progressing and producing specialists who exemplify excellence and professionalism.



A handwritten signature in black ink, appearing to read 'Asrul'.

*ASSOCIATE PROF. DR ASRUL ABDUL WAHAB
Head of Department & Head of Programme
DrPath (Medical Microbiology) UKM
Faculty of Medicine UKM*

2.Introduction

History and Evolution of the Medical Microbiology Pathology Specialty Programme at UKM

The Clinical Specialty Programme in Medical Microbiology at Universiti Kebangsaan Malaysia (UKM) trains specialists in the diagnosis of infectious diseases using multiple modalities, including bacteriology, virology, mycology, parasitology, and clinical immunology. Clinical microbiologists play a vital role in the prevention, diagnosis, and management of infections caused by bacteria, viruses, fungi, and parasites. They also advise clinicians on appropriate specimen collection, interpretation of laboratory results, and optimal antimicrobial therapy based on laboratory data and current resistance trends.

The Master of Medicine (Pathology) programme at UKM was first introduced in 1988, with the subspecialty of Medical Microbiology established in 1992. The first cohort of trainees completed their specialist training in 1996. In 1995, the curriculum and examinations were standardised under the Conjoint Board of Master of Medicine (Pathology), comprising representatives from Universiti Malaya (UM), UKM, Universiti Sains Malaysia (USM), the Ministry of Health Malaysia (MOH), and the College of Pathologists, Academy of Medicine of Malaysia (CPath AMM). Universiti Putra Malaysia (UPM) joined the board in 2007, followed by Universiti Teknologi MARA (UiTM) in 2012.

Pioneers of the Programme at UKM

The field of Medical Microbiology at UKM was established by its first group of lecturers, which included Dr. Victor K.E. Lim, Dr. Farida Jamal, Dr. Faridah Moosedin, Dr. Ilina Isahak, Dr. Sabiha Pit, Dr. Yasmin A. Malik, Dr. Salasawati Hussin, Dr. Nordiah Awang Jalil, and Dr. Marlyn Mohammad.





91

NUMBER OF GRADUATES

- 1996-2024

45

MPATH (MED MICROBIOLOGY)

- 1996-2012

46

DRPATH (MED MICROBIOLOGY)

- 2013-2024

3.YEARS & NUMBERS AT A GLANCE

1988

Establishment of The Master of Medicine (Pathology) programme at Universiti Kebangsaan Malaysia (UKM)

1992

The Medical Microbiology subspecialty was established

1996

The first cohort of graduates completed their specialist training

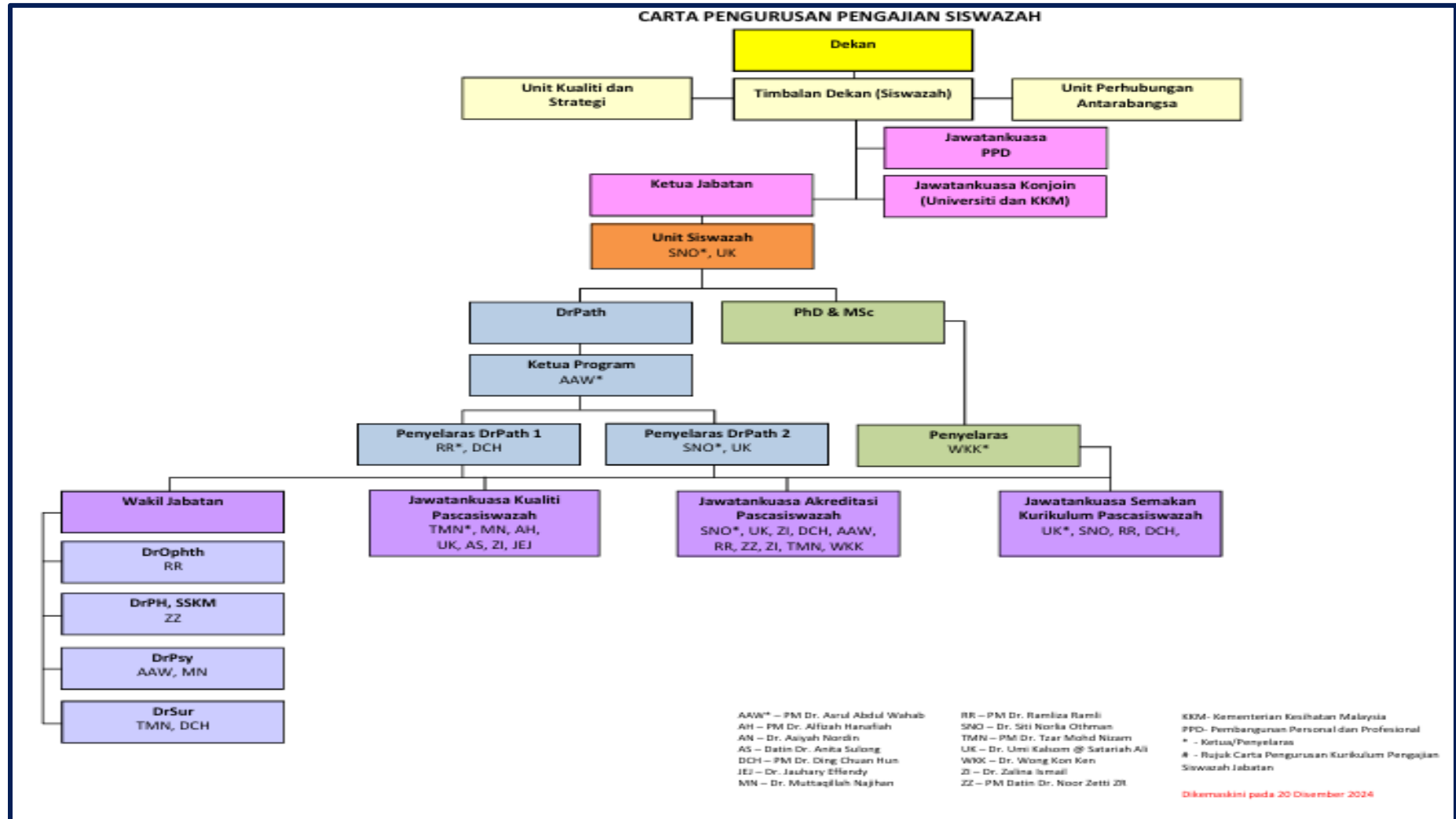
1995

the Conjoint Board of Master of Medicine (Pathology) standardized curriculum started.

The board university members:
Universiti Kebangsaan Malaysia (UKM)
Universiti Malaya (UM),
Universiti Sains Malaysia (USM),
Universiti Putra Malaysia (UPM)
Universiti Teknologi MARA (UiTM)

In collaboration with
the Ministry of Health Malaysia (MOH), &
the College of Pathologists, Academy of Medicine of
Malaysia (CPath AMM)

4. ORGANISATION CHARTS



5. CLINICAL SERVICES: HOSPITAL CANSELOR TUANKU MUHRIZ

71 400/ year

BACTERIOLOGY

- ◉ Culture & ID
- ◉ Antibiotic Susceptibility
- ◉ other related tests

2600/ year

MYCOLOGY

- ◉ Culture & ID
- ◉ Antifungal Susceptibility & others

9 500/ year

TISSUE CULTURE

- ◉ Rapid antigen tests
- ◉ Automated molecular assays

29 800/ year

VIROLOGY- SEROLOGY

13 700/ year

IMMUNOLOGY SEROLOGY & CELLULAR

2 500/ year

MOLECULAR

- ◉ HIV
- ◉ HBV, HCV
- ◉ EBV, CMV
- ◉ TB, NTM

**NUMBER OF TESTS
CONDUCTED ANNUALLY IN
MICROBIOLOGY
LABORATORY*
JABATAN PERKHIDMATAN
MAKMAL DIAGNOSTIK**

JPMD HCTM serves as the core training laboratory within the UKM campus.

Annually, the laboratory processes over 150,000 samples, providing ample case exposure and diversity for trainees. This workload ensures sufficient hands-on experience for trainees to develop the competencies required to function effectively as medical microbiology specialists.

In addition to HCTM, other accredited training centres involved in the programme include Hospital Melaka, Hospital Kuala Lumpur, and Hospital Sultanah Aminah Johor Bahru, which further enhance the breadth of clinical exposure and training experience.

**based on 2024 data*

6. ACADEMIC INFOs

4 YEARS

8 semesters

★ Stage 1: 48 weeks

★ Stage 2: 156* weeks

(*including 2 weeks
break/semester)

48 COURSES

7 PLOs

124

CREDIT HOURS

COURSE STRUCTURE

Stage 1 (2 semesters / 1 year)

- ★ General Pathology (8 courses)
- ★ Personal & Professional Development (2 courses)

Stage 2 (6 semesters / 3 years)

- ★ Bacteriology (6 courses)
- ★ Virology (6 courses)
- ★ Immunology (6 courses)
- ★ Mycology (6 courses)
- ★ Parasitology (2 courses)
- ★ Personal & Professional Development (6 courses)
- ★ Research (6 courses)

6. ACADEMIC – INTRODUCTION OF WPBA

12

DOPS

13

CBD

16

ECE

8

PPD reports

Workplace-Based Assessment (WPBA)

This new assessment method has been introduced to evaluate trainees' clinical competence and professional performance in real work settings.

TYPES OF WPBA

- ❖ Direct Observation of Procedural Skills (DOPS)
- ❖ Case-based Discussion (CBD)
- ❖ Evaluation of Clinical Events (ECE)
- ❖ Supervisor Report
- ❖ Research Progress Report

Quality Assurance in Assessment

The assessment of Programme Learning Outcomes (PLO) and Course Learning Outcomes (CLO) serves as a key quality measure in ensuring the effectiveness of teaching and learning within the programme. Regular evaluation of PLO and CLO achievement provides insight into the impact of teaching strategies, assessment methods, and student performance.

Alignment of Programme Learning Outcomes (PLO) with MQF 2.0 Domains

PLO-MQF 2.0 MAPPING

	PLO of Current Curriculum (English)	MQF 2.0
PLO 1	Demonstrate efficiency in handling specimens, including collection and processing, storage, retention and disposal of clinical samples, data storage, data retrieval and laboratory information management.	C3a Practical skills
PLO 2	Carry out quality assurance activities related to the accreditation of microbiology laboratories.	C2 Cognitive skills C3a Practical skills
PLO 3	Interpret and verify the results of laboratory examinations in relation to the relevant clinical history.	C2 Cognitive skills C3a Practical skills
PLO 4	Provide consultation in the management of infectious diseases and immunological mediators, hospital infection control and antibiotic policies.	C1 Knowledge and Understanding C2 Cognitive Skills C3c Communication Skills
PLO 5	Manage the laboratory effectively in relation to personnel, technical, equipment, reagents and materials, services and financial matters.	C3b Interpersonal skills C3d Digital skills C3f Leadership/autonomy/responsibility
PLO 6	Conduct research efficiently according to Good Clinical Practice	C2, Cognitive Skills C3a Practical skills C3c Communication Skills, C3 Digital skills C3e Numeracy skills C4b Entrepreneurial skills
PLO 7	Displays professional ethics, values, attitudes and legal requirements related to practice	C4a Personal skills C5 Ethics & Professionalism

For the 2024/2025 academic session (Semester 1), the analysis focused on Year 1 to Year 4 trainees, encompassing courses in General Pathology, Bacteriology, Virology, Immunology, Mycology, Research, and Personal and Professional Development. The KPI for PLO attainment is set at 70%.

PLO ATTAINMENT SESSION 2024/2025

KURSUS	Purata Pencapaian PLO							Purata pencapaian PLO Setiap Kursus
	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	
	C3a	C2,C3a	C2,C3a	C1,C2,C3c	C3b,C3d,C3f	C2,C3d,C3d,C4b	C4a,C5	
PATOLOGI UMUM (MIKRO I) FFPM 6413			100.0	100.0			100.0	100.0
PATOLOGI UMUM (MIKRO II) FFPM 6423							100.0	
PPD 1				100.0				100.0
PPD II			50.0	50.0	100.0			66.7
BACTERIOLOGY I	100.0	100.0	100.0	100.0				100.0
VIROLOGY I	100.0	100.0	100.0					100.0
IMMUNOLOGY I	100.0		100.0					100.0
MYCOLOGY I	100.0	100.0	100.0	100.0				100.0
PARASITOLOGY I		100.0	100.0	100.0				100.0
RESEARCH I						100.0		100.0
PPD III							100.0	100.0
BACTERIOLOGY II	100.0	100.0	100.0	100.0			100.0	100.0
VIROLOGY II	100.0	100.0	100.0					100.0
IMMUNOLOGY II	100.0		100.0					100.0
MYCOLOGY II	100.0	100.0	100.0	100.0				100.0
RESEARCH II						100.0		100.0
PPD IV							100.0	100.0
BACTERIOLOGY III	100.0	100.0	100.0	100.0				100.0
VIROLOGY III	86.0	100.0	86.0	100.0				93.0
IMMUNOLOGY III	100.0	100.0					100.0	100.0
MYCOLOGY III	100.0	100.0	100.0	100.0			100.0	100.0
RESEARCH III					100.0	100.0		100.0
PPD V							100.0	100.0
BACTERIOLOGY V	100.0	100.0	100.0	100.0				100.0
VIROLOGY V			0.0	100.0	100.0			66.7
IMMUNOLOGY V	100.0	100.0	100.0				100.0	100.0
MYCOLOGY V			100.0	100.0	100.0			100.0
RESEARCH V						100.0		100.0
PPD VII					100.0			100.0
PURATA PENCAPAIAN PLO SEMUA KURSUS	99.0	100.0	90.9	96.4	100.0	100.0	100.0	

6. ACADEMIC: TEACHING AND LEARNING FACILITIES

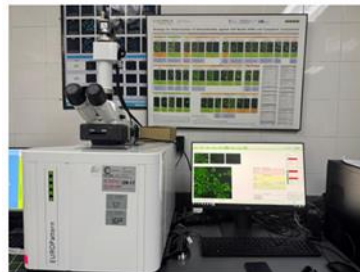
HCTM Diagnostic Lab



HCTM Library



Pre-Clinical Library



Research Lab

Latest Molecular Technology





7. QUALITY ASSURANCE & CQI

- The Continuous Quality Improvement (CQI) process for the Doctor of Pathology (Medical Microbiology) programme is carried out systematically across Area 1 to Area 7 in line with the National Standards for Medical Specialist Training. Each academic session includes a review of learning outcomes, teaching methods, and student performance.
- For Area 1–3, improvements focus on curriculum delivery, assessment, and learning support. The programme has strengthened the use of Workplace-Based Assessment (WPBA), increased academic supervision, and held regular mentoring sessions. Teaching methods have been diversified through case-based and team-based learning, while areas of weaker performance, such as in virology courses, are addressed through mock practical sessions and focused revision workshops.
- For Area 4–7, quality assurance efforts include improving clinical exposure, staff development, stakeholder engagement, and programme governance. The JPMD HCTM remains the main training center, supported by Hospital Melaka, Hospital Kuala Lumpur, and Hospital Sultanah Aminah Johor Bahru to ensure adequate case mix and training opportunities. Regular programme meetings, input from external examiners, and participation in conjoint board activities help maintain alignment with MMC and MQA standards.
- Ongoing faculty training and internal reviews ensure that the programme continues to meet its educational goals and supports trainees' development into competent specialists.

CQI measures at a glance

AREA 1: New curriculum review approved by UKM senate, Established clearer governance structure

AREA 2: WPBA, train-the-trainers, improvement of validity & reliability of assessment

AREA 3: involvement of trainees in departments/ programme meetings

AREA 4: introduction of CQI survey, TtT on assessments

AREA 6: established autonomy, regular stakeholder's engagements

AREA 7: structured quality monitoring, completion of full cycle quality process by accreditation, continuous quality improvement

9. LIST OF LECTURERS & TRAINERS

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Kuantan

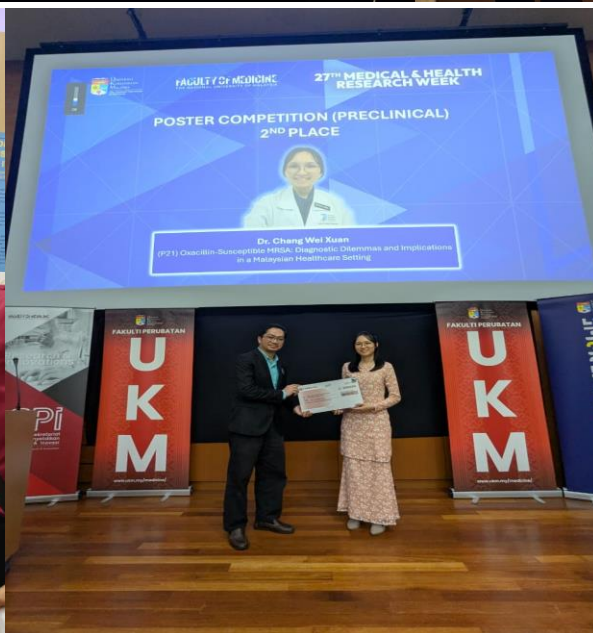
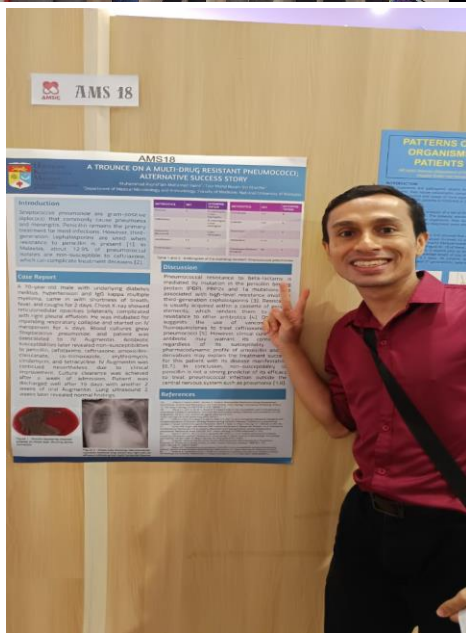
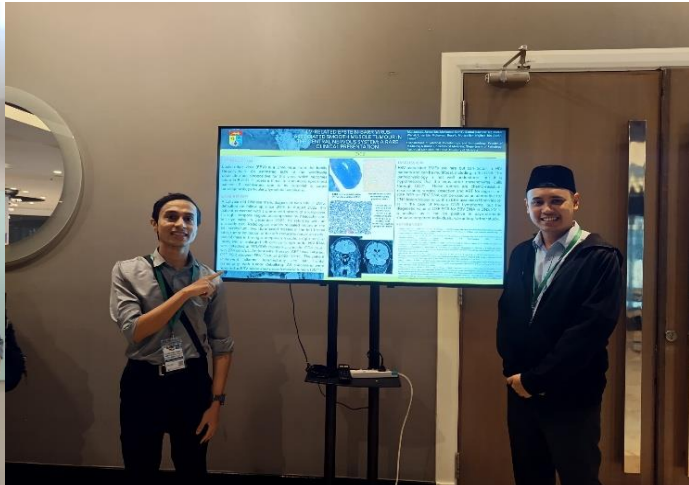
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MD (USM), (Med.Microbiology)(UPM)
MPath(Med.Microbiology)(USM)
MMC reg: 41640 NSR reg: 135819
Hospital Raja Permaisuri Bainun Ipoh

GALLERY

DEPARTMENT STAFF MEMBERS



Student's activities: Conferences, seminars, CMEs





TEACHING-LEARNING ACTIVITIES



TRAINERS ENGAGEMENT AND EMPOWERMENT ACTIVITIES

Bengkel Pemantapan Pentaksiran Siri 1-3, 2024





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End of Report