



The management committee and senior researchers of UMBI: (From right to left) Professor Dato' Dr. Wan Zurinah Wan Ngah (Deputy Director for Post-Graduate Studies & Internationalisation), Associate Professor Dr. Norfilza Mokhtar (Deputy Director for Research & Innovation), Professor Datuk Dr. A Rahman A Jamal (Director), Associate Professor Dr. Roslan Harun (Senior Fellow) and Associate Professor Dr. Raja Affendi Raja Ali (Head of Quality Management).



The photo shows our bright and young team leaders and research fellows. We also have research fellows from the Faculty of Medicine UKM under the dual appointment system. They include Prof. Dr. Zarina Latiff, Prof. Dr. Hamidah Alias, Prof. Dr. Shamsul Azhar Shah, Associate Prof. Dr. Isa Rose and Dr. Mohd Hanafi Ahmad Damanhuri.

## About Us

UMBI was established in July 2003 and is a center of excellence focusing on research in molecular medicine. We conduct studies looking at the genetic and cellular basis of many diseases including cancers, diabetes, infectious diseases, degenerative diseases and ageing. UMBI was given the recognition as a Higher Institution Centre of Excellence (HICoE) by the Ministry of Education in 2009.

UMBI leads The Malaysian Cohort project, the largest prospective cohort project in the nation to identify risk factors for various diseases and discover biomarkers for early detection of many diseases including cancers. The Malaysian Cohort Biobank is the largest biobank in South East Asia. UMBI is a member of the Asia Cohort Consortium and the P3G Consortium.

## Linkages

University of Newcastle (Australia), Curtin University (Australia), Shiga University of Medical Sciences (Japan), Niigata University, Japan, National Institute of Infectious Diseases (Japan), Harry Perkins Institute of Medical Research (Australia), Malaysia Genome Institute, National Space Agency, and others.

## Contact Us

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UMBI is a Higher Institution Centre of Excellence (HICoE) recognised by the Ministry of Education Malaysia

**UKM MEDICAL  
MOLECULAR  
BIOLOGY  
INSTITUTE  
(UMBI)**

*'Generating health solutions  
through research and  
discovery'*



## Genome Sequencing Laboratory

Our genome sequencing laboratory is well equipped with the latest technology platforms. We have two Ion Proton sequencing systems and one Ion Torrent system. We are currently conducting the 1000-Malaysian Genome project to sequence 1000 DNA samples from both normal and also those with diseases including cancers. We also have the ABI 3500 genetic analyser for Sanger sequencing. We are also doing exome sequencing and RNA sequencing on cancers, diabetes and hypercholesterolemia.

## Molecular Diagnostic Services

Our UMBI-UKMMC Genomics Unit (a collaboration between UMBI and the UKM Medical Centre) provides molecular diagnostic services for thalassemia, pharmacogenetics (HLA-B\*1502 and TPMT) and cancer related genes (K-Ras, B-Raf and EGFR). Our molecular diagnostic laboratory has the MS ISO 17025 accreditation.

## Core Facilities

Proteomics, Cell Culture, Confocal Microscopy, Flowcytometry, Microarray Analysis, Simulated Microgravity, *C. elegans* lab, PCR, Q-PCR, Bioinformatics.

## Post-Graduate Programmes

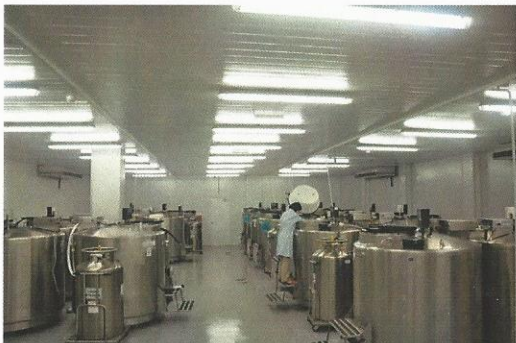
UMBI offers MSc and PhD in molecular medicine by research. Foreign candidates can apply but must be fully sponsored by their government.



*'Our mission is to be a national centre of excellence by conducting basic, applied and translational research to improve health via personalised medicine'*

## National Key Projects

- The Malaysian Cohort
- 1000-MyGenome
- Microgravity Science
- Cancer Genome & Epigenome



*The Malaysian Cohort Biobank, the largest in South-East Asia, stores biospecimens from over 100,000 participants. The biobank has a quality management system and the bioanalytical laboratory has the MS ISO 15189 accreditation.*

## Research Areas

- Cancers
- Stem Cells
- Anti-oxidants & Degenerative Diseases
- Functional Genomics
- Reproductive & Developmental Biology
- Infectious Diseases & Immunology
- Gravitational Biology