



Asia-Pacific
Economic Cooperation

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**Investment Toolbox
Malaysian Biotech Corporation's Investment
Toolbox: A Case Study**

Purpose: Information
Submitted by: Malaysian Biotechnology Corporation



**High Level Policy Dialogue on Agriculture
Biotechnology
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Investment Toolbox

Malaysian Biotech Corporation's
Investment Toolbox : A Case Study



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APEC HLPDAB AgBiotech Investment Toolbox

- 2006 Hanoi Vietnam HLPDAB agreed that an Investment Toolbox for AgBiotech would be created and designed for countries that may be interested to apply AgBiotech in strengthening their own economies, knowing about the potential of AgBiotech; and getting information to help encourage AgBiotech investment and / or develop their AgBiotech industry.
- Toolbox component would take into consideration:
 1. Regulatory framework
 2. Research & Development
 3. Technology transfer
 4. Intellectual Property Management
 5. Outreach & communication
 6. Business opportunities

INVESTMENT TOOLBOX: CHALLENGES

- Twenty-one economies, at different stages of adoption of AgBiotech
- Toolbox must acknowledge that there is **NO one-size-fits-all** approach to investment in AgBiotech
- Public and private sectors will play different roles throughout APEC economies

→
STEERING COMMITTEE
• CANADA
• MALAYSIA
• PERU
• RUSSIA
• UNITED STATES

INVESTMENT TOOLBOX OUTCOMES

- ◆ More investments in APEC economies AgBiotech sectors
- ◆ Greater APEC economies cooperation in AgBiotech
- ◆ Increased realization of benefits of AgBiotech throughout APEC economies

Malaysian BiotechCorp Value Proposition takes into consideration of:

- **Biotechnology Thrusts under Ninth Malaysia Plan (2006-2010)**
- The National Biotechnology Policy
- Malaysian BiotechCorp mandate

9TH MALAYSIAN PLAN STRATEGIC THRUSTS FOR BIOTECH

- TRANSFORMING/ENHANCING VALUE CREATION IN AGR/ HEALTH/ INDUSTRY
- CAPITALISING ON BIODIVERSITY FOR (AG)BIOTECH INDUSTRY
- NURTURE GROWTH IN (AG)BIOTECH
- LEVERAGE ON TECH CONVERGENCE TO GROW (AG)BIOTECH
- PROMOTE BIONEXUS TO ATTRACT (AG)BIOTECH INVESTMENTS
- CREATE ENABLING ENVIRONMENT TO BUILD (AG)BIOTECH INDUSTRY
- ENHANCE HUMAN CAPITAL DEVELOPMENT
- ESTABLISH R&D CENTERS OF EXCELLENCE AND ACCELERATE TECHNOLOGY DEVELOPMENT, DIFFUSION AND COMMERCIALISATION

Malaysian BiotechCorp Investment Toolbox takes into consideration of:

- Biotechnology Thrusts under Ninth Malaysia Plan (9MP 2006-2010)

The National Biotechnology Policy

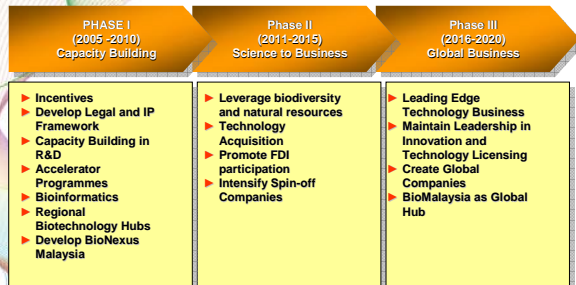
Mission Statement

- ▶ Innovation to create wealth by utilising and advancing biotechnology for socio-economic benefits of the nation in accordance with established social and ethical norms

Vision

- ▶ Position biotechnology as the new economic engine to enhance prosperity and wellness of the nation by 2020
- ▶ Through Healthcare, Industrial and Agriculture
- ▶ Enhance R&D and Tech Acquisition, Human Capital Development, Legal and Financial Structure

MALAYSIAN BIOTECH POLICY ACTION PLAN



SUMMARY OF POLICY THRUSTS


VISION
Position biotechnology as the new economic engine to enhance prosperity and wellness of the nation by 2020

- THRUST 1 : Agricultural Biotechnology Development
- THRUST 2 : Healthcare Biotechnology Development
- THRUST 3 : Industrial Biotechnology Development
- THRUST 4 : R&D and Technology Acquisition
- THRUST 5 : Human Capital Development
- THRUST 6 : Financial Infrastructure
- THRUST 7 : Legislative and Regulatory Framework
- THRUST 8 : Strategic Development
- THRUST 9 : Government Support and Commitment

APEC HIGH LEVEL POLICY DIALOGUE 19-22 JAN 2007 ³

Malaysian BiotechCorp Investment Toolbox takes into consideration of:

- Biotechnology Thrusts under Ninth Malaysia Plan (2006-2010)
- The National Biotechnology Policy
- Malaysian Biotech Corporation
- Globalization – What Does It Mean For Us?



APEC HIGH LEVEL POLICY DIALOGUE 19-22 JAN 2007

OBJECTIVES

Objective of Biotech Corp	<ul style="list-style-type: none"> ▶ Primary Government Development Agency for Malaysia's biotech industry ▶ One-Stop Center to facilitate start up of biotech business and operations
Objective of Agriculture Division	<ul style="list-style-type: none"> ▶ Assist in development of agricultural biotechnology infrastructure within Malaysia, in areas of human capital, technology platforms, research capabilities, new technologies, and a burgeoning business environment. ▶ To attract innovative, business oriented, internationally minded companies to Malaysia.

APEC HIGH LEVEL POLICY DIALOGUE 19-22 JAN 2007

MALAYSIAN BIOTECHNOLOGY CORPORATION

Governance	<ul style="list-style-type: none"> ▶ Report to Implementation and Advisory Councils, under leadership of Malaysian Prime Minister
Objective	<ul style="list-style-type: none"> ▶ Mechanism for implementation and coordination of National Biotech Policy
Functions	<ul style="list-style-type: none"> ▶ Lead Government Development Agency for Malaysia's biotech industry ▶ One-Stop Center to facilitate start up of biotech business and operations ▶ Facilitates and catalyzes technology and commercial spin-offs to the private sector

APEC HIGH LEVEL POLICY DIALOGUE 19-22 JAN 2007

ROLE OF MALAYSIAN BIOTEHCORP

Role 1	<ul style="list-style-type: none"> ▶ Biotech industry development agency and one-stop-centre for promotion of Biotech growth in Malaysia
Role 2	<ul style="list-style-type: none"> ▶ Ensure Government's biotechnology objectives and strategies are fully deployed (under custodian of Ministry of Science of Technology & Innovation, MOSTI) with other Ministry's representative among Board members
Role 3	<ul style="list-style-type: none"> ▶ Create presence in biotechnology industry value chain
Role 4	<ul style="list-style-type: none"> ▶ Coordination of biotechnology development effort

MARKET ACCESS

ASEAN Market

- ▶ ASEAN Free Trade Area (AFTA) established January 1992 to eliminate tariffs
- ▶ Regional market of 500 million people and combined GDP of USD800 billion

Asian Market

- ▶ Proposed ASEAN FTA with India, China and Japan
- ▶ Total trade MYR968 billion (USD262 billion), primarily with North-East Asia (USD86 billion), ASEAN (USD66 billion), US (USD45 billion) and EU (USD31 billion)

Islamic Countries' Market

- ▶ Access to Middle East and other Islamic countries
- ▶ 'Halal' market

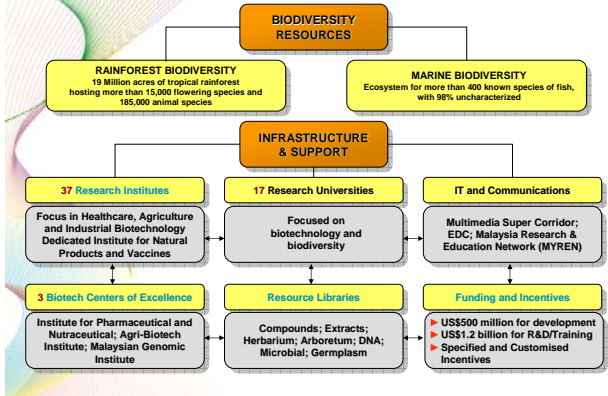
Supported by Developed Infrastructure
 International and Domestic Transport Linkages;
 Multimedia Super Corridor; Industrial/Technology Parks;
 High-Tech Telecommunications

BUSINESS ENVIRONMENT

Market-oriented Economy, Supportive Government Policies, Large Local Business Community and Growing Life Sciences Industry

ECONOMIC STRENGTH	SUPPORTIVE GOVERNMENT POLICIES	HUMAN CAPITAL	LIFE SCIENCES INDUSTRY POTENTIAL
Continuous Economic Growth High Level of Global Integration Knowledge-based Economy Market-oriented Economy Well-developed financial and banking sector Extensive trade links Total Trade 134% of GNP Competitive Business Costs	Liberal Equity Policy Competitive Tax Incentives Pro-business Policies Responsive Government Liberal Investment Policies Attractive Tax And Other Incentives Liberal Exchange Control Regime	Talented, young, educated and productive workforce Multilingual workforce Comprehensive vocational and industrial training Harmonious industrial relations	BioNexus Status Fiscal and Financial Incentives CROs/CMOs Conductive Regulatory Framework Intellectual Property Protection

R&D RESOURCES AND INFRASTRUCTURE



BIODIVERSITY

Natural Product Discovery

- ▶ One of 12 mega biodiverse tropical rainforest
- ▶ R&D by government and private research institutions and university research labs
- ▶ Extensive research in isolating and characterising natural compounds and potential active molecules
- ▶ Libraries of characterised compounds

RESEARCH INSTITUTIONS

Institutes of Higher Learning

▶ **17 Public Universities with research institutes focused on biotechnology and biodiversity**

Government Research Institutes

▶ **37 Institutes with focus in Healthcare Biotechnology, Agriculture and Industrial Biotechnology**

LIBRARIES

Herbarium

▶ **FRIM, USM, UPM, UKM, MARDI, UMS**

Extracts

▶ **USM, FRIM, UM, UMS**

Microbial Collections

▶ **UM, UMS, MARDI, FRIM, UPM, UKM, USM**

Arboretum

▶ **MARDI, UM, UPM, FRIM, USM**

Germplasm

▶ **UMS, UPM, MARDI**

DNA Library

▶ **UMS, MARDI**

INCENTIVES

Incentives

- ▶ **BioNexus Status, Bill of Guarantee and Competitive Incentives**
- ▶ **Venture capital funding, and Malaysian Life Science Fund**
- ▶ **Well funded Government-Linked Corporations**
- ▶ **Prepackage Incentives, R&D and Training grants and soft loans**

BIONEXUS status

Eligibility Criteria

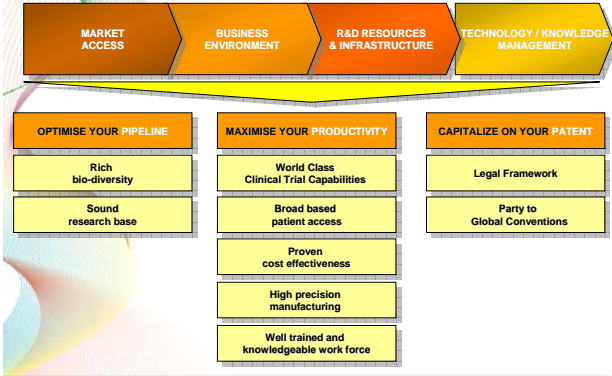
- ▶ **Establish a separate legal entity for the BioNexus-qualifying business and activities**
- ▶ **Be a provider of a product or services based on life sciences, or substantially utilise life sciences processes in production or agriculture**
- ▶ **Possess research capability, and must be conducting research in healthcare, agri-bio, industrial biotech or bio-manufacturing**
- ▶ **Employ significant percentage of knowledge workers**
- ▶ **Comply with environmental and ethical guidelines**

Bill of Guarantees

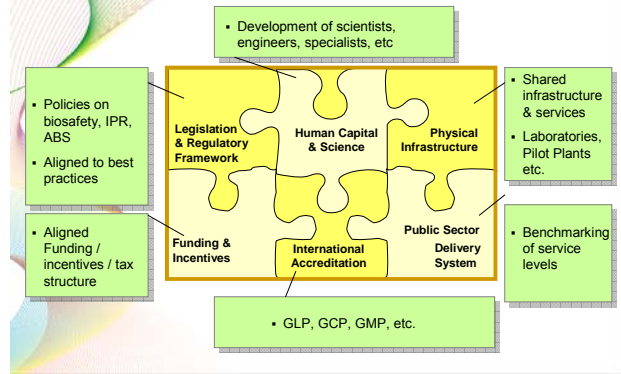
1. **Freedom of ownership**
2. **Freedom to source funds globally**
3. **Unrestricted employment of knowledge workers**
4. **Eligibility for competitive incentives and development programmes - Tax incentives, grants and other assistance**
5. **Provide an environment enabling accreditation to international standards**
6. **Provide an environment for intellectual property protection and enforcement comparable to global standards**
7. **Access to a supportive information network linking research centres of excellence**
8. **Access to shared labs, facilities and services**
9. **BiotechCorp as the dedicated agency empowered to act as a one-stop centre and provide fast-track options for Government approvals and licences**

www.biotechcorp.com.my

OVERALL IMPACT OF VALUE PROPOSITIONS



CREATION OF A CONDUSIVE CLIMATE IN INVESTMENT TOOLBOX



DEVELOPMENT MECHANISMS



CLIENT SERVICES SUPPORT DIVISION



DEVELOPMENT PROGRAMMES

Client Support Services



COMMERCIALISATION GRANT

COMMERCIALISATION GRANT

OBJECTIVE

- FUNDING TO PRIORITY BIOTECH AREAS AND BRIDGE FUNDING GAPS
- CREATE COMPREHENSIVE GRANT MECHANISM ENCOMPASSING THE ENTIRE RESEARCH, DEVELOPMENT & COMMERCIALISATION CHAIN
- ATTRACT & INCENTIVISE RESEARCHERS TO DEVELOP BIOTECH INDUSTRY
- PROVIDE FUNDING & CAPITAL FOR BIO ENTREPRENEURS

TECH ACQUISITION GRANT

TECHNOLOGY ACQUISITION PROGRAMME

OBJECTIVE

- ACQUIRE LEADING EDGE TECHNOLOGIES ON BEHALF OF AND FOR BIOTECH INDUSTRY
- FACILITATE DEVELOPMENT OF CORE AND PRIORITY AREAS
- ACCELERATE GROWTH OF BIOTECH INDUSTRY
- ESTABLISH ROBUST FOUNDATION IN BIOTECH R&D

IP RESEARCH & MANAGEMENT PROGRAMME

IP RESEARCH & MANAGEMENT PROGRAMME

OBJECTIVE

- STUDY AND ENHANCE COMPETITIVENESS OF IP ENVIRONMENT
- PROMOTE AWARENESS AND EDUCATION IN IP
- ENHANCE SKILLS AND EXPERTISE OF IP EXAMINERS
- ESTABLISH INTERNATIONAL DEPOSITORY AUTHORITY

BIOTECH ENTREPRENEUR PROGRAMME

BIOTECH
ENTREPRENEUR
PROGRAMME

OBJECTIVE

- PROVIDE BIOTECH ENTREPRENEURS WITH SKILLS AND KNOWLEDGE
- FACILITATE ESTABLISHMENT OF START UPS AND DEVELOP SME BASE
- ENHANCE COMPETITIVENESS OF ENTREPRENEURS AND THEIR BUSINESSES
- ENHANCE INDIVIDUAL PARTICIPATION IN BIOTECH

10 Components of Investment Toolbox (for Malaysia as one of the economies) in a nutshell, we would look at:

1. Structure of National Biosafety regulations (Complex ? / transparency)
2. R&D
 - Capability & Capacity building (Human Capital development)
 - Foresight and roadmap (blueprint / strategic planning of AgBiotech)
 - Cooperative R&D (multilateral / bilateral)
 - Knowledge / Technology generation
 - Scientific & Technological exchange programmes
3. IP Management / protection (effective?)
4. Incentives i.e. Pioneer Status /Investment Tax Allowance / Incentives in production of biotech related product
5. Financing / funding
6. Government's focus (based on comparative advantage?)
7. Bureaucratic-related investment licensing & permit (investor friendly?)
8. Tax systems (cumbersome? investor friendly?)
9. Outreach & communication

Creation of APEC AgBiotech Investment Toolbox : Next steps..

APEC HLPDAB AGBIOTECH INVESTMENT TOOLBOX: Next steps...

1. Meeting of the Steering Committee - call for additional steering committee members?
2. Definition of toolbox components by APEC economies involved
3. Identification of similar efforts in other fora, coordination of activities amongst economies
4. Identification of target audience (farmers, legislators, policy makers, financers, investment bankers)
5. Identification of contributors to the Investment Toolbox
6. Establishment of NEW due dates for Toolbox components and final product by all economies involved.

Thank You