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MALAYSIAN BUSINESS**mb-e**

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The Malaysian Biotech Corporation has had its share of brickbats but is determined to excel at the task at hand.

By Cynthia Ann Peterson

Long Road Ahead

B iotechnology is the latest buzzword among local policy makers these days. The mere mention of the word in passing could probably open many doors of officials in Putrajaya.

The government's zeal in promoting and creating a large, vibrant biotech industry is not a national secret. Putrajaya's interest in biotechnology is understandable. By 2020, the sector is estimated to contribute 5% to the gross domestic product (GDP), creating 280,000 jobs. Globally, by 2015, the industry is estimated to be worth over RM3 trillion. With an agrarian economy as a heritage, rich biodiversity and information communication technology (ICT) know how, the country has many advantages to aid its success in the sector.

But can the government succeed? Critics

are unsure. The Malaysian Biotech Corporation Sdn Bhd (MBC) is the key one-stop agency tasked with overseeing the biotechnology industry's development, with specific functions that include being the catalyst for commercial spin-offs to the private sector, facilitating market-driven R&D and commerce as well as advancing R&D and commerce in agriculture, healthcare and industrial biotechnology. However, despite its relatively recent existence, critics have already alleged that the MBC has been disappointing in its efforts to help secure funding as well as market the industry. But are its critics being fair?

No doubt, leading the nation's biotechnology charge is a daunting task given the stiff competition from other countries, the brain drain, funding and other issues. The key question is whether

the MBC is really ready to take up this challenge?

Money, money everywhere ...

Funding seems to be one of the key sticky issues among biotechnology start-ups despite the many avenues and the billions made available by the government.

In the Ninth Malaysia Plan, the government allocated RM2 billion for biotechnology, compared with RM574.4 million in the Eighth Malaysia Plan. Budget 2007 saw the sector being allocated RM210 million. This includes RM60 million for matching grants through the Biotech Acquisition programme, RM30 million for commercialisation of research and development (R&D) findings through the Biotechnology Commercialisation Fund and RM59 million for R&D initiatives for genome and molecular biology among



MANAGEMENT

DATUK A KADIR JASIN
Editor-in-Chief
akadirjasin@beritapub.com.my

ZAINI ZAINUDDIN
Senior General Manager
zainizai@beritapub.com.my

CHARLES RAJ
Senior Editor, Berita Publishing Sdn Bhd
Editor, Malaysian Business
mbeditor@beritapub.com.my

V S GANESAN
Marketing Director

MOHD DESA OMAR
Senior Manager, Production Services

MB-E

PRATHABAN V
Section Editor, mb-e
prathab@beritapub.com.my

CYNTHIA ANN PETERSON
Writer
cynthia@beritapub.com.my

AZLAN SALIM
Art Director

FAZREEN MOHAMED OSMAN
Graphic Designer

MOHD KAHARUDDIN AB SAMAD
Chief Photographer

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BADARIAH SALLEH
Subscription Executive

V MURUGESU Pre-Press Manager
AC VASUTHEVAN Senior Pre-Press Executive

For all advertisement & promotions enquiries
Tel: 03-76208111 Fax: 03-76208026
advertising@beritapub.com.my

For all circulation & subscription enquiries
Tel: 03-76208111 ext. 108
Fax: 03-76208621 circulation@beritapub.com.my

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other research. Venture capital opportunities via the US\$150 million Malaysian Life Sciences Capital Fund (MLSCF) are also available to promising early-to-mid stage companies.

MBC Chief Executive Officer (CEO) Iskandar Mizal Mahmood says there is a misconception about the funding value chain among entrepreneurs, as the amount of money disbursed really depends on the stage the companies are at.

'The development of many companies depends on where they are, and different stages require different types of funding. The laying of the foundation for the industry has already been done, and we have seen development since the launch of the National Biotechnology Policy. If you look at the development of the industry from the date of the launch (2005), the Ninth Malaysia Plan's allocation for the industry is many fold over the Eighth Malaysia Plan,' he says.

He adds that the new set of fiscal incentives announced in the Budget showed the government's commitment to building the industry. 'MBC, as the industry developer, has many stakeholders to work with. It is a collective effort and together we are showing the resolve and commitment to ensure the successful building of the industry. It has to be robust and sustainable to build a conducive environment,' says Iskandar.

He sees MBC as a conduit for funding, while acknowledging that there will always be critics. 'People will always criticise or tend to shift their frustrations in this case towards MBC, saying there are no funds. But if you look at the Ninth Malaysia Plan and the National Biotechnology Policy, the funding chain and gaps have been addressed to a large extent. If you look at complaints about venture capital seed, we fought for a RM100 million commercialisation fund. In terms of the environment, knowledge infrastructure, it is there,' he asserts.

Iskandar adds that the quality of the company is important, and its value proposition must be strong and viable enough. During BioMalaysia 2006, the first group of BioNexus status companies were announced, and they represented the kind of strength and viability looked for in such companies. 'All the seven BioNexus



ISKANDAR:
Quality of companies important

companies are start-ups, so it is inaccurate to say that there is no emphasis on start-ups,' he stresses.

In an industry as young as biotechnology here, investing in startups appear inevitable as more established companies are too few and far between. Things have changed over the years, and the risk involved in investing is not as high as it once was.

'Don't reinvent the wheel!'

There is a perceived higher risk in investing in biotechnology companies, but that is apparently changing. From a mortality rate of 90%, biotechnology firms now have a survival rate of over 80%. Companies need to realise that there must be a wide enough market for the products and services they plan to offer.

'There are working models already out there. All businesses have risks, but good entrepreneurs will know how to mitigate those risks. Rather than starting from scratch, we should utilise the global biotechnology value chain. That is where the opportunities are. Let's not reinvent the wheel,' says Iskandar.

MBC's role as a one-stop agency is to assist companies, do marketing, play an advocacy role in creating a conducive environment and assist with funding. 'To counter the argument that there are no funding opportunities, I strongly believe that what we are seeing on the ground is that the money is there to kick-start the industry,' he says.

To assist with commercialisation, MBC has brought in experts to conduct symposiums, promoted a database of research to entrepreneurs and is undertaking bridging efforts. 'Bridging

efforts will continue to be done. We have a biotechnology information tour going to universities to tell researchers about potential areas. We also have an entrepreneurship programme that will roll out this year,' he says.

According to Iskandar, MBC also works closely with the Malaysian Bioindustry Organisation (MBIO) to hear the industry's views.

There are several issues that need addressing for the industry to start off the block effectively.

'We need a coherent set of policies which are being addressed at the moment. Biotechnology is such a longterm industry, with high investments and long gestation periods, so most investors will want to know the regulatory climate,' says MBIO Chairman, Dr K Harikrishna. For example, the implications of the Biosafety Bill, and what it entails to the industry.

Harikrishna says MBIO and MBC have a symbiotic relationship and the latter is trying to educate business and academia on biotechnology. 'Until that is addressed we will probably see a lag phase before we can see results. We need to forget about

‘ Until the education of business and academia on biotechnology is addressed, we will probably see a lag phase before we can see results. We need to forget about the hype and get down to hard work ’

– K Harikrishna, MBIO Chairman

the hype and get down to hard work. What sells is the product in hand. If there is no product, or if one companies misjudges the market, they can land in trouble. Smaller companies probably find it difficult to be in touch with the market, as trends are often determined overseas,' he says.

The quality of the scientific work produced is also an area, which needs to be given focus as does the interaction between academia and industry. 'The scientific community and the industry need to interact so that they can understand each other's needs, and the more interaction there is, the better,' says Harikrishna, who is also the Director of Research, Sime Darby Technology Centre. Applied research in promising areas and stronger patents filed can be the result of

such interactions.

Getting Malaysian scientists abroad to return will also be a boon as they will bring their invaluable experience to the local industry. This will create a competitive environment which in turn can play a role in reversing the brain drain.

Wooing the big guns

Another litmus test for the local biotechnology industry's growth is in attracting foreign players. Finding a niche or a place in the biotechnology value chain is important, not just for the country as a whole but also for local biotechnology players. With competition rife, countries are all trying to woo the big pharmaceuticals to come and set up shop in their respective biotechnology parks. Singapore has its Biopolis. The island republic is reportedly investing some US\$8 billion in R&D and other ventures over five years.

The ability to attract the big pharmaceuticals and biotechnology firms is both a vindication and endorsement of any country's viability as a biotechnology powerhouse. So far, there have been no announcements of that nature here yet, but is the presence of these companies a real litmus test? Iskandar says the MBC looks at it from a different perspective.

'They are catalysts, and if you look at bringing in catalysts, it is engaging not just the big pharmaceuticals but big biotechnology firms. This will take time to secure and the effort is ongoing. Pharmaceuticals are here but we are trying to woo them to do early stage work here. We are following up on leads,' he says.

On competition from Singapore, he says it is not an either/or situation.

'There will always be those who say that they can go to Singapore, but no one country can do everything. We look at it from a complementary standpoint. There is always room for collaboration. Multinationals have a global view. We have

THE INAUGURAL SEVEN

BioNexus status is granted to qualifying biotechnology companies in the country. Similar to the MSC Malaysia status for information communication technology outfits here, BioNexus status offers special tax incentives, grants and other kinds of support under the BioNexus Bill of Guarantees.

The seven BioNexus companies unveiled at BioMalaysia 2006 were:

- Malaysian Bio-Diagnostic Research Sdn Bhd, which develops medical diagnostic kits.
- KL Biotech Manufacturing Sdn Bhd, a company that is in the development of supplements and pharmaceuticals derived from local herbs.
- Vivantis Technologies Sdn Bhd, which is in the research and development and production of enzymes and related products.
- Nova Laboratories Sdn Bhd, which produces plant-based pharmaceuticals.
- IPT Kosmo Sdn Bhd, a wastewater treatment technology company.
- The Asiatic Centre for Genome Technology Sdn Bhd, which is involved in genome sequencing and the discovery of biomarkers.
- Inno Biologics Sdn Bhd, a biopharmaceuticals contract manufacturer that is the flagship biotechnology company of Inno Bio Venture Sdn Bhd, a Ministry of Finance Inc Company with an affiliation with the Ministry of Science, Technology and Innovation.

to play up our strengths and, as long as we fit in the value chain, the value is there,' he explains.

However, waiting for the big corporations to knock on our doors is counterproductive.

'If we just wait and don't develop, it won't do us justice. Local company development is being done simultaneously. So the strategy is two-prong, and it is an ongoing effort,' he says.

Fitting into the value chain

Realising where the country stands in the scheme of things is important to prevent futile investments. With the population of India at over 1.1 billion, it probably makes Malaysia's 26 million a less attractive proposition for mass clinical trials of drugs.

'We do believe we are on the right track, and all our efforts will come to fruition in time. In terms of marketing, we will always have to look at where we have our strengths. We won't go knocking on the doors of the pharmaceuticals if we think we don't fit into their value chain. We are doing target marketing, and are looking for companies that complement our ecosystem here, and want what we have to offer them, not just in terms of human capital, for instance. In a knowledge-based industry, we have to be targeted in our approach,' he says.

He says that there are certain things the country can do, and those that it can't.

'With clinical trials, there is a shift in the industry to look at personalised medicine. The value proposition for Malaysia is our diverse ethnic make-up. There are areas where we are good at that are important with the drug development process. Some 30% of drugs have a natural substance base and we are quite advanced in the area of traditional medicine,' he says.

The medical world is moving towards personalised medicine where ethnic differences are taken into account, but it is unclear if Malaysia's relatively modest population will attract drug companies to conduct trials here despite the diverse ethnic make up.

Piece of the pie

There are about 5,000 biotechnology companies worldwide with a market



THE NATIONAL BIOTECHNOLOGY POLICY

The National Biotechnology Policy will be implemented in three phases:

Phase 1 (2005 – 2010): Capacity building

Phase 2 (2011 – 2015): Science to business

Phase 3 (2016 – 2020): Global presence

The nine thrusts of the National Biotechnology Policy are:

Thrust 1: Agriculture 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 Development

Thrust 7: Legislative and Regulatory Framework Development

Thrust 8: Strategic Positioning

Thrust 9: Government Commitment

The 9 BioNexus Bill of Guarantees:

- Freedom of ownership
- Freedom to source funds globally
- Freedom to bring in knowledge workers
- Eligibility for competitive incentives and other assistance
- Eligibility to receive assistance for international accreditations and standards
- Strong intellectual property (IP) regime
- Access to supportive information network linking research centres of excellence
- Access to shared laboratories and other related facilities
- BiotechCorp as the one-stop agency

(Source: MBC)

capitalisation of US\$700 billion, and Malaysia is aiming to become a global player in the industry by 2020, generating at least 20 global home-grown companies. The portion of the business the country ultimately gets is still unclear, and Iskandar says, how the cake is shared is very important.

'Biotechnology is a global business and it is more about fitting in the value chain. It is not just about the market, but the value to the part we play. People tend to look at the negatives rather than the positives,' he says.

Iskandar adds that the opportunities in biotechnology are huge as it is pervasive. The recipients are the entire population

of the world, he says. However much is done, critics will be there, and Iskandar accepts that.

'There will always be criticism but from my perspective, criticism that is meaningful, we will take seriously. We will remain steadfast and do our utmost to deliver. If there are things people think we aren't doing right, our doors are always open; engage with us directly because that is in our charter. People have to give the development of the industry a chance,' he says.

Harikrishna agrees: 'There is still place for us at the table but we need to leverage our strengths. It will take collective hardwork by everyone,' he says. **mb-e**