





# JOIN MALAYSIA'S BOOMING BIOECONOMY

Driving sustainable returns for bioentrepreneurs and investors

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### WHY BE PART OF MALAYSIA'S BIOECONOMY?

National initiatives like the National Biotechnology Policy 2.0 (NBP 2.0) have positioned Malaysia as a leader in bioeconomy development in Southeast Asia. The country's rapidly growing bioeconomy is attracting strong investment interest.

- The bioeconomy has contributed approximately RM37.5 billion to Malaysia's GDP through various biotechnology projects facilitated by Bioeconomy Corporation (as of July 2024).
- Malaysia's bioeconomy is projected to grow from RM150 billion in 2020 to RM181.2 billion by 2030, reflecting a 15% annual growth rate<sup>1</sup>.
- The bioeconomy drives employment growth in Malaysia, with **nearly 17,000 job opportunities**<sup>2</sup> recorded in biotechnology and bio-based industries (as of July 2024).

Bioeconomy Corporation is the lead development agency for the bio-based industry in Malaysia, under the purview of the Ministry of Science, Technology and Innovation (MOSTI).

Mohammad Fauzy Tambi, Rozhan Abu Dardak. "Fostering Bioeconomy in Malaysia through Technology and Innovation". Published on 7 June 2022 on FFTC Agricultural Policy Platform (FFTC-AP). Accessed on 1 November 2024.

<sup>2.</sup> As reported at the NBiOSHOWCASE 2024.

## ADVANCING BIOINNOVATION IN KEY SECTORS

Our Industry Development Division (IDD) acts as a one-stop centre that provides support, facilitation, and advisory services for investment activities across three core bioeconomy sectors:

#### **Agriculture Biotechnology**



Committed to promoting and advancing agricultural biotechnology to enhance food security locally and globally.

#### **Healthcare Biotechnology**



Primarily focuses on facilitating the development and commercialisation of biotechnological solutions that improve healthcare outcomes and enhance overall wellbeing.

### **Industrial Biotechnology**



Supports initiatives that leverage biotechnological processes and integrate biotechnology into industries. The subdivision also champions circular economic principles through bioinnovation.

### AGRICULTURE BIOTECHNOLOGY

#### The solution to food security & sustainability

With a vision to become a leader in facilitating and developing biotechnology and bio-based initiatives in this country, the AgBiotech subdivision works with various stakeholders to create a bioeconomy that's both cutting-edge and sustainable across five key areas.

#### **CROP BIOTECHNOLOGY**

Sustainable biotechnologyenabled farming techniques and technologies to improve crop growth and yield while reducing reliance on harmful chemical fertilisers.

#### **AQUACULTURE**

High-value aquaculture production via breeding technologies that enhance disease resistance and yield, reduces import dependence and improves resource management.

#### **NATURAL PRODUCTS**

Production of nutraceuticals, cosmeceuticals, functional foods, dietary supplements, and botanical extracts to enhance public health and quality of life.

#### LIVESTOCK

Advanced breeding techniques, health products, feed additives, and livestock waste management systems to improve food production and farm waste management.

#### **CELLULAR TECHNOLOGY**

Using living cells to produce proteins like seafood and meat in laboratories to reduce reliance on traditional farming methods.

### HEALTHCARE BIOTECHNOLOGY

### **Cutting-edge innovations for better and safer wellbeing**

With a mission to ensure the wellbeing of the people and lead the way for bioinnovation in healthcare, our Healthcare Bio subdivision works with various stakeholders to create a bioeconomy of innovation and sustainability across six key areas.

#### **BIOPHARMACEUTICALS**

Advanced medicines made from living cells or organisms to treat or prevent diseases.

#### **MEDICAL DEVICES**

Tools for diagnosing, treating, or preventing medical conditions.

#### STEM CELL, CELLULAR MEDICINE, AND CELLULAR & GENE THERAPY PRODUCTS

The use of special cells and genetic changes to repair tissues, treat diseases and injuries, and correct genetic disorders.

### BIOCOSMECEUTICAL & WELLNESS

Natural plant-based remedies promote natural health and beauty.

#### CONTRACT RESEARCH SERVICES

Companies facilitating non-clinical testing, pre-clinical testing, clinical trials, and central lab activities related to clinical trials.

#### CONTRACT RESEARCH & MANUFACTURING SERVICES (CRAMS)

Companies that provide contract research and manufacturing services to third parties.

### INDUSTRIAL BIOTECHNOLOGY

### The path forward for circular economy and climate action

Our Industrial Biotechnology subdivision's overarching vision is to foster an advanced and sustainable bioeconomy through collaboration with diverse stakeholders. We aim to achieve this by focusing on five key areas that champion circular economic principles.

#### **BIOFUEL & BIOENERGY**

Organic waste from agricultural activities or municipal solid waste, such as palm oil mill effluent, cellulosic biomass, vegetable waste oil, rice husk, and household organic waste to generate sustainable fuel and electricity.

#### **BIOMATERIALS**

Replacing fossil-based materials with natural-based materials, such as plantderived plastics, glues, fibres, and organic waste products.

#### BIOREMEDIATION

Removing harmful pollutants from soil, water, and air using microorganisms and creating valuable by-products.

#### **BIOCHEMICALS**

Natural chemicals from renewable resources like sugars, fats, oils, lignin, and proteins to reduce dependence on crude oil and lower costs.

#### **BIOCATALYST**

Enzymes used in edible oil, palm oil products, detergents, food and drinks, manufacturing, animal feed, and baking that reduce energy demand, emissions, and toxic chemicals.

### FUELING THE GROWTH OF BIO-BASED COMPANIES

Bioeconomy Corporation is focused on fostering the growth and development of biotechnology companies within these three key sectors by leading and supporting the following strategic initiatives:



#### **BioNexus Status**

A special status awarded to qualified international and Malaysian biotechnology companies.



#### **Bio-Based Accelerator (BBA)**

A programme to support the rising stars of bioeconomy and develop more BioNexus Status companies.









A prime example of how we continuously strive to nurture a resilient sharing economy is by conceiving and executing our new BBA in 2021.

The programme was crafted for start-ups and existing bio-based companies with immense growth.

Through BBA, we aim to provide them with vital resources and facilitation, empowering them to strengthen their presence in the local and global markets and ultimately meet the standards for eventual BioNexus Status qualification.

Encik Mohd Khairul Fidzal Abdul Razak, Chief Executive Officer, Bioeconomy Corporation

### **BIONEXUS STATUS**

Accelerating the growth and development of qualified biotechnology companies in Malaysia.

BioNexus is a special status awarded to qualified international and Malaysian biotechnology companies. The status bestows fiscal incentives, funding, and other guarantees to drive innovation and assist growth.

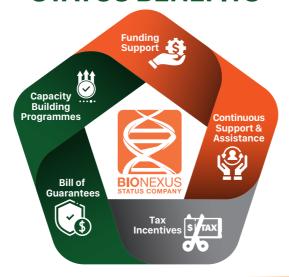
To qualify for BioNexus Status, a company must meet the following criteria:

- The proposed Qualifying Activity (QA) for products and/or services must have biotechnology elements, and the technology must be ready to be commercialised.
- 2 The proposed QA must be undertaken in Malaysia.
- The company undertakes continuous research & development (R&D) activity.
- The company is incorporated in Malaysia with a minimum paid-up capital of RM250,000 (for new and existing businesses).

From 2006 - 2023, Bioeconomy Corporation has facilitated:

- 347 companies to gain BioNexus Status.
- 16 BioNexus Status companies in achieving public listing.
- 30+ BioNexus Status companies to successfully penetrate the global market.

## BIONEXUS **STATUS BENEFITS**



### v*i* vant*i* s

With invaluable support from Bioeconomy Corporation, we attained BioNexus Status and successfully expanded on a global scale. The introduction of the BeST programme has strengthened our team with skilled biotechnology professionals, ensuring ongoing innovation and solidifying our leadership in the industry.

#### E.L. Law.

Chief Executive Officer, Vivantis Technologies Sdn Bhd

Bioeconomy Corporation has played a crucial role in connecting KLSMC with the biotechnology community both in Malaysia and internationally. This valuable network has greatly enhanced our capacity to innovate and lead in stem cell therapy. We look forward to future breakthroughs and successes, made possible by Bioeconomy Corporation's steadfast support and strategic vision. We deeply appreciate their commitment to keeping KLSMC at the cutting edge of progress.

#### Dr. Caroline Jee.

Chief Scientific Officer, KLSMC Stem Cells Sdn Bhd



### BIO-BASED ACCELERATOR (BBA)

BBA is a comprehensive facilitation programme designed to drive development of the bio-based sector and to enhance commercial viability.

To be accepted into the BBA programme, a company must meet the following criteria:

- 1 The company has adopted, or plans to adopt bio-based technology.
- The company has at least one employee contributing to KWSP (EPF).
- The company is a legally registered entity that complies with all relevant laws and regulations.
- The company pays an application fee of RM250 upon approval of BBA status.

Since the inception of the BBA programme in 2021 and up until 2024, Bioeconomy Corporation has nurtured 224 BBA companies.

## 7 AREAS OF SUPPORT FOR BBA COMPANIES



- Accreditation & Standards
- Certifications
- · Regulatory Advisory
- Product Development & Market Access
- · Funding Assistance
- Access to Laboratories & Technology Platforms
- Access to Knowledge Workers & Manpower

We joined the BBA programme at the end of 2022 and since then, the IDD Agriculture team and the BBA personnel have always supported us in all of our endeavours, from market access to helping us to get certifications and accreditations. They were instrumental in assisting us to obtain the PRESTIGE funding for our commercialisation and tech innovation efforts. We are proud to be part of the BBA programme!







The BBA programme has provided crucial resources, including funding, business consultation, travel subsidies, and business matching with potential partners. This support is invaluable for our growth in the competitive medical technology industry. We look forward to continued collaboration with Bioeconomy Corporation to become a leading precision health provider globally.

**Fadzhairi Abd Jabar,** Founder & CEO, Arcadia Life Sciences Sdn Bhd

### BECOME A CHANGEMAKER

The future promises sustainable food sources, advancements in healthcare, and the development of clean energy within a circular bioeconomy that benefits both people and the planet.

Whether you're a bioentrepreneur or a visionary investor, Bioeconomy Corporation is here as your trusted partner and advisor. Together, we can drive bioeconomic growth, foster local and international bioinnovation, create jobs, promote rural development, and deliver tangible benefits to society.

Let's join forces to turn these possibilities into reality and secure a brighter, more sustainable future for generations to come.

## GET IN TOUCH

Are you interested in exploring investment opportunities, applying for BioNexus Status, or joining our BBA programme? We look forward to hearing from you! Contact us today.

#### IDD

idd.enquiry@bioeconomycorporation.my

#### **BioNexus Status**

evaluation@bioeconomycorporation.my

#### **BBA Programme**

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