BIOTECHCORP
MALAYSIAN BIOTECHNOLOGY CORPORATION

INNOVATING COMMERCIALISATION IN BIOTECHNOLOGY

Annual Report 2010

Local People, Global Performance

2010

People First, Performance Now

The year 2010, which represents the period under review for this annual report, as well as the culmination of the first phase of National Biotechnology Policy (2005-2010), is the main typography element of the cover. In the first phase of implementation, the emphasis for the Malaysian Biotechnology Corporation Bhd was on capacity building. We felt it apt to characterise our 2010 achievements by creating a collage of Malaysians from all walks of life to stylise the 2010 typography. It is our tribute to Malaysians who inspire us to scale greater heights who stand to benefit tremendously by the creation of a world class, dynamic biotechnology industry. It is our dedication to the spirit of 1Malaysia as we forge ahead to the theme of People First, Performance Now.

In This Report

BIOTECHCORP
MALAYSIAN BIOTECHNOLOGY CORPORATION

CREATING A KNOWLEDGE BASED ECONOMY

"The impact of the Malaysian National Biotechnology Policy is to provide a comprehensive plan with clear targets and measurements. By the year 2020 – it is our target to achieve RM15 billion public and private sector investment in biotech, 5% contribution to GDP, 50 global biotech companies with revenue of RM170 billion." - YBhg Dato' Iskandar Mizal Mahmood, Chief Executive Officer, Malaysian Biotechnology Corporation Sdn Bhd

Highlights of 2010

Key Indicators for the Biotechnology Industry at December 31, 2010

Indicators	TARGETS				Achievements in 2005-2010 period
	Phase 1 (2005-2010)	Phase 2 (2011-2015)	Phase 3 (2016-2020)	Total (2005-2020)	
Investment by Private Sector and Government	RM 6 billion	RM 9 billion	RM 15 billion	RM 30 billion	RM 5.4 billion*
Number of BioNexus companies	25	25	50	100	188
Employment (at end period)	40,000	80,000	160,000	280,000	54,776
Annual Revenue (at end period)**	RM 20 billion	RM 80 billion	RM 170 billion	RM 270 billion	RM 13.5 billion
Contribution to GDP	2.5%	4%	5%	5%	2.2%

Source: BiotechCorp

Notes:

* This includes RM 2.2 billion from the private sector and RM 3.2 billion from the Government. (Source: BiotechCorp)

** This is the total number/value at the end of each Phase. The target for 2020 is the same as that at the end of Phase 3.

Other Facts and Figures

Total Approved Investment in BioNexus Status Companies as at December 31, 2010			
Industry Sector	Total 2009	Total 2010	Total (2005 - 2010)
Agriculture	RM 63 million	RM 184.4 million	RM 688.3 million
Healthcare	RM 24.5 million	RM 172.4 million	RM 604.6 million
Industrial	RM 32.8 million	RM 115.4 million	RM 704.2 million
Total	RM 120.3 million	RM 472.2 million	RM 1,997.1 million

BioNexus Status Companies : Investment by Industry			
Industry Sector	Total 2009	Total 2010	% Growth (2009 - 2010)
Agriculture	RM 569.9 million (45%)	RM 714.6 million (42%)	↑ 25.40%
Healthcare	RM 328.7 million (26%)	RM 379 million (22%)	↑ 15.30%
Industrial	RM 375.7 million (29%)	RM 610.1million (36%)	↑ 62.40%
Total	RM 1,274.3 million (100%)	RM 1,703.7 million (100%)	↑ 33.70%

BioNexus Status Companies: R&D Expenses by Industry			
Industry Sector	Total 2009	Total 2010	% Growth (2009 - 2010)
Agriculture	RM 19.1 million (44%)	RM 31.5 million (49%)	↑ 65.00%
Healthcare	RM 19.9 million (46%)	RM 27.9 million (44%)	↑ 40.20%
Industrial	RM 4.5 million (10%)	RM 4.7 million (7%)	↑ 4.40%
Total	RM 43.5 million (100%)	RM 64.1 million (100%)	↑ 47.40%

BioNexus Status Companies : Employees by Industry			
Industry Sector	Total 2009	Total 2010	% Growth (2009 - 2010)
Agriculture	849 (40%)	899 (35%)	↑ 5.90%
Healthcare	759 (35%)	920 (36%)	↑ 21.20%
Industrial	532 (25%)	722 (29%)	↑ 35.70%
Total	2,140 (100%)	2,541 (100%)	↑ 18.70%

BioNexus Status Companies : Knowledge Workers by Industry			
Industry Sector	Total 2009	Total 2010	% Growth (2009 - 2010)
Agriculture	330 (35%)	365 (31.3%)	↑ 10.6%
Healthcare	457 (49%)	553 (47%)	↑ 21.0%
Industrial	155 (16%)	247 (21.2%)	↑ 59.35%
Total	**942 (100%)**	**1,165 (100%)**	**↑ 23.7%**

BioNexus Status Companies : Revenue by Industry			
Industry Sector	Total 2009	Total 2010	% Growth (2009 - 2010)
Agriculture	RM 158.3 million (30%)	RM 215.4 million (48%)	↑ 36%
Healthcare	RM 119.0 million (22%)	RM 133.7 million (30%)	↑ 12.40%
Industrial	RM 259.2 million (48%)	RM 101.5 million (22%)	↓ 60.8%
Total	**RM 536.5 million (100%)**	**RM 450.6 million (100%)**	**↓ 16%**

Source: BiotechCorp

Biotechnology Blueprint For Growth

About Biotechnology

The United Nations Convention on Biological Diversity defines biotechnology as "Any technological application that uses biological systems, living organisms, or derivatives thereof, to make or modify products or processes for specific use."

In Malaysia, the biotechnology industry is spearheaded by a national agency, the BiotechCorp which is guided by a National Biotechnology Policy and developed according to the Biotechnology Masterplan.

The National Biotechnology Policy

The National Biotechnology Policy (NBP) is a landmark policy encompassing nine thrusts which emphasise Malaysia's intended direction and the Government's proposed measures towards developing biotechnology for wealth creation and national well-being.

The Nine Thrusts of the National Biotechnology Policy

1: Agricultural Biotechnology	Transform and enhance the value creation of the agricultural sector through biotechnology.
2: Healthcare Biotechnology	Capitalise on the country's biodiversity for commercialising the discoveries of health-related natural products and bio-generic drugs.
3: Industrial Biotechnology	Leverage on the country's strong manufacturing sector to increase opportunities for bio-processing and bio-manufacturing.
4: Research & Development, Technology Acquisition	Establish centres of biotechnology excellence, through research and development, as well as technology acquisition.
5: Human Capital Development	Build the nation's human capital through education, training and research activities, with the aim of producing knowledge generation capabilities.
6: Financial Infrastructure	Provide the right financial support via competitive lab-to-market funding and incentives to encourage committed participation from academia and the private sector, including Government-linked companies.
7: Legal & Regulatory Framework	Strengthen the legal and regulatory framework by reviewing ownership of intellectual properties and regulations relating to biotechnology process and business.
8: Strategic Development	Build international recognition for Malaysian biotechnology and find a niche in the global biotechnology value chain.
9: Government Support & Commitment	Realise the execution of the policy through the establishment of a dedicated and professional Government agency to spearhead the development of the biotechnology industry with the incorporation of BiotechCorp.

The Biotechnology Master Plan

Biotechnology is recognised by the Government of Malaysia to be a key strategic driver to propel economic and social progress - one which can unlock the value of the nation's natural resources and human capital talents to improve the lives of many of its people. The master plan outlines three stages of growth which the local biotechnology industry must go through in order to meet this objective.

PHASE 1: Capacity Building (2005-2010) *Sowing the seeds of growth*

1. Adoption of policies, plans and strategies
2. Establishment of advisory and implementation Councils
3. Establishment of Malaysian Biotechnology Corporation Sdn Bhd (BiotechCorp)
4. Capacity building in research and development
5. Industrial technology development
6. Develop agricultural, healthcare and industrial biotechnologies
7. Develop legal and intellectual property framework
8. Incentives
9. Business and corporate development through accelerator programmes
10. Bioinformatics
11. Skills development
12. Job creation
13. Regional biotechnology hubs
14. Development of BioNexus Malaysia as a brand

PHASE 2: Science to Business (2011-2015) *Making the sales pitch*

1. Develop expertise in drug discovery and development based on biodiversity and natural resources
2. New product development
3. Promote Foreign Direct Investment (FDI) participation
4. Intensify spin-off companies
5. Strengthen local and global brands
6. Job creation

PHASE 3: Global Business (2016-2020) *Attaining global prominence*

1. Consolidate strengths and capabilities in technology development
2. Further develop expertise and strength in drug discovery and development
3. Leading edge technology business
4. Maintain leadership in innovation and technology licensing
5. Create greater value through global Malaysian companies
6. Re-branding of Malaysia as global biotechnology hub

BiotechCorp: Charting Industry Progress

About the company

Malaysian Biotechnology Corporation Sdn Bhd (BiotechCorp) (Company No. 691431-D) was incorporated under provisions of the Companies Act 1965 on May 13, 2005 to identify value propositions in research and development (R&D) and commerce to support and facilitate these ventures through financial assistance and advisory services.

Structure	BiotechCorp is an agency of the Ministry of Science, Technology and Innovation (MOSTI). Its issued and fully paid share capital (95,000,002 ordinary shares of RM 1.00 each) is owned by the Ministry of Finance Incorporated (95,000,001 shares) and Federal Lands Commissioner (one share). It is governed by the Biotechnology Implementation Council (BIC) and counselled by the Biotechnology International Advisory Panel (IAP) (both chaired by the honourable Prime Minister of Malaysia). Six Cluster Working Group (CWG) Committees were established in 2006 to facilitate coordination between ministries and Government agencies.
Key Mandates	Act as a one-stop-centre for all biotechnology initiatives in Malaysia. Nurture and accelerate growth of Malaysian biotechnology companies. Actively promote foreign direct investments in biotechnology. Create a conducive environment for biotechnology in Malaysia.
Vision	To enhance the economic, health and social well being of the nation.
Mission	Lead the development of the biotechnology industry in Malaysia.
Corporate Values	Teamwork: *In a relationship based on mutual respect and understanding, we work together with our colleagues, clients and partners to achieve common goals.* Integrity: *We conduct our business with uncompromising integrity.* Excellence: *We strive to achieve excellence in all that we do.* Accountability: *We drive the delivery of results for the organisation and the nation.*
Leadership	See page 26 (Board of Directors) and page 34 (The Management Team).

Business Information

Registered Office & Principal Place of Business	Level 23, Menara Atlan 161B Jalan Ampang 50450 Kuala Lumpur Malaysia
Principal Banker	Malayan Banking Berhad Lot 1.01, Ampang Park 184 Jalan Ampang 50450 Kuala Lumpur Malaysia
Auditor	Deloitte KassimChan Chartered Accountants Level 19, Uptown 1, 1 Jalan SS21/58, Damansara Uptown Petaling Jaya 47400 Malaysia
Tax Consultant	Ernst & Young Chartered Accountants Level 23A, Menara Millenium Jalan Damanlela Pusat Bandar Damansara 50490 Kuala Lumpur Malaysia


BIOTECHCORP
MENARA ATLAN

Chairman's Message

The Malaysian Biotechnology Corporation Sdn Bhd (BiotechCorp) began in 2005 with an aspiration to build the Malaysian biotechnology industry literally from ground up. Its mandate included acting as a one stop centre for all biotechnology initiatives in Malaysia, nurturing and accelerating growth of Malaysian biotechnology companies, actively promoting foreign direct investments in biotechnology and creating a conducive environment for biotechnology to thrive in Malaysia. The mandate was to be implemented according to the National Biotechnology Policy (NBP), a 15-year master plan which outlines three phases for the growth of the industry in five year periods.

The first phase, targeted at building capacity for the industry was from 2005 to 2010. At the end of the first phase of NBP, BiotechCorp has achieved a 2.2% contribution to the gross domestic product. BiotechCorp has successfully developed and implemented the BioNexus programme by establishing a network of 188 BioNexus companies and creating jobs for people.

Various programmes and initiatives have been organised in order to provide a conducive environment for the industry especially in the areas of human capital and skills development, intensifying research and development, strengthening legal and regulatory framework and accelerating the development in agricultural, healthcare and industrial biotechnologies.

Further, the establishment of global names in biotechnology in our Bio-XCell ecosystem at Iskandar Malaysia in Johor such as France-based Metabolic Explorer (METEX), India-based Biocon Ltd and US-based Glycos Biotechnologies Inc is testament to the fact that we must be doing the right things. With investments totaling RM650 million, I believe these companies will further drive the industry to new heights and promote a more vigorous domestic direct investment landscape. But we cannot just stop here.

Taking stock of these achievements during this period, BiotechCorp is certainly on track towards meeting targets set by the government and to establish biotechnology as one of the new economic growth areas for the nation that will fulfill the agenda of the New Economic Model.

We are now focused on accelerating commercialisation in biotechnology for the next phase of NBP Master Plan - Science to Business. Moving forward, growing the network and number of BioNexus companies will be less significant. Priority must be given to growing the calibre, capacity and competitiveness of biotechnology companies. Placing quality over quantity is an imperative as we forge ahead to chart new frontiers for the industry.

Instead of focusing on product development per se, the time has arrived for universities and laboratories to embark on efforts targeted at commercialising research. The need to bring products to the market creates a strong impetus for public-private partnerships. Smart partnerships such as these will heighten the impact of initiatives undertaken by the industry, particularly where commercialisation is concerned, as industry players leverage upon each other's strengths to reach mutual goals.

At this juncture, the need for well-trained and talented human capital must be emphasised. In the first stage the emphasis was on product innovation but in this stage there would be a need for people who are able to successfully sell the products. It is important that the industry takes upon itself the onus to train people who understand the challenges that lie ahead and can respond to them in the best ways possible.

Equally important at this stage is ensuring that there is continued access to funding for industry players. Continuous government support is crucial as it has been seen as the primary drivers of growth for the industry in the last few years and is seen as an important catalyst, till a stage where critical mass is created. Industry players too must play a role in working towards ensuring a sustainable funding landscape exists, for example through channeling back some of the profits to help other companies grow.

It is no understatement to say that the second phase for the NBP, over the next five years would be more challenging than the first. All the stakeholders of the biotechnology industry in Malaysia must continue to be committed towards the cause of growing the industry from strength to strength, as we take it through the next phase of development.

We have had five great years in shaping the Malaysian biotechnology industry. Allow me to put on record my sincerest appreciation to the Government of Malaysia and my fellow board of directors at BiotechCorp for the efforts put in to catalyse developments in this industry. I would also like to thank the management and team at this organisation, for your hard work in ensuring that the implementation of the NBP remains on track and is headed towards uplifting the lives of people who benefit from this industry. Last but not least, I would like to thank all the industry players who continue to support us as we take the Malaysian biotechnology industry into its next stage of growth.

Tan Sri Datuk Dr Ahmad Zaharudin Idrus
Chairman

CEO's Report 2010

In the years since its inception in 2005, the Malaysian Biotechnology Corporation Sdn Bhd (BiotechCorp), established to lead the Government's efforts to promote growth of the biotechnology industry, has experienced a dynamic growth story. The past five years has seen our organisation grow from strength to strength with meaningful milestones achieved. Such accolades can only be achieved through the collective determination of the various people that serve the industry. Many individuals have given their best efforts and undeterred commitment in driving us to ascend to these present heights. The journey of the Malaysian biotechnology industry is perhaps an appropriate epitomisation of the Malaysian Government's 'People First, Performance Now' approach, one that I hope will continue to drive us to chart new frontiers, even as we celebrate achievements of the past.

Capacity building for the biotechnology industry

The National Biotechnology Policy (NBP) is the blueprint for the development of the Malaysian biotechnology industry. We have successfully completed Phase 1 of the NBP which centred on capacity building. In this first phase, BiotechCorp - the lead agency catalysing industry expansion, sought to build a strong foundation for biotechnology, focusing on the key success factors, namely human resource, regulatory and institutional development, investment and revenue generation.

Much of the achievements of BiotechCorp in the last five years would not have been possible without the many contributions and active facilitation from the Malaysian Government. At this juncture, I must put on record our sincerest appreciation to the Government for having played an instrumental role in creating greater impetus for the biotechnology industry.

Under the 9th Malaysia Plan (RMK 9) from 2005-2010, the Government had allocated RM2 billion to support the development of physical and soft infrastructure in the biotechnology sector. From this, a total of RM265 million was allocated to BiotechCorp.

With this allocation, we have put in place various programmes and initiatives to provide a conducive environment for the industry especially in the areas of human capital and skills development, intensifying research and development (R&D), strengthening the legal and regulatory framework and accelerating the development of agriculture, healthcare and industrial biotechnology areas. All these initiatives were implemented in order to prepare the industry players for an even more challenging period anticipated during Phase 2.

Creating a conducive environment for biotechnology industry growth

The dynamism of an industry is often measured by the number of participants it attracts. As the industry was built from scratch, much effort had to be poured into ensuring that we establish a favourable environment in which biotechnology initiatives will be able to flourish and attract more participants and projects. Some of the measures taken in the last five years are as follows:

Spurring excellence in research and development - Given that biotechnology is knowledge and technology intensive, enhancing research and development (R&D) is absolutely crucial. Over the last five years, the BioNexus Partners Programme (BNP) turned out to be one of the most successful programmes under BiotechCorp. It has been able to create a critical mass of infrastructure to facilitate Research & Development & Commercialisation (R&D&C) in Malaysia. As BiotechCorp drives the biotechnology sector in the country, laboratories under the programme are seen as catalysts to unlock the potential of the bio-diversity that Malaysia possesses.

To date, BNP includes 56 laboratories and units from 13 institutions of higher learning, three research institutes and two Government-linked companies. On a very encouraging note, several research initiatives undertaken in BNP labs are now in early stages of commercialisation.

Steps were also taken to establish technology development and acquisition programmes to fuel research productivity and shorten the time required to bring products to the market.

Sector development - There are three major sectors within the biotechnology industry namely agriculture, healthcare and industrial biotechnologies. Agricultural biotechnology is aimed at transforming and enhancing the value creation of the agriculture sector though biotechnology, while healthcare biotechnology entails capitalising on the country's biodiversity for commercialising the discoveries of health related natural products and bio-generic drugs. Through industrial biotechnology meanwhile, we hope to leverage on the country's strong manufacturing sector to increase opportunities for bio-processing and bio-manufacturing.

Through our industry development initiatives aimed at enhancing the capacity of players in these sectors, it is envisaged that each will present niche areas for Malaysians to explore and expand.

Incentives - Biotechnology projects face high risks, long gestation periods, substantial upfront capital investment and stringent regulatory compliance. Therefore, a comprehensive funding structure and attractive incentive schemes are necessary to address gaps in financing as well as to reflect the Government's commitment in supporting the industry. In Phase 1, BiotechCorp worked to provide competitive incentives to sustain growth of the industry.

BioNexus Malaysia was established to facilitate the marketing of biotechnology industry. It comprises a group of specialised companies and institutions that can support each other to create centres of excellence, which also sees the companies being incentivised in encouraging their participation in the industry.

The BioNexus programme has been recognised and acknowledged as amongst the best in class global programmes as it landed BiotechCorp the Growth, Innovation and Leadership (GIL) award, awarded by Frost & Sullivan in October 2010. This has fuelled growth and investment in biotechnology.

People development - Much focus was placed on the development of human resource capital and improvement of skill sets as Malaysia needs to increase and retain an adequate number of competent knowledge and skilled workers. Through the establishment of programmes such as the Biotechnology Entrepreneur Program and the Biotechnology Entrepreneurship Special Training (BeST) Programme, we have been able to take a more structured approach towards human capital capacity enhancement. A total of 1040 students were trained under these initiatives and have graduated from the programmes of which 75% have successfully secured employment within the biotechnology industry. The remaining ones either decided to further their studies or start new business ventures.

Legislative enhancements - BiotechCorp has worked at improving the existing legislative and regulatory framework to foster innovation and safeguard investment. Collaborations between BiotechCorp and other relevant agencies have impacted 10 laws and regulations and directives in the last five years.

Key achievements for BiotechCorp between 2005 and 2010

With the capacity building measures firmly in place, BiotechCorp witnessed the culmination of these quality enhancing efforts in the results outlined below:

Investments - The Malaysian biotechnology industry has attracted RM5.4 billion in investments, against a target of RM6 billion. Although 10% short of the targeted amount, it must be noted that we began the journey from scratch with a virtually non-existent biotechnology industry. Given the industry's relatively early stage of evolution, the significant amount of investment inflows even at the first stage signifies growing interest in the Malaysian biotechnology industry, indicating that we must be doing the right things.

The ratio of public to private investment was extremely favourable. The Government sanctioned approximately RM2 billion dedicated for biotechnology under the RMK 9 and another RM1.2 billion from other funds including Science and Technology Funds under the purview of Ministry of Science, Technology and Innovation (MOSTI) and other stimulus packages. The industry managed to raise private investment of approximately RM2.2 billion, a 10% increase from the expected amount of RM2 billion. Meanwhile, foreign investments within BiotechCorp's Bio-XCell initiative was RM650 million.

We have seen an encouraging growth of the BioNexus firms since inception reflecting the success of the programme to drive the growth of biotechnology related small and medium enterprises in Malaysia. The 188 BioNexus companies currently account for a total of RM1.96 billion investment, out of which 85% have been fully invested.

Additionally, there has been an increase in international collaborations in BioNexus companies. This is reflected by equity participation of international investors in these companies where out of the 188 BioNexus Status companies, 55 companies have foreign shareholding from 21 countries. Also, in 2010, we witnessed a RM400 million increase in investments with the industry undertaking different modes of fundraising such as initial public offering, equity investment and bank loans, among others.

Under the RMK 9, the number of spin-off companies was expected to grow from 25 in 2010 to 50 in 2015, and a total of 100 companies in 20 years (five companies per year). Based on historical data and future projections, it is estimated that by 2015, Malaysia will have 400 participants in the biotechnology sector. This growth is expected to come from the increase in the number of private firms, driven by the BioNexus Programme.

Revenue - The total industry revenue stood at RM 13.5 billion against the targeted RM20 billion set under the 9th Malaysia Plan (RMK 9). Typically, the lag period for the biotechnology industry internationally is as high as seven to 10 years. Given that the minimum lag period between investment to generation of revenue is two years, the revenues achieved by the industry is considerably high as most of the investments were typically made towards the end of RMK 9 and cumulative revenues are only one year behind schedule.

For 2010 alone, the total revenue generated by biotechnology firms was estimated to be close to RM2.19 billion, of which RM1.71 billion was generated from biotechnology activities. Almost two thirds of the revenue was generated within the domestic market, while the remaining was from international markets.

We must also take cognisance that these achievements come on the back of global financial crisis in 2009, which affected all sectors in Malaysia. Since, the NBP vision did not provide for this unforeseen challenge, it can be concluded that the progress of biotechnology industry in terms of revenue is on track. In moving forward, the industry is already witnessing a recovery and is likely to achieve envisioned growth during the period of 2011-2015.

Job creation - The industry has been very successful in creating employment opportunities during the five year period vis a vis the targets set for Phase 1 of the NBP.

Throughout 2005-2010, a total of 54,776 employment opportunities have been recorded in the biotechnology industry directly and indirectly. This signifies a 40 percent achievement above the target of 40,000. During the period of 2011 to 2015, we expect the number of new employment related to biotechnology to reach 80,000, and then 160,000 from 2016 to 2020. In other words, a total 280,000 new jobs, or almost two percent of the nation's job market, is targeted to be created from 2005 to 2020 along with the growth of industry and investment in human capital development.

Contribution to Gross Domestic Product (GDP) - Malaysia has ambitious plans for its biotechnology sector. By 2020, the government expects contribution of 5% of the country's GDP. Malaysia is not alone in pursuing excellence in the biotechnology sector. The high value added products characteristic of the sector have made it an attractive target for a number of countries in the region, including Singapore, Taiwan, Korea, China, India and Australia, leading to regional competition for funding and human resources.

During Phase 1 of the NBP, the biotechnology industry contributed approximately 2.2% to the country's GDP against the targeted 2.5%. While the industry had to contend with the ripple effects of the global financial crisis on 2009, we expect the industry to experience significant growth in size and the contribution to GDP in the forthcoming years.

Indeed, our achievements in the last five years have taken us through an interesting growth trajectory with new frontiers being explored and new paths charted. Overall, BiotechCorp believes that the above-mentioned achievements provide a solid foundation in order for us to further scale up the industry and take it to greater heights.

The establishment of Bio-XCell - BiotechCorp together with UEM Land - one of Malaysia's leading property developers, jointly developed 'Malaysian Bio-XCell, a biotechnology park and ecosystem in the Iskandar region, at the southern tip of Peninsula Malaysia. Bio-XCell is slated to be the regional hub for industrial and healthcare biotechnology with its focus on manufacturing and R&D. It is a platform where BiotechCorp pools the soft infrastructure – financial incentives, human capital development, business and operational set-up advisory and services and attractive leasing models, along with the hard or physical infrastructure that will enable companies to springboard their biotechnology business and commercialisation activities. To date, three global names are present within Bio-Xcell including France-based Metabolic Explorer (METEX), India-based Biocon Ltd and US-based Glycos Biotechnologies Inc with investments totalling RM650 million.

Moving into the future

While Malaysia's biotechnology industry emerged with stronger fundamentals despite the ripple effect the global financial crisis, it is ready to embark on the second phase of the NBP, also known as the Science to Business phase which focuses on commercialisation. Despite attaining a comfortable growth pace, our efforts cannot just stop here as the real potential yet to be realised. We recognise that in moving forward, several industry gaps need to be addressed to bring in the much-needed impetus for further growth of the domestic biotechnology industry.

Mobilising the biotechnology cluster - Although forays into the biotechnology industry can be financially rewarding with high revenue returns, it takes longer to mature and requires more funding when compared to other industries. R&D and relevant expertise plays a major role within the biotechnology value chain. In order for industry players to conduct continued R&D, both expertise and funding are essential and critical. The focus would be to further activate labs to have the right infrastructure and expertise to make them more effective to cater for the industry needs. The industry players have an important role to mobilise and energise the entire biotechnology cluster.

Facilitating greater funding access - The participation of large institutional investors is important to bring the scope of financial resources needed to finance a robust risk capital industry. To this end, Malaysia should ensure that institutional investors can legally invest in risk capital, encourage them to be involved in the industry, and also facilitate the involvement of banks within the industry. For example, insurance companies and pension funds should be allowed to invest up to a ceiling percent of their reserves in risk capital.

Human capital enhancements - The biotechnology industry requires relevant expertise to further its initial findings within the R&D sector. There is a gap in acquiring good talent which leads to poor quality of research. BiotechCorp could optimise this by tapping into a network of experts in niche biotechnology areas. This network could be made up of Malaysians living abroad and/or foreign overseas experts. A Malaysian biotechnology network of experts could be developed to increase the expertise within the Malaysian biotechnology clusters.

Additionally, a more long term approach in creating a ready talent pool for firms to employ will have to require the cultivation of interest in science related fields especially biotechnology. Interest has to be instilled in the early schooling years to cultivate a generation of students that are keen to be a part of this industry.

Striking up a niche - Malaysia has to find its niche expertise in biotechnology. Japan for example is known for its expertise in food technology. It has created successful branding of its biotechnology industry globally. Malaysia would have to develop its own niche expertise by focusing on key areas. The time has come under the second phase to identify and categorise Malaysian expertise perhaps in areas like biomass and industrial biotechnology.

Attaining global prominence - The Malaysian biotechnology clusters need to be further recognised globally. It is essential to continue more branding exercises, seminars, business matching and workshops that are positioned to attract more foreign investments and biotechnology enthusiasts from around the world.

Fostering more biotechnology alliances - Licensing agreements is one of the fastest growing types of collaborations for biotechnology firms, which is a positive trend. Attracting foreign firms to form partnerships with local firms or institutes will be the driver for the growth in the Malaysian biotechnology sector. The focus for the country should be on alliances and partnerships, as well as licensing agreements as these have a higher potential in generating innovative products and processes.

As outlined in the 10th Malaysia Plan, the industry is now moving towards the commercialisation stage. Recognising these industry gaps, the continuity of the programmes conceptualised to address them are essential to ensure the Malaysian biotechnology industry maintains its current growth rate. The roles of the programmes need to be revised, enhanced and re-strategised to be more market-oriented to address the commercialisation needs of the next phase. There is also a need to inspire cultures of excellence in biotechnology organisations to spur greater innovation and capitalise on business opportunities. In short, there has to be added vigour and intensity to the way in which these challenges are addressed, and we at BiotechCorp are committed to lead the industry into the next phase of its growth, and unlock the potential this industry holds for the nation, and the world.

Acknowledgements

The last five years, and especially the past one year has seen our efforts culminate in many wins for BiotechCorp. In a nutshell, these formative years saw us striving to create a larger footprint for the industry, having started from scratch with no real industry to speak of. It makes me proud to say that all these achievements have been possible because of the team spirit at work at this organisation, and to a large extent, beyond it as well. I would like to record my appreciation to my entire team at BiotechCorp - the talented individuals who have contributed efforts in taking the industry through its first phase of development. I would also like to thank our distinguished Board of Directors, led by Chairman YBhg Tan Sri Datuk Dr Ahmad Zaharudin Idrus, for the guidance and oversight in helping us achieve that challenging balance of being on track with national goals for the industry while meeting the needs of industry players. Last but not least, I would like to acknowledge our industry stakeholders and collaborative partners who have helped us bring growth for the industry. I look forward to many more fruitful collaborative efforts ahead.

Dato' Iskandar Mizal Mahmood
Chief Executive Officer

Our People, Our Strength

Board of Directors

Setting the tone, nurturing excellence

YBhg Tan Sri Datuk Dr Ahmad Zaharudin bin Idrus
(Chairman)

YBhg Dato' Madinah binti Mohamad

YBhg Dato' Iskandar Mizal bin Mahmood
(Chief Executive Officer)

Professor Dr Zainul Fadziruddin bin Zainuddin

YBhg Datuk Roseley Dato' Haji Khalid

Tuan Haji Mohd. Radzi Hussein

Absent:
YBhg Dato' Abd Wahab Maskan

YBhg Tan Sri Datuk Dr Ahmad Zaharudin Idrus (*Chairman)*

YBhg Tan Sri Datuk Dr Ahmad Zaharudin Idrus, a Malaysian, aged 66, was appointed by the Prime Minister of Malaysia as Chairman of BiotechCorp on May 16, 2005. Prior to his appointment to the Board, YBhg Tan Sri Datuk Dr Ahmad Zaharudin Idrus served as the Science Advisor to the Prime Minister of Malaysia from 2001 to 2006. He was the Vice Chancellor of Universiti Teknologi Malaysia from 1994 to 2001.

Besides serving as Chairman of BiotechCorp and several other organisations, YBhg Tan Sri Datuk Dr Ahmad Zaharudin Idrus is also a member of the IDB Advisory Panel on Science and Technology, Islamic Development Bank, Jeddah, Saudi Arabia.

After graduating with an Agriculture Science degree from Universiti Malaya in 1969, he proceeded to complete his Masters and PhD from the University of Aberdeen.

YBhg Tan Sri Datuk Dr Ahmad Zaharudin Idrus has been highly instrumental in the development of the Malaysian science and technology agenda. He served as Secretary of the National Council of Scientific Research and Development under the Ministry of Science, Technology and the Environment from 1981 to 1986. He was subsequently appointed as the Controller of the Standards and Industrial Research Institute of Malaysia (SIRIM), a position he held from 1986 to 1989.

Prior to his term at Universiti Teknologi Malaysia, YBhg Tan Sri Datuk Dr Ahmad Zaharudin Idrus served as the Director of Petronas Petroleum Research Institute from 1989 to 1992 and later as the Managing Director of Petronas Scientific Services from 1992 to 1994. Tan Sri Datuk Dr Ahmad Zaharudin Idrus was also a member of the Board of Petronas Refineries Pte. Ltd. from 1989 to 1994.

His contributions in the field of science and technology have gained him international recognition. In 1993, he received the Norway Award for Outstanding Contribution in the Field of Technology and in 1997, the ASEAN Achievement Award for Science.

YBhg Tan Sri Datuk Dr Ahmad Zaharudin Idrus was conferred the D.Sc (Hons. Causa) by the University of Portsmouth in 1998. Subsequently, the D.Sc (Honorary) by the University of Loughborough, Universiti Teknikal Malaysia Melaka in 2003, Universiti Teknologi Malaysia in 2005 and the Open University Malaysia in 2006.

In honour of his contributions, YBhg Tan Sri Datuk Dr Ahmad Zaharudin Idrus was conferred the award of “Chevalier de la Legion d’Honneur” by the French Government in 2004.

YBhg Dato' Iskandar Mizal Mahmood (*Chief Executive Officer)*

YBhg Dato' Iskandar Mizal Mahmood, a Malaysian, aged 45, was appointed to the Board on May 13, 2005. Prior to his appointment to BiotechCorp, he was the Chief Executive Officer of the Malaysian Technology Development Corporation (MTDC) a position he held since October 2003.

From 1999 to 2003, he was the General Manager of Malaysia Airports Bhd responsible for corporate finance, strategic planning, investor relations, business development and finance. He started his career with Arthur Andersen & Co in 1989 and had served in several financial institutions including Bumiputera International Merchant Bankers Bhd and Commerce International Merchant Bankers Bhd Group.

A graduate from Boston University, Massachusetts with a Bachelor of Science degree in Business Administration (Accountancy), YBhg Dato' Iskandar Mizal Mahmood brings to BiotechCorp his expertise in investment, business development, strategic planning, finance, corporate financing and research.

YBhg Dato' Madinah Mohamad

YBhg Dato' Madinah Mohamad, a Malaysian, aged 55, joined the Board on June 12, 2009.

YBhg Dato' Madinah Mohamad graduated with a Bachelor's degree in Social Science (Political Science) from Universiti Sains Malaysia and holds a Master's degree in Human Resource Development from Universiti Putra Malaysia.

She is currently the Secretary General of the Ministry of Science, Technology and Innovation, Malaysia (MOSTI) since 22 April 2009. As the Secretary General, she oversees the development of policies and implementation of the science, technology and innovation agenda in Malaysia and operations of MOSTI.

Prior to her current position, YBhg Dato' Madinah Mohamad served in various Government agencies such as the Public Service Department, the Ministry of National and Rural Development, the Ministry of Works, and the National Unity and Integration Department.

She began her civil service career as an Administrative and Diplomatic Officer in 1981 with the Ministry of Foreign Affairs.

YBhg Dato' Madinah Mohamad was awarded the Darjah Kebesaran Sri Indera Mahkota Pahang (SIMP) by His Royal Highness, Sultan of Pahang in 2009.

YBhg Datuk Roseley Dato' Haji Khalid

YBhg Datuk Roseley Dato' Haji Khalid, a Malaysian, aged 58, was appointed to the Board on March 5, 2010.

He holds a Bachelor's degree in Agriculture Science from Universiti Putra Malaysia and a Master of Science in Agriculture Economics from Texas A & M University, USA.

YBhg Datuk Roseley Dato' Haji Khalid was previously the Director-General of Agriculture, Department of Agriculture Malaysia, a position he held since 2008 and retired in February 2011.

YBhg Datuk Roseley Dato' Haji Khalid started his career as an Evaluation Agriculture Officer at the State Department of Agriculture, Negeri Sembilan in 1977. He has vast experience in the area of agriculture food industry. As the Agriculture Attaché/Alternate Permanent Representative (APR) of Malaysia to the Food and Agriculture Organization (FAO) of the United Nations at Rome, Italy, he was responsible in representing Malaysia in all meetings and negotiations at the United Nations agencies, the FAO, the WFP (The World Food Programme) and IFAD (International Fund and Agricultural Development). He was also involved in the preparation of the Second and Third National Agricultural Policy.

Besides BiotechCorp, YBhg Datuk Roseley Dato' Haji Khalid currently serves on the board of various bodies including the Federal Agricultural Marketing Authority (FAMA), the Muda Agriculture Development Authority (MADA) and the Farmers Organisation Authority. He is also the Chairman of the Pesticides Board of Malaysia, member of the Governing Board of Malaysian Agricultural Research & Development Institute (MARDI) and council member of the Farmers' Advisory Board.

YBhg Dato' Abd Wahab Maskan

YBhg Dato' Abd Wahab Maskan, a Malaysian aged 60, was appointed to the Board on June 7, 2010.

He is the Group Chief Operating Officer of Sime Darby Bhd and Board member of Sime Darby Plantation, SD Property and SD Healthcare. He chairs the Sime Darby Group Investment Committee and Sime Darby Group Sustainability Committee.

YBhg Dato' Wahab Maskan holds a B.Sc. in Management from University of Reading, England. He is a Fellow of Royal Institution of Chartered Surveyors (FRICS) and Institution of Surveyors Malaysia (FISM), a Fellow of Incorporated Society of Planters (FISP), a Fellow of Malaysian Institute of Management (FMIM).

YBhg Dato' Wahab Maskan's working experiences include Board and Management leadership in property, plantations, construction, manufacturing and services, both in the public and private sectors.

Tuan Haji Mohd. Radzi Hussein

Tuan Haji Mohd. Radzi Hussein, a Malaysian, aged 58, was appointed to the Board on May 21, 2008.

Tuan Haji Mohd. Radzi Hussein holds a Bachelor of Accounting (Hons) degree from Universiti Malaya and a Masters degree in Business Administration from the University of Wales, Aberystwyth in the United Kingdom. He is a member of the Malaysian Institute of Accountants.

He joined the Government in 1982 as Treasury Accountant in the Ministry of International Trade and Industry. From 1984 to 1993, he served as a Senior Treasury Accountant in the Accountant General's Department, Kuala Lumpur.

Later in 1993, Tuan Haji Mohd. Radzi Hussein was seconded to Universiti Utara Malaysia as the Deputy Bursar, a position he continued to hold until 1997. From 1997 to 2001, he served as the State Treasurer for Kedah State Government. Tuan Haji Mohd. Radzi Hussein was then again seconded to Kedah Akuakultur Sdn Bhd as Finance Manager for a period of one year.

Tuan Haji Mohd. Radzi Hussein was promoted and transferred in 2002 to take up the position of Chief Accountant in the Ministry of Home Affairs in Putrajaya.

In 2004, Tuan Haji Mohd. Radzi Hussein was appointed as the Deputy Director, Information Technology Management Division of the Accountant General's Department. He was then promoted in 2008, and is presently serving as the Director of the said Division.

Tuan Haji Mohd. Radzi Hussein currently serves on the Board of Pengurusan Aset Air Bhd.

Professor Dr Zainul Fadziruddin Zainuddin

Professor Dr Zainul Fadziruddin Zainuddin, a Malaysian, aged 50, was appointed to the Board on September 4, 2009.

Professor Dr Zainul Fadziruddin Zainuddin holds a Bachelor of Science in Microbiology from the University of East Anglia, United Kingdom and a PhD in Molecular Biology from the University of Surrey, United Kingdom.

Professor Dr Zainul Fadziruddin Zainuddin started his career in 1988 as a lecturer at the School of Medical Sciences, Universiti Sains Malaysia (USM), Pulau Pinang. He has held various positions in the said university including the position of the Head of Department of Medical Microbiology & Parasitology, School of Medical Sciences and was the founding Dean, School of Health Sciences.

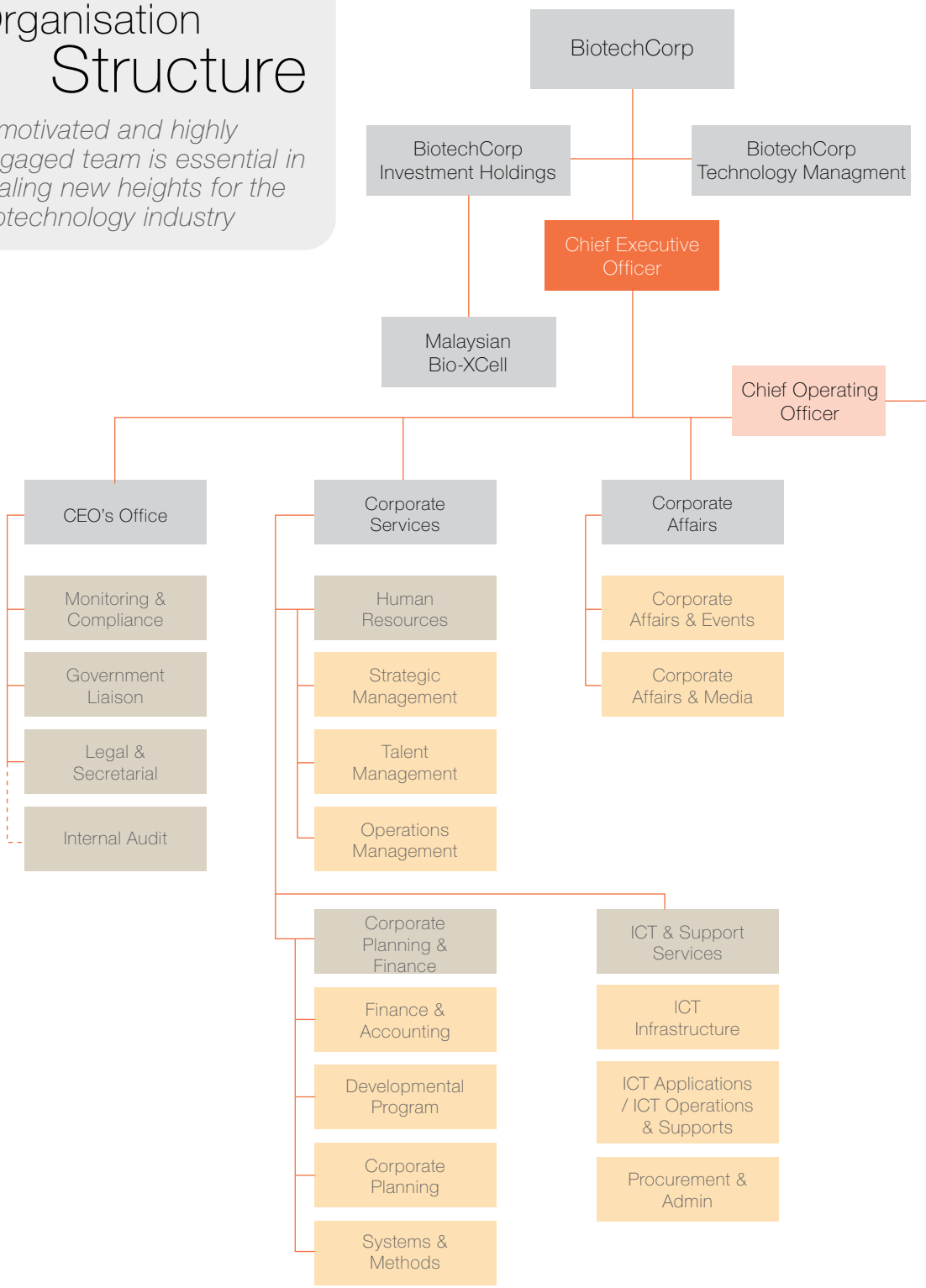
He is currently the Director, Innovations Office, Research and Innovation Division, USM; a position he has held since 2007.

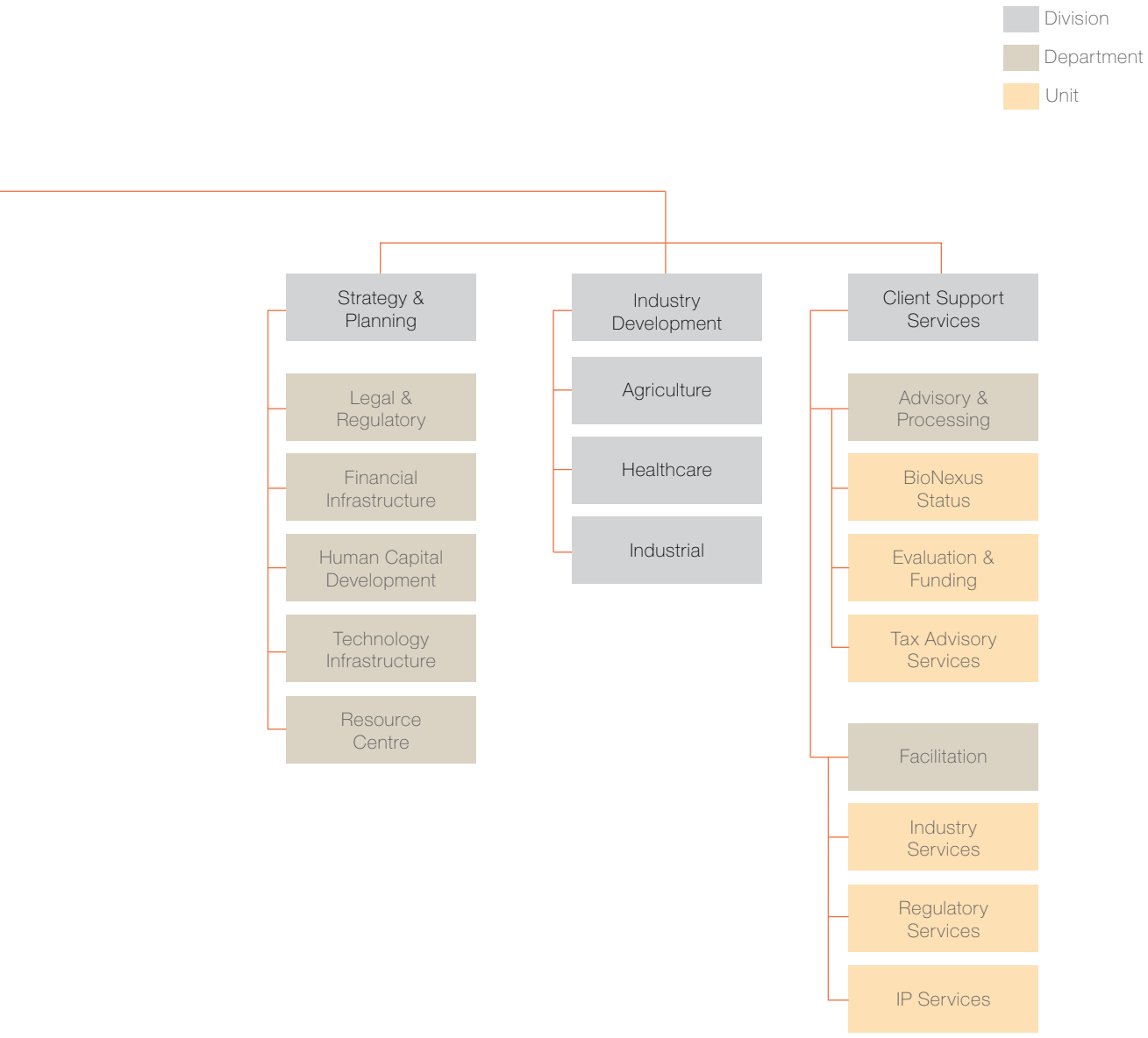
Besides BiotechCorp, Professor Dr Zainul Fadziruddin Zainuddin also sits on the Board of Malaysian Technology Development Corporation Sdn Bhd, Sanggar SAINS Sdn Bhd and IXC Malaysia Bhd.

Our People, Our Strength

Organisation Structure

A motivated and highly engaged team is essential in scaling new heights for the biotechnology industry




Division
Department
Unit
Strategy & Planning
Legal & Regulatory
Financial Infrastructure
Human Capital Development
Technology Infrastructure
Resource Centre
Industry Development
Agriculture
Healthcare
Industrial
Client Support Services
Advisory & Processing
BioNexus Status
Evaluation & Funding
Tax Advisory Services
Facilitation
Industry Services
Regulatory Services
IP Services

Our People, Our Strength

The Management Team

Turning plans into reality

YBhg Dato' Iskandar Mizal Mahmood
Chief Executive Officer

Dr Wan Abdul Rahaman Wan Yaacob
Chief Operating Officer

Encik Mohamad Azam Ali
Senior Vice President, Corporate Affairs

Mr Selvam Ramaraj
Senior Vice President, Healthcare

Encik Mohd Yazid Abd Hamid
Senior Vice President, Strategy & Planning

Encik Razif Abdul Aziz
Senior Vice President,
Client Support Services

Dr Abdul Manaf
Mohamad Radzi
Senior Vice President,
Agriculture

Tuan Syed Agil
Syed Hashim
Senior Vice President,
Corporate Services

Encik Razwin Sulairee
Hasnan Termizi
Senior Vice President,
Industrial

BIOTECHCORP
MALAYSIAN BIOTECHNOLOGY CORPORATION

STRIVING FOR EXCELLENCE IN 2010

"As an industry developer and enabler, BiotechCorp is actively promoting Malaysia's potential in biotechnology, enhancing investment opportunities by multinationals, acting as a bridge between businesses and researches to form profitable ventures as well as ensuring a conducive climate for the industry to grow."- YBhg Dato' Iskandar Mizal Mahmood, Chief Executive Officer, Malaysian Biotechnology Corporation Sdn Bhd

The Industry in Motion

The year 2010 saw BiotechCorp's continued commitment towards industry development through various initiatives and activities. As the final year for Phase 1, the industry continued to be guided by objectives to foster knowledge development in the industry and nurture talent that is crucial towards industry growth. The key focus was to enhance the quality of resources, including people to ensure that the final leg of the capacity building phase was effected in the best possible manner. The industry growth mechanism is as follows:

Knowledge generation: The creation of a knowledge bank of life sciences for economic advancement through enhancing the quality of human capital and intellectual property development.

Nurturing entrepreneurs & sustainable wealth creation: Enabling economic advancement through biotechnology while adding value to existing sources of wealth (e.g. production of food and medicine) and creating new sources that elevate competitiveness at regional and international levels (e.g. pollution control, sustainable waste management or renewable energy sources).

Improving the quality of life for all stakeholders: Putting in place an environment that will benefit industry players as well as society in general from a qualitative and quantitative perspective.

Calendar of Events

February 22 – March 14	BeST Meet the Industry Road Show

BeST Meet the Industry session was part of BiotechCorp's efforts to expose, promote and match the range and scope of biotechnology careers amongst BeST trainees with industry players.

March 23 - 24	BioEducation Symposium 2010

Le Meridian Kuala Lumpur & Sheraton Imperial Kuala Lumpur, Malaysia

The purpose of the symposium was to develop awareness and excitement about biotechnology fields and promote available career opportunities to students at the secondary school level via science teachers and career counsellors. It was also held to catalyse strategic partnerships among secondary schools, colleges, universities and the biotechnology industry.

March 26 – December 12 | **BioIndustry Dialogue & Exhibition 2010 (Jom Heboh)**

Kelantan, Terengganu, Sarawak, and Kuala Lumpur

It is an outreach programme to increase awareness and understanding of the country's value proposition in biotechnology whilst promoting food, healthcare and environment solutions through the products and services offered by BioNexus companies.

April 26 | **BiotechCorp's Financial Result 2009 & Malaysian Biotechnology Country Report 2009/2010**

Kuala Lumpur Convention Centre, Malaysia

BiotechCorp announced its audited financial results ending December 31, 2009 during the release of its 2009 Annual Report, witnessed by biotechnology industry participants and partners.

May 3 - 6 | **BioChicago 2010**

Bio International Convention, McCormick Place, Chicago, US

At the convention, BiotechCorp held the global launch of Bio-XCell, released the Malaysian Biotechnology Country Report 2009/2010 and completed an exchange of documents for Siogen Biotech and Veeda Clinical Research to develop a new nanoparticle formulation of Doxorubicin to treat cancer.

Bio-XCell also completed an exchange of documents with four separate entities namely: General Electric International Inc, Glycos Biotechnologies Inc (US), Strides Arcolab Ltd (India) and MGM Ingredients AG (Switzerland).

May 19 - 21 | **World Pharmaceutical (China) Summit 2010**

Novotel Shanghai Atlantis, China

BiotechCorp participated in this summit to increase awareness on the China – Malaysian partnership in biotechnology and promote business networking and investment into Malaysia by the Chinese business community.

May 27 | **BioPartnering 2010**

Sheraton Imperial Hotel, Malaysia

BiotechCorp launched its first Business Networking Platform (BNP) for the life sciences and biotechnology industry in Malaysia. At the event, 14 partner organisations representing 41 institutions of higher learning, research institutes, technology parks, incubators and government linked-companies were awarded BNP certificates.

June 2 – 4 **Bangalore India Bio 2010**

Hotel Lalit Ashok, Bangalore, India

Memorandums of understanding were signed with two reputed Indian companies and global biotechnology giants, Biocon Ltd and Dr Reddy's Laboratories Ltd.

July 20 – 21 **BioFunding Conference 2010**

Le Meridien Kuala Lumpur, Malaysia

This conference focused on creating further interest among financial and investment professionals to consider investment in the biotechnology sector. It served as a platform to share experiences from the US and other developing countries on how their biotechnology or life sciences industries were developed. The conference also highlighted key learning points for Malaysia from an implementation standpoint, with a focus on the funding aspect.

July 28 **National BeST Business Plan Competition 2010**

Sheraton Imperial Kuala Lumpur, Malaysia

The inaugural National BeST Business Plan Competition was introduced to enhance the Entrepreneurship Module. The module was designed to nurture and cultivate entrepreneurial drive among the BeST participants. Participants of the competition included winning teams from training centres across Malaysia who presented the most promising, original and innovative biotechnology related business plan. At the national level, the teams will once again present their refined business plans and will be judged by a panel of professional judges.

July 29 **Biotechnology Entrepreneurship Special Training (BeST) Programme Graduation Ceremony 2010**

Sheraton Imperial Kuala Lumpur

The BeST Graduation Day was held to celebrate, recognise and give appreciation to all trainees after having undergone a six month training.

September 25– October 2 (Kuala Lumpur)
November 8 – 10 (Kedah) **MyBiotechnology Carnival 2010**

Pusat Sains Negara Kuala Lumpur, Malaysia & AIMST University, Malaysia

An avenue for the younger generation, particularly secondary school students and graduates to get information and exposure on bioentrepreneurship. It also served as a platform to inform the public and industry players on career opportunities, bioentrepreneurial activities and updates concerning the biotechnology industry.

September 27 **Launch of MyBIO Carnival 2010**

Pusat Sains Negara, Bukit Kiara, Malaysia

Themed "Promoting innovation, careers and entrepreneurship in biotechnology", it was organised with an aim to bring biotechnology to people from all walks of life through fun-filled activities.

October 7 **2010 Frost & Sullivan Growth, Innovation & Leadership Awards (GIL Award)**

John Jacob Ballroom, St Regis Singapore

BiotechCorp was honoured with the Excellence in Growth Awards by Frost and Sullivan at the Growth, Innovation and Leadership Awards in Singapore. The award recognises a company which has demonstrated excellence in growth leadership.

October 16 - 18 **BioEducation Monsoon Camp 2010**

Ri-Yaz Heritage Marina Resort & Spa, Terengganu, Malaysia

The camp was a continuation of the Grassroots Awareness Programme to promote biotechnology education at the foundation level and build strategic partnership among the Government agencies Ministry of Higher Education and Ministry of Education, the respective Economic Corridors, high schools, colleges, universities and the biotechnology industry players.

October 27 **Exchange of Documents with Biocon**

Putrajaya International Convention Centre, Malaysia

BiotechCorp secured the largest strategic foreign direct investment within the Malaysian biotechnology sector involving the establishment of a biomanufacturing and R&D facility by India based Biocon Ltd in BiotechCorp's Bio-XCell initiative located in Iskandar, Malaysia, Johor. The documents between both parties were exchanged in Putrajaya, Malaysia witnessed by The Honourable Prime Minister of Malaysia, YAB Dato' Sri Mohd Najib Tun Abdul Razak and His Excellency Dr Manmohan Singh, the Prime Minister of India in conjunction with the Indian Premier's official visit to Kuala Lumpur.

November 1 **Biotechnology International Advisory Panel (BioIAP) Meeting 2010**

Kuala Lumpur Convention Centre, Malaysia

The meeting led by Deputy Prime Minister of Malaysia, YAB Tan Sri Dato' Hj Muhyiddin Bin Hj Mohd Yassin with participation of 10 BioIAP members witnessed more than 10 cabinet ministers and Government officials discussing the state of the industry as well as future developments for the biotechnology sector and related industries.

November 1 - 3 **BioMalaysia 2010 Conference & Exhibition**

Kuala Lumpur Convention Centre, Malaysia

This was the premier biotechnology event of the year for BiotechCorp to showcase latest research findings, state-of-the-art technology and new product launches. It also served as a platform for experts to engage in an exchange of knowledge, experiences and opinions in the development of the biotechnology industries. The event attracted over 7,400 participants from 17 countries.

November 13 - 14 **BioCareer 2010**

Kuala Lumpur Convention Centre, Malaysia

Themed "Emerging Innovative Careers in Biotechnology", the event was targeted at supporting Government initiatives to reduce unemployment and increase innovative careers in the biotechnology industry. The 2-day career fair attracted almost 4500 visitors and a total of 40 exhibitors from various companies.

Building Momentum in 2010

Fostering a Conducive Landscape for Biotechnology Evolution

Legal & Regulatory

As the Malaysian biotechnology industry continues to be developed, the importance of having a robust and relevant legal and regulatory framework is imperative. As the Malaysian Biotechnology Corporation Sdn Bhd (BiotechCorp) champions industry growth via the National Biotechnology Policy (NBP), the legal and regulatory function exists to ensure checks and balances are in place and the creation of an optimum regulatory environment that encourages further growth for the industry consistent with Thrust 7 of the NBP which emphasises the importance of establishing a solid and supportive regulatory framework for the development of biotechnology.

Focus Areas:

1. The establishment of a supportive regulatory framework and environment that takes into consideration the developmental aspirations of the nation and encourages innovation whilst ensuring public safety.
2. Contributing towards the balanced creation of safeguards to regulate access to local genetic resources, seeking not to hamper genuine initiatives and cooperation between the access provider and access seeker.
3. Contributing towards the development of a strong regulatory framework for intellectual property rights (IPR).
4. Encouraging the creation and filing of biotech-related patents with a view to commercialise.
5. The promotion and support initiatives for the attainment of international accreditation and compliance with international standards.
6. Contributing towards the establishment of a strong and enabling regulatory framework for the enhancement of efficacy in relation to product registration.

Key Results:

Issue / Activity	Result
BioSafety Framework	Regulations under the Biosafety Framework provides certainty to the biotechnology industry that a specific process to handle the release, importation, exportation and contained use of living modified organisms (LMOs) has been put in place. BiotechCorp played a role in the promulgation of the law and actively participated in the consultation exercise. • The BioSafety Act 2007 came into force on December 1, 2007, while the Biosafety Regulations 2010 came into operation on November 1, 2010. • The Chief Operating Officer of BiotechCorp was appointed by the National Biosafety Board as a member of the Genetic Modification Advisory Committee (GMAC).

Issue / Activity	Result
BioSafety Framework	• BiotechCorp has commenced cooperation with the Ministry of Natural Resources and Environment (MONRE) on capacity building initiatives to facilitate awareness of the Act and regulations among industry players.
Access & Benefit Sharing (ABS)	Having an ABS law will ensure that Malaysia is able to combat bio-piracy, besides providing an effective means for the country to capitalise upon its rich and diverse genetic resources in line with the country's objectives to promote biotechnology development as an engine for growth. • There are no domestic ABS laws to date but given its importance to Malaysia, and Malaysia's membership in the Conference of the Parties to the Convention on Biological Diversity (CBD), it is anticipated that a formal domestic ABS framework is in the pipeline as the Conference of the Parties to the CBD at its tenth meeting on October 29, 2010 in Nagoya, Japan adopted the *'Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilisation to the Convention on Biological Diversity'*. This is an international agreement which is aimed at sharing the benefits from the utilisation of genetic resources in a fair and equitable and it is expected that this Agreement will accelerate progress in the development of the domestic ABS law. The Nagoya Protocol will be open for signature by Parties to the Convention from February 2, 2011 until February 1, 2012.
Intellectual Property (IP)	BiotechCorp continues to work towards creating a conducive landscape for intellectual property. • The IP registration timelines in Malaysia are expected to considerably improve. During the launch of the National IP Day on April 26, 2010, the Deputy Prime Minister announced that the Intellectual Property Corporation of Malaysia (MyIPO) is now putting a new target of 36 months in 2011 and 32 months in 2012 for patent registration. To assist MyIPO in meeting this challenge, BiotechCorp is funding 10 contract patent examiners. • Based on deliverables under the 9th Malaysia Plan, BiotechCorp was able to produce a total of 135 certified professional IP managers from 2007 - 2010 under the Malaysian Institute of Management Certified Professional IP Manager Programme. The distribution of the participants from this programme is illustrated in the table below :

<table>
<tr><th>Issue / Activity</th><th>Result</th></tr>
<tr><td>Intellectual Property (IP)</td><td>
<table>
<tr><th>Category</th><th>No of Participants</th></tr>
<tr><td>BioNexus</td><td>84</td></tr>
<tr><td>Research Institutions (RI)</td><td>8</td></tr>
<tr><td>Institutes of Higher Learning (IHLs)</td><td>30</td></tr>
<tr><td>Government</td><td>13</td></tr>
<tr><td>Total</td><td>135</td></tr>
</table>
Under the Patent Cooperation Treaty (PCT) Malaysia was ranked 25th in 2010 at the global level in the number of applications filed. Malaysia acceded to the PCT in 2006 and since then the number of applications have increased by 59.8 %.
</td></tr>
<tr><td>Pharma Regulations</td><td>Pharmaceuticals are regulated by the National Pharmaceutical Control Bureau (NPCB) of the Ministry of Health, under the Control of Drugs and Cosmetics Regulations 1984 which empowers the NPCB to implement the registration of Scheduled poisons, Non-scheduled poisons, Traditional medicines, and Cosmetics. A Technical Working Group (TWG) for biotech products was established to prepare relevant guidelines for biosimilar products and the TWG successfully came up with the Guidance Document and Guidelines for Registration of Biosimilars in Malaysia, which was then published on August 4, 2008.
In 2010, BiotechCorp co-organised with the NPCB a workshop at ASEAN level entitled ‘ASEAN Workshop on Medical Dictionary for Regulatory Activities (MedDRA) Training Program’ and a ‘Workshop on Preparation of Product Dossier Submission for Biosimilars' in Kuala Lumpur.
As a member of ASEAN, Malaysia continues to play an active role in harmonisation efforts through the ASEAN Consultative Committee for Standards and Quality’s (ACCSQ) Pharmaceutical Product Working Group (PPWG), the Traditional Medicines and Health Supplements Product Working Group (TMHS PWG) as well as the Medical Devices Product Working Group (MDPWG).
BiotechCorp has also produced a ‘Regulatory Guidebook on Doing Business in USA and Europe’.
</td></tr>
</table>

Issue / Activity	Result
International Accreditation - Good Laboratory Practices (GLP)	The GLP Compliance Programme to certify adherence of test facilities to the Organisation for Economic Co-operation and Development (OECD) Principles of GLP and Compliance Monitoring have been initiated by the Malaysian Compliance Monitoring Authorities (see note below). BiotechCorp is currently working with these agencies in the certification of test facilities through the provision of funding for numerous capacity building initiatives. These includes the identification of potential test facilities for GLP compliance. • In 2010, GLP inspection were conducted on nine committed test facilities in which three are found to be ready for testing in compliance to the OECD GLP requirements. **Note:** Malaysia was made a provisional adherent to the Organisation for Economic Co-operation and Development (OECD) Mutual Acceptance of Data (MAD) system in 2008. The year 2010 saw the continued implementation of the OECD GLP framework, which is applicable to non-clinical health and environment safety studies. The Government had designated the National Pharmaceutical Control Bureau (NPCB) and Department of Standards Malaysia (Standards Malaysia) as the Malaysian Compliance Monitoring Authorities (CMAs). Malaysia intends to achieve full adherent status to the OECD MAD system by 2012.
International Accreditation - Good Clinical Practices (GCP)	The Ministry of Health continues to ensure that each clinical trial proposal goes through a rigorous review and the trial itself is strictly monitored and regularly audited. The Clinical Research and Compliance Section of NPCB plays an important role in issuing the Clinical Trial Import License (CTIL) and ensuring compliance with GCP. The obvious benefit of GCP is acknowledged by NPCB as Malaysia becomes a more active participant in international drug research. • In 2010, seven GCP Investigator training programmes were held in collaboration with the Clinical Research Centre (CRC) and the Associates of Clinical Research Professionals Malaysia (ACRPM) whereby over 210 GCP investigators were trained.

Issue / Activity	Result
International Accreditation – Good Clinical Practices (GCP)	• Four other workshops conducted in 2010 include the 'Workshop for Study Directors and Quality Assurance Personnel of GLP Studies', 'Joint CRC-BiotechCorp Clinical Research Governance & Ethics Workshop', a 'Symposium on Pharmaceutical Science to Business', and 'Good Laboratory Practice (GLP) Workshop for Study Directors and Quality Assurance Personnel of GLP Studies'.
Training Regulators	In addition to creating awareness among industry players and the general public, BiotechCorp assisted in the training of key regulators to create awareness and enhance their own skills in various important areas. • Collaboration with the Intellectual Property Corporation of Malaysia (MyIPO) to provide IP Law training for the judiciary, officers of the Attorney General's Chambers and enforcement officers from the Ministry of Domestic Trade, Cooperatives and Consumerism to support the establishment of the IP Courts in Malaysia. • Collaboration with MyIPO to provide training to approximately 80 patent examiners from MyIPO on specialised training with an expert from the Korean Patent Office (KIPO) and also an expert familiar with the procedures at the United States Patent and Trademark Office (USPTO) to increase knowledge and enhance patent examination skills. • Collaboration with the National Pharmaceutical Control Bureau (NPCB) of the Ministry of Health and the Department of Standards Malaysia (STANDARDS MALAYSIA) of the Ministry of Science, Technology and Innovation (MOSTI) to provide the Organisation for Economic Cooperation and Development's (OECD) Principles of Good Laboratory Practices (GLP) training for their respective GLP inspectors worldwide so as to ensure quality inspections and smooth completion of the OECD GLP framework for Malaysia. • Collaboration with NPCB to provide training to a key regulator at the International Regulatory Conference on Herbal Medicine Meeting and Workshop and on QC Requirements for Biosimilars Manufacturing in Kuala Lumpur to enhance awareness and skills in the quality aspects of biosimilars and herbal medicine.

Next Steps for Legal and Regulatory:

- For BioSafety and ABS, Malaysia needs to ensure that the biosafety policy and laws not only protect biodiversity, but also encourage the development of biotechnology in the country. This balancing act remains the biggest challenge in a scenario where there are multiple stakeholders. BiotechCorp sees that the most effective way to ensure a win-win situation for the country would be the creation of channels for discourse and consultation between regulators and the industry so that future laws, regulations and rules impacting the development of biotechnology in the country can be formulated in an inclusive and constructive manner. We will continue to facilitate such discussions.

- On the IP front, there is need to increase awareness on strategic IP management and focus on areas such as securitisation and collateralisation of IP.

- BiotechCorp hopes to participate and contribute in the development of pharmaceutical regulations and continue constructive engagement with regulatory stakeholders to provide an avenue for discourse and alignment towards national policies.

- In terms of international accreditation, we hope to support Malaysian CMAs - NPCB and Standards Malaysia in achieving full adherence to the OECD GLP MAD system by 2012 and assist in the identification of facilities for GLP accreditation in terms of capacity building and training

- In keeping regulators up to speed with knowledge and the latest in the industry, BiotechCorp hopes to collaborate with the NPCB to provide training for key regulators in the review of drug development in clinical trials, in the GLP Compliance Programme and in drug regulatory authorities' efforts to harmonise regulations and improve the safety, efficacy and quality of medicines. Participation in the proposed training not only enhances the capacity and competency of NPCB's personnel but also offers a chance for NPCB to build their network with other regulatory authorities worldwide

- We look forward to collaborations with Ministry of Natural Resources and Environment (MONRE) and the Ministry of Science, Technology and Innovation (MOSTI) to conduct workshops on biosafety and ABS besides providing exposure for key regulators in these areas, as there is a crucial need to build capacity in this respect.

Financial Infrastructure

Via its financial infrastructure function, BiotechCorp develops mechanisms of funding, facilitates collaborations and attracts investments for the biotechnology industry. It also implements programmes to promote private investment in the biotechnology industry.

Focus Areas:

1. Develop and implement a comprehensive mechanism of funding focusing on priority areas from research to market.
2. Accelerate industry growth through strategic partnerships with the domestic and global private sectors including Government-linked companies and specific programmes.
3. Ensure mechanisms for funding with the venture capital industry, the banking sector and the private sector.

Key Results:

Issue / Activity	Result
Investments in 2010	The Malaysian biotechnology industry grew further in 2010 with investments continuing to come in from both public and private funding sources. • The total approved investments by BioNexus companies amounted to RM1.96 billion as at December 31, 2010, an increase of 29% compared to RM1.52 billion as at December 31, 2009. This is in line with the increase in the number of BioNexus companies from 151 companies at the end of 2009 to 188 companies at the end of 2010. • In efforts to promote private investments in the biotechnology industry, BiotechCorp continued to engage with various local and foreign investors and introduced potential biotechnology deal flows within the core biotechnology areas of agricultural, healthcare and industrial, to investors such as private venture capitals & private entities, corporations and financial institutions. Efforts were also focused on facilitating and matching biotechnology companies and projects looking for funding with private investors or funders. • International investments continued to flow into Malaysia during the period under review indicating strong interest in the Malaysian biotechnology industry. The number of BioNexus Status companies with international interest (both minority interest and controlling interest) increased by 35%, from 46 in 2009 to 62 in 2010. These international investments were mainly from Australia, Belgium, Holland, India, Japan, Singapore, Taiwan, United Kingdom, United States, Germany and China. Among these, 14 are international companies at the end of 2009 whilst the number increase to 16 at the end of 2010, with a total approved investment for the additional international companies amounting to RM57.8 million.
Fund raising for biotechnology companies through the capital market	Biotechnology companies have also raised funds through the capital market. • The Malaysian Genomics Resource Berhad (MGRC), a BioNexus status company, headed for a stock market listing, on the ACE market of Bursa Malaysia on October 5, 2010. The listing exercise entails the issuance of new 17.1 million shares in the company and an offer for sale of two million existing shares, raising a total of RM18.5 million. With the listing of MGRC, there are in total five listed BioNexus companies on the local as well as foreign exchanges. Other listed BioNexus companies include StemlifeBerhad and Sunzen Biotech Berhad (Bursa Malaysia), HolistaColltech (Australian Securities Exchange (ASX)), and Pure Circle (AIM, London Stock Exchange).

Key Results:

Issue / Activity	Result
Establishment of funds to assist the industry	BiotechCorp provides assistance towards efforts to establish dedicated biotechnology funds. • In 2010, BiotechCorp assisted IMBN Venture Co. Ltd, a joint venture between Asia Pacific International Molecular Biology Network (A-IMBN) and the Tsunami group of Japan, to establish a dedicated biotechnology fund with an initial target fund size of RM100 million. IMBN Venture was assisted with meetings with potential investors and partners as well as its application to register as a 'Venture Capital Management Company' with the Securities Commission. • In addition, there were also inquiries from venture capitalists from the US, Singapore and Germany to set up biotechnology funds focusing on medical device and biomass respectively.
Raising awareness on funding opportunities and encouraging investment	BiotechCorp continued to create awareness and interest among the financial and investment community on the business and technical aspects of the biotechnology sector locally and globally, with the intention for them to eventually consider investment within the industry. • BiotechCorp organised the BioFunding Conference 2010, the second to be held following the success of the conference in 2009. This year's conference was a platform to feature more global perspectives given the majority of international presenters/speakers. It attracted a total of 229 participants coming from organisations such as Government linked funders, venture capitalists (VCs) and private equities firms (PEs), financial institutions, corporations as well as corporate advisers and consultants. BioNexus companies that participated in the conference benefited immensely as it provided them with overviews of the global biotechnology landscape and the three subsectors of biotech i.e. agriculture, healthcare and industrial as well as the expectation of investors and funders when investing in their business. The conference provided an avenue for them to network with the investors and funders. • Also in 2010, a BioFunding Workshop focusing on the valuation of biotechnology and life sciences companies, was organised with participants from Government linked funders, VCs and PEs, fnancial institutions as well as corporations.

Next Steps for Financial Infrastructure Development:

- Continuous engagement industry players, Government agencies and investors to promote investment in the biotechnology industry in Malaysia by facilitating and matching biotechnology companies with potential investors.

- Increasing investments, directly or indirectly, through developing and executing/implementing funding mechanism such as engaging local and foreign parties in establishing biotechnology funds, collaboration with local corporations for investment in biotechnology through private-public partnership models and collaboration with other Government ministries/agencies on funding related matters.

Human Capital Development

An industry is only as good as the people who are involved in it. In this context, the quality of human capital is an important aspect in undertaking any industry development initiative. BiotechCorp harbours the aspiration of creating world-class professionals in the industry to act as catalysts that will spur greater magnitudes of growth for the industry. In this regard, the audience for human capital development initiative range from school going children, who are potential industry players in the future, right up to professionals and corporate captains.

Focus Areas:

1. Develop skilled, knowledgeable and competent human capital to ensure adequate supply of human capital for the biotechnology ecosystem.
2. Develop capabilities across the biotechnology value chain - from research to commercialisation, business development, product development, production and marketing.

Key Results:

Issue / Activity	Result
BioEducation Symposium 2010	The Symposium was held to develop awareness amongst science teachers and career counsellors about biotechnology fields and available career opportunities so they would be able to provide this information to students. • A total of 96 participants were involved in the BioEducation Symposium 2010, held on March 23 & 24, 2010 at Le Meridien & Sheraton Imperial Kuala Lumpur.
Biotechnology Entrepreneurship Special Training (BeST) Programme and Graduation 2010	BeST is part of BiotechCorp's approach to develop and nurture skilled talent within the industry in a bid to ensure a sustainable pool of human capital for Malaysia. • The graduation ceremony for those who went through the BeST programme was held on July 2010 at Sheraton Imperial Kuala Lumpur to celebrate, recognise and give appreciation to all trainees after having been enrolled in the three months classroom-based training.

Issue / Activity	Result
BeST Meet The Industry Session 2010	• BeST 'Meet the Industry' sessions were held in five locations in the country including Kuala Lumpur, Penang, Pahang, Johor and Terengganu as part of BiotechCorp's effort to expose, promote and match the range and scope of biotechnology careers amongst BeST trainees with industry players. Dialogues were held between representatives from the industry, recruitment agencies and the BeST Alumni. Additionally, there were also booths from biotech companies offering internship placement to the BeST trainees.
BioEducation Monsoon Camp 2010	This is an effort aimed at promoting biotechnology education at foundation level and facilitating strategic partnerships among the Government agencies such as the Ministry of Higher Education and Ministry of Education, the respective Economic Corridors, high schools, colleges, universities and the biotechnology industry players. • A total of 74 teachers from secondary schools around Terengganu participated in this camp. The programme, a continuation of the Grassroots Awareness Programme was held from October 16 - 18, 2010 at Ri-Yaz Heritage, Marina Resort & Spa, Kuala Terengganu.
MyBio Carnival 2010	This programme is targeted at creating biotechnology awareness by bringing together all the stakeholders within the industry. • In 2010, BiotechCorp together with Malaysian Biotechnology Information Centre (MABIC), and National Science Centre (NSC) jointly organised two Biotechnology Carnivals from September 18 - 26, 2010 at the National Science Centre and in October 2010 at AIMST University. Participants included students, parents, scientists, members of the media, policy makers and industry players.
qb3 Globe 2010	The qb3 Global Bio-Entrepreneurship Course 2010 (GLOBE 2010) is a one-week comprehensive course in bio-entrepreneurship tailored to the needs of professionals situated in countries with emerging biotechnology industries (see note below). • In 2010, 11 participants from selected BioNexus Status companies attended the course. The objective of the programme was to create awareness on the complexity in developing a successful global biotechnology venture and also provided a networking platform for participants.

Issue / Activity	Result
	Note: The course provides a content-rich overview of the life sciences industry, entrepreneurship and venture financing. It incorporates cases and projects throughout the course to build the skills and expertise of the individuals to become leaders in their opportunity areas. This programme is the result of five year collaboration with the California Institute for Quantitative Biosciences (QB3), San Francisco.
Learning Entrepreneur Series (LENS) 2010	LENS 2010 is a series of entrepreneurship workshops for researchers, BioNexus companies and potential bioentrepreneurs. • In collaboration with Institute of Marketing Malaysia (IMM) under the SMECorp's Skills Upgrading Programme for SMIs/SMEs, a total of 8 training courses with total participation of 153 employees from BioNexus Status companies have been completed in 2010. • In collaboration with the Malaysian Academy of SME & Entrepreneurship Development (MASMED, UiTM), two sessions of four-day 'Biotechnology Entrepreneur Workshops' were held in September 2010 • In collaboration with the Faculty of Law of Universiti Teknologi MARA (UiTM), two workshops for 'Developing Entrepreneur Skills on Intellectual Property Management', each lasting five days, were held in August and September 2010.

Next Steps for Human Capital Development:

- Intensification of efforts to nurture a pool of competent human capital with the right skills, knowledge and attitude in line with industry requirements to support Phase 2 of the NBP.
- Designing and implementing robust and flexible training and development programmes which cater to all levels of the industry's workforce.
- Heightening awareness at the grass-roots level about educational paths, career paths and business opportunities in biotechnology.
- Active engagement and collaborative efforts with relevant parties, industry players and government ministries and agencies to establish specific human capital development programmes for the biotechnology sector.

Technology Infrastructure

'Technology Infrastructure' can be defined as the complete suite of technologies, equipment and facilities available for the research, development and commercialisation of products and services in the biotechnology-related life sciences. Technology Infrastructure plays an important role to identify and facilitate the commercialisation of locally developed intellectual property/technology and to improve the availability of shared facilities for the industry.

Focus Areas:

1. Mechanisms for the commercialisation of products and services arising from biotechnology.
2. Access to shared laboratories and other related facilities (BioNexus Bill of Guarantees No. 8).

Key Results:

Issue / Activity	Result
BioNexus Partners (BNP) Programme	Under the BNP programme, BiotechCorp assists laboratories and units within these organisations, which are particularly relevant to the biotechnology-related life sciences industry by maintaining facilities and equipment used by the BNP laboratories and units for providing services to BioNexus companies and other relevant commercial entities and facilitating research and development and commercialisation (R&D&C) within the biotechnology-related life sciences industry in Malaysia. • As at December 31, 2010, BiotechCorp has exceeded the target set for the BNP Programme as follows: - 87.5% of the BNP services/equipment/facilities are utilised by the biotechnology-related life sciences industry. - 4.5 average ratings from users who are satisfied with the quality of services/equipment/facilities offered by BNP laboratories and units. - 31% increase in rate of capacity utilisation of BNP equipment/facilities in comparison to 2009. - 29% increase in collaboration and/or commercialisation arising from the BNP programme in comparison to 2009. - 135 training and job opportunities as contract staff in BNP laboratories and units. - Achieve ISO 9001 Quality Management System Certification for BNP Programme. Note: To date, there are 56 BNP laboratories and units in 13 public institutes of higher learning (IHLs), 3 research institutes (RIs) and 2 Government-linked companies (GLCs) offering high-end research and testing facilities/services/equipment to biotechnology-related life sciences industry.

Issue / Activity	Result
Triple Helix Portal	Triple Helix is BiotechCorp's online partnering portal, launched in 2008 to encourage public private partnerships. The portal enables search for commercialisable biotechnology-related life sciences projects/products developed by Malaysian researchers; as well as research and development and commercialisation (R&D&C) facilities, equipment and services offered by IHLs, RIs, technology parks (TPs), incubators, and GLCs. • As at December 31, 2010, BiotechCorp has made available 165 commercialisable biotechnology-related life sciences projects/products available on the Triple Helix • As at the same period, there were 100 biotechnology-related life sciences services/equipment/facilities offered by public and private organisations in Malaysia including 56 BNP laboratories and units in 13 public IHLs, 3 RIs and 2 GLCs.
Commercialisation Assistance Programme(CAP)	The Global Bridge: Malaysia CAP Programme was specifically designed together with the Larta Institute to maximise the commercial potential of entrepreneurs emerging from research by broadening their market reach and significance beyond Malaysia. This is done by providing experienced and expert advisors and world class content to enable these entrepreneurs to enhance their commercial profiles and accelerate commercial outcomes with a clearly defined commercialisation roadmap, business tools and contacts to internationally renowned industry experts. • The 2010-2011 CAP Programme was designed for 20 entrepreneurs, who were selected from BioNexus Status companies and the general pool of entrepreneurs and researchers from IHLs and RIs. The 2010 - 2011 programme was an expansion from the Pilot Programme in 2009 - 2010 whereby 12 researchers and entrepreneurs from various IHLs and RIs aiming to commercialise their R&D outcomes were selected. • The 2010 - 2011 CAP also had a component called Transaction Readiness Programme (TRP) for five CAP companies advanced enough in their product development and ready to commence with partnering discussions and transactional work. These companies were selected, intensively prepared and positioned by expert advisors for the purpose of targeting and attracting potential partners during the JP Morgan Healthcare Conference in January 2011. A total of 96 meetings were actualised through this programme.

Issue / Activity	Result
Technology Commercialisation Network – Biotechnology (TCN-Bio)	TTCN-Bio serves as a platform to enhance connections amongst the players in the biotechnology/life sciences commercialisation value chain. • The second TCN – Bio Forum was successfully held on December 16, 2010 with 103 participants from the industry, investing communities, technology transfer offices, Government and researchers. • Several other programmes were conducted such as a joint Pitching Session in collaboration with the Cradle Investment Programme and a Business Networking Session where 109 one-on-one meetings were arranged between the technology providers and parties interested in the technologies showcased. • Prior to the Business Networking Session, a technology evaluation programme was also implemented to assist 20 successfully selected participants aiming to commercialise their technologies. The programme comprised evaluation of their technology offerings, market information, strategic analysis, financial plan, the organisation and exit possibilities, which were undertaken by Frost & Sullivan.
Science Parks and Incubators Network – Biotechnology (SPIN-Bio)	SPIN-Bio aims to serve as a platform for biotechnology related technology/research/science parks and incubators to converge, communicate and network for excellence in fostering innovations and nurturing growth. • In 2010, the first meeting for the SPIN-Bio was successfully held on July 14. It was attended by 93 participants from 47 organisations. SPIN-Bio was held back to back with the National Business Incubator Association (NBIA) Advance Certificate in Biotechnology Incubator Management Programme for 52 Incubator Managers in the country.

Next Steps for Technology Infrastructure / Shared Facilities Unit:

- To ensure 60% of the 56 BNP laboratories and units are utilised by the biotechnology-related life sciences industry
- To ensure 20% increase in collaborations and/ or commercialisation arising from the BNP programme in comparison to year 2010
- To ensure successful re-certification of existing QMS ISO9001:2008 certified processes for BNP Programme
- To populate up to 180 commercialisable biotechnology-related life sciences projects/products and 120 services/equipment/facilities into Triple Helix database.

Resource Centre

For sustainable industry development, knowledge generation and development is an important element. However, one of the challenges in an industry such as this is that information is available but it is located in islands – across various different stakeholders. The collation of such information so it can be used as a reference point would benefit the industry. BiotechCorp mediates information flow in the industry and manages a resource centre as a one stop centre for industry related information.

Focus Areas:

1. Information resources and information services that facilitate networking and collaboration between stakeholders.
2. The provision of one-stop-centre services for biotechnology – a conducive environment for knowledge sharing and dissemination.

Key Results:

Issue / Activity	Result
RC Usage results in 41 times ROI	As at December 2010, there are 188 BioNexus Status companies, 25 BioNexus partners and 60 active registered members along with almost 200 staff of BiotechCorp using RC services and facilities. • Based on record of utilisation of RC services and facilities by internal and external stakeholders in 2010, the Return of Investment (ROI) on databases usage and borrowing items from RC is tremendous. The ROI is valued at more than RM28 million against the value of materials borrowed, which was RM676,000. This surpassed the RC target for year 2010.
BioInfoday	In encouraging internal and external members to use services and resources, the RC arranges user education programmes such as BioInfoday, which is meant to familiarise members with the RC facilities, resources and services and also to acquaint members with basic database searching techniques • In 2010, RC arranged 19 sessions of BioInfoday exclusively for BioNexus Status companies.
Publications	There are two main publications produced by the RC as a value-added service to its members. • A weekly online newsletter called BioNews has been published since 2007. • BioQuarterly has been published since September 2009 with a different format of information to ensure members are continuously updated with the latest news, acquisitions, news services and privileges.

Issue / Activity	Result
RC Materials	The Resource Centre houses over 3,500 industry and other relevant monographs, online databases, print journals and other publications. • It uses the Library of Congress Classification Scheme for its collection subject classification which is automated using an open source library system offering searchers via library website. • RC processes are now computerised through Integrated Library System (ILS) using KOHA, an open source application. Modules that have been computerised are cataloguing, materials loaning, user account maintenance, journal/ magazine subscription maintenance, tracking of resources, automated overdue notification and management reporting. Online Public Access Catalogue (OPAC), which is part of the ILS is accessible by RC patrons from anywhere with internet connection allowing them to check their account status, materials borrowed, materials renewal, overdue and penalties.

Next Steps for Resource Centre:

- To cater for the increasing informational need, the RC's role in 2011 will be further enhanced and renamed as Knowledge Management Unit (KM) under Business Intelligence Department. KM's team will commence the development of knowledge infrastructure to provide conducive environment for knowledge sharing and dissemination. In addition, KM has planned to initiate collaboration and partnering with other academic, research institutions (RIs) and training centre's libraries for easier and wider access for information.

- The ILS and KM's website will continue to be enhanced, involving system changes for the system administrator and users. As part of an ongoing effort, KM encourages staff to select books through the book selection activities from selected vendors and publishers. Trial subscriptions to databases and journals are vetted through by BiotechCorp employees in their respective fields of expertise prior to actual subscriptions to ensure RC provides useful and relevant resources to users.

Spearheading Industry Development

Agricultural Biotechnology

As part of its commitment to drive industry development, BiotechCorp seeks to enhance the economic value of the Malaysian agriculture industry through adoption of cutting-edge biotechnology tools, innovation and commercialisation.

To facilitate this achievement, the Agricultural Biotechnology framework is based on the Third National Agricultural Policy (NAP 3) and the National Policy on Biological Diversity (1998), and is sub-divided into the following key sectors:

a. ***Natural products biotechnology*** *which includes extraction, standardisation, product development, & validation, including nutraceuticals, cosmeceuticals, food/food ingredients, functional food, pharmaceuticals/botanical drugs, dietary supplements.*

b. ***Crops biotechnology*** *which includes seed/seedling production, bio-fertilizer, bio-control and mushroom technology.*

c. ***Livestock biotechnology*** *which includes goat, cattle, and its related activities such as reproductive, health & feed additives technologies.*

d. ***Aquaculture biotechnology*** *which includes shrimp, freshwater fish & marine aquaculture. Marine aquaculture focuses on algae and its related activities such as reproductive, health & feed additives technologies.*

Key Results:

Issue / Activity	Result
Bio-Fertilizer	BiotechCorp has worked on encouraging the agriculture industry to embark on the production of bio-fertilizers. • In 2010, BioNexus Status bio-fertilizer companies have successfully penetrated the local and ASEAN market in 2010. The bio-fertilizer sector contributed the largest revenue among the BioNexus Status companies, at approximately RM 141.41 million. These companies have started to expand their facilities to increase production due to increasing market requirements.
Tissue culture/micro-propagation	Tissue culture companies are constantly improving their techniques and production efficiency with specific collaboration with key Government agencies/institutes such as the Forest Research Institute Malaysia (FRIM), Nuclear Malaysia (MINT), Malaysian Agriculture Research and Development Institute (MARDI), and Universities as well as international organisations. • In 2010, tissue culture companies have continued to successfully commercialise their products to major plantation companies as well as Government agencies. Specific examples include the mass production of pineapples (MD2), bananas (Cavendish, Berangan), orchids and other floriculture & forestry species as well as aquatic (ornamental) plants.

Issue / Activity	Result
Natural products	BiotechCorp has facilitated the development of flagship companies with core competencies in extraction, standardisation, profiling and pre-clinical trials among others, with the aim of creating an evidence-based platform which helps in the development and creation of higher value natural products. The commercialisation of products through established marketing channels and continued collaboration between these companies and research institutes has improved product branding and contributed to regional and global market developments.
Seed production	In 2010, progress was achieved to transform Malaysia into a seed production hub using molecular breeding techniques. • The Center of Marker Development and Validation Centre (CMDV) was established at the Malaysian Agriculture and Research Development Institute (MARDI), with local BioNexus companies engaging to fast track their breeding programmes to produce high quality (premium) seeds.
Livestock	BiotechCorp is committed in ensuring growth and sustainability of nucleus livestock farms. • In 2010, focus was given to the development of multiplier farms. One BioNexus company and at least two pre-BioNexus farms are being nurtured to become multiplier farms. • Further development initiatives in the production of animal feed for the livestock sector were also established to support the growing demands by the livestock sector. This involves the establishment of feedstock production, eg. grain corn plantations and silage production by most multiplier and nucleus farms.
Aquaculture	BiotechCorp continues to encourage the establishment of key projects that will support the development of the aquaculture industries in Malaysia. • Initiatives in three main areas of this sector, which complement each other include aquaculture feed development, aquaculture health and the development of broodstock and breeding technology as well as the development of the algae sector.

Issue / Activity	Result
Agricultural biotechnology companies	As at December 2010, a total of 79 agricultural biotechnology companies were awarded the prestigious BioNexus Status. The breakdown is as follows: • 23 companies engaged in research, development and commercialisation of natural products • 34 companies involved in the seed/seedlings production, bio-fertilizer and mushrooms cultivation sector. • 15 companies in the livestock sector, including goat, cattle and animal feed. • 7 aquaculture companies, including shrimp, freshwater fish and marine fish. However, out of the 79 BioNexus Status companies in Phase 1 (2005 – 2010), a total of 18 companies were awarded the BioNexus Status in 2010, for their engagement in agricultural related business, adopting biotechnology tools, including employing knowledge workers.

Agricultural Biotechnology Projects Carried Out in 2010

No.	Company	Country	Activity and Achievements
1	Bio Marinuus Sdn Bhd	Malaysia	This aquaculture company is involved in the production of grouper fingerlings, mainly tiger groupers for the grow-out industry. The hatchery is at Sungai Rengit, Pegerang, Johor while the broodstock are kept at adjacent floating net cages beside the hatchery. Feed for the fingerlings such as phytoplanktons, zooplanktons and rotifers are produced under controlled conditions in the farm. The company has started to generate revenue since the demand for quality fingerlings in Malaysia is very high.
2	Inspisegar Sdn Bhd	Malaysia	This is an associated company of JW properties which is among the largest producers of Tiger shrimps in Malaysia. Inspisegar is involved in the production and research and development (R&D) of quality shrimp feeds.
3	JEFI Aquatech Sdn Bhd	Malaysia	JEFI Aquatech is a related company of Penang based Jeen Huat Food Industries which is a pioneer in the food processing industry of Malaysia. JEFI Aquatech is involved in the breeding, production, R&D of SPF White Shrimps targeting the export market.

No.	Company	Country	Activity and Achievements
4	SP Aquaculture Sdn Bhd	Malaysia	This Johor-based aquaculture company received its BioNexus Status for its expansion to produce Tiger and Giant Grouper fingerlings and their hybrids. The company which was previously also bred Red Snappers and Seabass is now focusing on Groupers due to its high demand and the company's ability to produce good quality fingerlings.
5	Sciencegates Sdn Bhd	Malaysia	The company is involved in the mass cultivation of microalgae mainly *Hematococcus pluvalis* for the production of astaxanthin. The company is actively collaborating with BioWing Co Ltd of Japan for cultivation and extraction under Malaysian conditions. BioWing Co Ltd is among the most advanced companies in the world for the research and development as well as production of microalgae.
6	Kris Biotech Sdn Bhd	Malaysia	The Kluang-based livestock breeding company has successfully commenced their biotechnology activities through successfully training their staff to conduct artificial inseminations.
7	Pomer Sdn Bhd	Malaysia	Pomer is involved in the production of Single Cell Proteins for livestock and aquaculture feed from Palm Oil Mill Effluent (POME). The company has successfully commenced its facility set-up and acquired land as well as raw materials supply for its production.
8	Biosafe Microbial Development Centre	Malaysia	BMDC is involved in the R&D, production and commercialisation of direct-fed microbial (DFM) as animal feed additive for the livestock industry starting with swine. The company has started its marketing initiatives in South East Asia.
9	Asia BioZyme Science	Malaysia	This company is involved in the production of microbial-based agricultural products as soil conditioners and plant growth enhancers. The company has formulated its own microbial-based organic compounds under the brand name of ZymeSoil and ZymeGrow to address the growth, yield enhancement and nutrient requirements of plants.
10	Furley BioExtracts Sdn Bhd	Malaysia	The BioNexus company is involved in the research, development, production and commercialisation of products produced from standardised extracts of local traditional herbs and plants using biotechnology. Among the company's key successful products include mangosteen juice with astaxanthin extracts. The company has commenced revenue generation and in the midst of completing its Goods Manufacturing Practices (GMP) facility.

No.	Company	Country	Activity and Achievements
11	GT Bioscience Sdn Bhd	Malaysia	The Terengganu-based company is involved in the research, development, extraction and commercialisation of herbal-based nutraceutical products. The company has signed a Merchant service agreement with Equinox 8 in December 2010. Equinox 8 is an internet marketing company with over 3000 products of diverse categories.
12	Tropical Bioessence Sdn Bhd	Malaysia	The Malacca-based company is involved the in research, development, extraction and commercialisation of essential oil from medicinal and aromatic plants. The company has signed a Merchant service agreement with Equinox 8 in December 2010.
13	Jalur Salju Sdn Bhd	Malaysia	The Negeri Sembilan-based company is involved in the research, development, production and commercialisation of high quality planting materials for food and commercial crops via tissue culturing process.
14	Green Alive Sdn Bhd	Malaysia	The Johor-based BioNexus company is involved in the research, development and commercialisation of microbial-based agriculture products mainly for oil palm plantations. The company has secured suitable land for its commercial production.
15	IOI Palm Biotech Sdn Bhd	Malaysia	A subsidiary of the IOI group, this BioNexus company is involved in the commercialisation of high quality clonal ramets, ornamental, fruit crops and forest species using tissue culture process.
16	Terra Garden Biotech (M) Sdn Bhd	Malaysia	This BioNexus company which is based in Kelana Jaya with its greenhouse and tissue culture facilities in Negeri Sembilan is involved in the production and commercialisation of high quality planting materials for agricultural, horticultural and ornamental plants. It also undertakes related R&D activities via the tissue culturing process.
17	M-Gen-Propagation Sdn Bhd	Malaysia	This Rawang-Selangor based BioNexus company is involved in the commercialisation of tissue culture products and its related R&D activities. The company has successfully secured contracts and supplied their products to Government and private companies.
18	Fasclone (M) Sdn Bhd	Malaysia	This Bangi-Selangor based BioNexus company is involved in the commercialisation of micro-propagated planting materials for commercial crops using proprietary bioreactor based liquid culture technology and its related R&D activities.

No.	Company	Country	Activity and Achievements
19	Celltis Sdn Bhd	Malaysia	This Subang Jaya, Selangor based BioNexus company is involved in the commercialisation of high quality planting materials from tissue culture and undertakes R&D activities related to this area. The company has secured a technology transfer/support agreement with Sweden based Nakhlatec-International Horticultural Advisors.
20	Mushroom Ambra Biotech Sdn Bhd	Malaysia	This Johor-based BioNexus company is involved in the commercialisation of edible mushroom spawns through tissue culture technique and undertakes related R&D activities. The company plans to expand its operations for the production of new varieties of mushrooms.
21	Green World Genetics Sdn Bhd	Malaysia	This Kepong based company engages in research, development and commercialisation of tropical seed breeding utilising biotechnology tools. It has successfully concluded its field trials for its feed and sweet corn varieties at Batu Arang.
22	Biotrack Technology (M) Sdn Bhd	Malaysia	This Negeri Sembilan-based BioNexus company is involved in the research, development, production and commercialisation of microbial-based bio-fertilizers. Other than the local market, the company has successfully exported its product, Rhizagold to Indonesia.
23	BioFusion Sdn Bhd	Malaysia	This BioNexus company involved in the research, development and commercial production of effective microorganisms (EM) for agricultural and industrial waste bioremediation applications. It has successfully set up operations in Bintulu, Sarawak and secured sales contracts with local oil palm companies.
24	Grand Range Biotechnologies Sdn Bhd	Malaysia	The BioNexus company is involved in the research, development, production and commercialisation of vermin-compost based biofertilizer products for agricultural applications.

Next Steps for Agricultural Biotechnology:

- To harness Malaysia's diverse natural resources including talent to encourage companies, especially those involved in agricultural biotechnology to identify and standardise valuable components from crops and plants, and formulate functional foods with health benefits.

- To support the crops, livestock and aquaculture sectors in establishing a comprehensive breeding programme utilising the now available Marker Assisted Selection techniques at the CMDV to fast track development and production of high quality produce. This is to be achieved through the production of certified seeds and genetic materials with traits to meet international market requirements.

- To assist multi-national corporations to establish collaboration in setting up their base, including R&D, and/or production centers in Malaysia.

- To continue nurturing local BioNexus companies and encouraging them to create spin-off companies with global reach as an attempt to prepare these companies for Phase 3 of the National Biotechnology Policy which will see the Malaysian biotechnology industry take on a more global appeal.

- To work with local agricultural biotechnology companies with the aim of establishing global agricultural biotechnology companies and brands in Malaysia, thus sealing Malaysia's position as a global biotechnology hub par excellence.

Healthcare Biotechnology

Contributing to better quality healthcare is an important part of what we do at BiotechCorp. As the lead agency spearheading the biotechnology industry in Malaysia, BiotechCorp strives to create a suitable business environment for local and international entrepreneurs involved in this segment. Among others, the function entails attracting and enhancing investments in the healthcare segment, nurturing companies within this sector and identifying growth opportunities.

Focus areas:

1. Biopharmaceuticals/Pharmaceuticals
2. Contract research organisations (CRO)/Contract manufacturing organisations (CMO)
3. High Technology Medical Devices
4. *In-Vitro* Diagnostics
5. Therapeutics/Cell Therapy
6. Bioinformatics

Key Results:

Issue / Activity	Results Summary
Total Capital Investment	BiotechCorp is the principal agency for attracting foreign and domestic direct investment in biotechnology to Malaysia. We provide facilitation services to companies seeking both fiscal and non-fiscal incentives. It has facilitated biotech companies in obtaining incentives under BioNexus Status and also incentives under other Government's promotion programs. • In 2010, BiotechCorp via its healthcare industry development initiatives successfully engaged a total of 28 projects approved with a total capital investment amounting to RM1.61 billion. Focus was given to international and local projects within BiotechCorp's Industry Development Division – Healthcare (IDD Healthcare)'s area of interest the healthcare biotechnology segment. • Also in 2010, there were nine projects approved under BioNexus Status, and eight projects with approved incentives under other Government promotion programs.

Issue / Activity	Results Summary
Foreign Direct Investment (FDI)	In 2010, IDD Healthcare adopted a regional approach in undertaking business development initiatives based on the overall perspective of the industry, resource availability and Malaysia's healthcare biotechnology industry's value proposition. Focus was on mature markets with established biotechnology industries such as USA and Europe. Global companies and multinational corporations (MNCs) were targeted. IDD Healthcare also focused on the emerging markets (such as IndoChina, Korea and Taiwan), with investment perspective and continuing efforts in established markets. • As a result, significant foreign biopharmaceuticals companies, CROs, CMOs, and businesses involved in high-end medical and diagnostic devices with significant investments up to RM1.56 billion have set up their operations in Malaysia. The largest contribution to investment came from India with 74.8% of the total capital investment. Pakistan contributed 8.96%, China with 3.42% and local investment at 3.12%. The Indian investment was from Biocon Ltd, which announced an investment of RM492.6 million on October 27, 2010, in Malaysia for the setting up of a bio-manufacturing and research and development facility. This marks the biggest FDI for this sector in the country.
Job Creation	The total capital investment of approved projects has resulted in the creation of employment opportunities within healthcare biotechnology. • In 2010, there were 1,355 knowledge workers within this segment. For BioNexus companies under the Healthcare Biotechnology sector, 58% of the total workforce comprises of knowledge workers. The high percentage of knowledge workers is contributed by these subsectors: biopharmaceuticals, CRO, CMO, medical devices and stem cell subsectors.
Nurturing of Healthcare Biotech Companies	In creating a suitable business environment for local and international entrepreneurs, BiotechCorp's efforts include awarding the BioNexus Status to eligible companies commercialising their biotechnology products or services. Emphasis is also placed on the development of these companies to ensure sustainability and viability of the biotechnology industry in Malaysia. • In 2010, IDD Healthcare nurtured 34 Healthcare Biotechnology companies, mostly comprising of BioNexus Status companies in generating revenue of RM99.42 million. As at December 31, 2010, there were 70 BioNexus Status companies in Healthcare Biotechnology. • To increase the growth of Domestic Direct Investments (DDI), IDD Healthcare has initiated programs to encourage the involvement of strategic parties in acting as a catalyst for domestic investment. IDD Healthcare has also identified major domestic corporations and BiotechCorp is actively engaging these corporations to invest in biotechnology.

Issue / Activity	Results Summary
Malaysia's Economic Transformation Program (ETP)	The Economic Transformation Program (ETP) is a comprehensive effort that will transform Malaysia into a high-income nation by 2020. For BiotechCorp, the ETP is relevant as 'Healthcare' has been identified as one of the twelve National Key Economic Areas (NKEAs), underscored by six entry point projects including Pharmaceuticals Manufacturing and Clinical Research. The accessible BioNexus incentives are among the areas which were highlighted and attracted the interest of the CROs and pharmaceutical companies. • A foreign clinical research company has set up a Phase 1 unit in Malaysia, joining the growing list of contract research organisations (CROs) attracted to the country.

Healthcare biotechnology projects carried out in 2010

No	Company	Origin	Nature of Business
1	Genor BioPharma Co. Ltd.	China (FDI)	The company will develop, manufacture and commercialise biopharmaceutical products for the Organisation of Islamic Conference (OIC) countries through a JV with a Malaysian partner.
2	Invendo Medical GmbH	Germany (FDI)	The company has developed Invendoscopy™ - a solution for the colonoscopy procedure. It allows for minimal discomfort, is sedationless and hygienically safe due to single-use and enables non-physician scope driving with simple handheld navigation.
3	Molplex Sdn Bhd	United Kingdom (FDI)	The company is a contract research provider of integrated, automated and highly scalable software platform for early drug discovery and validation.
4	Criticare Systems (M) Sdn Bhd	United States of America (FDI)	A medical device company developing, manufacturing and marketing specialised pulse patient monitors, sensors and related accessories used in anaesthesia, critical care and outpatient care.
5	Eurocor Asia Sdn Bhd	Germany (FDI)	A medical device company manufacturing specialised catheters used in heart surgery to mechanically widen a narrowed or obstructed blood vessel.
6	Opto Circuits (Malaysia) Sdn Bhd	India (FDI)	A medical device company developing, manufacturing and marketing specialised pulse patient monitors, sensors and related accessories used in anaesthesia, critical care and outpatient care.

No	Company	Origin	Nature of Business
7	Phoenix Pharma Central Services (M) Sdn Bhd	Singapore (FDI)	Contract Research Organisation (CRO) involved in developing new biomarkers and providing specialised molecular diagnostics assays for companion diagnostics test services targeting oncology and diabetes.
8	Ananda Sdn Bhd	USA (FDI)	A company interested in setting up adult stem cell geriatric diseases research and treatment and biomolecules production facility using patented bioreactor for oncology therapy and cosmetic market.
9	Strides Arcolab Limited	India (FDI)	Strides Arcolab's Specialties division was spun off as a separate division now known as Agila Specialities Pvt Ltd. Agila produces various specialties drugs and focuses on key therapeutic areas like anti-infectives, oncology, CNS, opthalmics and peptides.
10	Infinite Biomed Technologies (M) Sdn Bhd	USA (FDI)	The company focuses on R&D and commercialisation (R&D&C) activities of urine related diagnostics products with integrated innovative closed-system biological / pathological sample collection.
11	Advance Neuroscience Allies (ANSA)	India (FDI)	The company has developed a technology for the isolation of mesenchymal stem cells (MSC) from different tissue sources e.g. bone marrow, adipose tissue, umbilical cord and dental pulp.
12	Getz Pharma Pvt. Ltd	Pakistan/USA (FDI)	The company is involved in the development and production of sterile injectables, solid dosage, penicillin products, biopharmaceutical/biosimilars products.
13	Aseacyte	United Kingdom (FDI)	The company is a joint venture/ partnership with Avanticell, CARIF and Sime Darby in chemical analysis to complement company's cell-based analysis, to form an integrated service for the evaluation of natural products as potential new therapeutics.
14	Astra Diagnostics GmbH	Germany (FDI)	The company will develop and manufacture a broad range of high performance Molecular Diagnostics products using PCR, RT-PCR and NAT technology.

No	Company	Origin	Nature of Business
15	Cytopeutics Sdn Bhd	China (FDI)	Development and provision of clinical treatments using autologous MSC.
16	Veras Research Sdn Bhd	USA (FDI)	A CRO company conducting clinical trials and other trial related services.
17	Asia Botanicals Sdn Bhd	Australia (FDI)	A company which researches, develops, and commercialises standardised herbal-based products from Malaysian indigenous herbs.
18	D2 Bio Solutions Sdn Bhd	German (FDI)	A CRO providing contract research services for clinical trials, drug discovery, and medical device development.
19	Royal Bird's Nest Sdn Bhd	Malaysia (DDI)	The company will engage in R&D&C for edible bird's nest based pharmaceuticals, nutraceuticals, and cosmeticeuticals. Conducts clinical studies on standardised edible bird's nest extracts for therapeutic application in wound healing, stroke, osteoarthritis, and cosmesis.
20	Strovi Tel Sdn Bhd	Malaysia (DDI)	The company will develop and commercialise fractionated plasma products.
21	One-Bio Sdn Bhd	Malaysia (DDI)	A subsidiary of Chemopharm Group, focusing on the development, production and commercialisation of phyloinformatics platform and bio-surveillance kit for viral pandemic prediction and prevention.
22	Empire Biotech Sdn Bhd	Malaysia (DDI)	A CRO providing formulation development, regulatory and technical support services to pharmaceutical companies.
23	Leonix Sdn Bhd	Malaysia (DDI)	A medical device company involved in the design, development, manufacturing and commercialisation of orthopaedic trauma implants.
24	Biotech Diagnostics Sdn Bhd	Malaysia (DDI)	The company is developing antibody based diagnostic kit for detection of Clostridium difficile (C. Difficile) toxins in the faecal specimens of diarrhea patients.
25	InnoBio Diagnostics Sdn Bhd	Malaysia (DDI)	The Inno Group created Inno Bio Diagnostics Sdn Bhd as a centre of excellence for R&D of stem cell based technology for cell based diagnostics, cell based therapy and regenerative medicine.
26	Xynergen Sdn Bhd	Malaysia (DDI)	Company is currently collaborating with Malaysian Genome Institute to develop a novel protein based diagnostic biochip for diseases.

No	Company	Origin	Nature of Business
27	HirudoGenesis Biotechnology Sdn Bhd	Malaysia (DDI)	The company is involved in discovery, development and commercialisation of pharmaceutical products originated from natural ingredients.
28	CCM Biopharma Sdn Bhd	Malaysia (DDI)	A subsidiary of CCM Group involved in the development and production of biosimilars, specifically recombinant human erythropoietin.
29	KLSMC Stem Cells Sdn Bhd	Malaysia (DDI)	A subsidiary within the Kuala Lumpur Sports Medicine Centre group providing harvesting, processing and storage service of Peripheral Blood Stem Cells to be used in their articular cartilage regeneration therapy.
30	Medical BioTheraphy Sdn Bhd	Malaysia (DDI)	Maggot Debridement Therapy (MDT) with sterile maggots.
31	Oleopharma Sdn Bhd	Malaysia (DDI)	The company has developed a palm oil-based drug pharmaceutical grade excipient known as HAMIN®. It will undertake research, development, commercialisation and manufacturing HAMIN® for pharmaceutical applications.

Next Steps for Healthcare Biotechnology:

- In line with the goals of the National Biotechnology Policy (NBP) Phase 2, one of the key objectives is to promote healthcare biotechnology industry's growth through attracting investments, creating employment opportunities and contribution to the nation's GDP via revenue generation. Going forward, the Business Development & Investment – Healthcare Division (BDI Healthcare) will focus on strategies pertaining to commercialization.

- BDI Healthcare will be seeking major investments in Biopharmaceuticals and Biologics sector.

- BDI Healthcare will be implementing nurturing activities to accelerate growth of existing BioNexus companies.

Industrial Biotechnology

Industrial biotechnology is one of the high value growth areas that BiotechCorp hopes to develop further in efforts to tap into vast potential available in this area. Through this function, BiotechCorp aims to attract more inbound investments as well as facilitate industry growth.

Focus Areas:

1. New value and growth in Malaysia's Industrial sector.
2. Growth in the bio-manufacturing industry.
3. New bases of operations for major global biotechnology players.

Key Results:

Issue / Activity	Results Summary
The Performance Management & Delivery Unit (PEMANDU) NKEA Laboratories	BiotechCorp attended the lab in 2010 to highlight areas concerning biotechnology in Malaysia. • As a result, palm oil related industry (upstream, midstream and downstream), herbal industries and waste water treatment become the focus for industrial biotechnology in Malaysia.
Technology Acquisition	Universiti Putra Malaysia (UPM), the custodian of the Supercritical Fluid (SCF) platform technology that was acquired by BiotechCorp through IDD Industrial's Biotechnology Acquisition Program (BAP), is working with FeyeCon and BiotechCorp in the setting-up of the plant. • Subsequent to this, CNI Holdings Bhd and AMWAY (M) Sdn Bhd signed a Memorandum of Collaboration with BiotechCorp during BioMalaysia 2010 to explore the usage of the platform technology and applications in the production of novelty products.
Cluster Working Group (CWG)	BiotechCorp understands that in order to maintain relevance, there must be cross-industry dialogues that facilitate knowledge transfer and communication. • In 2010, BiotechCorp held discussions with local stakeholders regarding global trends, feedstock strategy, and market and technology drivers for industrial biotechnology according to the current demands and requirements.
Biotechnology Twinning Initiative (BTI)	The BTI programme started since the MOSTI Minister's Working Visit to the Republic of Korea in 2009. • In 2010, eight students were selected from the Biotechnology Entrepreneur Special Training (BeST) programme to attend the Korea Research Institute of Bioscience and Biotechnology (KRIBB) in September 2010 for three months. • In December 2010, during the Honourable President of the Republic of Korea's visit to Kuala Lumpur, a Memorandum of Understanding was signed on joint promotion on bio-energy and biofuel between BiotechCorp and Korean Energy Management Corporation (KEMCO).
Advanced Bioprocessing Technologies for Bulk, Fine & Specialty Chemicals	Developments in this area in 2010 include: • Two foreign entities, having established local presence are collaborating with BiotechCorp on our Bio-XCell initiative to set up intermediate and bulk chemicals facilities which require an investment amounting to about RM190 million. The aim is to have the facility in place and completed by the third quarter of 2013. • Two local players, one in food ingredients and another in high quality functional food have started manufacturing in 2010. Both of the companies hold 'Pioneer Status'.

Issue / Activity	Results Summary
Biocatalysts	In 2010, a foreign biocatalyst company worked with a local oil palm plantation to increase the oil extraction rate of oil palm fruits. • Initial lab tests have shown promising results.
Green Chemistry – Biofuel and Bioremediation	One foreign entity has a joint collaboration with a huge oil palm plantation company to produce bioethanol from empty fruit bunches (EFB) using enzymatic process. • The demonstration plant finished construction in the fourth quarter of 2010 and the commercial plant announcement will be made in 2011.
Advanced Bioprocessing Technologies for Biopolymer Industry	There are two key developments in this area: • Discussions are on-going between a foreign-owned and a large local oil palm plantation in oil palm upstream development phase. Collaboration agreement should be signed in the second quarter of 2011. • A local BioNexus Status company has started their production in Northern Malaysia to produce biodegradable packaging using agriculture waste as the raw material. Demands have come from abroad as well as foreign-owned local entities.
Bio-Generic Manufacturing – CRO/CMO	Two local companies that were awarded BioNexus Status in 2010 have contributed to development in this segment. • A local CMO company has started bioprocess scale-up technology for microbial and bioremediation applications. • Another local CRO company specialising in Supercritical Fluid (SCF) platform technology for natural products extraction has started operation in the second quarter of 2010.
Attract FDIs to use Malaysia as their industrial biotech hub and capitalise on the nation's resources and biodiversity	A milestone achieved in this area concerns a new development with Korean counterparts: • BiotechCorp has signed an Memorandum of Understanding, witnessed by both countries leaders, with Korea Energy Management Corporation (KEMCO) for joint-commercial activities between the enterprises and research institutes of both countries in promoting renewable energy-specifically in bioenergy and biofuels.

Industrial biotechnology projects carried out in 2010

No	Companies Name	Project Type	Status	Project Initiative
1	Ekstrak Tulen Sdn Bhd	DDI	Project Operationalised	The development of Contract Research Organisation (CRO) for local herb extracts using Super Critical Carbon Dioxide (SC-CO2) system. The company was awarded a BioNexus status on 8 April 2010 with total approved investment of RM0.4 million.
2	Intertech Asia Sdn Bhd	DDI	Project Operationalised	R&D and production of food ingredients, natural improver for bread, "Panatura" derived from wheat using solid state fermentation and enzymatic process. The company made a total approved investment of RM15.8 million.
3	Promise Earth Sdn Bhd	DDI	Project Operationalised	Commercialisation of the bioremediation process to treat organic waste such as food waste using Japanese technology and convert them into soil enhancer and moisturiser. The company made a total approved investment of RM2.2 million.
4	Return 2 Green Sdn Bhd	DDI	Project Operationalised	Manufacturing of biodegradable packaging and food containers from biomass (sugar cane bagasse and paddy husk/straw) using enzymatic process. The company made a total approved investment of RM2.2 million.
5	Sireh Emas Sdn Bhd	DDI	Project Operationalised	Manufacturing and marketing products derived from natural resources extracts, for example, Sireh (Betel leaf) and Ginger. The company currently has a Technology Licence Agreement with SIRIM for the commercialisation of skin lightening products from natural resources developed by SIRIM using SIRIM's intellectual property rights which is known as "Xanzwhite products". It has a total paid-up capital of RM0.5 million

No	Companies Name	Project Type	Status	Project Initiative
6	Vance Bioenergy Sdn Bhd	DDI	Project Operationalised	Molecular distillation of Tocotrienol Rich Fraction (TRF) and other essential nutraceuticals from palm oil and palm oil derivatives utilising Vance Nutraceuticals proprietary technology. The company has a total paid-up capital of RM15 million.
7	Circle Field Sdn Bhd	DDI	Project Operationalised	Commercialisation of microbial based bioremediation for river and sewage wastewater treatment and soil enhancer products and services. The company was awarded the BioNexus Status on July 23, 2010 with total approved investment of RM3 million.
8	Biogreen Equation Sdn Bhd	DDI	Project Operationalised	R&D and the production of biodegradable resin. The company made a total approved investment of RM1.05 million
9	MyAgriNutri-Bio Sdn Bhd	DDI	Project Operationalised	Production of bio-compost through composting of oil palm biomass including empty fruit bunches (EFB), decanter cake and dried palm oil mill effluent (POME). The company has a total paid-up capital of RM5 million and has commenced manufacturing in January 2010.
10	Supercritical Fluid Extraction (SFE) spin off: Clove	DDI	Project Operationalised	This is CNI Holdings Bhd (CNI) project with a market price of RM510/kg using SFE in UPM with potential annual revenue of RM76,500.
11	SFE spin off: Nutmeg	DDI	Project Operationalised	This is a CNI project with a market price of RM320/kg using SFE in UPM with potential annual revenue of RM3.84 million.
12	SFE spin off: Coriander	DDI	Project Operationalised	This is a project by Hai-O with a market price of RM750/kg using SFE in UPM with potential annual revenue of RM0.62 million.

No	Companies Name	Project Type	Status	Project Initiative
13	SFE spin off: Cinnamon	DDI	Project Operationalised	This is a project by Yakin Biolab Sdn Bhd with a market price of RM870/kg using SFE in UPM with potential annual revenue of RM4.4 million.
14	SFE spin off: Solanesol from tobacco	DDI	Project Operationalised	This is a project by 1st Global Biotech (M) Sdn Bhd with a market price of RM650/L using SFE in its own facility with potential annual revenue of RM3.3 million.
15	BioRemeds (M) Sdn Bhd	DDI	Project Operationalised	The company is a Contract Manufacturing Organisation (CMO) for microbial culture for bioremediation activities. It was awarded the BioNexus Status on December 8, 2010 with total approved investment of RM25 million.
16	Digital Bell Sdn Bhd	DDI	Project Operationalised	In-Situ Bioremediation for Effective Microorganism (EM) culture was set up under this company with a total paid-up capital of RM0.1 million.
17	Agro Science Resources Sdn Bhd	DDI	Project Secured	This company produces Add-X, food additive derives from citrus plant extract using solvent and super critical fluid extraction method. It was awarded the BioNexus Status December 8, 2010 with total approved investment of RM5.5 million.
18	MGM Ingredients Malaysia Sdn Bhd	DDI	Project Secured	This company produces the Panatura, natural starter dough used as a natural improver to make a wide variety of high quality breads and biscuits using enzymatic process. It was awarded the BioNexus Status on June 21, 2010 with total approved investment of RM15.8 million.
19	Enretech (M) Sdn Bhd	DDI	Project Secured	This company is involved in manufacturing of organic absorbents and microbial-based soil remediation technologies from Australia to clean-up of a wide variety of liquid spills on land and water. It was awarded the BioNexus Status on May 25, 2010 with total approved investment of RM2.7 million.

No	Companies Name	Project Type	Status	Project Initiative
20	Oiltek Nova Bioenergy Sdn Bhd	DDI	Project Secured	This company is involved in designing, building and selling of biogas and recovery plant, which could be extended into steam and power generation. It has made a total approved investment of RM0.2 million.
21	Avenue Biotech Sdn. Bhd	DDI	Project Secured	This company seeks to commercialise natural product extracts using SFE technology. It was awarded the BioNexus Status on December 8, 2010 with total approved investment of RM0.2 million.
22	Glycos Biotechnologies Inc	FDI	Project Secured	This company is involved in the production of technical-grade ethanol from crude glycerin using the metabolic pathway process. The Malaysian entity, Glycosbio Asia Sdn Bhd was awarded BioNexus Status on October 28, 2010 with a total approved investment of RM53 million.
23	Metabolic Explorer S. A. (METEX)	FDI	Project Secured	This company is involved in the production of 1,3, propanediol (PDO) at Bio-XCell ecosystem, Nusajaya, Johor, using crude glycerine using metabolic pathway process. It was awarded with the BioNexus Status in 2009 and has signed a build, lease and transfer agreement with Malaysian Bio-XCell Sdn Bhd for total approved investment of RM133 million.

Next Steps for Industrial Biotechnology:

- Maintain consistency in biogeneric manufacturing in offshore networks/markets and firm up existing CRO/CMO with funds and continuous support from the relevant agencies.
- Attract more foreign direct investment (FDI) to use Malaysia as a hub for their industrial biotechnology activities, particularly multi-national corporations (MNCs).
- Work with local agriculture players to increase renewable feedstock supply for the development of industrial biotechnology.
- Increase focus on palm oil, agriculture and water treatment sectors according to Economic Transformation Programme (ETP) under PEMANDU.

- Nurture local BioNexus companies to expand market globally and to increase domestic direct investment (DDI).

- Promote more local players to adopt SCF platform technology in their production to produce high quality and value natural products extracts.

Client Engagement

Providing Continuous Industry Advisory and Support

BiotechCorp remains committed towards providing effective and efficient services to clients to ensure sustained interest in industry growth initiatives and the momentum of implementation of these efforts are maintained.

Focus areas:

1. BioNexus Status
2. Biotechnology Commercialisation Grants
3. Tax Incentives

Key Results:

Issue / Activity	Results Summary
BioNexus Status	BiotechCorp processes and evaluates applications from biotechnology companies to award the BioNexus Status. • A total number of 188 applications for BioNexus Status were received by BiotechCorp in 2010. For the year, 39 BioNexus Status companies were approved bringing the total number to 188 (as at December 31, 2010). The companies approved are as follows: 1. BioChemie Science Sdn Bhd 2. Klinsel Sdn Bhd 3. Spektra Biotek Sdn Bhd 4. Bio Marinuus Sdn Bhd 5. Green Alive Sdn Bhd 6. Wanita Anggun Sdn Bhd 7. Ekstrak Tulen Sdn Bhd 8. Phoenix Pharma Sdn Bhd 9. Getz Pharma Sdn Bhd 10. Enretech (M) Sdn Bhd 11. Bio Science R & D Sdn Bhd 12. KLAS Farm Sdn Bhd 13. IOI Palm Biotech Sdn Bhd 14. Astra Diagnostic Asia Pacific Sdn Bhd 15. Medical Biotherapy Sdn Bhd 16. Palm Oil Waste Energy Sdn Bhd

Issue / Activity	Results Summary
BioNexus Status	24. BAM Probiotic Sdn Bhd 25. Veras Research Sdn Bhd 26. Fasclone (M) Sdn Bhd 27. Inspisegar Sdn Bhd 28. Sciencegates Biotech Sdn Bhd 29. Sengenics Sdn Bhd 30. Avenue Biotech Sdn Bhd 31. Agro Science Resources Sdn Bhd 32. AsiaBioZymeScience Sdn Bhd 33. Celltis Sdn Bhd 34. Mushroom Ambra Sdn Bhd 35. MCI Bio-Peptide Sdn Bhd 36. SP Aquaculture Sdn Bhd 37. One Bio Sdn Bhd 38. Bioremeds (M) Sdn Bhd 39. JEFI AquaTech Resources Sdn Bhd • In addition, 14 applications requesting changes on special conditions imposed on BioNexus Status companies were assessed and tabled for the consideration of the BioNexus Evaluation Committee (BEC) and recommended to the Ministry of Finance (MOF).
Biotechnology Commercialisation Grants	Access to early financing is vital to start-up companies commercialising their products and services. Biotechnology Commercialisation Grants have benefited a number of BioNexus Status companies, especially at the early stage of operations. • In 2010, a total of 21 BioNexus Status companies received grants under the Seed, Research and Development and International Business Development fund schemes bringing the total number of grant recipient to 75 companies (as at December 31, 2010). The grant recipients in 2010 are as follows: 1. Aning Biotech Corporation Sdn Bhd 2. Bio Photonic Healthcare Sdn Bhd 3. Biosmart Sdn Bhd 4. Biosafe Microbe Development Centre Sdn Bhd 5. Cytopro Malaysia Sdn Bhd 6. Delphax Sdn Bhd 7. DNA Research Centre (M) Sdn Bhd 8. Genenews Diagnostics Sdn Bhd 9. GT Bioscience Sdn Bhd 10. Joint Implants International Sdn Bhd 11. Manna Biotech Sdn Bhd 12. MyCRO Sdn Bhd 13. Myenzyme Sdn Bhd 14. Neopeutics Sdn Bhd 15. North Borneo Herbal Biotechnology Sdn Bhd

Issue / Activity	Results Summary
Biotechnology Commercialisation Grants	16. O3 Solutions Sdn Bhd 17. Pomer Sdn Bhd 18. Promise Earth (M) Sdn Bhd 19. Return 2 Green Sdn Bhd 20. Stella Gen Sdn Bhd 21. World Aquatic Ecosystem Sdn Bhd
Tax Advisory & Services	BiotechCorp processes and evaluates applications for income tax exemptions for BioNexus Status companies and other relevant tax incentives for the industry. • Apart from the 100% income tax exemption on statutory income incentive granted to BioNexus Status companies, a total of 12 applications for other BioNexus Status tax incentives were received and processed in 2010. The 12 applications received and processed for other BioNexus Status tax incentives are: 1. Genting Plantation Berhad 2. IOI Corporation Berhad 3. BioAlpha International Sdn Bhd 4. Chua Tongsan Sdn Bhd 5. PureCircle Sdn Bhd 6. Stemlife Berhad 7. Genting Green Tech Sdn Bhd 8. TSH Biotech Sdn Bhd 9. IOI Palm Biotech Sdn Bhd 10. Mushroom Ambra Biotech Sdn Bhd 11. SP Aquaculture Sdn Bhd 12. M-Gen-Propagation Sdn Bhd • In our effort to create awareness on the benefits and advantages of tax incentives accorded to companies with the Bionexus Status, two seminars were conducted in 2010 including “Seminar on Guidelines on Tax Incentives Accorded to the BioNexus Status Companies” and “Seminar on Import Duty & Sales Tax Exemption and Malaysian Custom Import/Export Legislation & Procedures”.

Next Steps for Client Services:

- Take on a continuous process enhancement exercise to meet the challenges of Phase 2 of National Biotechnology Policy

- Roll out of the Biotechnology Commercialisation Funding (BCF) programme under the RMK 10 program

- Provide value added support and services which will contribute towards the competitiveness of the BioNexus Status companies.

BIOTECHCORP
MALAYSIAN BIOTECHNOLOGY CORPORATION

BUILDING THE FOUNDATION FOR SUSTAINABLE INDUSTRY GROWTH

"The government's efforts in building and creating conducive ecosystem for the industry are bearing fruit as Malaysia is now an important destination for global biotechnology opportunities." - YBhg Dato' Iskandar Mizal Mahmood, Chief Executive Officer, Malaysian Biotechnology Corporation Sdn Bhd

Winning Stakeholders' Confidence in 2010

A Testament of Excellence: Growth in Industry Leadership Award 2010 by Frost & Sullivan

On October 7, 2010, the Malaysian Biotechnology Corporation (BiotechCorp) won an 'Excellence in Growth Award' at the 2010 Frost & Sullivan 'Growth, Innovation and Leadership Awards' banquet in Singapore for having demonstrated significant excellence in growth leadership. The win affirms the capability of the biotechnology industry as a key driver of economic growth which also provides an impetus for knowledge based economy for Malaysia.

A letter from Frost & Sullivan to BiotechCorp on the award stated: "The Malaysian Biotechnology Corporation has played a pivotal role in enabling the growth of the biotechnology industry in Malaysia. The BioNexus programme is today recognised as amongst the best in class global programmes which has resulted in growth that is significantly higher than the global industry average. Initiatives to support startup organisations with assistance on technology transfer, branding and marketing are very well received by the industry."

Frost & Sullivan Group Vice President, Pharmaceuticals/Biotech Rhenu Bhuller said the growth of BioNexus firms by 37% in 2009 reflects the success of the programme in driving growth for small and medium biotechnology enterprises in Malaysia. "This is a significant achievement when compared with a global decline of 10 percent in terms of the number of firms."

"BiotechCorp has also supported companies in branding as well as technology transfer and funding for example funds like the Biotechnology Commercialisation Grant (BCG)," Rhenu said.

We at BiotechCorp believe that the overall growth for the industry stems from sound infrastructure and strategic collaborations with regional and global partners.The BioNexus partners programme also sees BiotechCorp collaborating with 56 labs in public universities and research institutes to expedite commercialisation of research & development (R&D) products and services.

Apart from that, some major milestones recorded by the industry leading to this achievement include revenue growth of 45% in first quarter of 2010, the sector's increasing contribution to national gross domestic product (GDP) and the increasing number of BioNexus status companies going global - with some getting listed on London Stock Exchange, Australian Stock Exchange and Bursa Malaysia.

Within four years, BioNexus Status companies recorded total revenues of RM1.12 billion, 50% contributed from export earnings. Reinforcing their global status, there are multiple foreign investments in BioNexus companies, with shareholding from Singapore, Japan, Hong Kong, Taiwan, India, Italy, United Kingdom and the United States of America (USA).

Moving forward, BiotechCorp believes that these collaborations will pave the way for the next level of growth as it embarks on Phase 2 or the Science to Business phase (2011 to 2015) of the National Biotechnology Policy.

Global Acknowledgements: The Foreign Investors' Perspectives

More than five years ago, BiotechCorp commenced efforts to create a Malaysian platform for biotechnology industry players to leverage upon as they too strived grow their businesses. Here we would like to share some insights we have gained from big industry players, who tell us we are on the right path.

India-based Biocon Ltd's Chairman and Managing Director, Ms Kiran Mazumdar-Shaw
"Malaysia is a compelling global destination for biotechnology, backed with world-class infrastructure and attractive tax incentives. Investing in Malaysia provides us with an international location with strategic geographical proximity to India. Furthermore, Malaysia and the Bio-XCell Ecosystem in Iskandar Malaysia are attractive propositions. Biocon is pleased to be an early mover in this emerging opportunity as we dovetail our research and biomanufacturing operations with those in Malaysia to gain a global competitive advantage."

France-based Metabolic Explorer's Chief Executive Officer, Mr Benjamin Gonzalez
"Malaysia is our first commercial plant. We find the support provided by the Bio-XCell Park and the country's location which has palm oil, the main supplier for our product, as an attractive platform to operate Metex plant here."

US-based Glycos Biotechnologies Inc, Chief Executive Officer, Mr Richard Cilento
"We are excited to be partnering with Bio-XCell to bring GlycosBio technological platform to the Malaysian biochemical industry. The BioNexus Status demonstrates the benefits of a collaborative effort between private enterprises and the strategic objectives of the Malaysian government. Having the support of BiotechCorp and working closely with their dedicated professionals has proven to be a key differentiator for GlycosBio and the emerging biochemical value chain we are supporting."

Raising the Bar for Industry Growth

Malaysian biotechnology industry companies listed on local and foreign stock exchanges as at December 31, 2010

Company	Achievement
Stemlife Berhad	Listed on Bursa Malaysia on October 17, 2006. **Market capitalisation: RM68.48 million**
PureCircle Sdn Bhd (formerly known as Stevian Biotechnology Corporation Sdn Bhd)	Listed on the London Stock Exchange's Alternative Investment Market on December 11, 2007. **Market capitalisation: RM1.22 billion**
Sunzen LifeSciences Sdn Bhd	Listed on Bursa Malaysia's MESDAQ on October 8, 2008. **Market capitalisation: RM28.38 million**
Holista Biotech Sdn Bhd	Acquired Colltech Australia Ltd, a company listed on the Australian Stock Exchange, through a reverse takeover on July 10, 2009. **Market capitalisation: RM48.83 million**
Malaysian Genomics Resources Centre Bhd (MGRC)	Listed on Bursa Malaysia on October 5, 2010. **Market capitalisation: RM77.16 million**

Source: BiotechCorp

Major Investments in Bio-XCell

Company	Achievement
Biocon Ltd	Established a biomanufacturing and research & development (R&D) facility. **Investment total: RM 500 million**
Metabolic Explorer	Established its first propanediol manufacturing plant. **Investment total: RM 100 million**
Glycos Biotechnologies Inc	Established an industrial biochemical plant and biotechnology R&D centre. **Investment total: RM 46 million**

Source: BiotechCorp

Bio-XCell - Asia's New Regional Biotechnology Hub

In May 2010, BiotechCorp held the global launch of the Bio-XCell initiative at BioChicago, United States of America (USA). The initiative which entails a joint venture between BiotechCorp and property developer UEM Land, was launched by then Minister of Science, Technology and Innovation Datuk Seri Dr Maximus Ongkili.

Bio-XCell - a dedicated biotechnology park and ecosystem at Iskandar Malaysia in Johor, is poised to be the regional biotech hub for biomanufacturing research and development and commercialisation (R&D&C).

The ecosystem at Bio-XCell is designed to provide an ideal platform for healthcare and industrial players to establish their manufacturing and R&D facilities in Asia and unlock the potential of the Asian biotechnology market.

Among some of the highlights of Bio-XCell are as follows:

Strategically Located, Globally Connected - Nestled in the integrated township of Nusajaya, in the heart of the Iskandar region, Bio-XCell provides a strategic launchpad for global players to tap into the Asian biotechnology market.

Bio-XCell is strategically located within 59 km of five international seaports and two international airports, and is a 15 minutes drive from Singapore. This places Bio-XCell within 8 hours flight from most major Asian cities and provides access to more than 3 billion people.

Nusajaya is a 24,000 acre fully integrated urban development with world class infrastructure designed to be the pinnacle of Malaysia's southern corridor. It is adjacent to Johor's new administrative state capital, Kota Iskandar and Medini, a new urban township being developed on the shores of the state. The signature development of UEM Land boasts of open residential spaces and an integrated healthpark with state of the art healthcare facilities.

Additionally, EduCity, an initiative targeted at creating an education hub within the Iskandar region is being developed in the vicinity. Among prestigious educational to be established within this hub is the Newcastle University Medicine Malaysia, Marlborough College, and Netherlands Maritime Institute of Technology.

There will also be many attractions for leisure as three theme parks are being developed in the area as well including Legoland.

Global appeal - In the first six months following its global launch, Bio-XCell secured three major clients. Biocon, GlycosBio and Metabolic Explorer were early entrants into the ecosystem, bringing with them around RM650 million in foreign direct investment (FDI) and taking up a 'Platinum Scheme' (see below for explanation) each.

In October 2010, Bio-XCell welcomed its first investor from the healthcare biotechnology sector – Biocon Ltd of India. The company is one of Asia's largest biotechnology enterprises and India's first billion dollar biotech company. Biocon will be developing an integrated plant focusing on the manufacturing of drug products, drug delivery devices and drug substances over two phases.

GlycosBio Inc from Texas will use Bio-XCell as the site of their proprietary platform technology to produce technical grade ethanol using crude glycerin from palm oil. The abundance of biomass from Malaysia's agriculture industry was a key selling point as Bio-XCell provided them a space at the source of their raw materials.

Metabolic Explorer from France was recently awarded the BioNexus Status and would be establishing their plant in Bio-XCell for the production of palm derivative oil (PDO) from crude glycerin. The Metabolic Explorer plant is designed to produce up to 50,000 metric tons of PDO a year, with a first step of 8,000 tons to satisfy growing market demand.

Bio-XCell's success in securing these three clients in 2010 reflects strong market acceptance towards Malaysia's unique selling points towards the industrial and healthcare biotechnology sector.

The Bio-XCell Advantage: Unlimited Opportunities, World-Class Facilities

Platinum Scheme

Bio-XCell provides space to clients based on a Build-to-Lease approach in the provision of built-up area and equipment, providing customised designs and layout of facilities to meet the specific needs of the industry.

Standard Shell

Besides the fully customisable Platinum Scheme, Bio-XCell is providing Standard Shells with a land size of about 1 acre with about 20,000 square feet of built-up area. The first four Standard Shells would be ready for move-in by November 2011.
Moreover, Bio-XCell will be providing value added utilities from the Central Utilities Facility such as steam, chilled water and waste water management.

Central Hub

Apart from manufacturing space, Bio-XCell would be equipped with value added services to support the business and lifestyle requirements of its tenants in its Central Hub.

The Central Hub will be designed to comply with Malaysia's Green Building Index criteria, focusing on maximising energy efficiency, indoor environmental quality, sustainable site planning and management, use of materials and resources, water efficiency and innovation.

It will serve as the heartbeat of the ecosystem and house the shared laboratories, incubation facilities, office space, training facilities, administrative and park management services as well as retail and lifestyle outlets.

The shared facilities and amenities would provide a cost-effective option for clients who require lab and business facilities on a pay-per-use basis.

Bio-XCell expects to begin welcoming tenants into the property in the fourth quarter of 2011, while the Central Hub expects to be fully operational by mid-2012.

With highly interactive spaces, a strategic network that provides opportunity for synergy and collaboration, Bio-XCell is the perfect address to work, learn and play.

Pushing the Limits Team

Biocon's Team

BiotechCorp:
1. Selvam Ramaraj
2. Wan Jeffery Majid
3. Shahreen Abd Hakim
4. Wan Hasnul
5. Hayati Nasir
6. Fakril Zamani Mahmud
7. Zulkifli Badrudin

Bio-XCell:
8. Serajdeen Abd Jabar
9. Azleen Abdullah
10. Nadzari Bachek
11. Mazlan Ami
12. Shazaril Adri

METEX's Team

BiotechCorp:
1. Razwin Sulairee
2. Farish Kamaludin
3. Fazil Ellias
4. Loh Siew Mun

Bio-XCell:
5. Serajdeen Abd Jabar
6. Nadzari Bachek
7. Mazlan Ami
8. Azleen Abdullah
9. Mohd Shahreza
10. Norzalina Ismail

GlycosBio's Team

BiotechCorp:
1. Razwin Sulairee
2. Zainal Azman Hj Abu Kasim
3. Farish Kamaludin
4. Fazil Ellias
5. Mohd Badri Dawood
6. Woon Soo Chin
7. Azad Azzam
8. Wan Hasnul

Bio-XCell:
9. Serajdeen Abd Jabar
10. Nadzari Bachek
11. Mazlan Ami
12. Azleen Abdullah
13. Mohd Shahreza
14. Norzalina Ismail

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SUCCESS OF THE RMK-9 PROGRAMMES

"The sector's increasing contribution to the national GDP and the increasing number of BioNexus companies going global are testament to the growth of the industry. It is also good to note that foreign investors find Malaysia as a compelling global destination for biotechnology, backed with world-class infrastructure and attractive tax incentives." - YBhg Dato' Iskandar Mizal Mahmood, Chief Executive Officer, Malaysian Biotechnology Corporation Sdn Bhd

Phase 1 RMK-9 Period:

A Frost & Sullivan Report

Key Facts	
Objective	Capacity building for the Malaysian biotechnology industry
The policies	Ninth Malaysia Plan and National Biotechnology Policy Phase 1: Capacity Building
The time frame	2005 - 2010
The budget	RM265 million

The first phase development of the Malaysian biotechnology industry, entailing capacity building was implemented under the Ninth Malaysia Plan (RMK-9) and guided by the National Biotechnology Policy (NBP)'s from 2005-2010.

NATIONAL BIOTECHNOLOGY POLICY (NBP)'S 1ST PHASE DEVELOPMENT (2005-2010): CAPACITY BUILDING

Phase 1: Capacity building of the NBP has been crucial in unlocking the potential of the Malaysian biotechnology industry. Industry revenues grew at a compound annual growth rate (CAGR) of approximately 60% over the 2005 to 2010 period. This was made possible largely amidst strong government support especially the six RMK-9 Programmes which had evidently nurtured both the local biotechnology companies (especially BioNexus) and Bio entrepreneurs to facilitate growth.

To have a precise marker within the biotechnology industry performance dashboard, some of the Key Performance Indicators (KPIs) were set at the beginning of the six RMK-9 programmes. These targets include: investments, biotechnology revenue, employment generated and contribution to GDP.

BiotechCorp has commenced six key programmes that deliver and implement strategies outlined in the three development phases of the NBP. Targets are set by the Economic Planning Unit (EPU) to measure the success of the implementation of programmes, and these targets are ultimately tied to the indicators of NBP. As shown in Table 1, the Government of Malaysia (via BiotechCorp) has made commendable progress and achievements in terms of attaining its early developmental targets and objectives:-

Table 1

Key Indicators for the Biotechnology Industry		
Indicators	**Actual**	**Target**
Investment by private sector and government	RM 5.4 billion	RM 6 billion
Employment	54,776	40,000
Total revenue	RM 13.5 billion	RM 20 billion
Contribution to GDP	2.2%	2.5%

Furthermore, other initiatives have been undertaken to improve the image, capabilities and eco-system of the overall Malaysian biotechnology industry. These include initiatives such as:

1. The Bio-XCell cluster in Iskandar Johor which has attracted significant investments from leading global players such as Biocon, Metex, GlycosBio etc, total approved investment of RM1.146 billion;

2. Participation in International fairs/conferences such as BioMalaysia, BioEurope, BioInvestor among others aimed at establishing strategic platforms for more effective collaborations among global and local Biotechnology industry fraternities;

3. Public outreach including the BioIndustry Dialogue and Exhibition in conjunction with "Karnival Jom Heboh – TV3, BioUsahawan and etc. Public awareness on biotechnology is essential for the overall success of the implementation of a national biotechnology aspiration. With accurate and factual resources available and accessible, the public will be aware of the benefits of such initiatives. This can in turn generate support for the Government's efforts and assist in developing biotechnology as a key driver of economic growth;

4. Knowledge from a business and investment perspective is pivotal for the commercialisation of any technology. The BioFunding conference provided participants with a better understanding of the biotechnology industry from business and investment perspectives, as well as its tremendous economic potential. BioNexus Status companies benefited greatly as the conference provided them with knowledge on how to attract investors / funders to participate in their businesses besides providing an avenue for them to network with the investors / funders. Such knowledge is seen to be pivotal for the commercialisation of any technology.

5. The Biotechnology Business and Investment Matching enabled for active engagements with various local and foreign investors such as private VCs, corporations, financial institutions and angel investors to increase the access of funding and business opportunities for Malaysia's biotechnology companies and bio-entrepreneurs.

The results of these programmes are reflective of the initiatives taken by the Government. Several selected high impact programmes with clear measurable benefits are discussed in this report.

SIX FOCUS RMK-9 PROGRAMMES UNDER BIOTECHCORP

Phase 1 NBP (Capacity Building)

GDP Contribution	Employment	Revenue	Investment
Target: 2.5% Actual: 2.2%	Target: 40,000 Actual: 54,776	Target: RM20 b Actual: RM13.5 b	Target: RM6 b Actual: RM5.4 b

Essential Biotechnology Industry Requirement

Investment/ Grants	Entrepreneurship	Human Capital	Policy Framework	Technology Platform	Research Infrastructure
BCG	**BEP**	**BeST**	**IPRM**	**BAP**	**BNP**
• A total of RM116.89 m were approved under seed fund. R&D matching fund & International Business Development matching fund • 55 BCG grant recipients.	• 51 business ventures created • 274 new entrepreneurs & researchers trained • International Collaborations (LARTA, QB3 etc.)	• 1,040 students were trained • International collaborations (KRIBB Korea, Stempeutic India etc,) • Industry lead body for MOHR	To create awareness on regulatory/law among the industry players. Contribution in: • Biosafety Act 2007 • Patent Corporation treaty 2006 • Biosimilar Guidance by MOH • Protection of new plant Varieties Act 2004	• 4 technology platforms acquired (Nanotechnology , Protein Micro Array, Super critical fluid extraction, Marker Assisted Selection) • 4 custodians appointed (USM, UPM, IMR, MARDI)	• 56 labs nationwide • 31% increase in total capacity utilization from 2009-2010 • Satisfaction rating 4.5 (out of 5) for services rendered

Other Notable Initiatives

Bio-XCell	Participation in International Fares	Reaching *Rakyat*	Bridging the Funding Gap
• Biocon • METEX • GlycosBio	• Bio-Malaysia • Bio-Europe • Bio-Investor	• BioIndustry Dialogue and Exhibition • BioUsahawan Press Conference	BioFunding Conference

BiotechCorp was trusted and allocated a sum totalling RM265 million by the Government of Malaysia to undertake four (4) developmental programs namely:-

1. Biotechnology Commercialisation Grant (BCG);
2. Biotechnology Acquisition Program (BAP);
3. Biotechnology Entrepreneur Program (BEP); and
4. Intellectual Property Research Management Program (IPRM)

During the RMK-9 mid-term review in 2008, two additional developmental programs were added namely (i) BioNexus Partners Program (BNP); and (ii) Biotechnology Entrepreneurship Special Training (BeST) program as a result of encouraging progress in various biotechnology entrepreneurship developmental initiatives.

The RMK-9 funds allocated by the Government of Malaysia have been instrumental in the implementation of NBP Phase 1: Capacity Building of the Malaysian biotechnology industry. This included programs that were rolled-out and output or outcomes achieved as well as goodwill created through collaborative efforts with inter-agencies or ministries.

The overall performance of the six RMK-9 Programs is summarised below:-

1. Biotechnology Commercialisation Grant (BCG)

BCG has been the key driver providing funds to encourage and facilitate deserving local biotechnology companies with capabilities. A total of 55 BioNexus companies have been awarded seed funds, research and development (R&D) matching funds and International Business Development (IBD) funds amounting to RM116.89 million with 679 employments of which 410 are knowledge-workers.

The overall final assessment shows that there is a stronger demand for funding by biotechnology companies (especially BioNexus companies). Many have indicated that continuity of such funding is crucial in ensuring the growth of their R&D efforts and commercialisation. Companies have also indicated that the BCG is an excellent effort by BiotechCorp and the government to help nurture not only young companies at the seed level but also companies that are ready to go global. Some have expressed appreciation as they have obtained seed level support in order to grow their R&D functions and others have been able to increase their exports globally.

At this stage, BiotechCorp is on the right direction with disbursement of grants to help provide the much needed support in creating the critical mass throughout the value chain. The progress has been outstanding with companies now, amongst other things, being able to lay out their infrastructure. Notwithstanding, the BCG program has successfully established the necessary critical mass of industry players which will eventually form the solid fundamental base for the industry's future expansion aspirations.

2. Biotechnology Acquisition Programme (BAP)

The BAP plays a major role in facilitating R&D processes. With the acquisition of four advanced biotechnology platforms (see below), the BAP is poised to become a key driving force in terms of actual know-how and technology transfer to open new possibilities to discoveries in Malaysia's biotechnology and life science sector.

Updates on the technology acquisitions are as follows:

	Technology	Application focus
1	French-based Nanotechnology in non-cancer applications	To-date, three projects/ applications have been approved by the Steering Committee to be developed using the nanotechnology platform including: 1. Two projects / applications from Universiti Sains Malaysia (USM):- a) Drug Delivery System (DDS) for Tuberculosis using Nanosilica-based platform to develop new silica based particles as carrier for therapeutic molecules/biomolecules in DDS application. Tuberculosis has been chosen as the disease to be treated in the drug delivery system proof of concept. b) Gold-conjugated antibody for diagnostic application. 2. One project / application from Cerebro Sciences Sdn Bhd a) Neuron specific delivery of ganodotropin-releasing hormone (GnRH) in small interfering RNA (siRNA). Focusing on healthcare, immediate applications to be developed utilising this technology include biopharmaceuticals / pharmaceuticals and medical devices / IVD segments. Other potential applications include tissue engineering, nanofiltrations, nanobaterries with supercapacitors and quantum computers, among others.
2	Australia-based DotScan™ Antibody Microarray	This technological acquisition will facilitate the development of immunoassay reagents and therapeutic monoclonal antibodies.
3	Canada-based Marker Assisted Selection (MAS) in plant & animal breeding technology	The Canada-MAS will facilitate potential new varieties in commercial and food crops, livestock, forestry and aquaculture with desirable economical traits. With the MAS, it is envisaged that these can be produced much faster than the conventional breeding approach.
4	Netherlands-based supercritical fluid extraction (SFE) technology	This acquisition will enable the extraction of high valued flavours or fragrances, food ingredients, nutraceuticals, active pharmaceuticals / cosmetics ingredients and specialty industrial chemistry. Other potential applications include material treatment and pollution abatement.

The four platform technologies are expected to improve industry performance in a shorter time-frame and create new business opportunities through various applications, thus driving the overall growth of the industry. With these acquisitions, BiotechCorp is also well-poised to become a key driving force in terms of know-how and technology transfer to open new possibilities for discoveries in biotechnology and life sciences in Malaysia.

3. Biotechnology Entrepreneur Programme (BEP)

Via the BEP program, Malaysian Biotechnology companies (particularly BioNexus companies) have been mentored to explore new horizons and equip themselves with the required business expertise and knowledge transfer.

Over the RMK-9 period, BiotechCorp had successfully initiated and completed the following:

	Initiative	Details
1	Mentoring programmes	A total of 16 programmes were conducted with US-based QB3, BioPark, Association of University Research Parks (AURP), National Business Incubation Association (NBIA) and LARTA Institute, UK-based Centre for Entrepreneurial Learning (CfEL) of Cambridge University - IGNITE Programmes; Executive-in-Residence (EIR) programmes. A total of 35 researchers presented biobusiness ideas of global potential to international venture capitalists (VCs) and industry experts.
2	International conferences and dialogues	More than 700 industry participants attended a total of 14 international conferences and dialogues under the BEP for the RMK-9 period. Among others, the conferences were: • Conference on Science to Business – Exploring Entrepreneurship Opportunities in Biotechnology • Industry Dialogue - Double Helix: Decoding Biotech Start-ups and Investment Options in Malaysia • BioFunding and Technology Commercialisation
3	Biotechnology Entrepreneur Workshops	Approximately 274 new entrepreneurs and researchers were trained over the period of RMK-9 from the overall 31 Biotechnology Entrepreneur Workshops held. A total of 20 business ventures namely seven spin-off companies, 12 joint venture companies and one technology licensing arrangement, were churned out as a result of the BEP.

4. Intellectual Property Research Management (IPRM)

The IPRM programme contributed significantly towards the successful completion of Phase 1 of the NBP where numerous advocacy, capacity building and regulatory review initiatives to promote the development of the local biotechnology industry were carried out. It has also been instrumental in ensuring that the developmental aspirations of the country through the NBP is achieved by paving the way to a conducive regulatory framework which supports the growth of the biotechnology industry. The IPRM programme also opened the doors for many collaborative initiatives between BiotechCorp and various Ministries, Agencies, Institutions of Higher Learning, Research Institutes and also the industry. This programme has enabled participation and contribution to be made in the development of laws, regulations and directives since the introduction of the NBP in 2005, amongst them :

	Initiative	Details
1	New laws, regulations and directives since the introduction of the NBP	Key developments include: • Accession to the Patent Corporation Treaty on 16 August 2006; • Biosafety Act passed by Parliament on 11 July 2007; • The Biosafety Regulations came into operation on 1 November 2010; • Protection of New Plant Varieties Act 2004 came into force 1 January 2007; • Protection of New Plant Varieties Regulations 2008 came into operation on 20 October 2008; • The Biosimilars Guidance document issued by the National Pharmaceutical Control Bureau (NPCB) under the Ministry of Health (MOH) in August 2008; • The Good Clinical Practice (GCP) Inspection Programme issued by the Director of Pharmaceutical Services, MOH in 2010; • The Data Exclusivity Directive introduced in 2011; • Malaysia became a Provisional Member of OECD GLP Mutual Acceptance Data (MAD) system in 2008; • Target for full adherence to the Organisation of Economic Cooperation and Development (OECD) Good Laboratory Practice (GLP) Mutual Acceptance of Data system by 2012
2	Skills and knowledge development in	Over 5,000 participants from BioNexus companies, industry players, (institutions of higher learning (IHLs), research institutes and government agencies have attended conferences, seminars and workshops in areas such as intellectual property (IP), biosafety, pharmaceutical regulations and international accreditation such as Good Clinical Practice (GCP), Good Manufacturing Practice (GMP) and Good Laboratory Practice (GLP) under IPRM.

	Initiative	Details
3	IP Protection	There has been improvement in terms of protection of IP under the IPRM initiative. According to the Intellectual Property (IP) Rights Index 2010, Malaysia has moved up six positions to 31 from 37 in 2009 for the Protection of IP Rights. According to the World Economic Forum's IMD Global Competitiveness Report 2010-2011, in terms of IP protection, Malaysia has moved up four places to 33 from last year's ranking of 37.
4	Patent processing	With IPRM, patent processing time has now improved from 60 months in 2003 to 43 months in 2010 and the backlog of patent files is currently being addressed.
5	Engagement with stakeholders	The Programme helped to enhance the engagement levels amongst relevant stakeholders such as MyIPO, NPCB, Department of Biosafety, Standards Malaysia, CRC etc.

5. BioNexus Partners Programme (BNP)

BNP allows local and foreign biotechnology companies to access labs and infrastructure to undertake product testing and research to enhance productivity of the companies. Through the BNP Programme, 56 laboratories and units owned by institutes of higher learning (IHLs) and research institutes (RIs) have been opened up for access to biotechnology industry (including BioNexus companies) and 87.5% of these BNP laboratories/units have been utilised by the industry as of end RMK-9 period. The companies utilising these facilities are satisfied with the quality of BNP services. As per a recent survey, the participants gave an average score of 4.5 (on a scale of 1 to 5, with 5 being the highest) for the satisfaction levels with the quality of BNP services, equipment, and facilities[1].

6. Biotechnology Entrepreneurship Special Training (BeST) Programme

The success of this programme is well demonstrated with actual job placements of more than 75% of those who participated in the BeST programme. The programme bridges the gap between the education provided at the IHLs and industry requirements. It is a six-month intensive and structured re-tooling programme for graduates from all disciplines, wishing to enter the biotechnology industry and other related industries in general. Combining classroom-based learning, laboratory work and industry internship, the programme is aimed at equipping the graduates with essential skills and knowledge for every-level positions within biotechnology companies or biotechnology-related companies.

[1]: *Includes all public universities in Malaysia.*

The BeST programme has managed to assist graduates in biotechnology and life sciences disciplines to prepare themselves for entry level positions. Through this programme, BiotechCorp was awarded and recognised as Industry-Lead Body (ILB) for human capital development in Malaysia by the Ministry of Human Resources (MOHR) in April 2011. In general, ILB is responsible for defining, maintaining and improving national standards of performance for the country's National Occupation Skill Standard (NOSS). ILBs represent their sector of employment, including small and leading-edge employers and must have credibility as employment-led organisations.

The Malaysian biotechnology industry is now moving towards Phase 2: Science to Business of the NBP and hence, the overall industry requirements are also changing dynamically, with more focus on the business aspects of the industry. Since, a part of the industry is still at nascent development stage, there is a need for expansion of the scope instead of minor revisions.

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EMBRACING THE PHASE 2 SHIFT

"Our focus in Phase 2 from 2011 - 2015 is in bringing scientific discoveries and innovations to market. The growth and success of the biotechnology sector hinges on our success in expanding capability and competency of our people in biotechnology."- YBhg Dato' Iskandar Mizal Mahmood, Chief Executive Officer, Malaysian Biotechnology Corporation Sdn Bhd

Moving from Science to Business

The Malaysian biotechnology sector is on a dynamic growth spurt amidst a vibrantly developing global biotechnology industry. The completion of the first phase of the NBP (NBP Phase 1) under the 9th Malaysia Plan (RMK 9) period from 2005 to 2010 has facilitated countless capacity building initiatives spanning areas such as funding, industry development and human capital development, among others.

On the back of this concerted effort at capacity building, the statistics, in terms of revenue contribution and investments attracted in Malaysia (see Page 6) thus far are very telling about the momentum driving the industry forward.

However, the proof of the pudding is as always, in the eating. Given the effort put in to create a conducive environment for Malaysia to harness its biotechnology position, there is much urgency now for the industry to move towards commercialisation. This is the stage where the projects conceptualised during the first phase will see transition to becoming well-received business ideas that translate into greater profitability and sustainable growth for the industry.

In addition, Phase 2 is where our global aspirations for the Malaysian biotechnology industry must take shape. Homegrown companies must aim for a slice of the global biotechnology market which becomes increasingly lucrative as time passes.

As we nurture local companies to be the growth drivers for this industry, an equally pressing agenda will involve taking these companies to a wider audience, serving a larger market than just Malaysia. If they have not already done so, this is the time in which biotechnology companies will need to embrace more global thinking and adopt approaches in both research and marketing excellence.

For the Malaysian Biotechnology Corporation Sdn Bhd (BiotechCorp), this is a crucial phase – one that will engender real proof of concept, crystallising the many hours of hard work and commitment towards harnessing the true potential this industry holds.

In so doing, there are two elements that are imperatives for further growth. Players within the biotechnology ecosystem must capitalise on NBP Phase 1 achievements and they must leverage on greater innovation and have a greater appetite for commercial success as they scale these new heights.

Moving into Phase 2 will set the stage for emphasis in the following areas:
- Developing expertise in drug discovery and the development on biodiversity and natural resources
- New product development
- The creation of global brands

Industry segments that are market relevant

Globally, the agriculture market in 2008 was worth some US$178 billion in 2008 (Source: UK Technical Strategy Report), healthcare was estimated at US$1.1 trillion in 2009 (Source: Data Monitor) and the industrial biotechnology market was estimated at US$160.6 billion in 2009 (Source: McKinsey Report). Developments in the Malaysian biotechnology industry in these areas are as follows:

- Agricultural biotechnology - This segment focuses on natural products discovery and commercialisation, aquaculture, crop technology and livestock.

  As at December 2010, a total of 79 agricultural biotechnology companies were awarded with the prestigious BioNexus Status, involving 23 companies engaged in research, development and commercialisation (R&D&C) of natural products, 34 companies involved in crops, including seed/seedlings production, bio-fertilizer and mushrooms, 15 companies involved in the livestock business including goat and cattle and 7 within the aquaculture segment, including shrimp, freshwater fish and marine fish.

  The BioNexus Status companies are recognised for their engagement in agriculture related businesses, adopting biotechnology tools and employing knowledge workers.

- Healthcare biotechnology - In this segment, emphasis is placed on areas such as Contract Research Organisations (CROs), Contract Manufacturing (CMO), Drug Discovery and Drug Delivery, Bioinformatics, Therapeutics, Medical Device and Diagnostics as well as Biopharmaceuticals.

  Presently, approximately 72 manufacturers in Malaysia are licensed by the Drugs Control Authorities (DCA), about 30 are licensed to manufacture prescription medicines, while the rest produce Over-the-Counter medicines. Some 140 manufacturers are licensed to produce traditional and herbal medicine in Malaysia. Malaysia can also strategically position itself as a tropical biotechnology hub in the areas of tropical diseases research, diagnostics, drug /vaccines and clinical trials.

- Industrial biotechnology - Areas within this segment include Biocatalyst, Biopolymer, Bioremediation, BioFuel and Fine and Specialty Chemicals.

  We believe that easy access to abundance of palm oil biomass, given Malaysia's world class reputation in the oil palm cultivation and palm oil production area, puts investors at a strategic advantage.

Local companies must think more global

While our industry achievements have been notable to date, local biotechnology companies cannot simply rest on your laurels. In an industry that will reward those who are world class, we need to demonstrate our capabilities to shine beyond just our borders. There is a need to focus our efforts in bringing scientific discoveries and innovations from research activities to showcase at the world stage. In this respect, one area which is critical to this effort is the commercialisation of Malaysian research and development (R&D) - especially the commercialisation of Malaysian R&D outside of the country.

On BiotechCorp's part, we will support local companies to achieve maturity. Efforts will be taken to nurture local BioNexus companies and encourage them to create spin-off companies with international reach as an attempt to prepare these companies for the next phase - Phase 3 of the NBP, which will see the Malaysian biotechnology industry take on a more global appeal.

Continuity of investments needed

An unfettered flow of investment in the industry is essential to ensure sustainable growth and continuity. At present, investments and funding in start-ups and early stage biotechnology companies are largely from public funds, done either through direct investment by the Government or via grants and debt financing by Government agencies or Government-related funding organisations.

As we move towards commercialisation, the private sector too needs to play a larger role as an engine of growth for the industry. Companies are encouraged to embrace collaboration as mergers and acquisitions have been proven to be an important and significant way to grow products and brands, even in biotechnology and healthcare sectors.

In many instances, we have seen that raising funds through the capital market has proven to be a good approach to grow and expand the business as well as profile and enhance a company's corporate reputation. This could be a viable mode for companies to consider as well.

In accelerating commercialisation, there is a sense of urgency to increase foreign participation.

This we believe can be done through continued strategic foreign direct investments (FDIs) which will create more value for the local industry. BiotechCorp aims to bring the best of global brands, as this will create a domino effect for a more dynamic domestic direct investment landscape as well.

It is heartening for us to welcome some of the big names to join the Malaysian biotechnology scene. We have seen the participation of Biocon Ltd, India's first billion dollar biotechnology company with an initial investment of RM500 million in Bio-XCell, Iskandar Johor followed by Metabolic Explorer and Glycos Biotechnologies Inc. These are companies that are envisaged to be catalysts in kick starting the next level of growth for the industry.

Leveraging on Malaysia's world class ecological diversity

Malaysia's richness in biodiversity and natural resources is no secret to the world. A competitive advantage of this magnitude, coupled with the kind of impetus being provided by the Government to facilitate industry growth means that players who are keen to take advantage of this industry are favourably-poised for upward mobility.

Our world class ecological diversity harbours a broad range of plant products. This would particularly benefit companies with established screening capabilities. The growth of health and wellness industries across the globe will drive the demand for products that are able to meet the needs of consumers in this segment.

Stepping up the game with Phase 2

The targets for Phase 2 will see us raising the stakes to step up on our game. We hope to attract RM9 billion in investments and RM50 billion in revenue – both amounts reflecting a 150 % increase from Phase 1, a 100% increase in employment opportunities to 80,000 and finally, 4% contribution to the gross domestic product.

Indeed, the next phase for the Malaysian biotechnology industry is a reflection of our towering ambition. It is a test in realising a plan put into place more than five years ago, and will require even more commitment to excellence and passion from all of us to ensure seamless implementation. Collectively, we all hold the responsibility of developing this industry so that it will uplift the quality of lives of our people, our nation and the rest of the world.

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ENSURING INDUSTRY VIABILITY AND SUSTAINABILITY

"Despite the global economic slowdown, biotechnology continues to provide significant growth opportunities in strengthening Malaysia's economic resilience."- YBhg Dato' Iskandar Mizal Mahmood, Chief Executive Officer, Malaysian Biotechnology Corporation Sdn Bhd

Statement on Corporate Governance

Inspiring integrity, nurturing values

The Board of Directors of BiotechCorp is committed to instilling a corporate culture which emphasises on good corporate governance and the effective application of the principles and best practises as set out in the Malaysian Code on Corporate Governance.

The Board remains fully resolved to ensuring that integrity, transparency, accountability and professionalism are observed in the conduct of the business activities of BiotechCorp.

It recognises that these core values will not only safeguard the interest of its stakeholders but also maximise the shareholder value.

A. Board of Directors

Composition and Balance

The Board currently comprises seven (7) members. With the exception of the Chief Executive Officer, all the remaining members are non-executive directors.

The Chairman is appointed by the Prime Minister of Malaysia. Three (3) directors represent the Government of Malaysia, one (1) director represents the research and development sector and one (1) director represents the industry (private sector).

A brief profile of each Director is presented on pages 26 to 31 of this Annual Report.

To ensure the balance of power and authority, the roles of the Chairman and the Chief Executive Officer of the Company are clearly segregated.

The non-executive directors are independent of Management and are free from any relationship that could materially affect or interfere with the exercise of their independent judgement.

There were several changes in the Board's composition during the financial year 2010. The changes are summarised in the table below:

Name	Remarks
YBhg Tan Sri Dato' Seri Dr Haji Mohamed Ismail Merican	Directorship ceased on February 22, 2010
YBhg Dato' Sofian Mohd Salleh	Resigned on February 28, 2010
YBhg Datuk Roseley Dato' Haji Khalid	Appointed on March 5, 2010
YBhg Dato' Abd Wahab Maskan	Appointed on June 7, 2010

Meetings

The terms of reference of the Board provides for the Board to meet at least once in every quarter with additional meetings convened as and when required. Meetings for the year are scheduled early in the year. Due notice is given for scheduled meetings and additional meetings are convened on an ad hoc basis for urgent and important matters. Where appropriate, decisions are taken by way of circular resolutions in between scheduled meetings.

The agenda for each Board meeting and papers relating to the agenda items are disseminated to all Directors prior to the meeting, in order to provide sufficient time for the Directors to review the Board papers and seek clarifications, if any.

During the financial year under review, five (5) board meetings were held.

Details of attendance of each individual director in respect of the meeting held are disclosed below:

	Number of Board Meetings attended/held (during the Directors' tenure)	
Name of Directors	Attended	%
YBhg Tan Sri Datuk Dr Ahmad Zaharudin Idrus	5/5	100
YBhg Dato' Iskandar Mizal Mahmood	5/5	100
YBhg Dato' Puteh Rukiah Abd Majid[1]	5/5	100
YBhg Dato' Madinah Mohamad	2/5	40
Tuan Haji Mohd. Radzi Hussein	2/5	40
Professor Dr Zainul Fadziruddin Zainuddin	4/5	80
YBhg Datuk Roseley Dato' Haji Khalid	1/4	25
YBhg Dato' Abd Wahab Maskan	2/3	67

Notes: [1] The Board had during its meeting held on February 24, 2011 accepted the resignation of YBhg Dato' Puteh Rukiah Abd Majid's membership to the Board and to all related Board Committees with effect from March 21, 2011.

Supply of Information

Board Meetings are structured with pre-set agendas. Relevant documents and papers to be tabled to the meeting are circulated in advance to ensure there is sufficient time for the Directors to obtain further information where necessary and to facilitate informed decision-making process.

All Directors have full and immediate access to information relating to the Company's business and affairs in the discharge of their duties.

Appointment and Re-election of Directors

During the period under review, the Board had approved the appointment of YBhg Datuk Roseley Dato' Haji Khalid and YBhg Dato' Abd Wahab Maskan as directors of the Company.

In line with the Memorandum and Articles of Association of the Company, the election of Directors takes place each year, where one-third of the Directors retire from office at each Annual General Meeting (AGM); the Directors are eligible to offer themselves for re-election.

The Articles also provide that Directors appointed in the year by the Board shall hold office until the next following AGM, and shall be eligible for re-election.

Board Committees

The Board of Directors had delegated certain responsibilities to Board Committees including the Audit Committee (AC), the Nomination and Remuneration Committee (NRC) and Cluster Working Groups (CWGs).

These Committees operate within clearly defined terms of reference approved by the Board.

(a) Audit Committee (AC)

The AC was established on 10 February 2006.

The Committee's role is to review the Company's financial reporting and to ensure the effectiveness of the systems of internal control and compliance.

The AC currently comprises the following members:

i) Tuan Haji Mohd. Radzi Hussein - Chairperson
ii) YBhg Datuk Roseley Dato' Haji Khalid
iii) Professor Dr Zainul Fadziruddin Zainuddin

The AC met two (2) times during the financial year ended December 31, 2010.

(b) Nomination and Remuneration Committee (NRC)

The NRC was established on March 30, 2006.

The Committee is primarily responsible for the following:

a) to review, evaluate and analyse all matters relating to the Company's Human Resource Policies and Procedures;

b) to review, assess and determine the Company's employee remuneration and benefits structure; and

c) to oversee the selection and appointment of Senior Management personnel of the Company

The NRC currently comprises the following members:

i) YBhg Tan Sri Datuk Dr Ahmad Zaharudin Idrus – Chairperson
ii) Professor Dr Zainul Fadziruddin Zainuddin
iii) YBhg Datuk Roseley Dato' Haji Khalid

The NRC met three (3) times during the financial year ended December 31, 2010.

(c) Cluster Working Groups (CWGs)

The Board of Directors had on March 30, 2006 established CWGs comprising representatives from BiotechCorp and its stakeholders from both the public and private sectors.

Each CWG is headed by a member of the Board, and serves as the forum for BiotechCorp and its stakeholders to discuss issues relating to the implementation of the National Biotechnology Policy.

There are currently six (6) CWGs, namely:

(i) CWG on Agricultural Biotechnology
(ii) CWG on Industrial Biotechnology
(iii) CWG on Human Capital Development
(iv) CWG on Healthcare Biotechnology
(v) CWG on Funding Support
(vi) CWG on Legislative and Regulatory Framework

(d) Other Committees established by the Board, include the following:

(i) Tender Board A
(ii) Tender Board B
(iii) Programme Recommendation Committee
(iv) Programme Approval Committee
(v) Commercialisation and Technical Acquisition Grants (CTAG) Technical Committee
(vi) CTAG Approval Committee
(vii) Pre-Disbursement Committee
(vii) Risk Management Committee (RMC)

The RMC was established on June 12, 2008.

The RMC's set up was part of the implementation of the Company's Enterprise Risk Management (ERM) Framework to ensure that the identified corporate risks are properly managed, that management of such risk is duly substantiated and that the results are properly measured and documented.

The RMC operates within a clearly defined terms of reference duly approved by the Board.

The principal duties and functions of the RMC inter alia are:

- To ensure that BiotechCorp's policy and information on risk management exercise are effectively communicated and cascaded to all divisions and staff of BiotechCorp;

- To constantly and continuously identify appropriate methods and tools required for the implementation of risk mitigation and action plans;

- To ensure that the practice of ERM is embedded within the operations of BiotechCorp;

- To apprise the Board of Directors on the state of internal control based on BiotechCorp's risk profile, the Company's ability to manage the risks identified and the cost/benefit of the related controls.

The membership of the RMC comprise the following:

- Chief Executive Officer of BiotechCorp
- Chief Operating Officer
- All Senior Vice Presidents

The RMC met four (4) times during the financial year ended December 31, 2010.

B. Reports to Shareholders & Investors

BiotechCorp reports the Operating Expenditure (OPEX) and Development Expenditure received from the Ministry of Science, Technology and Innovation and the Ministry of Finance based on approved deliverables and targets set by and between the Government and BiotechCorp.

The Company's website at www.biotechcorp.com.my contains vital information concerning the Group which is updated on a regular basis. Shareholders are also able to put questions to the Company using the website.

C. Accountability and Audit

Financial Reporting

In presenting the annual financial statement to the stakeholders, the Board aims to present a balanced and understandable assessment of BiotechCorp's position and deliverables.

The Audit Committee assists by scrutinising the information to be disclosed, to ensure accuracy and transparency.

Directors' Responsibility Statement

The Directors are required by the Companies Act, 1965 to prepare financial statements for each financial year which have been made out in accordance with the provisions of the Act and applicable approved accounting standards and thus, provide a true and fair view of the state of affairs of the Company at the end of the financial year and of the results and cash flows of the Company for the said financial year.

The Directors are satisfied that in preparing the financial statements of the Company for the financial year ended December 31, 2010, the Company had used the appropriate accounting policies and applied them consistently.

The Directors are also of the view that relevant approved accounting standards were followed in the preparation of these financial statements.

Internal Control

The Board of BiotechCorp recognises the pivotal role of a strong internal control system in keeping the Company on course towards achieving its goals and objectives.

Towards this end, the Board had established the necessary framework for an internal control system which covers the areas of risk management, financial, organisational, operations and compliance with relevant laws and regulations.

- *Management Committee*

  The Management Committee, which is set up by the Company, comprises the Chief Executive Officer, the Chief Operating Officer, all Senior Vice Presidents and representative from any subsidiary company of the Company (as identified by the Chief Executive Officer from time to time).

  The Management Committee meets on a bi-monthly basis to discuss and deliberate on operational issues, monthly financial results and the status of projects undertaken by the divisions, departments and business units within the Company.

- *Performance Review*

  The Board receives and reviews regular reports from the Management which are required to be brought to its attention for discussion, thus ensuring that it maintains full and effective supervision over appropriate controls.

  The Chief Executive Officer leads the presentation of board papers and provides comprehensive explanations on pertinent issues.

  In addition, the Board is kept updated on the Company's activities and its operations.

  The Board approved Corporate Scorecard, Business Plan and Budget are closely monitored by the Management. Variances and critical operational issues are followed up and appropriate action are undertaken to address the same.

  At the end of the financial year, the Company's performance and financial results are tabled to the Board for approval.

- *Internal Audit Function*

  The Internal Audit Department (IAD) is independent of the activities and operations of the Company.

  The duties of the Internal Auditors are performed impartially, proficiently and with professional due care.

  IAD analyses, monitors and undertakes continuous improvement of the system of internal controls to ensure its adequacy and integrity.

  Overall, the IAD is responsible for advising the Company on established policies, guidelines, controls and security procedures in order to minimise risks, prevent losses and promote efficiency and effectiveness in achieving BiotechCorp's mission as entrusted under the National Biotechnology Policy.

- *Risk Management*

  The Company applies a balanced approach to risk-taking and is committed to implementing an active approach to the mitigation of risk.

  A range of on-going processes to identify, evaluate, monitor and manage risks that may affect the achievement of the Company's objectives were implemented during the year under review.

- *Quality Management – ISO 9001:2008*

  BiotechCorp embarked on the Quality Management System (QMS) initiative in 2008. Further to an extensive gap analysis exercise undertaken, the quality policy manual, quality objectives and business processes were developed and documented.

On November 2, 2009, BiotechCorp had successfully obtained the QMS ISO9001:2008 certification. During the year under review, the scope of certification was extended to the following:

"Management of BioNexus Status Application, BioNexus Monitoring Processes, Commercialisation Grants Application & Disbursement Processes and Technology Acquisition, BNP Status Application, BNP Compliance Review & Grants Application, BNP Grants Disbursement, Payment and Expatriate Application"

Quality Management initiative aims at providing support, facilitation and advisory services to nurture and develop biotechnology companies in Malaysia through delivery of high quality and customer-oriented services and efficient work processes which are continuously improved.

- *Business Continuity Plan and Crisis Simulation Exercise*

  In 2010, BiotechCorp developed the Business Continuity Plan (BCP). The establishment of BCP is based on the business continuity strategy that was documented in 2009. BCP outlines the structured framework and sets out the planning methodology to ensure that any disruption to the operations of the business units, as a result of any eventualities, is kept at a minimum and thus helping to build business resiliency. BCP is designed to serve as a structured framework in managing disaster and recovering operations of the business units. A crisis simulation exercise was conducted to test established plans. Continual improvement and documentation of the BCP are carried out to ensure that these plans remain effective and relevant.

- *Records Management System based on ISO15489:2001 and Document Management System (DMS)*

  In the effort to mitigate business and operational risks, the Records Management System (RMS) based on ISO15489:2001 standards was initiated in 2010. RMS is an expansion of the scope of the Quality Management System ISO9001:2008's Control of Records Procedure. The first phase of the project implementation involved the establishment of the Record Management Policy (RM Policy). The RM Policy is referred to the baseline for the development and implementation of the second phase. In the implementation stage, the RMS will be integrated with the IT supporting instrument and Document Management System (DMS). The integrated system will facilitate establishment of a centralized corporate document and records system to provide for an effective storage management and faster retrieval process.

D. Relationship with External Auditors

The Company maintains a transparent and appropriate relationship with the External Auditors.

Where necessary, the External Auditors advice are sought to ensure that the Company complies with applicable accounting standards and all statutory requirements.

The External Auditors are invited to attend meetings to deliberate on audit plans and annual financial results and to make necessary recommendations for the Board's approval.

Financial Statements

Sustainability through financial efficiency

Company No. 691431 - D

MALAYSIAN BIOTECHNOLOGY CORPORATION SDN. BHD.
(Incorporated in Malaysia)

DIRECTORS' REPORT

The directors of MALAYSIAN BIOTECHNOLOGY CORPORATION SDN. BHD. have pleasure in submitting their report and the audited financial statements of the Group and of the Company for the year ended 31 December 2010.

PRINCIPAL ACTIVITIES

The Company is principally engaged to act as a dedicated and professional one-stop agency for the government in developing biotechnology industry in the country whilst the principal activities of the subsidiaries are as stated in Note 9 to the Financial Statements. There have been no significant changes in the nature of these principal activities during the year.

RESULTS OF OPERATIONS

The results of operations of the Group and of the Company for the financial year are as follows:

	Group RM	Company RM
Net profit for the year	4,051,997	3,854,811

In the opinion of the directors, the results of operations of the Group and of the Company during the financial year have not been substantially affected by any item, transaction or event of a material and unusual nature.

DIVIDENDS

No dividend has been paid or declared by the Company since the end of the previous financial year. The directors do not recommend any dividend payment in respect of the current financial year.

RESERVES AND PROVISIONS

There were no material transfers to or from reserves or provisions during the financial year.

ISSUE OF SHARES AND DEBENTURES

The Company has not issued any new shares or debentures during the financial year.

SHARE OPTIONS

No options have been granted by the Company to any parties during the financial year to take up unissued shares of the Company.

OTHER STATUTORY INFORMATION

Before the income statement and balance sheet of the Company were made out, the directors took reasonable steps:

(a) to ascertain that proper action had been taken in relation to the writing off of bad debts and the making of allowance for doubtful debts, and had satisfied themselves that there were no known bad debts to be written off and that no allowance for doubtful debts was required; and

(b) to ensure that any current assets which were unlikely to realise their book values in the ordinary course of business had been written down to their estimated realisable values.

As of the date of this report, the directors are not aware of any circumstances:

(a) which would require the writing off of bad debts or render the amount of allowance for doubtful debts in the financial statements of the Group and of the Company inadequate to any substantial extent; or

(b) which would render the values attributed to the current assets in the financial statements of the Group and of the Company misleading; or

(c) which have arisen which render adherence to the existing method of valuation of assets or liabilities of the Group and of the Company misleading or inappropriate; or

(d) not otherwise dealt with in this report or financial statements which would render any amount stated in the financial statements of the Group and of the Company misleading.

At the date of this report, there does not exist:

(a) any charge on the assets of the Group or of the Company that has arisen since the end of the financial year and which secures the liabilities of any other person; or

(b) any contingent liability in respect of the Group or of the Company that has arisen since the end of the financial year.

No contingent liability or other liability of any company in the Group has become enforceable, or is likely to become enforceable within the period of twelve months after the end of the financial year which, in the opinion of the Directors, will or may substantially affect the ability of the Company to meet its obligations as and when they fall due.

In the opinion of the directors, no item, transaction or event of a material and unusual nature has arisen in the interval between the end of the financial year and the date of this report which is likely to affect substantially the results of operations of the Group and of the Company for the succeeding financial year.

DIRECTORS

The following directors served on the Board of the Company since the date of the last report:

Tan Sri Datuk Dr Ahmad Zaharudin bin Idrus
Dato' Iskandar Mizal bin Mahmood
Mohd Radzi bin Hussein
Dato' Madinah binti Mohamad
Prof Dr Zainul Fadziruddin bin Zainuddin
Datuk Roseley bin Dato' Haji Khalid
Dato' Abd Wahab bin Maskan (appointed on 7 June 2010)
Dato' Puteh Rukiah binti Abd. Majid (resigned on 21 March 2011)

DIRECTORS' INTERESTS

None of the directors in office at the end of the financial year held shares or had beneficial interest in the shares of the Company during and at the end of the financial year.

DIRECTORS' BENEFITS

Since the end of the previous financial year, none of the directors of the Company has received or become entitled to receive any benefit (other than the benefit included in the aggregate amount of emoluments received or due and receivable by the directors as shown in the financial statements or the fixed salary of a full time employee of the Company or of the related corporation) by reason of a contract made by the Company or a related corporation with the director or with a firm of which he/she is a member, or with a company in which he/she has a substantial financial interest.

During and at the end of the financial year, no arrangement subsisted to which the Company was a party whereby directors of the Company might acquire benefits by means of the acquisition of shares in, or debentures of, the Company or any other body corporate.

Company No. 691431 - D

HOLDING CORPORATION

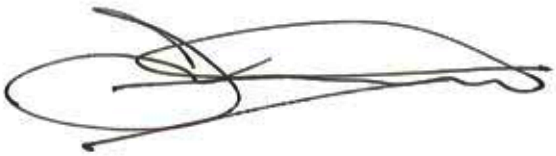
The Company is a subsidiary company of Minister of Finance (Incorporated), a body corporate incorporated pursuant to the Minister of Finance (Incorporation) Act, 1957 (Revised 1989).

AUDITORS

The auditors, Messrs. Deloitte KassimChan, have indicated their willingness to continue in office.

Signed on behalf of the Board of Directors in accordance with a resolution of the Directors,

TAN SRI DATUK DR AHMAD ZAHARUDIN BIN IDRUS



DATO' ISKANDAR MIZAL BIN MAHMOOD

Kuala Lumpur
April 28, 2011

Company No. 691431 - D

INDEPENDENT AUDITORS' REPORT TO THE MEMBERS OF MALAYSIAN BIOTECHNOLOGY CORPORATION SDN. BHD.
(Incorporated in Malaysia)

Report on the Financial Statements

We have audited the financial statements of MALAYSIAN BIOTECHNOLOGY CORPORATION SDN. BHD., which comprise the balance sheets of the Group and of the Company as of 31 December 2010 and the income statements, statements of changes in equity and cash flow statement for the year then ended, and a summary of significant accounting policies and other explanatory information, as set out on page 118 to 143.

Directors' Responsibility for the Financial Statements

The directors of the Company are responsible for the preparation of financial statements that give a true and fair view in accordance with Private Entity Reporting Standards and the Companies Act, 1965 in Malaysia and for such internal control as the directors determine are necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit and to report our opinion to you, as a body, in accordance with Section 174 of the Companies Act, 1965 in Malaysia and for no other purpose. We do not assume responsibility towards any other person for the contents of this report.

We conducted our audit in accordance with approved standards on auditing in Malaysia. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal control relevant to the entity's preparation of financial statements that give a true and fair view in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the directors, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence that we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Company No. 691431 - D

Opinion
In our opinion, the financial statements have been properly drawn up in accordance with Private Entity Reporting Standards and the Companies Act, 1965 in Malaysia so as to give a true and fair view of the financial position of the Group and of the Company as of 31 December 2010 and of their financial performance and cash flows for the year then ended.

Other matter
The financial statements of the Company for the year ended 31 December 2009 were audited by another firm of auditors and are presented here merely for comparative purposes. The report issued by the predecessor auditors, which was dated 25 March 2010, expressed an unqualified opinion.

Report on Other Legal and Regulatory Requirements
In accordance with the requirements of the Companies Act,1965 in Malaysia, we also report that:

(a) in our opinion, the accounting and other records and the registers required by the Act to be kept by the Company and its subsidiaries have been properly kept in accordance with the provisions of the Act:

(b) we are satisfied that the accounts of the subsidiaries that have been consolidated with the financial statements of the Company are in form and content appropriate and proper for the purposes of the preparation of the financial statements of the Group, and we have received satisfactory information and explanations as required by us for these purposes; and

(c) the auditors' report on the accounts of the subsidiaries were not subject to any qualification and did not include any comment made under of Section 174(3) of the Act.

DELOITTE KASSIMCHAN
AF 0080
Chartered Accountants

KAMARUL BAHARIN BIN TENGKU ZAINAL ABIDIN
Partner - 2903/11/11 (J)
Chartered Accountant

28 April 2011

Company No. 691431 - D

MALAYSIAN BIOTECHNOLOGY CORPORATION SDN. BHD.
(Incorporated in Malaysia)
AND ITS SUBSIDIARIES

INCOME STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2010

	Note	Group		Company	
		2010 RM	2009 RM	2010 RM	2009 RM
Other operating income		45,413,249	44,556,954	44,977,618	44,556,954
Staff costs	4	(17,336,132)	(18,222,236)	(17,336,132)	(18,222,236)
Promotion and corporate communication expenses		(8,776,153)	(7,622,205)	(8,577,492)	(7,622,205)
Administrative expenses		(10,422,339)	(9,825,114)	(10,415,362)	(9,704,114)
Depreciation		(2,896,705)	(2,882,915)	(2,896,705)	(2,882,915)
Other operating expenses		(1,878,891)	(1,730,086)	(1,878,829)	(1,730,051)
Profit from operations		4,103,029	4,274,398	3,873,098	4,395,433
Interest expense		(18,287)	(19,441)	(18,287)	(19,441)
Profit before tax	5	4,084,742	4,254,957	3,854,811	4,375,992
Tax expense	6	(32,745)	-	-	-
Net profit for the year		4,051,997	4,254,957	3,854,811	4,375,992
Attributable to:					
Shareholders of the Company		4,042,167	4,279,163	3,854,811	4,375,992
Minority interest		9,830	(24,206)	-	-
Net profit for the year		4,051,997	4,254,957	3,854,811	4,375,992

The accompanying Notes form an integral part of the Financial Statements.

Company No. 691431 - D

MALAYSIAN BIOTECHNOLOGY CORPORATION SDN. BHD.
(Incorporated in Malaysia)
AND ITS SUBSIDIARIES

BALANCE SHEETS
AS OF 31 DECEMBER 2010

	Note	Group 2010 RM	Group 2009 RM	Company 2010 RM	Company 2009 RM
ASSETS					
Non-Current Assets					
Property, plant and equipment	7	50,072,679	7,614,802	9,520,839	7,614,802
Intangible assets	8	24,957,281	23,274,566	24,957,281	23,274,566
Investment in subsidiaries	9	-	-	2	2
Total Non-Current Assets		75,029,960	30,889,368	34,478,122	30,889,370
Current Assets					
Other receivables, deposits and prepayments	10	16,258,970	2,666,474	119,908,518	2,847,472
Cash and bank balances	11	313,480,807	367,516,710	214,703,693	367,414,745
Total Current Assets		329,739,777	370,183,184	334,612,211	370,262,217
Total Assets		404,769,737	401,072,552	369,090,333	401,151,587
EQUITY AND LIABILITIES					
Capital and Reserve					
Share capital	12	95,000,002	95,000,002	95,000,002	95,000,002
Accumulated losses		(22,046,218)	(26,088,385)	(22,136,745)	(25,991,556)
		72,953,784	68,911,617	72,863,257	69,008,446
Minority interest		35,550,132	15,794	-	-
Total Equity		108,503,916	68,927,411	72,863,257	69,008,446

	Note	Group 2010 RM	Group 2009 RM	Company 2010 RM	Company 2009 RM
Non-Current Liabilities					
Hire-purchase liabilities	14	30,083	73,571	30,083	73,571
Deferred income	13	223,105,529	251,941,214	223,105,529	251,941,214
Total Non-Current Liabilities		223,135,612	252,014,785	223,135,612	252,014,785
Current Liabilities					
Other payables and accruals	15	73,053,976	80,018,309	73,047,976	80,016,309
Hire-purchase payables - current portion	14	43,488	112,047	43,488	112,047
Tax liability		32,745	-	-	-
Total Current Liabilities		73,130,209	80,130,356	73,091,464	80,128,356
Total Liabilities		296,265,821	332,145,141	296,227,076	332,143,141
Total Equity and Liabilities		404,769,737	401,072,552	369,090,333	401,151,587

The accompanying Notes form an integral part of the Financial Statements.

Company No. 691431 - D

MALAYSIAN BIOTECHNOLOGY CORPORATION SDN. BHD.
(Incorporated in Malaysia)
AND ITS SUBSIDIARIES

STATEMENTS OF CHANGES IN EQUITY
FOR THE YEAR ENDED 31 DECEMBER 2010

	Attributable to shareholders of the Company				
Group	Share Capital RM	Accumulated Loss RM	Total RM	Minority Interest RM	Total Equity RM
At 1 January 2009	70,000,002	(30,367,548)	39,632,454	-	39,632,454
Issue of share capital	25,000,000	-	25,000,000	-	25,000,000
Subscription of shares by minority shareholder	-	-	-	40,000	40,000
Net profit for the year	-	4,279,163	4,279,163	(24,206)	4,254,957
At 31 December 2009/ 1 January 2010	95,000,002	(26,088,385)	68,911,617	15,794	68,927,411
Subscription of shares by minority shareholder	-	-	-	35,524,508	35,524,508
Net profit for the year	-	4,042,167	4,042,167	9,830	4,051,997
At 31 December 2010	95,000,002	(22,046,218)	72,953,784	35,550,132	108,503,916

Company	Share Capital RM	Accumulated Loss RM	Total Equity RM
At 1 January 2009	70,000,002	(30,367,548)	39,632,454
Issue of share capital	25,000,000	-	25,000,000
Net profit for the year	-	4,375,992	4,375,992
At 31 December 2009/1 January 2010	95,000,002	(25,991,556)	69,008,446
Net profit for the year	-	3,854,811	3,854,811
At 31 December 2010	95,000,002	(22,136,745)	72,863,257

The accompanying Notes form an integral part of the Financial Statements.

Company No. 691431 - D

MALAYSIAN BIOTECHNOLOGY CORPORATION SDN. BHD.
(Incorporated in Malaysia)
AND ITS SUBSIDIARIES

CASH FLOW STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2010

	Group		Company	
	2010 RM	2009 RM	2010 RM	2009 RM
CASH FLOWS FROM OPERATING ACTIVITIES				
Net profit for the year	4,051,997	4,254,957	3,854,811	4,375,992
Adjustments for:				
Tax expenses	32,745	-	-	-
Amortisation of government grants	(67,293,917)	(54,628,545)	(67,293,917)	(54,628,545)
Amortisation of intangible assets	677,058	112,843	677,058	112,843
Depreciation of property, plant and equipment	2,896,705	2,882,915	2,896,705	2,882,915
Interest income	(9,210,705)	(6,692,972)	(8,796,075)	(6,692,972)
Interest expense	18,287	19,441	18,287	19,441
Provision for accumulating compensated expenses	79,374	47,252	79,374	47,252
(Reversal of allowance)/ Allowance for doubtful debts	(82,527)	268,861	(82,527)	268,861
Operating loss before working capital changes	(68,830,983)	(53,735,248)	(68,646,284)	(53,614,213)
Changes in working capita :				
Other receivables, deposits and prepayments	1,044,066	(740,737)	1,044,066	(740,737)
Other payables and accruals	458,215	2,022,162	454,215	2,020,162
Cash Used In Operations	(67,328,702)	(52,453,823)	(67,148,003)	(52,334,788)
Tax refunded	-	262,500	-	262,500
Net Cash Used In Operating Activities	(67,328,702)	(52,191,323)	(67,148,003)	(52,072,288)

	Group		Company	
	2010 RM	2009 RM	2010 RM	2009 RM
CASH FLOWS FROM INVESTING ACTIVITIES				
Purchase of property, plant and equipment	(45,354,582)	(4,951,192)	(4,802,742)	(4,951,192)
Acquisition of technology licenses	(2,359,773)	(14,732,947)	(2,359,773)	(14,732,947)
Interest received	8,438,736	6,692,972	8,196,216	6,692,972
Acquisition of shares in a subsidiary	-	-	-	(2)
Advances to subsidiaries	-	-	(103,640,660)	(180,998)
Net Cash Used In Investing Activities	(39,275,619)	(12,991,167)	(102,606,959)	(13,172,167)
CASH FLOWS FROM FINANCING ACTIVITIES				
Developmental government grants received	47,507,000	223,573,000	47,507,000	223,573,000
Non-developmental government grants received	19,407,933	38,850,000	19,407,933	38,850,000
Developmental grants disbursed	(49,740,690)	(39,324,819)	(49,740,690)	(39,324,819)
Hire purchase repayments	(112,046)	(119,963)	(112,046)	(119,963)
Interest paid	(18,287)	(19,441)	(18,287)	(19,441)
Proceed from issuance of share capital	-	25,000,000	-	25,000,000
Subscription of ordinary shares by minority shareholder	360,000	40,000	-	-
Subscription of Redeemable Convertible Preferences Shares ("RCPS") by minority shareholder	35,164,508	-	-	-
Net Cash Used In Financing Activities	52,568,418	247,998,777	17,043,910	247,958,777

	Note	Group 2010 RM	Group 2009 RM	Company 2010 RM	Company 2009 RM
NET (DECREASE)/ INCREASE IN CASH AND CASH EQUIVALENTS		(54,035,903)	182,816,287	(152,711,052)	182,714,322
CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR		367,516,710	184,700,423	367,414,745	184,700,423
CASH AND CASH EQUIVALENTS AT END OF YEAR	11	313,480,807	367,516,710	214,703,693	367,414,745

Cash and cash equivalents comprise:

	Group 2010 RM	Group 2009 RM	Company 2010 RM	Company 2009 RM
Cash and bank balances	7,842,807	4,660,710	6,065,693	4,558,745
Deposits placed with licensed financial institutions	305,638,000	362,856,000	208,638,000	362,856,000
	313,480,807	367,516,710	214,703,693	367,414,745

The accompanying Notes form an integral part of the Financial Statements.

MALAYSIAN BIOTECHNOLOGY CORPORATION SDN. BHD.
(Incorporated in Malaysia)
AND ITS SUBSIDIARIES

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2010

1. GENERAL INFORMATION

The Company is a private limited liability company, incorporated and domiciled in Malaysia.

The Company is principally engaged to act as a dedicated and professional one-stop agency for the government in developing biotechnology industry in the country whilst the principal activities of the subsidiaries are as stated in Note 9. There has been no significant change in the nature of these principal activities during the year.

The total number of employees of the Group and of the Company at year end were 186 (2009: 160) and 186 (2009: 160) respectively.

The registered office and principal place of business of the Company is located at Level 23, Menara Atlan, 161B, Jalan Ampang, 50450 Kuala Lumpur.

The financial statements of the Group and of the Company have been authorised by the Board of Directors for issuance on 28 April 2011.

2. BASIS OF PREPARATION OF THE FINANCIAL STATEMENTS

The financial statements of the Group and of the Company have been prepared in accordance with the provisions of the Companies Act, 1965 and Private Entity Reporting Standards in Malaysia.

3. SIGNIFICANT ACCOUNTING POLICIES

Basis of Accounting

The financial statements of the Group and of the Company have been prepared under the historical cost convention.

Basis of Consolidation

Subsidiaries

Subsidiaries are entities, including unincorporated entities, controlled by the Group. Control exists when the Group has the ability to exercise its power to govern the financial and operating policies of an entity so as to obtain benefits from its activities. In assessing control, potential voting rights that presently are exercisable are taken into account. Subsidiaries are consolidated using the purchase method of accounting.

Under the purchase method of accounting, the financial statements of subsidiaries are included in the consolidated financial statements from the date that control commences until the date that control ceases.

Investments in subsidiaries are stated in the Company's balance sheet at cost less any impairment losses, unless the investment is classified as held for sale (or included in a disposal group that is classified as held for sale).

Minority interest

Minority interest at the balance sheet date, being the portion of the net identifiable assets (excluding goodwill) of subsidiaries attributable to equity interests that are not owned by the Company, whether directly or indirectly through subsidiaries, are presented in the consolidated balance sheet and statement of changes in equity within equity, separately from equity attributable to the equity shareholders of the Company. Minority interest in the results of the Group are presented on the face of the consolidated income statement as an allocation of the total profit or loss for the year between minority interest and the equity shareholders of the Company.

Where losses applicable to the minority exceed the minority's interest in the equity of a subsidiary, the excess, and any further losses applicable to the minority, are charged against the Group's interest except to the extent that the minority has a binding obligation to, and is able to, make additional investment to cover the losses. If the subsidiary subsequently reports profits, the Group's interest is allocated with all such profits until the minority's share of losses previously absorbed by the Group has been recovered.

Transactions eliminated on consolidation

Intra-group balances and transactions, and any unrealised income and expenses arising from intra-group transactions, are eliminated in preparing the consolidated financial statements.

Foreign Currency Conversion

Transactions in foreign currencies are converted into Ringgit Malaysia at the exchange rates prevailing at the transaction dates. Foreign currency assets and liabilities at financial year-end are converted into Ringgit Malaysia at the exchange rates prevailing at the balance sheet date. All foreign exchange gains or losses are taken up in the income statements.

The principal closing rates used in the translation of foreign currency amounts are as follows:

	2010 RM	2009 RM
1 United States Dollar	3.08	3.42
1 Singapore Dollar	2.38	2.44

Income Tax

Income tax comprises current and deferred tax. Current tax is the expected amount of income taxes payable in respect of the taxable profit for the year and is measured using the tax rates that have been enacted or substantively enacted by the balance sheet date.

Deferred tax is provided for, using the 'liability' method, on temporary differences at the balance sheet date between the tax bases of assets and liabilities and their carrying amounts in the financial statements. In principle, deferred tax liabilities are recognised for all taxable temporary differences and deferred tax assets are recognised for all deductible temporary differences, unused tax losses and unused tax credits to the extent that it is probable that future taxable profit will be available against which the deductible temporary differences, unused tax losses and unused tax credits can be utilised. Deferred tax is not recognised if the temporary difference arises from goodwill or from the initial recognition of an asset or liability in a transaction which is not a business combination and at the time of the transaction, affects neither the accounting profit nor taxable profit.

The carrying amount of deferred tax assets is reviewed at each balance sheet date and reduced to the extent that it is no longer probable that sufficient future taxable profit will be available to allow all or part of the asset to be recovered.

Deferred tax is measured at the tax rates that are expected to apply in the year when the asset is realised or the liability settled, based on tax rates that have been enacted or substantively enacted by the balance sheet date. Deferred tax is recognised in the income statements, except when it arises from a transaction which is recognised directly in equity, in which case the deferred tax is also charged or credited directly in equity, or when it arises from a business combination that is an acquisition, in which case the deferred tax is included in the resulting goodwill.

Impairment of Assets Excluding Goodwill

At each balance sheet date, the Group reviews the carrying amounts of its non-current assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss (if any). Where it is not possible to estimate the recoverable amount of an individual asset, the Group estimates the recoverable amount of the cash-generating unit to which the asset belongs.

Recoverable amount is the higher of fair value less costs to sell and value-in-use. In assessing value-in-use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset.

If the recoverable amount of an asset (or cash-generating unit) is estimated to be less than its carrying amount, the carrying amount of the asset (or cash-generating unit) is reduced to its recoverable amount. An impairment loss is recognised immediately in the income statements.

Where an impairment loss subsequently reverses, the carrying amount of the asset (or cash-generating unit) is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset (or cash-generating unit) in prior years. A reversal of an impairment loss is recognised immediately in the income statements.

Property, Plant and Equipment

Property, plant and equipment are stated at cost less accumulated depreciation and any impairment losses.

Depreciation of property, plant and equipment, other than freehold land, construction and other work in-progress which are not depreciated, is computed on the straight-line method at the following annual rates based on the estimated useful lives of the various assets:

Office equipment	20%
Computer equipment	33 1/3%
Furniture and fittings	20%
Motor vehicles	20%

The residual value, estimated useful life and depreciation method of property, plant and equipment are reviewed at each balance sheet date and, if expectations differ from previous estimates, the changes will be accounted for as a change in an accounting estimate.

Gain or loss arising from the disposal of an asset is determined as the difference between the net disposal proceeds and the carrying amount of the asset, and is recognised in the income statements.

Assets Acquired Under Hire-Purchase Arrangements

Assets acquired under hire-purchase arrangements are capitalised in the financial statements and the corresponding obligations are treated as liabilities. Finance charges are allocated to the income statements to give a constant periodic rate of interest on the remaining hire-purchase liabilities.

Intangible asset

Patent and licenses

Patent, licenses and other similar purchased rights of technology platform are recognized as intangible assets if it is probable that the future economic benefits that are attributable to such assets will flow to the Company and the cost of such assets can be reliably measured.

Intangible asset is stated at cost less accumulated amortisation and impairment losses.

Subsequent expenditure on capitalised intangible assets is capitalised only when it increases the future economic benefits embodied in the specific asset to which it relates. All other expenditures are expensed as incurred.

Amortisation is charged to the income statement on a straight-line basis over the estimated useful lives of intangible assets unless such lives are indefinite. Intangible assets with indefinite useful lives are tested for impairment annually and whenever there is an indication that they may be impaired. Intangible assets are amortised from the date that they are available for use. The estimated useful lives of the intangible assets are determined based on the estimated life span of the patent, licences or rights of the technology platform. The estimated useful lives for the current financial year is between 20 to 25 years.

Amortisation methods, useful lives and residual values are reviewed at the end of each reporting period and adjusted, if appropriate.

Employee Benefits

(i) Short term employee benefits

Wages, salaries, bonuses and social security contributions are recognised as an expense in the year in which the associated services are rendered by employees of the Company. Short term accumulating compensated absences such as paid annual leaves are recognised when services are rendered by employees that increase their entitlement to future compensated absences.

(ii) Defined contribution plan

As required by law, companies in Malaysia make contributions to the Employees Provident Fund ("EPF"). Such contributions are recognised as an expense in the income statement as incurred.

Other receivables, deposits and prepayments

Other receivables, deposits and prepayments are stated at cost net of allowance for doubtful debts.

Liabilities and provision

Other payables and accruals are stated at cost.

Provision for liabilities are recognised when the Company has a present obligation as a result of a past event and it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, and a reliable estimate of the amount can be made. Provisions are reviewed at each balance sheet date and adjusted to reflect the current best estimate.

Cash Flow Statements

The Group and the Company adopt the indirect method in the preparation of the cash flow statements.

Cash equivalents are short-term, highly liquid investments that are readily convertible to cash with insignificant risks of changes in value.

Cash and cash equivalents

Cash and cash equivalents consist of cash in hand, balances and deposits with licensed financial institutions.

Income

(i) Services
Income from services rendered is recognised net of discounts in the income statements as and when services are performed.

(ii) Interest income
Interest income is recognised in the income statements as and when there is reasonable assurance that it will be received.

Expenses

Operating lease payments
Payments made under operating leases are recognised in the income statement on a straight-line basis over the term of the lease. Lease incentives received are recognised in the income statement as an integral part of the total lease payments made.

Government grants
Government grant is recognised initially as deferred income when there is reasonable assurance that it will be received and that the Company will comply with the conditions associated with the grant. Grants that compensate the Company for expenses incurred are recognised in the income statements over the period necessary to match them with the related costs that they are intended to compensate. Grants that compensate the Company for the cost of an asset are recognised in the income statements on a systematic basis over the useful life of the asset.

4. STAFF COSTS

	Group		Company	
	2010 RM	2009 RM	2010 RM	2009 RM
Directors' remunerations	1,010,837	1,298,486	1,010,837	1,298,486
Employee Provident Fund	2,166,363	1,939,955	2,166,363	1,939,955
Salaries and other staff costs	14,079,558	14,936,543	14,079,558	14,936,543
Provision for accumulating compensated absences	79,374	47,252	79,374	47,252
	17,336,132	18,222,236	17,336,132	18,222,236

5. PROFIT BEFORE TAX

Profit before tax is arrived at after charging/(crediting) the followings:

	Note	Group		Company	
		2010 RM	2009 RM	2010 RM	2009 RM
Audit fee		26,000	22,000	20,000	20,000
Depreciation of property, plant and equipment	7	2,896,706	2,882,915	2,896,706	2,882,915
Amortisation of intangible assets	8	677,058	112,843	677,058	112,843
Rental of premises		3,765,169	3,343,770	3,765,169	3,343,770
Lease rental		325,923	261,296	325,923	261,296
Interest expense		18,287	19,411	18,287	19,411
Realised loss/(gain) on foreign exchange		3,172	(3,454)	3,172	(3,454)
(Reversal of allowance)/ Allowance for doubtful debts		(82,527)	268,861	(82,527)	268,861
Interest income		(9,210,706)	(6,692,972)	(8,796,075)	(6,692,972)
Amortisation of developmental grants	13	(31,294,720)	(17,005,449)	(31,294,720)	(17,005,449)
Amortisation of non-developmental grants	13	(35,999,197)	(37,623,096)	(35,999,197)	(37,623,096)

6. TAX EXPENSE

	Group		Company	
	2010 RM	2009 RM	2010 RM	2009 RM
Estimated current year tax payable	32,745	-	-	-

A reconciliation of income tax expense applicable to profit before tax at the statutory income tax rate to income tax expense at the effective income tax rate of the Group and of the Company is as follows:

	Group		Company	
	2010 RM	2009 RM	2010 RM	2009 RM
Profit before tax	4,084,742	4,254,957	3,854,811	4,375,992
Tax at statutory tax rate of 25%	1,021,186	1,063,739	963,703	1,093,998
Tax effects of:				
Expenses not deductible for tax purposes	18,415	30,259	-	-
Income not taxable for tax purpose	(1,006,856)	(1,093,998)	(963,703)	(1,093,998)
Tax expense for the year	32,745	-	-	-

The Company has been granted a tax exemption on its statutory income under subsection 127 (3A) Income Tax Act 1967 (for all sources of income except for dividend income) for the period of 5 years commencing from year of assessment 2006 to 2010. During current financial year, the Company has been granted an extension for the period of 5 years commencing from year of assessment 2011 to 2015.

No deferred tax has been recognised for the following items:

	Deferred Tax Assets/(Liabilities)			
	Group		Company	
	2010 RM	2009 RM	2010 RM	2009 RM
Property, plant and equipment	(185,481)	276,257	(185,481)	276,257
Unutilised tax losses	30,362,673	30,362,673	30,362,673	30,362,673
Unutilised capital allowance	2,441,287	1,861,932	2,441,287	1,861,932
	32,618,479	32,500,862	32,618,479	32,500,862

The unutilised tax losses and deductible temporary differences do not expire under current tax legislation. Deferred tax assets have not been recognised in respect of these items because it is not probable that future taxable profit will be available against which the Company can utilise the benefits.

7. PROPERTY, PLANT AND EQUIPMENT

Group	Freehold land	Office equipment	Computer equipment	Furniture and fittings	Motor vehicles	Construction and other work-in progress	Total
Cost	RM	RM	RM	RM	RM	RM	RM
As of 1 January 2009	-	902,388	6,403,824	1,252,750	667,243	162,000	9,388,205
Additions	-	16,700	1,438,803	26,634	146,646	3,322,409	4,951,192
Reclassification	-	-	162,000	-	-	(162,000)	-
As of 31 December 2009/1 January 2010	-	919,088	8,004,627	1,279,384	813,889	3,322,409	14,339,397
Additions	36,524,927	230,564	1,006,620	837,709	-	6,754,762	45,354,582
Reclassification	-	37,593	17,400	99,041	-	(154,034)	-
As of 31 December 2010	36,524,927	1,187,245	9,028,647	2,216,134	813,889	9,923,137	59,693,979

Group	Freehold land	Office equipment	Computer equipment	Furniture and fittings	Motor vehicles	Construction and other work-in progress	Total
Accumulated Depreciation	RM	RM	RM	RM	RM	RM	RM
As of 1 January 2009	-	404,106	2,436,944	667,878	332,752	-	3,841,680
Charge for the year	-	183,104	2,306,162	254,949	138,700	-	2,882,915
As of 31 December 2009/ 1 January 2010	-	587,210	4,743,106	922,827	471,452	-	6,724,595
Charge for the year	-	191,255	2,220,805	332,531	152,114	-	2,896,705
As of 31 December 2010	-	778,465	6,963,911	1,255,358	623,566	-	9,621,300
Net Book Value							
As of 31 December 2010	36,524,927	408,780	2,064,736	960,776	190,323	9,923,137	50,072,679
As of 31 December 2009	-	331,878	3,261,521	356,557	342,437	3,322,409	7,614,802

Company	Office equipment	Computer equipment	Furniture and fittings	Motor vehicles	Other work-in progress	Total
Cost	RM	RM	RM	RM	RM	RM
As of 1 January 2009	902,388	6,403,824	1,252,750	667,243	162,000	9,388,205
Additions	16,700	1,438,803	26,634	146,646	3,322,409	4,951,192
Reclassification	-	162,000	-	-	(162,000)	-
As of 31 December 2009/ 1 January 2010	919,088	8,004,627	1,279,384	813,889	3,322,409	14,339,397
Additions	230,564	1,006,620	837,709	-	2,727,849	4,802,742
Reclassification	37,593	17,400	99,041	-	(154,034)	-
As of 31 December 2010	1,187,245	9,028,647	2,216,134	813,889	5,896,224	19,142,139

Company	Office equipment	Computer equipment	Furniture and fittings	Motor vehicles	Other work-in progress	Total
Accumulated Depreciation	RM	RM	RM	RM	RM	RM
As of 1 January 2009	404,106	2,436,944	667,878	332,752	-	3,841,680
Charge for the year	183,104	2,306,162	254,949	138,700	-	2,882,915
As of 31 December 2009/ 1 January 2010	587,210	4,743,106	922,827	471,452	-	6,724,595
Charge for the year	191,255	2,220,805	332,531	152,114	-	2,896,705
As of 31 December 2010	778,465	6,963,911	1,255,358	623,566	-	9,621,300
Net Book Value						
As of 31 December 2010	408,780	2,064,736	960,776	190,323	5,896,224	9,520,839
As of 31 December 2009	331,878	3,261,521	356,557	342,437	3,322,409	7,614,802

As at 31 December 2010, the net book value of motor vehicle of the Group and of the Company that were acquired by means of hire-purchase arrangements is RM77,894 (2009: RM200,678).

8. INTANGIBLE ASSETS

	Group		Company	
	2010 RM	2009 RM	2010 RM	2009 RM
Technology patent and licenses, at cost	25,747,182	23,387,409	25,747,182	23,387,409
At 1 January	23,274,566	8,654,462	23,274,566	8,654,462
Additions	2,359,773	14,732,947	2,359,773	14,732,947
	25,634,339	23,387,409	25,634,339	23,387,409
Less: Amortisation to income statements	(677,058)	(112,843)	(677,058)	(112,843)
At 31 December	24,957,281	23,274,566	24,957,281	23,274,566

The acquisitions of technology patent and licenses are part of the 9th Malaysia Plan ("RMK-9") program under the Biotechnology Acquisition Program. Completion of the various technologies is based on the fulfillment of specific terms and conditions as stated under the individual agreement. Intangible asset is amortised on a straight line basis over its estimated useful lives when the asset is available for use.

9. INVESTMENT IN SUBSIDIARIES

	Company	
	2010 RM	2009 RM
Unquoted shares, at cost	2	2

The subsidiary companies are as follows:

Name of Subsidiary	Country of incorporation	Effective equity interest 2010 %	Effective equity interest 2009 %	Principal activity
BiotechCorp Investment Holdings Sdn. Bhd.	Malaysia	100	100	Investment holding
Subsidiary of BiotechCorp Investment Holdings Sdn. Bhd.				
Malaysian Bio-XCell Sdn. Bhd.	Malaysia	60	60	Development and operation of biotechnology park

All the subsidiaries are audited by Deloitte KassimChan.

10. OTHER RECEIVABLES, DEPOSITS AND PREPAYMENTS

Other receivables, deposits and prepayments consist of:

	Group		Company	
	2010 RM	2009 RM	2010 RM	2009 RM
Other receivables and prepayments	16,322,891	2,925,295	16,150,781	2,925,295
Less: Allowance for doubtful debts	(1,088,736)	(1,171,263)	(1,088,736)	(1,171,263)
	15,234,155	1,754,032	15,062,045	1,754,032
Sundry deposits	1,024,815	912,442	1,024,815	912,442
Amount due from subsidiaries	-	-	103,821,658	180,998
	16,258,970	2,666,474	119,908,518	2,847,472

The amount due from subsidiaries are non-trade in nature, unsecured, interest free and repayable on demand.

11. CASH AND BANK BALANCES

Cash and cash equivalents included in the cash flow statements comprise the following balance sheet amounts:

	Group		Company	
	2010 RM	2009 RM	2010 RM	2009 RM
Cash and bank balances	7,842,807	4,660,710	6,065,693	4,558,745
Fixed deposits with licensed institutions	305,638,000	362,856,000	208,638,000	362,856,000
	313,480,807	367,516,710	214,703,693	367,414,745

Included under cash and cash equivalents of the Group and of the Company are amounts represent unutilised disbursement for the purposes of developmental projects amounting to RM153,061,304 (2009 : RM191,268,510)

Effective interest rates and repricing analysis

The following table indicates the effective interest rates at the balance sheet date and the year in which they reprice or mature, whichever is earlier.

	Effective interest rates %	Group RM	Company RM
2010			
Financial asset			
Deposits placed with licensed financial institutions	2.85 to 3.10	305,638,000	208,638,000
2009			
Financial asset			
Deposits placed with licensed financial institutions	2.05 to 3.54	362,856,000	362,856,000

12. SHARE CAPITAL

	Group and Company	
	2010 RM	2009 RM
Authorised:		
100,000,000 ordinary shares of RM1 each	100,000,000	100,000,000
Issued and fully paid:		
95,000,002 ordinary shares of RM1 each		
At 1 January	95,000,002	79,000,002
Issue of shares	-	25,000,000
At 31 December	95,000,002	79,000,002

13. DEFFERED INCOME

	Group and Company	
	2010 RM	2009 RM
a) Developmental Grants		
At 1 January	239,380,486	109,801,871
Received/(reclassed) during the year:		
IP Research and Management Program ("IPRM")	(5,600,000)	13,277,000
Biotechnology Acquisition Program ("BAP")	(12,700,000)	14,430,000
Biotechnology Commercialisation Grant ("BCG")	44,807,000	58,591,000
Biotechnology Entrepreneur Program ("BEP")	5,898,750	11,096,250
Biotechnology Entrepreneurship Training Program ("BeST")	6,450,000	19,830,000
BioNexus Partners Program ("BNP")	8,651,250	6,348,750
Biotechnology Park ("Bio-XCell")	-	100,000,000
	286,887,486	333,374,871
Less: Commercialisation grants awarded	(41,964,436)	(67,250,272)
BNP grants awarded	(274,332)	(9,738,664)
	244,648,718	256,385,935
Less: Amortisation to Income Statements	(31,294,720)	(17,005,449)
At 31 December	213,353,998	239,380,486
b) Non-developmental Grants		
At 1 January	12,560,728	11,333,824
Additions during the year	33,190,000	38,850,000
Less: Amortisation to Income Statements	(35,999,197)	(37,623,096)
At 31 December	9,751,531	12,560,728
Total deferred income	223,105,529	251,941,214

The Company was awarded with government grants for the following purposes:

a) Developmental Grants

Intellectual Property Research and Management Program comprises a series of programs that are targeted to enhance the efficiency and effectiveness of intellectual property management and protection in Malaysia.

Biotechnology Acquisition Program provides funding for the acquisition of enabling and platform technologies within the biotechnology industry.

Biotechnology Commercialisation Grant provides funding to facilitate the establishment of biotechnology start-ups. The Biotechnology Commercialisation Grant comprises Seed Funding, R&D Matching Funding and International Business Development Matching Funding.

Biotechnology Entrepreneur Program seeks to develop biotechnology entrepreneurs by providing the necessary skill sets and knowledge to commence, develop and manage new biotechnology ventures.

Biotechnology Entrepreneurship Training Program ("BeST") is an intensive and structured training program for biotechnology graduates to equip themselves with the necessary knowledge and skills with the aim to provide a competent workforce in the industry.

BioNexus Partner Program ("BNP") seeks to promote active collaboration between biotechnology companies and universities, research institutes, technology parks and incubators in the country by leveraging the facilities, infrastructure and capabilities available.

Biotechnology Park project is an initiative approved under the Government's Second Economic Stimulus Package to develop and operate a biotechnology park in Iskandar Malaysia, Johor known as 'Bio-XCell'.

b) Non-developmental Grants

The non-developmental grant received from the government is to finance the Company's day-to-day operating activities.

14. HIRE-PURCHASE PAYABLES

Hire-purchase payables consist of the following:

	Group and Company	
	2010 RM	2009 RM
Total outstanding obligations	83,799	214,133
Less: Interest in suspense	(10,228)	(28,515)
Principal outstanding	73,571	185,618
Less: Amount due for settlement within 12 months (shown under current liabilities)	(43,488)	(112,047)
Non-current portion	30,083	73,571

The non-current portion is repayable as follows:

	Group and Company	
	2010 RM	2009 RM
Financial years ending 31 December:		
2011	-	43,488
2012	19,000	19,000
2013	11,083	11,083
	30,083	73,571

15. OTHER PAYABLES AND ACCRUALS

	Group		Company	
	2010 RM	2009 RM	2010 RM	2009 RM
Developmental grants awarded payables	66,099,850	73,601,772	66,099,850	73,601,772
Other payables	6,389,247	5,883,986	6,389,247	5,883,986
Accruals	564,879	532,551	558,879	530,551
	73,053,976	80,018,309	73,047,976	80,016,309

The developmental grants awarded payables cover for periods up to 2 years.

16. LEASE COMMITMENTS

Total future minimum lease payments under non-cancellable operating leases are as follows:

	Group and Company	
	2010 RM	2009 RM
Less than one year	178,300	185,473
Between one and five years	49,045	398,509
	227,345	583,982

The Company leases a number of computer equipment under operating leases. The leases run for a period of three years. None of the leases include contingent rentals.

17. CAPITAL COMMITMENTS

	Group		Company	
	2010 RM	2009 RM	2010 RM	2009 RM
Approved and contracted for:				
Property, plant and equipment	3,500,460	897,745	3,500,460	897,745
Patent and licenses	9,900,677	27,061,104	9,900,677	27,061,104
Freehold land	33,539,000	69,063,508	-	-
Construction of building	49,550,000	-	-	-
	96,490,137	97,022,357	13,401,137	27,958,849
Approved but not contracted for:				
Property, plant and equipment	11,143,834	-	11,143,834	-
Freehold land	8,494,200	-	-	-
Construction of building	74,100,000	-	-	-
	93,738,034	-	11,143,834	-
	190,228,171	97,022,357	24,544,971	27,958,849

The capital commitments of the Group and of the Company will be recognised in the financial statements when the goods or works are delivered or completed in accordance to the contract it relates to.

Company No. 691431 - D

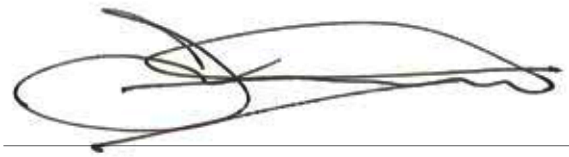
MALAYSIAN BIOTECHNOLOGY CORPORATION SDN. BHD.
(Incorporated in Malaysia)

STATEMENT BY DIRECTORS

The directors of MALAYSIAN BIOTECHNOLOGY CORPORATION SDN. BHD. state that, in their opinion, the financial statements of the Group and of the Company, which comprise the balance sheets as of 31 December 2010, and the income statements, statements of changes in equity and cash flow statements for the year then ended, and a summary of significant accounting policies and other explanatory information, as set out on pages 118 to 143, are drawn up in accordance with Private Entity Reporting Standards and the provisions of the Companies Act, 1965 in Malaysia so as to give a true and fair view of financial position of the Group and of the Company as of 31 December 2010 and of the financial performance and the cash flows of the Group and of the Company for the year ended on that date.

Signed on behalf of the Board of Directors
in accordance with a resolution of the Directors,

TAN SRI DATUK DR AHMAD ZAHARUDIN BIN IDRUS



DATO' ISKANDAR MIZAL BIN MAHMOOD

28 April 2011

Company No. 691431 - D

MALAYSIAN BIOTECHNOLOGY CORPORATION SDN. BHD.
(Incorporated in Malaysia)

DECLARATION BY THE OFFICER PRIMARILY RESPONSIBLE FOR THE FINANCIAL MANAGEMENT OF THE COMPANY

I, SYED AGIL BIN SYED HASHIM, the Officer primarily responsible for the financial management of MALAYSIAN BIOTECHNOLOGY CORPORATION SDN. BHD., do solemnly and sincerely declare that the financial statements of the Group and of the Company, which comprise the balance sheets as of 31 December 2010, and the income statements, statements of changes in equity and cash flow statements for the year then ended, and a summary of significant accounting policies and other explanatory information, as set out on pages 118 to 143 are, in my opinion, correct and I make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the Statutory Declarations Act, 1960.

SYED AGIL BIN SYED HASHIM

Subscribed and solemnly declared by the abovenamed SYED AGIL BIN SYED HASHIM at KUALA LUMPUR this 28th day of April 2011.

Before me,

COMMISSIONER FOR OATHS

PESURUHJAYA SUMPAH
No. W 350
SHAFIE B. DAUD
MALAYSIA
38A, JALAN TUN MOHD FUAD 1
TAMAN TUN DR. ISMAIL
60000 KUALA LUMPUR

Editorial Team for Annual Report 2010

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Vice President, Healthcare

Marlia Othman
Executive, Business Unit Support

Yap Sook Yee
Manager, Secretarial

Anuar Haniff
Senior Manager, Developmental Program

Anita Daud Charles
Head, Corporate Communications Bio-XCell

Rajini Kanth
Manager, Business Unit Support

Mohd Faisal Abu Hassan
Assistant, Business Unit Support

Ahmad Izral Abd Karim
Senior Manager, Finance & Accounting

Tengku Nila Putri Tengku Ilham
Vice President, Capability Development

Sharifah Hanifah Syed Abd Aziz
Senior Vice President, Legal & Secretarial

Dr. Kodi Isparan Kandasamy
Vice President, Agriculture

Elina Jani
Executive, Business Development

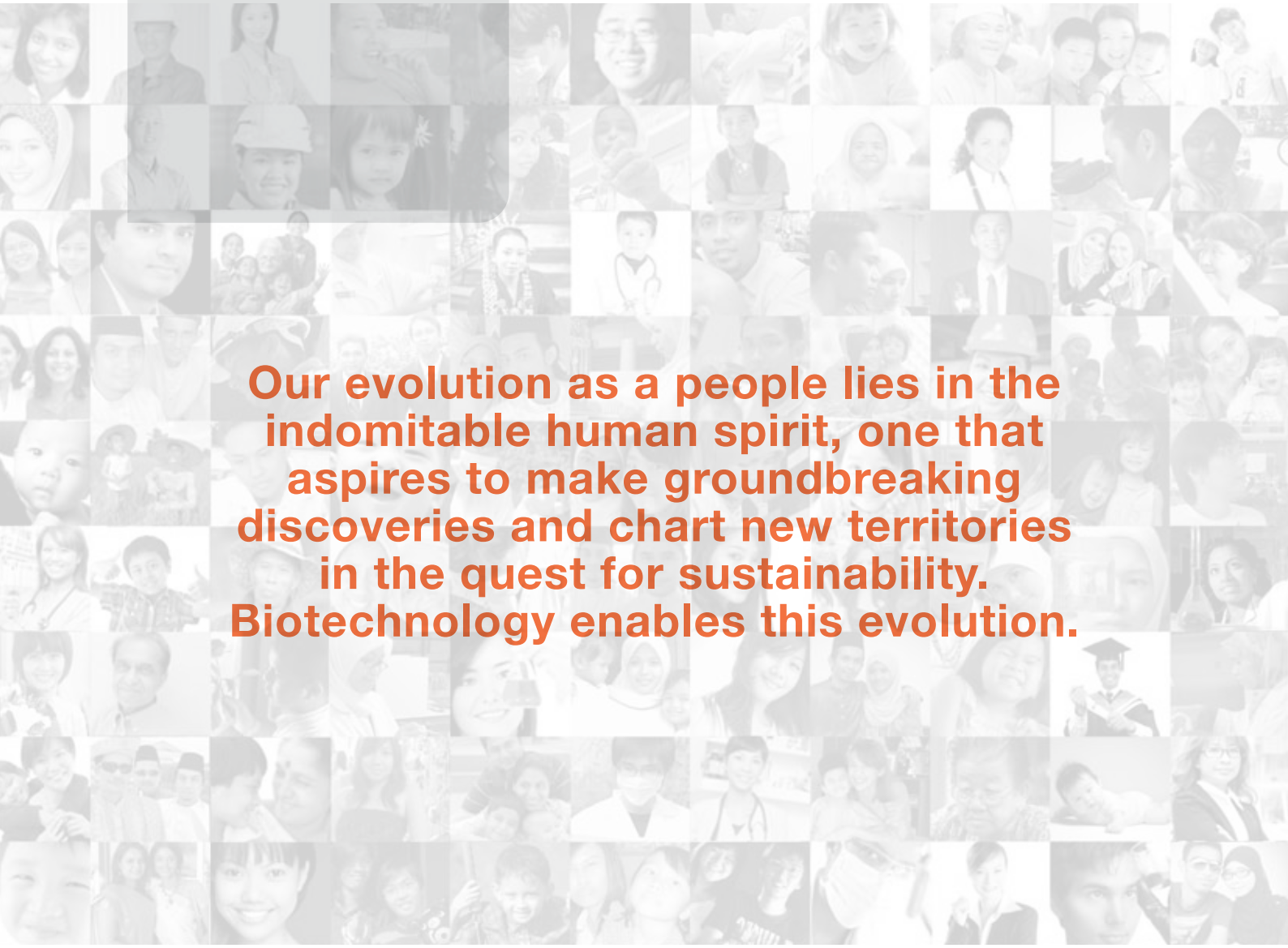
Kanimoli Ramaiah
Vice President, Talent Management

Nurul Aida Basri
Manager, Shared Facilities

Not in the picture:

Aida Shafinaz Allias - *Vice President, Industrial*
Nora Mohamed - *Vice President, Evaluation*
Faizah Pakhrurazi - *Knowledge Management*
Adrian Abdul Ghani - *Vice President, Regulatory Affairs*
Haslina Hamidan - *Manager, Branding*
Shahreel Riza Idris - *Manager, Financial Transaction*

BIOTECHCORP
MALAYSIAN BIOTECHNOLOGY CORPORATION



Our evolution as a people lies in the indomitable human spirit, one that aspires to make groundbreaking discoveries and chart new territories in the quest for sustainability. Biotechnology enables this evolution.

BIOTECHCORP
MALAYSIAN BIOTECHNOLOGY CORPORATION

www.biotechcorp.com.my
www.biomalaysia.com.my

Malaysian Biotechnology Corporation (BiotechCorp) is a central contact point for biotechnology and life science companies in Malaysia. BiotechCorp is the industry's one-stop-centre providing support, facilitation and advisory services.

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