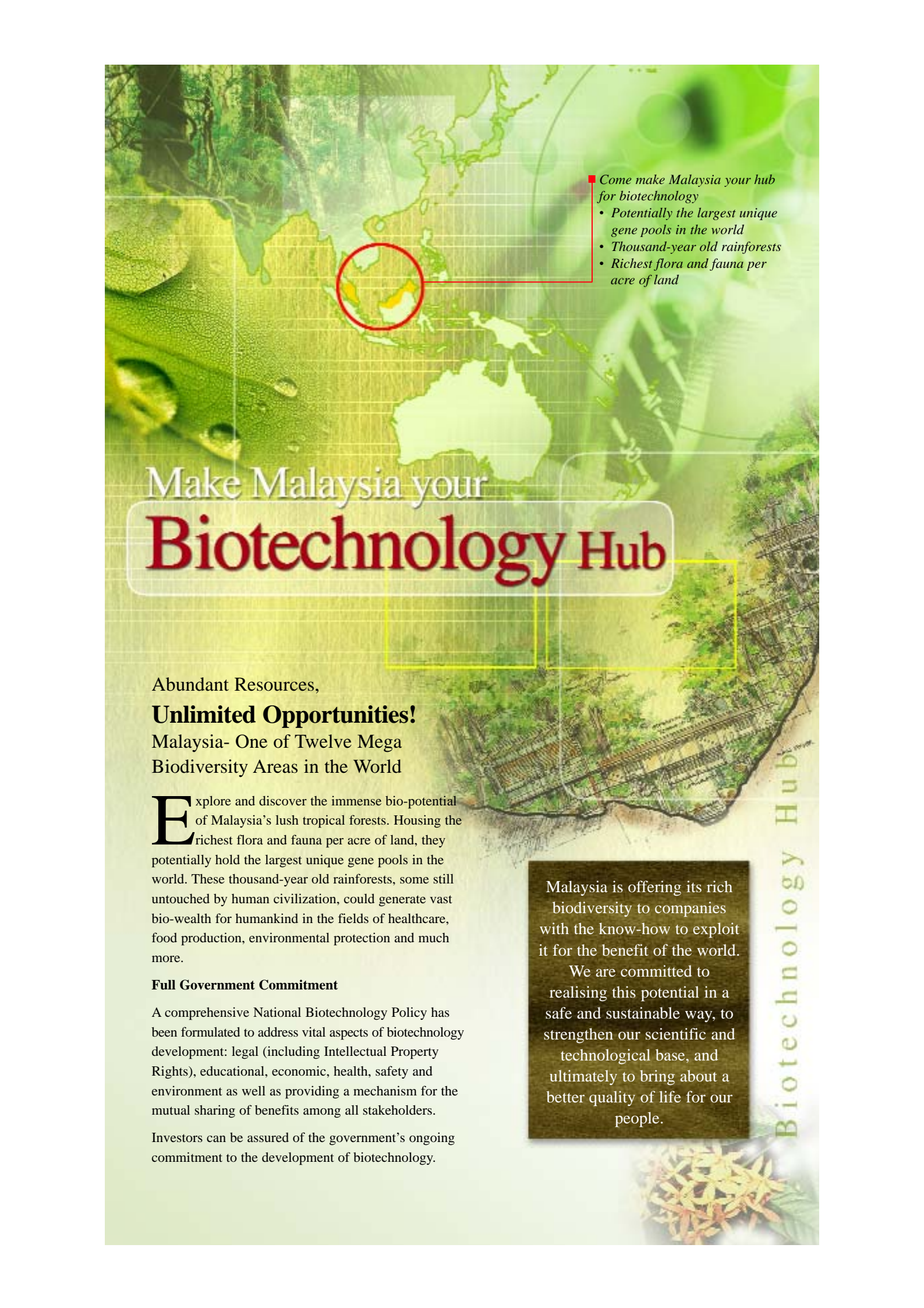


- 
- *Come make Malaysia your hub for biotechnology*
  - *Potentially the largest unique gene pools in the world*
  - *Thousand-year old rainforests*
  - *Richest flora and fauna per acre of land*

# Make Malaysia your **Biotechnology Hub**

Abundant Resources,  
**Unlimited Opportunities!**  
Malaysia- One of Twelve Mega  
Biodiversity Areas in the World

**E**xplore and discover the immense bio-potential of Malaysia's lush tropical forests. Housing the richest flora and fauna per acre of land, they potentially hold the largest unique gene pools in the world. These thousand-year old rainforests, some still untouched by human civilization, could generate vast bio-wealth for humankind in the fields of healthcare, food production, environmental protection and much more.

#### **Full Government Commitment**

A comprehensive National Biotechnology Policy has been formulated to address vital aspects of biotechnology development: legal (including Intellectual Property Rights), educational, economic, health, safety and environment as well as providing a mechanism for the mutual sharing of benefits among all stakeholders.

Investors can be assured of the government's ongoing commitment to the development of biotechnology.

Malaysia is offering its rich biodiversity to companies with the know-how to exploit it for the benefit of the world.

We are committed to realising this potential in a safe and sustainable way, to strengthen our scientific and technological base, and ultimately to bring about a better quality of life for our people.

Biotechnology Hub



## Resources in Abundance

### Fauna

- 150,000 species of invertebrates, more than 1,000 species of butterflies
- more than 12,000 species of moths, nearly 300 species of mammals

### Flora

- 15,000 known species of flowering plants
- more than 1,100 species of ferns

### Marine Life

- 4,000 species of fish
- one of the most diverse coral communities in the world

### People

- On the Peninsular: Malays, Chinese, Indians, Semai, Negrito
- On Borneo Island: Kadazan, Kelabit, Iban, Bajau, Melanau and an incredible mixture between the groups
- Some ethnic groups live in remote, highly inaccessible areas, ensuring continued survival of their unique gene pools.



## Skilled Human Resources

Malaysia's current National Education Policy emphasizes on science and technology in the country's 37 institutions of higher learning. Today, there are:

- 13 universities offering biotechnology programmes and 12 universities offering chemical engineering programmes with about 3,000 undergraduates studying biotechnology annually.
- about 23,000 research personnel and more than 5,000 R&D scientists and skilled workforce are expected to be available over the next five years.

Malaysian scientists have also won several international Gold awards such as:

- "Innovative ingredient from fruit-base in high fibre bread" at the 2004 International Exhibition of Invention New Techniques and Products, Geneva;
- "TYPHIRAPID - a rapid IgM test for the diagnosis of acute typhoid fever" at IENA 2003 Nuremberg, Germany;
- "Enhanced growth system for the aquaculture industry" at the 30th International Exhibition of Inventions 2002, Geneva.

The continued emphasis on creating and training a strong pool of talent for the biotechnology industry will ensure a stable supply of well trained workforce to meet staffing needs.



## Strong R&D Support

- Government funding for R&D, human resources development and infrastructure.
- Established research institutions housing modern facilities and state-of-the-art equipment for biotechnology research.
- Strong R&D expertise in the country's long established agriculture and food industry particularly for industrial crops (oil palm, rubber, rattan, forest trees), food crops (rice, banana, sago, herbs and medicinal plants) and ornamentals (orchids, pitcher plants).
- Specialised science and technology parks, incubation centres and clinical trial centres catering to the needs of biotechnology and other technology-intensive industries and R&D activities.
- Biotechnology Cooperative Centres coordinated by the National Biotechnology Directorate carrying out R&D activities in collaboration with leading research institutions and universities.
- Public universities with biotechnology research units undertaking collaborative research activities with the private sector and overseas universities.

Public research institutions engaged in biotechnology research comprise the Malaysian Agriculture Research and Development Institute (MARDI), Malaysian Palm Oil Board (MPOB), Institute of Medical Research (IMR), Forest Research Institute of Malaysia (FRIM), Malaysian Rubber Board (MRB), Malaysian Institute for Nuclear Technology Research (MINT) and the Institute of Natural Products and Vaccinology.

Existing areas of research include:

- Yield improvement and disease resistance for agricultural produce
- Design and development of medical diagnostic kits
- Screening of local herbs for pharmaceutical properties
- Gene expression and genome analysis
- Molecular biology
- Clonal planting materials
- Microbial food and feed additives
- Vaccines and enzymes



# Intellectual Property Rights Protection

Malaysia has a strong intellectual property rights (IPR) regime and ranks high among East Asian countries in IPR protection. Malaysia is a member of the World Intellectual Property Organisation (WIPO) and signatory to the Paris Convention, the Berne Convention and the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) under the World Trade Organisation (WTO).



Intellectual property protection in Malaysia

- Patents
- Trademarks
- Industrial designs
- Copyrights
- Geographical indications
- Layout designs for integrated circuits

## Biotechnology Initiatives

The government is implementing new initiatives to accelerate the development of the biotechnology industry. Measures have been undertaken to:

- integrate research activities at the state and national level
- encourage industry participation and attract investment and quality human talent
- provide specialised commercialisation support services (patent, legal advisory, business plans, marketing plans and partners sourcing)
- facilitate sharing of facilities and advanced technologies
- facilitate strategic alliances and networking opportunities

Specialised research laboratories dedicated to molecular biology, agro-biotechnology and drug development are available:-

- Laboratory for agriculture biotechnology (plant and animal biotechnology) at the Malaysian Agriculture Research and Development Institute (MARDI)
- Laboratory for genomics and molecular biology at the University Kebangsaan Malaysia-Malaysian Technology Development Corporation (UKM-MTDC) Smart Technology Centre
- Laboratory for pharmaceutical and nutraceutical biotechnology to spur natural product research at the University Putra Malaysia (UPM)



**Make Malaysia  
your base to  
explore our rich  
biodiversity. See  
your investments  
grow.**

## International Collaboration

Collaborations between Malaysia and foreign institutions are welcomed to assist us in building a foundation for a sustainable biotechnology industry here. Amongst Malaysia's foreign collaborative partners are:

- Massachusetts Institutes of Technology (MIT), USA
- National Cancer Institute, USA
- Medichem Research of Lemont, Illinois, USA
- Nimura Genetic Solutions, Japan
- Functional Food Creation Research Institute Co. Ltd., Japan
- Cambridge University, UK
- Centre for Genetic Engineering and Biotechnology, Cuba (CIGB)

### Priority Areas for Development

- Food biotechnology
- Plant biotechnology
- Animal biotechnology
- Molecular biology
- Medical biotechnology
- Biopharmaceuticals
- Industrial/Environmental biotechnology

## Opportunities

Malaysia's rich biodiversity offers vast opportunities for investors venturing into the fields of genomics, proteomics and structural biology for the discovery of new products or improved existing products. Over 1,000 species of flora are reported to have therapeutic value that can be tapped for medicinal potential. Other areas include:

- Herbal and marine products
- Nutraceuticals/Pharmaceuticals
- Vaccines (especially against tropical diseases)
- Biodiagnostics
- Industrial enzymes

## Attractive Investment Incentives

A corporate tax rate of 28% applies to both local and foreign-owned companies in Malaysia. The government provides various incentives including training and R&D grants.

### Incentives

#### 1. Incentives for High Technology Companies (including biotechnology companies)

- Pioneer Status with a tax exemption of statutory income for five years, or
- Investment Tax Allowance of 60% on qualifying capital expenditure for five years which can be offset against 100% of the statutory income.

#### 2. Incentives for Strategic Projects

- Pioneer Status with a full tax exemption of 100% of statutory income for 10 years, or
- Investment Tax Allowance of 100% on qualifying capital expenditure for five years which can be offset against 100% of the statutory income.

#### 3. Incentives for R&D

#### 4. Incentives for Software Development

#### 5. Pre-Packaged Incentives

Customised packages that cover both tax and non-tax incentives.

#### 6. Incentives for Export

#### 7. General Incentives

- Industrial Building Allowance
- Infrastructure Allowance
- Import duty exemptions for
  - raw materials/components
  - equipment and machinery

## Venture Capital

Recognising the importance of venture capital (VC) as an important source of financing for technology intensive enterprises, the government is developing a strong VC base to support start-ups. Government-backed organisations and private venture companies have begun to venture into the biotechnology industry.

Biotechnology companies can check out the websites of the following venture capital companies for more information:

#### **MTDC Private Equity Management Sdn. Bhd. @ Malaysian Technology Development Corporation Sdn. Bhd.**

Website : [www.mtdc.com.my](http://www.mtdc.com.my)  
E-mail : [comms@mtdc.com.my](mailto:comms@mtdc.com.my)

#### **Expedient Equity Sdn. Bhd.**

Website : [www.expedientequity.com](http://www.expedientequity.com)  
E-mail : [jason@expedientequity.com](mailto:jason@expedientequity.com)

#### **MSC Venture Corporation Sdn. Bhd.**

Website : [www.mdc.com.my](http://www.mdc.com.my)  
E-mail : [msscvc@mdc.com.my](mailto:msscvc@mdc.com.my)

#### **Commerce Asset Ventures Sdn. Bhd.**

Website : [www.commerce-ventures.com.my](http://www.commerce-ventures.com.my)  
E-mail : [jl@commerce-ventures.com.my](mailto:jl@commerce-ventures.com.my)

#### **Mayban Ventures Sdn. Bhd.**

Website : [www.mayban-venture.com.my](http://www.mayban-venture.com.my)  
E-mail : [zain@mayban-ventures.com.my](mailto:zain@mayban-ventures.com.my)

#### **Celadon Capital (Malaysia) Sdn. Bhd.**

Website : [www.celadoncapital.com](http://www.celadoncapital.com)  
E-mail : [celadon@celadoncapital.com](mailto:celadon@celadoncapital.com)

#### **Springhill Bio Ventures Sdn. Bhd.**

Website : [www.springhilluk.com](http://www.springhilluk.com)  
E-mail : [info@springhilluk.com](mailto:info@springhilluk.com)

#### **BI Walden Management Sdn. Bhd.**

Website : [www.wiig.com](http://www.wiig.com)  
E-mail : [malaysia@waldenintl.com](mailto:malaysia@waldenintl.com)

#### **Amanah Venture Sdn. Bhd.**

Website : [www.amanah.com.my](http://www.amanah.com.my)  
E-mail : [shaiktaufik@ac.amanah.com.my](mailto:shaiktaufik@ac.amanah.com.my)

For more information on investment opportunities, please contact:



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