

13. DIRECTORS' REPORT



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**Website:** www.StemLife.com

**Registered Office:**

149A Jalan Aminuddin Baki  
Taman Tun Dr Ismail  
60000 Kuala Lumpur

Date: **15 SEP 2006**

**The Shareholders  
StemLife Berhad**

Dear Sir/Madam

On behalf of the Board of Directors of StemLife Berhad ("StemLife"), I report, after making due enquiries during the period from 30 June 2006 (being the date to which the last audited financial statements of StemLife and its subsidiary and associate companies ("Group") have been made) to **15 SEP 2006** (being a date not earlier than fourteen (14) days before the date of this Prospectus) that:

- (a) the business of the Group has, in the opinion of the Directors, been satisfactorily maintained;
- (b) in the opinion of the Directors, no circumstances have arisen since the last audited financial statements of the Group which have adversely affected the trading or the value of the assets of the Group;
- (c) the current assets of the Group appear in the books at values which are believed to be realisable in the ordinary course of business;
- (d) no contingent liabilities have arisen by reason of guarantees or indemnities given by the Group;
- (e) since the last audited financial statements of the Group, there has been no default or known event that could give rise to a default situation, in respect of payments of either interest and/or principal sums in relation to any borrowing of which the Directors are aware; and
- (f) save as disclosed in the Reporting Accountants' Report and the Reporting Accountants' Letter on the Proforma Consolidated Financial Information as set out in Sections 12 and 11.14 of this Prospectus respectively, there have been no material changes in the published reserves or unusual factors affecting the profits of the Group since the last audited financial statements of the Group.

Yours faithfully  
For and on behalf of the Board of Directors of  
**STEMLIFE BERHAD**

A handwritten signature in black ink, appearing to read "Sham-tan", written over the printed name of the Managing Director.

**LOW SU-SHING**  
Managing Director

STORAGE • THERAPEUTICS • R&D

14. EXECUTIVE SUMMARY OF THE INDEPENDENT MARKET RESEARCH REPORT AND LETTER THEREON

FROST & SULLIVAN

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01 SEP 2006

The Board of Directors  
StemLife Berhad  
B-7-15, Megan Avenue II,  
12 Jalan Yap Kwan Seng,  
50450 Kuala Lumpur  
Malaysia

Dear Sirs:

**Executive Summary of the Independent Market Research Report on the  
Strategic Analysis of the Stem Cell Banking Markets in Malaysia**

The purpose of the Summary Independent Market Report prepared by Frost & Sullivan (M) Sdn Bhd is for inclusion in the Prospectus of Stemlife Berhad ("StemLife") in relation to the proposed listing of and quotation for the entire issued and paid-up share capital of StemLife on the MESDAQ Market of the Bursa Malaysia Securities Berhad.

***Malaysia – An ASEAN Economic Powerhouse***

The Malaysian economy strengthened in the third quarter of 2005, expanding by 5.3 per cent. Private sector activity continued to provide the main impetus to growth. Domestic demand strengthened, expanding at an annual rate of 9.4 per cent, due mainly to stronger private consumption and investment activities. Private consumption expenditure remained a significant source of growth, expanding by 10.4 per cent. Gross fixed capital formation strengthened to increase by 9.6 per cent. Private sector investments remained strong due to capacity expansion, upgrading, as well as new investments in downstream activities across most sectors of the economy. While Government consumption expenditure increased, Government development expenditure was lower and continued to be focused on the provision of essential services.

Bangalore      Bangkok      Beijing      Buenos Aires      Cape Town      Chennai      Delhi      Dubai      Frankfurt  
Kuala Lumpur      London      Mexico City      Mumbai      New York      Oxford      Palo Alto      Paris      San Antonio  
Sao Paulo      Seoul      Shanghai      Singapore      Sydney      Tokyo      Toronto

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**14. EXECUTIVE SUMMARY OF THE INDEPENDENT MARKET RESEARCH REPORT AND LETTER THEREON (Cont'd)**

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**F R O S T & S U L L I V A N**

Malaysia has a population of 27 million; with an average per-capita annual income of RM 17,221; an average of almost RM 1,435 a month, is one of the most developed nations in Southeast Asia. In 2005, approximately 61 percent of Malaysia's population make up the middle and upper income group of the population; this means that the adoption of stem cell banking has a large market potential as the average Malaysian is able to afford it.

National healthcare expenditure accounts for 3.5 percent of GDP in 2005. Trends in the last 5 years show that healthcare expenditure has increased steadily, and is expected to increase further in years to come. Increased funds dedicated towards healthcare will have positive effects on the stem cell banking industry as it will allow more Malaysians to have higher accessibility to better healthcare facilities as well as allow physicians to be better trained and aware of stem cell technologies.

**OVERVIEW AND DEFINITION OF MAIN TERMS****STEM CELLS**

Stem cells are the fundamental building block cells which have the capacity to regenerate and the potential to produce almost any kind of cell in the human body. Decades of research and development have gone into triggering and controlling these properties of stem cells so as to use them for repairing specific tissues and curing diseases. The wide scope of stem cell therapy has made researchers believe that in the near future stem cells can potentially change the face of human disease. The global stem cell industry is estimated to grow to RM 113.6 billion by the year 2010. In the same duration, the global stem cell banking industry is estimated to reach RM 22.7 billion.

**STEM CELL RESEARCH**

The regenerative and curative properties of stem cells have given mankind the hope of alleviating the increasing disease burden it is faced with today.

Figure 1-1 shows the global incidence and prevalence of some diseases which are growing the world over.

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**14. EXECUTIVE SUMMARY OF THE INDEPENDENT MARKET RESEARCH REPORT AND LETTER THEREON (Cont'd)**


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F R O S T  S U L L I V A N

Figure 1-1

Some Existing and Potential Applications of Stem Cell Technology Global Incidence and Prevalence, 2005

<b>Disease</b>	<b>Incidence</b>
Cancer	11,000,000
Thalassaemia (major)	65,000

<b>Disease</b>	<b>Prevalence</b>
Cardiovascular Disease	147,000,000
Limb Ischemia	500,000,000
Lupus	100,000
Osteoarthritis	20,000,000
Parkinson's Disease	5,400,000
Alzheimer's Disease	13,000,000
Bone and Cartilage Damage	300,000,000

*Source: Frost & Sullivan*

Stem cell therapy can treat over 72 diseases ranging from the blood disorders, to heart diseases, and even to spinal cord injuries. With over 200 companies around the world involved in stem cell research the number of diseases that can be treated with stem cells is expected to increase manifold. Applications for limb ischemia, osteoarthritis, lupus, type one-diabetes and other autoimmune diseases are already under trial. Stem cell therapies are also being researched for other degenerative diseases like Parkinson's disease and Alzheimer's disease.

Research on stem cells and their applications started in France in the late 1950's. Thereafter, US, and the European countries of UK, France and Sweden led the stem cell research initiative. Advances in stem cell research spurred more companies in other countries to start their own programs for stem cell research. With Korea's ground-breaking claims for stem cell research since early 2000, the spotlight was turned on Asia. Korea and Singapore both have a vibrant stem cell research environment. Research in Korea has come under scrutiny from the international community after a fraudulent claim with respect to embryonic stem cells was uncovered in late 2005. This has not deterred the growth of stem cell research in this region and countries like Malaysia, Thailand and India have also commenced their stem cell research initiatives.

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**F R O S T & S U L L I V A N**

Advances in stem cell research have fuelled the investment and funding towards this effort. This is evident from the fact that federal funding for stem cell research is increasing at an accelerated rate in the US despite controversies and the Bush government's negative stance over stem cell research. Frost & Sullivan's research estimates that funding for stem cell research globally will reach over RM 50 billion in the next 2 years.

**STEM CELL BANKING**

The stem cell banking industry, a component of the stem cell industry, offers the service of cryogenically preserving stem cells. Stem cell banking has 2 broad classifications; based on the ownership of the stem cells they are private and public stem cell banks. Furthermore, based on when stem cells are collected, there are Umbilical Cord Blood Stem Cell (UCBSC) Banks – obtained from newborn babies' umbilical cords and Peripheral Blood Stem Cell (PBSC) Banks – obtained from adults. Collection of UCBSC and PBSC causes no harm to the donor. UCBSC is collected by a completely non-invasive process and PBSC is harvested using a safe procedure similar to donating blood.

The immense potential of stem cell therapy has created an increasing demand for stem cell banks where stem cells are harvested or collected, tested, processed and stored for future use. Stem cell banks operate with the objective to meet this demand. Private stem cell banks allow the donors to retain their ownership for a fee whereas public stem cell banks claim the ownership from them.

Private stem cell banking is a form of biological insurance. An initial fee for collection or harvesting is charged to the stem cell donor, this is followed by a periodical fee for storage at the private stem cell bank. The stem cell donor at a private bank has access to his stem cells as soon as the requirement arises and for no extra fee.

Private stem cell banking was pioneered in the US in the early 1990s. Private stem cell banks in Europe and Asia were started post 1995 and Australia had its first stem cell bank in 2001. Since 2001, there has been a rapid increase in the number of stem cell banks and this can be owed to the rapid advances in stem cell research in the late 1990s starting with the cloning of the first mammal from adult stem cells, Dolly the sheep, in 1996 to the first successful UCBSC transplant for treatment of Fanconi's Anemia in a 5 year old boy in 1998.

Rising incidence of diseases coupled with the existing and potential UCBSC and PBSC therapies give people the reason to bank their and their children's stem cells.

**OVERVIEW OF THE GLOBAL STEM CELL BANKING INDUSTRY**

The stem cell banking industry is developing at different phases in different parts of the world. UCBSC Banking is in its 'early adopters / pioneers' phase in countries like US and Europe, where it has been in operation for over a decade and the industry has started seeing the 'followers early majority' stage effects of newcomers, acquisitions and consolidations, aggressive marketing,

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aggressive pricing, etc. UCBSC banking in most other countries is at its introductory or 'early adopters' stage. Collection of UCBSC is a completely non-invasive process. Consenting parents allow their infant's umbilical cord blood to be collected. This collection needs to be carried out within a short window of time. After collection the cord blood requires testing and processing before storage at the bank. Private UCBSC banks charge an initial fee for collection and thereafter a periodical fee for storage.

PBSC banking is at its introductory stage globally. Companies with experiences in UCBSC banking are now adding PBSC banking to their service portfolio as globally the revenue model of PBSC is pegged 3-4 times the UCBSC subscription and storage. This is because:

- 1) At present very few banks store PBSC
- 2) High cost of investing in the 'apheresis' cell separator machine used to harvest PBSC.
- 3) High cost of the drug, Neupogen; which is injected into a patient before extraction of PBSC.

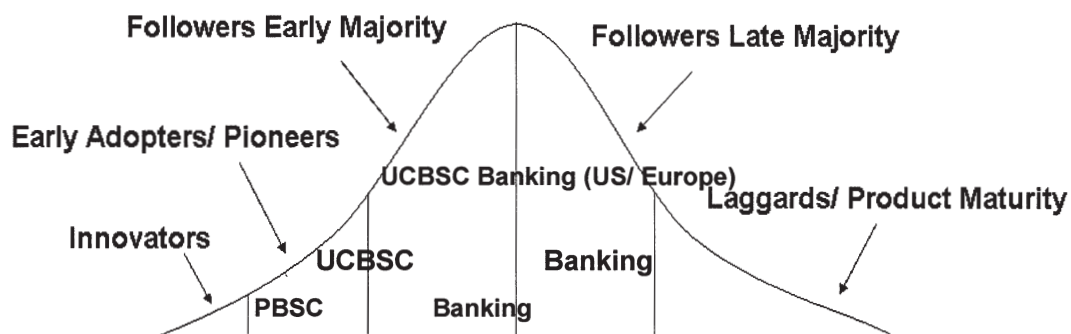
#### SNAPSHOT OF THE STEM CELL BANKING INDUSTRY – MALAYSIA, THAILAND AND INDONESIA

##### *Industry Lifecycle for Malaysia*

Figure 1-2 below depicts the stage of the industry life cycle that stem cell banking stands at in Malaysia.

Figure 1-2

Stem Cell Banking Industry Life Cycle



Source: Frost & Sullivan

The first private stem cell bank in Malaysia, StemLife was set up in 2002 hence the stem cell banking industry in this country is still in the introductory stage of the Industry Life Cycle. In light of global stem cell banking industry trends, there exists large untapped potential in Malaysia. With the ongoing research and discovery of new stem cell therapies to complement existing therapies, the potential for future growth is positive.

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**Key Parameters for Country Comparisons**

Figure 1-3 below lists the key parameters of the global stem cell banking industry vis-à-vis the stem cell banking industry in Malaysia, Thailand and Indonesia.

Figure 1-3

Key Parameters for Stem Cell Banking, Global and Country Specific

Country / Region	Stem Cell Banking Market Size by Revenue (2005)	Stem Cell Banking Market Size by Revenue (2010)	Stem Cell Banking CAGR	Drivers
<b>Global</b>	RM 7.2 Billion	RM 22.7 Billion	25.8%	<ul style="list-style-type: none"> <li>• Emerging Therapies</li> <li>• Government Recognition and Funding</li> <li>• Downstream and Upstream Collaborations</li> <li>• High Growth of Life Sciences Industry</li> </ul>
<b>Malaysia</b>	RM 10.8 Million	RM 46.5 Million	33.8 %	<ul style="list-style-type: none"> <li>• Increasing Stem Cell Awareness</li> <li>• Increasing Number of Proven Stem Cell Therapies</li> <li>• Rising Incidences of Major Diseases and Conditions</li> <li>• Government Policies and Incentives</li> <li>• Rising Income Levels</li> </ul>
<b>Thailand</b>	RM 0.9 Million	RM 15.1 Million	73.9%	<ul style="list-style-type: none"> <li>• Government Support for Stem Cell Research and Therapy</li> <li>• Increase in Proven Stem Cell Applications</li> <li>• Rising Incidences of Major Diseases</li> <li>• Increased Exposure of Medical Fraternity to Transplantation Technology</li> <li>• Growing Healthcare Tourism</li> </ul>
<b>Indonesia</b>	RM 0.3 Million	RM 3 Million	58.5%	<ul style="list-style-type: none"> <li>• Large Population</li> <li>• Advances in Stem Cell Therapy</li> <li>• Rising Incidences of Major Diseases</li> </ul>

Source: Frost & Sullivan

**Stem Cell Banking Market Size for Malaysia, Thailand and Indonesia**

The stem cell banking industry is slated to grow at a CAGR from 2005 to 2010 of 33.8 percent in Malaysia which is higher than the global CAGR of 25.8 percent over the same period of time although starting from a lower base. The revenue from the stem cell banking industry in Malaysia in 2010 is estimated to be RM 46.5 Million.

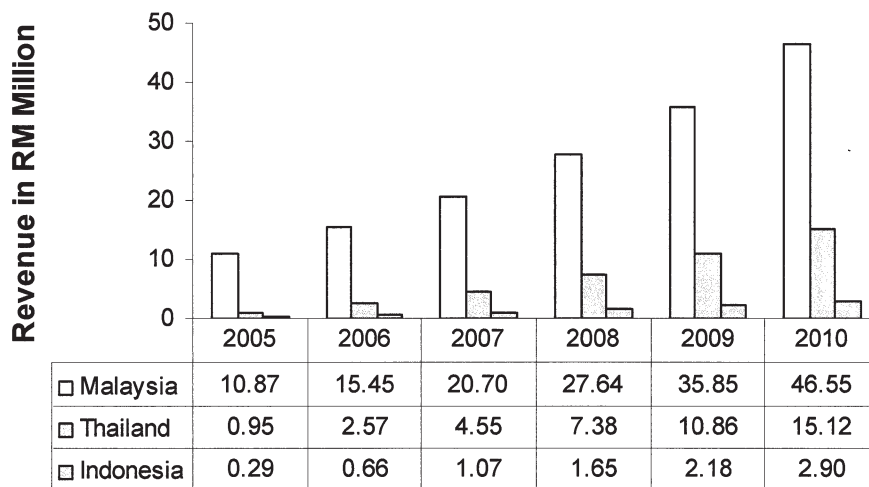
14. EXECUTIVE SUMMARY OF THE INDEPENDENT MARKET RESEARCH REPORT AND LETTER THEREON (Cont'd)

F R O S T & S U L L I V A N

The figure 1-4 below illustrates the market size for stem cell banking in Malaysia, Thailand and Indonesia for the years 2005-2010.

Figure 1-4

Growth in Stem Cell Banking Market Size in Malaysia, Thailand and Indonesia, 2005-2010



Source: Frost & Sullivan

The CAGR from 2005-2010 for this industry in Thailand and Indonesia is estimated to be 73.9 percent and 58.5 percent respectively. The revenue from the stem cell banking industry in 2010 will be RM 15.1 million for Thailand and RM 3 million for Indonesia.

The stem cell banking industry in Malaysia is the largest in comparison to Thailand and Indonesia by virtue of the fact that it boasts of the earliest introduction of stem cell banking within these countries and that it has had 2 fully operational stem cell banks for over 3 years now. Rising income levels as well as stem cell transplants have also fuelled the growth of the market in Malaysia.

The Thai stem cell banking market was held by a single company until August 2005 when another company entered the market. This gave the market an impetus for growth and the market is estimated to continue growing at a rapid rate till 2007. After that it is expected to stabilise to a steady growth rate fuelled by increasing stem cell applications, research and number of banks generating more awareness.

Indonesia, at present has two stem cell banks that are operating their marketing offices. These offices collect cord blood and ship them to their company's branches in the parent country for processing and storage. The country is still dealing with the lack of medical infrastructure and personnel as well as low income levels which reflect in the stem cell banking market size.



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F R O S T & S U L L I V A N

**Stem Cell Banking Market Competition for Malaysia, Thailand and Indonesia**

The stem cell banking market in these three countries is in its introductory phase characterized by low competition, few players, large potential and yet untapped markets, low levels of awareness and high growth rates.

Figure 1-5 below lists out the key players in the three countries who provide private stem cell banking services through stem cell banks or their marketing offices present in the countries.

Figure 1-5

**Availability of Private Stem Cell Banking Services in Malaysia, Thailand and Indonesia, 2005**

Market	Private Stem Cell Banking Service Providers(year of commencement)		Market Leader (2005)
Malaysia	StemLife (2002) *	CryoCord (2003) *	StemLife
Thailand	CordLife (2003) ^	Thai StemLife (2005) *	CordLife
Indonesia	CordLife (2003) ^	StemCord (2005) ^	CordLife

Source: Frost & Sullivan

Notes:

\* Bank

^ Marketing office

Frost & Sullivan's competitive analysis shows that in 2005, StemLife Sdn. Bhd. is the leading private umbilical cord blood stem cell bank in Malaysia with 63 percent market share, followed by Cryocord Sdn. Bhd. with 37 percent. StemLife has 100 percent market share of the peripheral blood stem cell banking industry in Malaysia.

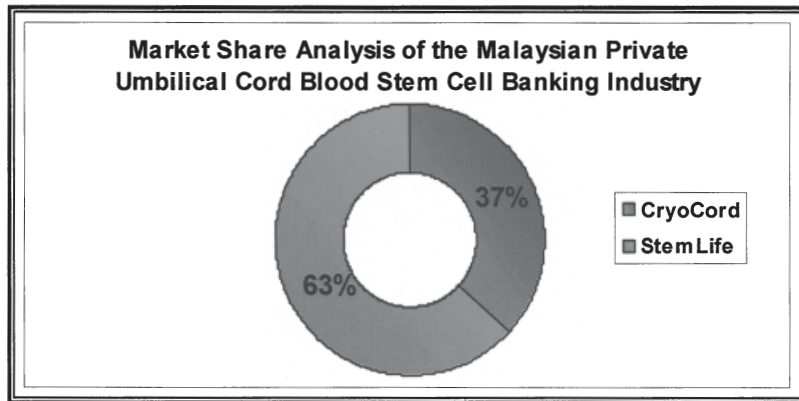
Figures 1-6 & 1-7 show the market share analysis of the Malaysian Stem Cell Banking Industry.

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Figure 1-6

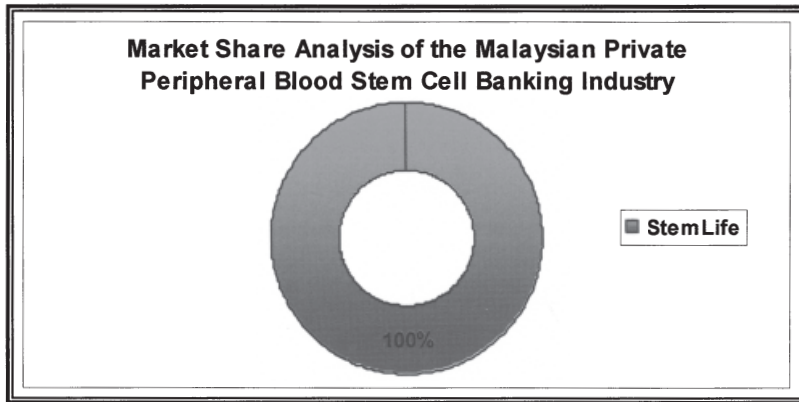
Market Share Analysis of the Malaysian Private Umbilical Cord Blood Stem Cell Banking Industry



Source: Frost & Sullivan

Figure 1-7

Market Share Analysis of the Malaysian Private Peripheral Blood Stem Cell Banking Industry



Source: Frost & Sullivan

StemLife was the first private stem cell bank to be established in Malaysia. Since its inception in 2001 StemLife has provided stem cell banking services meeting or exceeding US and European industry standards and has made itself the company of choice for hospitals, medical practitioners and consumers alike. In early 2005 StemLife launched PBSC banking to add to its existing service portfolio of UCBC banking. PBSC banking gives adults from Malaysia and its surrounding countries an option to store their own stem cells at any stage of their lives. The number of stored samples at StemLife has grown from just 624 samples in 2003 to 4,845 samples at the end of 2005.

In its efforts to extend the benefits of stem cells StemLife has also developed a downstream network with medical professionals for the use of the stem cells to treat diseases. StemLife is the only company in Malaysia with the proven expertise in preparing stem cells for stem cell transplants. It consulted on its first stem cell transplant in April 2003. The Company has since then consulted on sixteen cases of stem cells transplants for heart, leukemia, thalassemia, lymphoma and diabetic foot

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**F R O S T & S U L L I V A N**

ulcer. Thirteen of these cases involved PBSC transplants. Globally, the number of stem cell therapies for heart diseases and diabetic foot ulcers has not been very many due to the lack of experience and technical know-how. With less than 150 successfully treated cases of diabetic foot ulcers and 700 of heart diseases world over, it is commendable that StemLife has been successfully involved in two cases of diabetic foot ulcer and six cases of heart diseases in Malaysia.

As of August 2005, StemLife entered a joint venture with Superior Biotech Ltd. and Jetanin Co. Ltd to form Thai StemLife; controlling a 40 percent stake in it. They have plans to expand within this region and beyond. They already cover several cities within Malaysia with marketing offices and collection centres. In keeping with expanding sales network and to accommodate the present and the potential increase in stem cell donors, they have invested in the expansion of their storage and processing facilities.

Being the pioneer in the Malaysian market, StemLife managed to capture the market and is still in the majority with 63 percent market share. StemLife's success can also be attributed to the following:

- Full-ranging complete services of stem cell banking (UCBSC and PBSC), stem cell therapy and transplant consultancy.
- Breakthrough involvement in thirteen transplants for treatments ranging from leukemia, thalassemia, heart damage, diabetic foot ulcer and lymphoma.
- Strong ties with local medical professionals built on credible historical performance and professional alliances.
- Provision of quality services through utilisation of up-to-date technology and equipment for processes, CAP accreditation, continuous R&D and adherence to international standards (e.g. blood processing protocol set by the American Association of Blood Banks)

CryoCord is the other stem cell banking and research company located in Malaysia. It was established in 2003 and offers UCBSC banking services. Its collection and processing procedures are in line with European standards on UCBSC banking. The company is considering expansion into countries like Thailand and China.

Incorporated in Singapore in May 2001, and a subsidiary of Australia based Cygenics, CordLife focuses on UCBSC banking. It has plans to expand its range of services to include PBSC banking, amongst other tissue types. It currently provides UCBSC banking services across the Asian region through marketing offices and is seeking to expand geographically.

The two private stem cell banking companies in Malaysia have market coverage across all major cities in West and East Malaysia including Penang, Subang, Ipoh, Kuala Lumpur, Johor Bahru, Kota Kinabalu, Kuantan and Kuching. Both companies operate with state branches in major states in order to maximise market coverage; these branches are staffed with between 3 and 5 personnel for the collection of UCBSC from hospitals in the surrounding areas.

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**14. EXECUTIVE SUMMARY OF THE INDEPENDENT MARKET RESEARCH REPORT AND LETTER THEREON (Cont'd)**

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F R O S T  S U L L I V A N

The Malaysian stem cell banking industry is experiencing rapid growth due to greater awareness about the potential of stem cells coupled with the increasing income levels of the people, government support and the efforts of stem cell companies to increase awareness. The Thai market for stem cell banking is fuelled by government support, increasing awareness of transplant technology by the medical fraternity and growing healthcare tourism. In Indonesia the stem cell banking industry is at its infancy but its 200 million strong population offer a huge potential market for stem cell banking.

**Government Regulation**

The governments of Malaysia, Thailand and Indonesia have no regulations pertaining to the stem cell banking industry. However, a recent development in Malaysia is the coming into force of the Private Healthcare Services and Facilities ACT 1998 (Act) and the Private Healthcare Services and Facilities Regulations 2006 (Regulations). The Act and the Regulations which have come into effect since May 1, 2006 pertain to private blood banks and may thus have implications on private stem cell banks as well. The Act requires private stem cell banks to be approved by the Director General of Health and licensed to provide facilities. The Regulations pertain to the maintenance of standards for infrastructure, human resources and operations.

There are very few countries in the world which have a regulatory framework for stem cell banking and research. The US and the UK both have stringent guidelines pertaining to stem cell research and the South Korean government has recently announced guidelines for UCBSC banking.

These governments are expected to draw guidelines in the next few years as stem research advances. The government's role should be towards nurturing development and ensuring quick but quality access to new stem cell applications for those who need it most.

**Quality Standards**

To collect and store stem cells it is vital that stem cell banks engage in ethical business practices and maintain quality through regulatory licenses and certificates of accreditation. The licenses and accreditations required are those that apply to blood banking and processing such as certification by the American Association of Blood Banks (AABB) and the College of American Pathologists (CAP). At present there are no specific standards for stem cell banking globally. In the US, where stem cell banking started in the early 1990s, the FDA is still contemplating setting standards for stem cell banks. Stem cell banks are expected to achieve and maintain standards of blood banks and the AABB accreditation is often sought.

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**14. EXECUTIVE SUMMARY OF THE INDEPENDENT MARKET RESEARCH REPORT AND LETTER THEREON (Cont'd)**

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F R O S T  S U L L I V A N**MARKET DYNAMICS****Key Industry Drivers*****Emerging Therapies***

Stem cells are banked because they have the potential to cure diseases. Therefore, the value to the donor is the prospective use of the stem cells to successfully treat any ailment he might have. Advances in stem cell research will increase the value to the end-user and will convince more to store their and their children's stem cells.

***Rising Incidence of Diseases***

Healthcare delivery systems the world over are faced with the growing burden of diseases. This can be largely attributed to the increase in life expectancy and resultant aging population. Malaysia, Thailand and Indonesia are dealing with an increase in chronic and degenerative diseases like cancer and cardiovascular disease. Diabetes is also a major cause of concern in these three countries.

***Government Recognition and Funding***

The government has two important roles to play towards the success of stem cell banking and research;

1. Regulate the industry; to ensure that the quality is not compromised and access to stem cell applications is equitable.
2. Support the industry; not just by allocating funds for it but also creating an environment where private investors are encouraged to fund institutions conducting research and banking. To create this environment, the government has to lay the foundation by developing infrastructure for research and development.

**Key Industry Restraints*****Competition from Substitutes***

Stem cell therapies need a significant advantage over existing therapies for them to be preferred over the existing non-stem cell therapies. Stem cell therapies apart from those for blood related disorders like thalassemia and blood cancer are at the moment very new and very few people have the expertise to conduct them.

The cost of stem cell therapy is considerable in the absence of private stem cell banking. Patients requiring well-matched stem cells may have to pay over RM 380,000 in the absence of their own banked stem cells.

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F R O S T  S U L L I V A N***Graft Versus Host Disease***

A key point for private stem cell banking is the occurrence of Graft Versus Host Disease (GVHD) which occurs when the recipient's system does not identify the donor stem cells as its own. Immunosuppressant drugs are being developed to overcome this issue but these drugs have to be taken for a person's lifetime and can cost a considerable amount of money. Researchers are also working towards tailoring stem cells as per a patient's needs to circumvent GVHD.

***Lack of Reimbursements***

Reimbursements from 3rd party payers like insurance companies will affect adoption and profitability of stem cell transplants and banking. Medical and healthcare insurance is prevalent in most of the countries where the stem cell industry is present. Health insurance plans differ in their coverage of stem cell transplants depending on the premium offered.

Increased coverage by insurers of the entire transplant process starting from donor matching, to storing to the therapy itself will aid the adoption of stem cell banking. Insurers are working with stem cell banks to provide complete coverage from storage to the transplant process.

***Lack of Education and Awareness***

A large part of the population today remains unaware of the advantages of storing one's stem cells. Even in the US, where stem cells have been banked for more than 15 years now, the penetration level for UCBSC banking has reached only 3.5 percent as at 2004. Penetration level is estimated to have reached 10 percent by the end of 2005, as several banks like Cord Blood America Inc. and Cryo-cell are investing in aggressive marketing of their services through different media channels in an attempt to educate the masses about the advantages of stem cell storage.

***Barriers to Entry and Exit******Large Start-up Cost***

The cost of setting up and maintaining a full-service stem cell bank with its own laboratory facilities in this region is quite substantial. Initial capital investment supplemented with further investment to bring the bank operational efficiency and economies of scale could be over RM 5 million.

On the other hand banks such as Lifecell, a UCBSC bank in India in collaboration with Cryo-cell Incorporated, US were set up at a cost RM 14.39 million. This amount is attributed to investment in intangible assets such as knowledge and technology transfers.

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**14. EXECUTIVE SUMMARY OF THE INDEPENDENT MARKET RESEARCH REPORT AND LETTER THEREON (Cont'd)**

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F R O S T  S U L L I V A N***Financial Sustenance***

This is a high operating cost industry right from collection to transportation to processing and storage. Storage cost is continuous. Stem cell banks will have to enough financial backing for sustenance of operations for the initial few years.

***Credibility***

The standards of quality and technology in the stem cell industry are very high. Industry players need to prove their credibility before they can gain any market share. Accreditations like the one provided by AABB and certifications like the International Standards Organisation (ISO) for processes are perceived as credibility counters by the donors and recipients.

***Dedicated Personnel and Expertise***

A key challenge for the stem cell banking industry is to develop, maintain and retain skilled personnel. Right from the stage of collection to storage and then ultimately usage, the efficacy of the stem cells is dependant on the personnel handling it. The stem cell banking processes will have to keep pace with advances in technology, thus training and development of personnel will be an on-going activity at stem cell banks. The lack of such personnel and training facilities in most countries will act as barrier to entry into this industry.

**INDUSTRY OUTLOOK**

The promise held by stem cell therapy is enormous and the global stem cell industry is slated to reach RM 113.6 billion by the year 2010. Banking of stem cells is an integral part of stem cell therapy and research and the global stem cell banking industry is expected to reach RM 22.7 billion by the year 2010.

The key drivers of the stem cell banking industry are stem cell therapies which are emerging to provide solutions to erstwhile incurable conditions or better the results of existing ones. There are over 200 companies working towards developing stem cell therapies.

Though pioneered by the countries in Europe and North America, the focus of stem cell research is now moving towards the East, with South Korea, Singapore, Japan, China, India, Malaysia and Thailand stepping up their efforts to develop and provide new stem cell therapies.

In Malaysia, the private stem cell banking industry is expected to flourish, primarily driven by the rising awareness of successful stem cell therapies amongst the medical fraternity and amongst the general public. Stem cell banking is able to provide 'biological insurance' to many people, and when needed, it can be used to facilitate stem cell therapy in patients. Those who have contracted cancer, blood disorders, diabetes, amongst over 72 conditions have been successfully treated through stem cell transplant procedures performed all around the world.

14. EXECUTIVE SUMMARY OF THE INDEPENDENT MARKET RESEARCH REPORT AND LETTER THEREON (Cont'd)

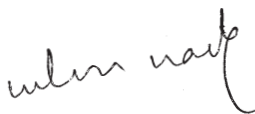
F R O S T & S U L L I V A N

Frost & Sullivan predicts that the combined private stem cell banking industry in Malaysia consisting of both UCBSC and PBSC will grow from RM 10.8 million in 2005 to RM 46.5 million in 2010. Ongoing global stem cell research efforts will uncover increasingly more applications for stem cell therapy. This will most likely be in conditions and diseases which previously had limited existing successful therapies.

In Malaysia, stem cell therapies are already conducted by Malaysian doctors on cancer, heart disease, and diabetic patients. Stem cell therapies are expected to become more widely performed in Malaysia as more and more doctors learn about the benefits of stem cell therapies. In turn, these developing trends ensure that the general public becomes more knowledgeable about the therapeutic properties that stem cells possess, which will then grow the demand for private UCBSC and PBSC banking.

Frost & Sullivan has prepared this report in an independent and objective manner and has taken adequate care to ensure the accuracy and completeness of the report. We believe that this report presents a true and fair view of the industry within the limitations of among others, secondary statistics and primary research. Our research has been conducted with an "overall industry" perspective and may not necessarily reflect the performance of individual companies in this industry. We are not responsible for the decisions and / or actions of the readers of this report. This report should also not be considered as a recommendation to buy or not to buy the shares of any company or companies.

Yours Sincerely,



Nitin Naik

Director

Frost & Sullivan Malaysia Sdn. Bhd.