



UNIVERSITI  
TEKNOLOGI  
MARA

- Research
- Consultancy
- Intellectual Property
- Commercialisation
- INFOREC

Soaring Towards Excellence





## 5. APPLICATION

### 5.1 Application Form

Researchers can obtain the application form through the IRDC website <http://www.uitm.edu.my/brc> or from the IRDC main office. The Forms are also available at the Unit of Research, Development and Commercialisation (URDC) of faculties/ UiTM branch campuses.

### 5.2 Form Submission

For projects which cost above RM 20,000.00, completed application form must be submitted to IRDC. Projects which cost RM 20,000.00 and below, completed application forms must be submitted to the faculties/ branch campuses' Unit of Research, Development and Commercialisation (URDC). Researchers who are in need of research grant in a large amount are encouraged to apply for IRPA grant or from other agencies.

### 5.3 Approval Period

Technical Research Meeting is held once every 2 months. Applicants will be called to present their research proposals to the Technical Committee which will approve the research proposal or suggest any amendments. The proposal will then be brought to the Research Committee Meeting chaired by Deputy Vice Chancellor (Research and Development) for approval. Approval letter will be given to applicants within two (2) weeks after the meeting.

## ENQUIRIES

Should there are any enquiries, please contact:

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**ZAHRAH IBRAHIM**  
Executive Officer

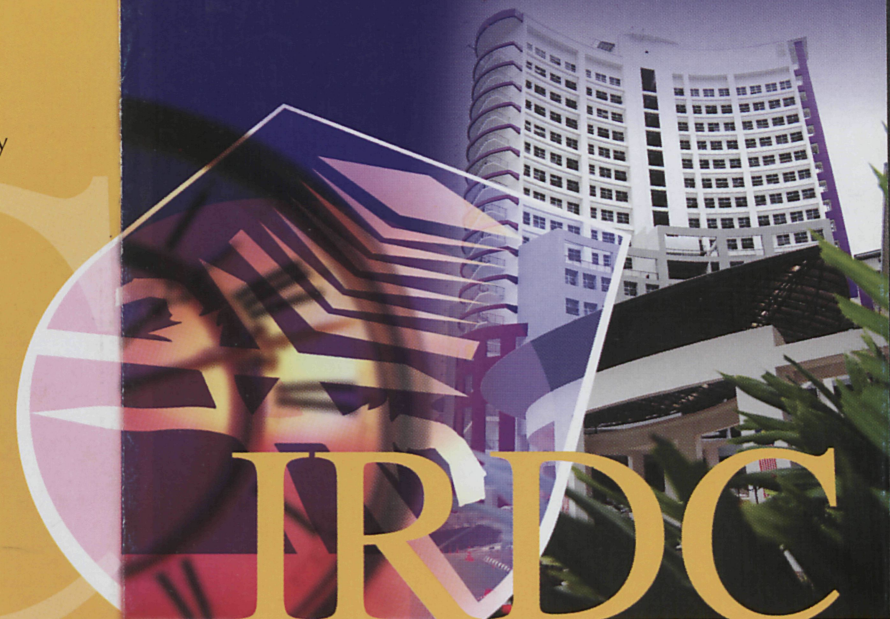
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Universiti Teknologi MARA



**Institute of Research,  
Development and  
Commercialisation (IRDC)**



## 1. INTRODUCTION

The Institute of Research, Development and Commercialisation (IRDC) coordinates and supports the university's academic community through services that facilitate their research, development, commercialisation and intellectual property protection activities. IRDC is divided into 7 divisions that are responsible for managing short term research activities, long term research grants, consultancy activities, financial management of consultancy, information management, intellectual property and commercialisation. Research managed by IRDC covers fundamental, applied and development research in Science and Technology, Social Sciences and Management Sciences. Consultancy work includes contract research, advisory services, design and build, testing and training. Other services provided by the Institute are training and advisory services on intellectual property protection and to facilitate the commercialisation of the university's intellectual property. The IRDC is also responsible for publicising research and development output to the government and industry, both locally and abroad. IRDC is always striving for excellent service and this is projected through our attainment of the ISO 9001:2000 Certification in April 2003.

## OBJECTIVES

1. To promote quality research of world- class standards
2. To manage, coordinate and provide necessary services for successful research, consultancy and projects for commercialisation
3. To assist the exploration of new areas and the identification of niche areas
4. To disseminate information and provide training on research, consultancy, intellectual property and commercialization
5. To ensure continuous quality research and consultancy
6. To provide quality services through the state of the art facilities
7. To facilitate the process of intellectual property protection

## 2. TYPE OF SERVICES

Services provided by IRDC include:

- Science and Technology Research
- Social Science Research
- Consultancy
- Commercialisation
- Intellectual Property
- Courses on Research Methodology
- Other Services

## 3 CUSTOMERS

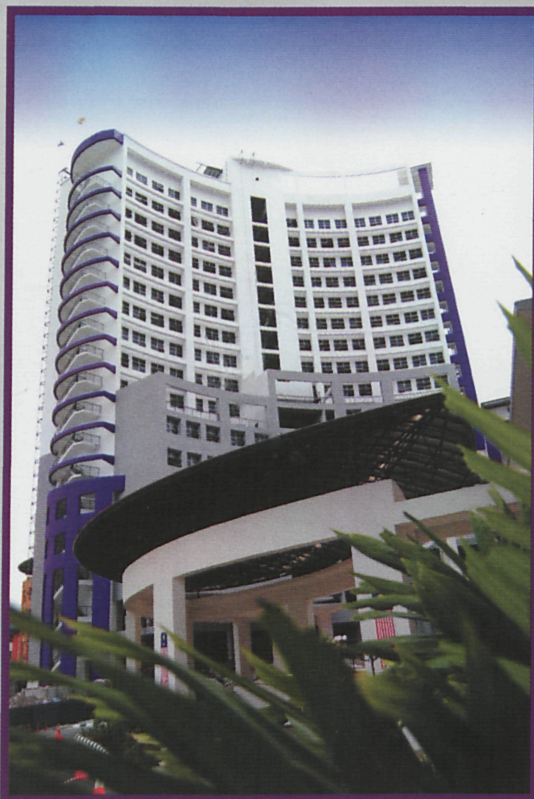
All academic staff are eligible to apply and obtain services from the institute. Involvement of UiTM staff is always welcomed. Research participation through collaboration between UiTM and the government/ private sector are also encouraged.



## UNIVERSITI TEKNOLOGI MARA

Universiti Teknologi MARA (formerly Institute Teknologi MARA), located in Shah Alam, is the largest technological university in Malaysia. This university is unique in two senses, in catering only to the indigenous people of Malaysia (or Bumiputras) and in having branch campuses in every state of the country. Established in 1956, it was formerly known as the Dewan Latehan RIDA which later evolved to become Maktab MARA (1965), Institut Teknologi MARA (1967) and finally renamed University Teknologi MARA on 26 August 1999.

In its academic venture, UiTM has been known as the pioneer for Computer Science, Mass Communication, Rubber and Plastic Technology, Microbiology, Library Information Science, Art and Design, Hotel Catering, Accountancy and Secretarial Science. UiTM provides a big storehouse of expertise working in different academic disciplines. Her more than 3000 academic staffs working in numerous areas of specialization is an access to a storage base for research and consultancy work. This unique position enables UiTM staff to collaborate in their research and consultancy work at the institutional level. The most encouraging development is now witnessed by the active participation of researchers, among others, from the Faculties of Engineering, Applied Science, Art and Design and the Faculty of Architecture, Planning & Survey. Together with the support system and in response to the nation's effort towards achieving a developed and industrialized nation status, UiTM is continuously establishing linkages with private as well as public sectors in research and development (R&D) programmes.



Being the largest, UiTM has more than 100,000 students pursuing varied courses, consisting of full-time and off-campus students, students in the distance learning and flexible learning programmes, as well as those in the affiliated colleges. Courses which are offered at the Advance, Post-graduate, Masters and PhD levels, are catalysts which promote research activities in UiTM.

UiTM, hence, provides tremendous avenues in R&D, especially in the new frontiers of science. UiTM's capability to commercialize some of its products is a testimony of the extent of its research potentials.



## IRDC IN BRIEF

Universiti Teknologi MARA's research and consultancy centre, Institute of Research, Development and Commercialisation, is the primary point of contact for industry, commerce and government bodies seeking to access the University's expertise.

It was originally known as the Centre for Planning, Research and Development and was established in April 1980. In September 1987, due to its growing importance and increasing number of research and consultancy activities in UiTM, the centre was restructured and branched into two divisions: the Research and Consultancy Centre (RACC), and the Planning and Evaluation Unit. The centre changed its name again to Bureau of Research and Consultancy (BRC) in 1994. BRC evolved to Institute of Research, Development and Commercialisation (IRDC) after merging with Institute of Intellectual Property on 15 July 2003. IRDC supports the university's academic community through servicing their IRDC research, consultancy, intellectual property protection and commercialisation. Currently, the Institute is divided into six divisions:

- Science and Technology
- Social Science and Management
- Consultancy Services
- INFOREC
- Intellectual Property
- Commercialisation

Activities undertaken by the bureau covers both basic and applied research in Science, Technology, Social Sciences, Business and Management. Staff within the University also undertakes extensive programmes of consultancy for outside bodies, including industry, commerce, government and the profession. Consultancy field includes advisory services, design and supervision, testing and training. BRC is committed in providing a link between potential sponsors and UiTM staffs. However, IRDC does not take responsibility for consultancies entered into privately by a member of staff.

UiTM is proud of its research projects which have been patented and commercialized. Among those are food technology products and AUTOLAB (a scientific measurement and control software used in ordinary PC). It is expected that many of the on-going research projects will have potential value for commercial application.



- Medical and Health Sciences •
- Information Technology •
- Bio Composite / Agro-Industry •
- Biotechnology •
- Environment •
- Developmental Technology •
- Coastal & Offshore •
- Energy Technology •
- Fracture Mechanics •
- Economics & Trade Management •
- Urban Studies •
- Art of Writing & Media •
- Education •
- Management & Services •
- Sports Science & Recreation •
- Policy and Government Administration •
- Language & Culture •
- Chemical Sciences / Natural Products •
- Corporate Governance •
- Microwave Technology •
- Architecture •
- Advanced Materials •
- Superconductivity •
- Engineering Sciences •
- Digital Imaging •
- Food Technology •
- Agricultural Sciences •





Bulletin "Review" •

IRDC Today •



Scientific Research Journal •



Social and Management  
Research Journal •

Research Seminar •



Proceedings •

Research Workshop •

Research Reports •

Consultancies •



Intellectual Property Protection •

Commercialisation •



NO.	PROJECT TITLE	AWARD	YEAR
1.	Prototype Lung Cancer Rapid Diagnostic Kit (Bronze Award)	Biotechnology Asia Exhibition	2005
2.	Isolation and Stabilization Of Colorant From Orchid (Cateleya Bowringwana) Using Biomaterials (Silver Award)	Biotechnology Asia Exhibition	2005
3.	Fungal Bioremediation Of Textile Wastewater (Bronze Award)	Biotechnology Asia Exhibition	2005
4.	RAPLEX: Rapid Multiplex PCR For Genotyping of CYP2C8 (Bronze Award)	Biotechnology Asia Exhibition	2005
5.	Selective Sensing Of second Messengers Intracellular Signal Transduction (Inositol-1, 4, 5- triphosphate) and Its Model Compound By A Supramolecular Luminescent Receptor (Silver Award)	Biotechnology Asia Exhibition	2005
6.	Cholesterol-Reducing Activity Of Lactobacillus Cultures In Vitro (Gold Award)	Biotechnology Asia Exhibition	2005
7.	OPTMO: Oil Palm Trunk and Malaysian Oak Hybrid Laminated Veneer Lumber (Bronze Award)	16th International Invention, Innovation, Industrial Design & Technology Exhibition	2005
8.	Remote Controlled Speedboat From Malaysian Plywood (Gold Award)	16th International Invention, Innovation, Industrial Design & Technology Exhibition	2005
9.	Fish-Based Breakfast Cereal (Silver Award)	16th International Invention, Innovation, Industrial Design & Technology Exhibition	2005
10.	Predictive Model For Estimation Of Rubber wood Stand Volume Using Landsat TM (Gold Award)	16th International Invention, Innovation, Industrial Design & Technology Exhibition	2005
11.	Desulphurization Of Industrial Solid Waste Using Chemical Process (Bronze Award)	16th International Invention, Innovation, Industrial Design & Technology Exhibition	2005
12.	Banana Stem Extract As Coagulant For Spent Coolant Treatment (Bronze Award)	16th International Invention, Innovation, Industrial Design & Technology Exhibition	2005
13.	Oil Spill Absorber Using Palm Frond (Silver Award)	16th International Invention, Innovation, Industrial Design & Technology Exhibition	2005
14.	Desulphurisation of Organic Sulphur Forms in South East Asian Lignite and Sub-bituminous Coals via Mild Oxidizing and Reducing Techniques-A Pre Combustion of Coal Treatment (Gold Award)	33rd International Exhibition Of Inventions, Geneva, Switzerland	2005
15.	Liquefaction of Lignite and Subbituminous Malaysia Coals with Supercritical Fluid Extraction System via High-pressure Fixes Bed Compact Reactor (Silver Award)	33rd International Exhibition Of Inventions, Geneva, Switzerland	2005



**NO. PROJECT TITLE****AWARD****YEAR**

16. Encrypted Cheque Verification (Safe Cheque) (Silver Award)	33rd International Exhibition Of Inventions, Geneva, Switzerland	2005
17. Wireless Control Remote Ring Main Unit (RMU) System (Bronze Award)	33rd International Exhibition Of Inventions, Geneva, Switzerland	2005
18. High DC Voltage Multiplier Circuit (Bronze Award)	33rd International Exhibition Of Inventions, Geneva, Switzerland	2005
19. Survival Robot (Bronze Award)	33rd International Exhibition Of Inventions, Geneva, Switzerland	2005
20. Bio-based Adsorber For Industrial Waste Water Treatment (Silver Award)	33rd International Exhibition Of Inventions, Geneva, Switzerland	2005
21. Tree Mapping System (Silver Award)	33rd International Exhibition Of Inventions, Geneva, Switzerland	2005
22. Isolation And Stabilization Of Colourant (Cattleya Bowringiana) Using Biomaterials (Gold Award)	33rd International Exhibition Of Inventions, Geneva, Switzerland	2005
23. Non-Wax Resist Agent For Batik Printing (Silver Award)	33rd International Exhibition Of Inventions, Geneva, Switzerland	2005
24. Guava Chips (Gold Award)	33rd International Exhibition Of Inventions, Geneva, Switzerland	2005
25. Nata de Pine (Gold Award)	33rd International Exhibition Of Inventions, Geneva, Switzerland	2005
26. Palm Oil-Based Degreaser (POD) For Metal Cleaning In Oil And Gas Industries (Gold Award)	Invention & New Product Exposition (INPEX), Pittsburgh, USA.	2005
27. National Award For Management Accounting (NAFMA) Best Practice (Xerox Innovation Award)	Invention & New Product Exposition (INPEX), Pittsburgh, USA.	2005
28. Concrete Reinforced With Oil Palm Trunk Fibre (Silver Award)	Seoul International Invention Fair, Korea	2004
29. Development Of The Cement And Coconut Shell Particle Board (Silver Award)	Seoul International Invention Fair, Korea	2004
30. Lighting Control Systems For Comfort Zone Reading (Gold Award) Special Award: Korean Assoc. For School Invention (KASI)	Seoul International Invention Fair, Korea	2004
31. Leachability And Strength Of Encapsulated Solid Waste: Introducing Two-In-One Testing Kit (Gold Award)	Seoul International Invention Fair, Korea	2004
32. Carbonized Rice Husk As An Oil Spill Absorber: Enhancement Of Absorbing Capacity By Chemical Treatment (Gold Award)	Seoul International Invention Fair, Korea	2004

achievements

RDC



NO.	PROJECT TITLE	AWARD	YEAR
33.	Latex-Based As A New Coagulant For Treatment Of Obstinate Spent Coolant (Gold Award)	Seoul International Invention Fair, Korea	2004
34.	KuMAN: Universal Coagulant For Color Removal (Silver Award)	Seoul International Invention Fair, Korea	2004
35.	Design Flood Estimation Guidance System (Deflood Gs) (Gold Award)	32th International Exhibition Of Invention Geneva Switzerland	2004
36.	A Rapid Detection Kit For Pesticide Residues (Gold Award)	32th International Exhibition Of Invention Geneva Switzerland	2004
37.	Catalytic Converter For 4-Strokes Motorcycle Engine: New Substrates And Manufacturing Technology (Gold Award)	32th International Exhibition Of Invention Geneva Switzerland	2004
38.	"Rosjan" - Number For Prediction Of Flood Type (Silver Award)	32th International Exhibition Of Invention Geneva Switzerland	2004
39.	Plant-Based Coagulant For Batik Wastewater Treatment : Introducing All-In-One Concept (Silver Award)	32th International Exhibition Of Invention Geneva Switzerland	2004
40.	Novel Laser Desugn For Fibre Optics Telecommunication System (Silver Award)	32th International Exhibition Of Invention Geneva Switzerland	2004
41.	Development Of The Cement And Coconut Shell Particle Board (Silver Award)	S & T Expo 2003	2003
42.	Concrete Reinforced With Oil Palm Trunk Fiber (Silver Award)	S & T Expo 2003	2003
43.	Lighting Control Systems For Comfort Zone Reading (Silver Award)	S & T Expo 2003	2003
44.	Gui-Fuzzy For PQ Analysis (Bronze Award)	S & T Expo 2003	2003
45.	Latex-Based As A New Coagulant For Treatment Of Obstinate Spent Coolant (Gold Award)	S & T Expo 2003	2003
46.	Corbonized Rice Husk As Oil Spill Absorber: Enhancement Of Absorbing Capacity By Chemical Treatment (Silver Award)	S & T Expo 2003	2003
47.	KuMAN Universal Coagulant For Colour Removal (Gold Award)	S & T Expo 2003	2003
48.	Leachability And Strength Of Encapsulated Industrial Solid Weste: Introducing Two-In-One Testing Kit (Silver Award)	S & T Expo 2003	2003

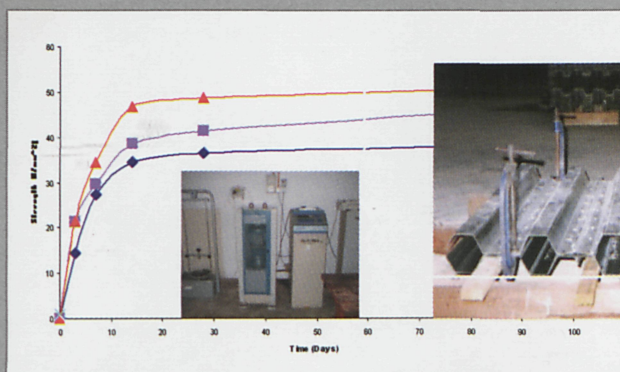
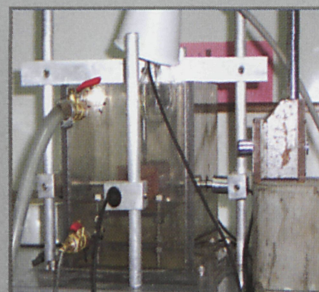


**NO. PROJECT TITLE****AWARD****YEAR****achievements**

49. "ROM" Scale is a Scale of Measurement On The Degree of Landslide Tragedy (Gold Award)	International Exhibition of Invention, Geneva, Switzerland	2002
50. Finite Element Imaging System (Gold Award)	International Exhibition of Invention, Geneva, Switzerland	2002
51. Intelligent Interactive Soccer Playing Robot (Silver Award)	International Exhibition of Invention, Geneva, Switzerland	2002
52. Optical Fiber Biosensor Instrumentation (Silver Award)	International Exhibition of Invention, Geneva, Switzerland	2002
53. Fuzzy Logic Control System (Bronze Award)	International Exhibition of Invention, Geneva, Switzerland	2002
54. Intelligent Campus-wide Smart Card System (Bronze Award)	International Exhibition of Invention, Geneva, Switzerland	2002
55. The Potential of Solar Irradiation as a Source of Natural Lighting in Buildings and Its Implication on Energy-Efficiency (Silver Award)	29th International Exhibition of Invention, Geneva, Switzerland 29th International Exhibition of Invention, Geneva, Switzerland	2001
56. Prefabricated Wood I-Joist: Effective Jointing Technique (Silver Award)	29th International Exhibition of Invention, Geneva, Switzerland 29th International Exhibition of Invention, Geneva, Switzerland	2001
57. PC-Based Intelligent Motion Controller (Bronze Award)	28th International Exhibition of Invention, Geneva, Switzerland	2000
58. Trapping System of Unburned Hydrocarbon from Exhaust Emission System (Cyclozos™) (Bronze Award)	28th International Exhibition of Invention, Geneva, Switzerland	2000
59. Portable Optical Fibre Sensors Measuring Instrument (Silver Award)	28th International Exhibition of Invention, Geneva, Switzerland	2000
60. Novel Two-Phase Variable- Reluctance Motor Configuration Capable of Self Starting (Silver Award)	I – TEX '99	1999
61. Variable Reluctance Motor (Bronze Award)	27th International Exhibition of Invention, Geneva, Switzerland	1999
62. Enviro Card (Bronze Award)	27th International Exhibition of Invention, Geneva, Switzerland	1999
63. Zero Waste (Silver Award)	27th International Exhibition of Invention, Geneva, Switzerland	1999
64. Strength Testing Kit for Filtering Granular Media (Silver Award)	27th International Exhibition of Invention, Geneva, Switzerland	1999
65. Reconstituted Lignocellulosic Panel From Oil Palm Frond (Special Award)1.	Minds-Henry Goh Environmental	1998



66. Strength Testing Kit for Filtering Granular Media (Silver Award)	I – TEX '98	1998
67. Removing the Inorganic and Organic Sulphur Forms and Ashes from High Sulphur Coal by Using Relatively Cheap, Economical Reagent Commonly Available In Most Chemical Laboratories (Silver Award)	Mindex – Innotex'97	1997
68. Utilisation of Used Bleaching Earth and Paddy Wastes in the Ceramic Industry (Merit Award)	Petronas	1996
69. Peroxyacetic Acid – A Simple and Economical Desulphuring Agent for Sub- bituminous High Sulphur Coal (Incentive Award)	Petronas	1996
70. Utilisation of Used Bleaching Earth in the Production of Highly Porous Ceramic (Silver Award)	Mindex – Innotex '96	1996
71. Computerised Climate Profile For Thermal Comfort Studies (Best Paper Under The Category of New Product)	COSTAM	1995
72. Erosion Study In Cameron Highland (Best Paper Under The Category of Environment)	COSTAM	1995
73. Trapping System of Hydrocarbons, Particulates and Toxic Gases from Exhaust of Vehicles (Merit Award)	Petronas	1994
74. SISPUKOM	Innovasi KSN	1994
75. Utilisation of Charcoal To Trap Volatile Matter	Petronas	1993
76. Utilisation of Charcoal To Trap Oil Spills (From Waste Material)	Petronas	1992







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Institute of Research, Development and  
Commercialisation (IRDC)

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