ANTAI HOSPITAL SINGAPORE PTE. LTD.

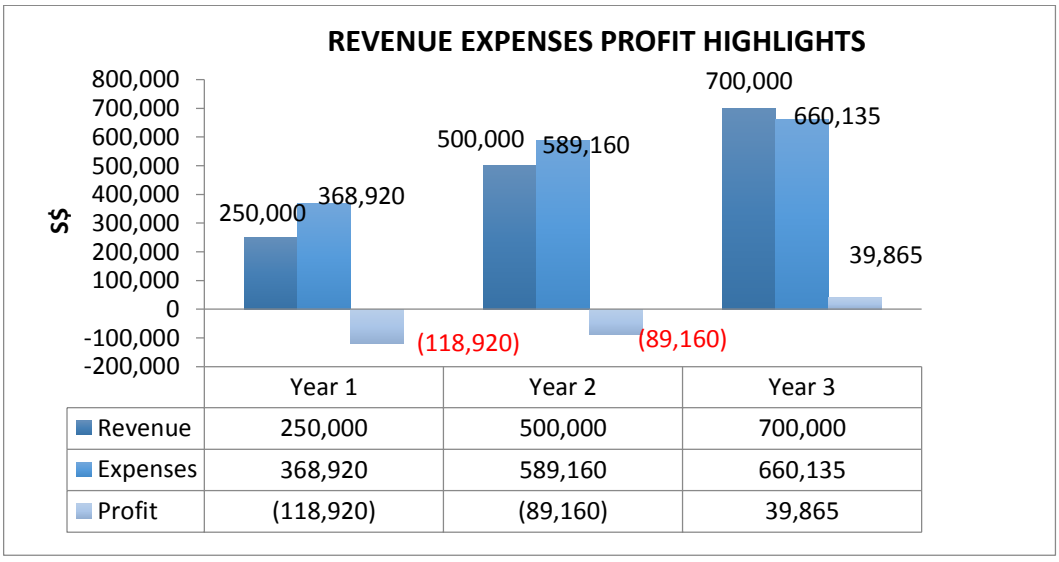
Business Plan 2021

Dr. Fenglin Chen

EXECUTIVE SUMMARY

Recurrent Spontaneous Abortions (RSA), known variously as Recurrent Pregnancy Loss, Recurrent miscarriage, etc., remains an enigma for the obstetrician and gynaecological (OB/GYN) community around the world. Common risk factors include increased maternal age, obesity, smoking, alcohol, pre-existing medical conditions and anatomical abnormalities of the reproductive system. Though several drugs have been trialled and are currently being administered, the challenge of recurrent miscarriage continues to overwhelm the OB/GYN professionals. Dr Fenglin Chen, an OB/GYN physician, licensed by the Ministry of Health of the People's Republic of China, has conducted extensive research and has successfully discovered a method for diagnosing and treating immunological recurrent miscarriage. Dr Chen's innovation has been patented in China, the USA and the European Union. The patented drug kit and the DNA vaccine has undergone clinical trials in China, as the president of Beijing Antai Jiayuan Maternity Hospital, where Dr Chen is the president and over 67 proprietary technologies are being successfully implemented to improve the reproductive health of women. However, for the patented technique to become marketable on a large scale, it needs further clinical trials and regulatory approvals across Asia.

Singapore has a reputation as a key clinical research hub in Asia, and that is mainly attributed to its impressive track record of high-quality clinical trials, infrastructure, highly-qualified doctors and clinical research organisations and highly educated population that understands the need and benefits of clinical trials. ANTAI HOSPITAL SINGAPORE PTE. LTD. (ANTAI HOSPITAL SINGAPORE) has been established in Singapore to coordinate and manage the clinical research, product and business development activities to commercialise the patents owned by Dr Chen. ANTAI HOSPITAL SINGAPORE will also eventually function as a local agent when innovation is commercialised. The idea is to secure partnerships with academia and large pharmaceutical companies to engage contract Clinical Research Organisations (CRO) to conduct trials and commercialise the patent. The current paid-up capital is S$1,003,000. More funds will be injected as the activities scale further.



	Year 1	Year 2	Year 3
Revenue	250,000	500,000	700,000
Expenses	368,920	589,160	660,135
Profit	(118,920)	(89,160)	39,865

VISION

To contribute to women's health initiatives through evidence-based medicine and enhances clinical outcomes related to obstetric and gynaecological health through the development of innovative diagnostic and prognostic tools.

MISSION

To provide strategic research, regulatory and business development services that make patents commercially viable.

OBJECTIVES

- To function as a strategic business unit and external research, regulatory and business management centre for the clients.
- To help our clients gain more control over the cost of clinical research in the region and speed up the commercialization of patents relating to reproductive health.
- Selectively grow our regional presence by establishing strategic alliances with local and regional academic institutions, biotech companies and maternity healthcare facilities.
- Be acknowledged as a valued and trusted partner in the life science enterprise community.
- To actively promote collaboration, interaction and exchange in the fraternity through organizing and participating in workshops, forums and conference.
- To foster high calibre of research expertise among young OB/GYN professionals through sponsoring training, research and overseas exchange programs.
- To continuously raise the quality of diagnostic and treatment modalities available for patients suffering from RSA and infertility through a capital commitment for research, training and education.

COMPANY SUMMARY

Singapore is reputed for its clinical research and clinical trials management activities in Asia. The global pharmaceutical companies and research entities prefer to conduct product development, clinical research because of the good clinical practices and sound regulatory environment that facilitate successful commercialisation of drugs and devices in the global markets. As the secretariat for the APEC Coordinating Centre for Good Clinical Practice (GCP), Singapore plays a strategic role in developing GCP in Asia, steering initiatives such as the training of clinical research personnel and cultivating a favourable environment for multi-site clinical trials in the region. Singapore has been accepted into the Organisation for Economic Co-operation and Development (OECD) Mutual Acceptance of Data framework. With this OECD-MAD status, data from pre-clinical trials conducted by testing facilities in Singapore which are compliant with the requirements of Good Laboratory Practice (GLP) will be

accepted by some 30 OECD and non-OECD members, including the United States, European Union and Japan. Vaccines and drugs developed and tested in Singapore, thus enjoy faster access to the world's top biomedical markets. Therefore Singapore is a dynamic centre in the Asia-Pacific region for biopharma firms and contracts research organisations (CROs) to conduct their regional clinical development activities. This scenario spells ample opportunity for biomedical entities owning patents to seek partnership with CROs and pharma companies to accelerate clinical trials and commercialisation of patents.

ANTAI HOSPITAL SINGAPORE PTE. LTD. was incorporated in Singapore with a Paid-up capital of S$1003,000. The private limited entity has been established to generate viable innovations that revolutionize the diagnostic and treatment modalities of recurrent spontaneous abortions and improve the reproductive health of women. The entity will provide research, regulatory and business development services to commercialize patents generated in the relevant areas of interest. To commence with, the company will work towards commercializing Dr Chen's innovations to treat recurrent miscarriage. Eventually, the company will extend its consultancy service to other biotech institutions and researchers who own patents in OB/GYN.

The founder of the company Dr Fenglin Chen has more than 25 years of experience as an OB/GYN physician in China. His research interest focused on developing diagnostic and treatment tools for immunological recurrent spontaneous abortions and infertility. He has successfully developed a diagnostic and treatment modality for recurrent miscarriage and has secured patents for the same in the USA and the EU jurisdictions besides China. Dr Chen owns 30% of the Singapore company, ANTAI HOSPITAL SINGAPORE PTE.LTD. while the remaining shares are held by Sha Tong (15%), Shuo Chen (40%), and Wei Zhang (15%). Dr Chen and his partners will meet all the financial requirements of the company in its initial stages. As a company relying on intellectual capital, the company does not foresee any fiscal challenges and will be amply funded to meet its payroll requirements and other business costs.

STARTUP EXPENSES

EXPENSES	**S$**
Legal Expenses	3,000
Computer & Office equipment	15,000
Leasehold deposit	6,000
Website	3,000
Furnishing	10,000
Miscellaneous	3,000
Total	**40,000**

COMPANY LOCATION

Singapore has established its position as a premier global site for pharmaceutical and medical technology manufacturing. In addition, more than 50 biomedical sciences companies are carrying out R&D activities that include drug discovery, translational and clinical research as well as medical technology innovation, many of them through new partnerships and business models. Companies such as GlaxoSmithKline, Novartis, Lilly, Takeda, CombinatoRx, S*Bio, MerLion Pharmaceuticals *and* PharmaLogicals are engaged in active R&D activities here.

The Biopolis is a standing testimony to Singapore's dedication to enhance life science R&D efforts. The Biopolis co-locates public sector research institutes with corporate labs and is designed to foster a collaborative culture among the institutions and organisations under one roof. 11 of the world's top pharmaceutical and biotechnology companies have invested in more than 25 commercial-scale manufacturing facilities in Singapore. They include Abbott, Alcon, Genentech, GlaxoSmithKline, Lonza, Merck Sharp & Dohme, Novartis, Pfizer, Sanofi-Aventis, Schering-Plough and Wyeth. Several Contract Research Organisations (CROs) have also established operations in Singapore to support the pharmaceutical industry's growing outsourcing needs. These include global CROs Covance, Quintiles and ICON.

Singapore's Vision is to be the regional Biopolis. The city-state is cosmopolitan, and is strategically located at the heart of Asia within a seven-hour flight radius of other Asian research sites. Its population comprises three key Asian ethnic groups namely Chinese, Indians and Malays. Beyond geography and socio-cultural characteristics, Singapore provides diverse partnership opportunities with its public-sector research institutes, base of leading pharmaceutical and biotechnology companies, clinical-research units in hospitals and international research organizations. Singapore provides the perfect enterprise hence locating the company in Singapore is a well-researched and commercially viable decision.

NATURE OF BUSINESS

Dr.Chen through his research studies and experience of treating several thousand patients at his 5000 square meter specialty hospital at Beijing has developed evidence-based DNA vaccine to effectively prevent recurrent miscarriages in women and has successfully secured patent approval for his inventions from China, the European Union (1722225 ; 1719516) and the United States (7902162 ; 7674590). The patent must be made viable through appropriate clinical trials, regulatory registrations and commercial manufacturing and distribution so that the drug and treatment modality can be made widely available for the benefit of several thousand women suffering recurrent miscarriages. Antai Hospital Singapore has been primarily set up to manage the activities that would lead to the commercialization of the patents owned by Dr.Chen by actively collaborating with academia, clinical research organizations, biopharmaceutical companies, regulators and distributors. Thus, to begin with, the Singapore entity will primarily function as independent research and development and business development unit of the Beijing Antai Hospital. That being so, its earnings in the first few years of operations will be in the form of service consultancy fees charged to Beijing Antai Hospital. Eventually, as the vaccine goes into commercial production and sales, much of its operating revenue will be from the sales of the vaccine.

Commercialization of Dr.Chen's RSA innovation is the key priority; however, it is a long-winding road to financial sustainability. Therefore, the company will also engage in trading of medical consumables and devices between Singapore and China to ensure the financial viability of the venture. Antai Hospital Singapore will leverage the infrastructure of Beijing Antai Hospital and the founder's network of affiliates by acting as a conduit for medical tourism serving the regional patient pool seeking medical services in China at a competitive price.

Antai Hospital Singapore will eventually graduate into a full-service consultancy servicing entities operating across the clinical research spectrum by providing a complete portfolio of project management services. Through our range of services, we will help clients identify opportunities to enhance compliance activities and optimize the management of research phases along the continuum - from study initiation to new drug development, regulatory approval, manufacturing and marketing.

Dr. Chen and his partners are keen on making the patent viable and offering the full-suite of services to patients suffering with recurrent miscarriage in Singapore and other South-east Asia Countries. Therefore, when time is conducive investment will be committed towards fully or partly acquiring or joint venturing with a local hospital to provide services along the patented technology alongside waterbirth and allied reproductive healthcare services. The aim is to make Singapore a sought-after specialist centre for prevention of recurrent miscarriage in the south-east Asian region.

SERVICES

- Feasibility analysis & due diligence report on potential research, manufacturing and distribution partners
- Strategic planning of clinical trials
- Developing proposals & protocols
- Contracts & negotiations
- Project management and review and control
- Identifying sponsors and investors
- Regulatory approvals
- Local agent services

BUSINESS PLAN MILESTONES

- To identify CRO partners and kick-off negotiation before the end of year 1.
- To commence clinical trials and trading operations in Year 2.
- To achieve breakeven by year 3.
- To commence building a regional network of affiliates by Year 3.
- To secure regulatory approval and go into commercial manufacturing by year 5.

- To expand our scope of services in order to graduate to a full-service consultancy by year 5.
- *To explore opportunities to invest in a local hospital to provide services along the patented technology alongside waterbirth and allied reproductive healthcare services by year 5.*

MARKET ANALYSIS

Numerous published studies and articles indicate that the Asia-Pacific region is shaping up to be the most dynamic area of growth in the world for the biomedical industry. The region accounts for almost 56 per cent of the world's population. In addition to its growing affluence and growing healthcare needs, Government support for the biomedical industry spells greater scope for companies that are engaged in clinical research and supporting activities. Adding further weight to the potential of the region is a PricewaterhouseCoopers study, which showed that a significant section of the companies surveyed believe that the centre of gravity for the global pharmaceutical market will be in Asia, with China, India and Singapore being key countries.

In this regard, even as the global pharmaceutical and biomedical sciences industry grapples with the problems of declining R&D productivity and competition from generics, Asia presents a ray of hope with its expanding market opportunities for both global and Asian biomedical sciences companies. With the fast-maturing regulatory environment, increasingly experienced investigators, higher data quality yield and growing patient base in these regions a hoard of R&D activities are shifting towards the region. Pushing the growth of clinical trials in the region is the increasing demand for shorter development time of drugs for unmet medical conditions.

Singapore presents a stellar bio-cluster in Asia that has established a strong track record and foundation in biomedical sciences manufacturing and R&D activities. Singapore has built up a strong scientific foundation with seven research institutes and five research consortia in key fields that include clinical sciences, genomics, bioengineering, molecular/cell biology, medical biology, bioimaging and immunology. Under Research, Innovation and Enterprise 2020 (RIE 2020), which allocated S$4 billion to the Health and Biomedical Science, the National Medical Research Council (NMRC) of Singapore has renewed its commitment to support and coordinate translational and clinical research (TCR). National Health Innovation Centre (NHIC) has, spurred commercialisation of medical discoveries and technologies from individuals across the healthcare sector and fostered numerous collaborations between institutions and industry.

Against this backdrop of Singapore that is committed to accelerating bench discoveries into bedside applications, the recurrent miscarriage patent gains significance. Globally approximately 1 – 3% of all couples of reproductive age experience recurrent miscarriage. A miscarriage is defined as the loss of a fetus at any time between conception and the 24th week of gestation (GW) or the loss of a fetus weighing < 500 g. According to World Health Organization (WHO) three and more miscarriages in a row before the 20th GW is defined as recurrent miscarriage. However, according to the American Society for Reproductive Medicine (ASRM) losing even two pregnancies in a row is classified as recurrent miscarriage and this definition inflates the incidence of RM to 5% of all couples of reproductive age. The management of recurrent miscarriages is an unsolved problem, and up to 50% of cases of recurrent pregnancy losses will not have a clearly defined aetiology. The investigations and management of recurrent miscarriages are one of the most debated topics.

Women constitute an estimated 3.5 billion of the global population, of which about 1.8 billion are presently in the child-bearing age, and this would reach 2 billion by 2025. Going by the WHO definition of recurrent miscarriages, even if we assume a median rate of incidence of 1.5% 27 million women are potentially afflicted with recurrent miscarriage, and this would increase to 30 million in the next five years. Even if we assume that 1 in 1000 of the women suffering from recurrent miscarriage undergoes treatment, the potential patient pool globally is 27,000 to 30,000 every year. Studies also reveal that with women increasingly postponing marriage and pregnancy, the incidence of miscarriages and thereby immunological recurrent miscarriage is bound to increase. The improved access to healthcare and awareness among women will spur more patients to seek treatment for their condition that will further inflate the conservative estimate of the patient pool. Even after discounting all these factors, with an estimated market price of S$10,000 per patient, the innovation has a market potential of generating at least S$270 million a year.

Given the fact that there are no effective evidence-based therapeutic options available for immunological recurrent miscarriage, the exclusivity granted by the patent gives us a substantially unthreatened competitive advantage and revenue potential. That said, this level of revenue will be realized only when the patent becomes viable, meaning the vaccine goes into commercial manufacturing and sales. While we are considering the direct development, manufacturing and sales of the vaccine, ANTAI HOSPITAL SINGAPORE, we would also explore avenues to mitigate risks and costs associated with going direct by licensing the patent pharmaceutical companies, albeit revenue will be a fraction of what we would achieve by going direct.

Trading in medical consumables will be essential to sustain our operations. The global medical consumables market was valued at approximately USD 194 billion in 2017 and is expected to generate revenue of around USD 279 billion by the end of 2024, growing at a CAGR of around 5.3% between 2018 and 2024. While the Asia-Pacific market is set to register the fastest growth until 2024, the consumables account for 20% of China's US$ 79 billion medical device market. With our current network in the healthcare sector in the region, we are capable of securing at least a very small fraction of this market to earn moderate revenue.

MARKET SEGMENTATION

- Clinical Research Organizations
- Public-sector research institutes
- Pharmaceutical companies
- Bio-tech companies
- Healthcare facilities

TARGET MARKET

ANTAI HOSPITAL SINGAPORE will target all the above segments in Singapore and the regional markets.

COMPETITIVE EDGE

- Evidence-based therapeutic intervention
- Patented technology hence high entry barrier
- Access to investors and sponsors
- Excellent Track record and professional expertise
- Access to professional network and infrastructure

MARKETING STRATEGY

- Active strategic networking
- Listing in industry directories
- Blog Marketing
- SEO/SEM Marketing
- Social media engagement
- Journal publications
- Direct marketing to overseas facilities
- Sponsoring health events, organizing campaigns and

MANAGEMENT SUMMARY

Dr Fenglin Chen will be the CEO of the Singapore entity. He will provide direction and judgement in research sponsorship and partner selection. He will be responsible for designing

and implementing programs and processes to achieve established research and business goals, and benchmarks. He will be responsible for the initial establishment of the company and therefore be responsible for the business development, instituting organization policy, client relationship management, and recruitment of project partners. His key tasks will also include developing an affiliate network of research enterprises in regional markets. He will be responsible for engaging and liaising with the stakeholders such as pharmaceutical companies, third-party manufacturers, distributors, hospitals and regulatory agencies.

Dr Chen has more than 25 years of experience as OB/GYN physician in China, where he founded the Beijing Antai Maternity Hospital, a 5000 square meter facility that provides comprehensive reproductive healthcare services for over 34,000 recurrent miscarriage patients annually and deploys over 67 proprietary technologies. The hospital has an annual profit of US$ 7 million. His research interest is primarily focused on developing diagnostic and therapeutic tools for immunological recurrent miscarriage and infertility. He has been widely featured in many print and electronic media in China and his works have been published in eminent medical journals. He is a well-respected gynaecologist in the fraternity.

Other positions in the company will be filled by recruiting locally.

ORGANISATIONAL STRUCTURE

FINANCIAL PLANNING

General Assumptions

- All figures in SGD
- Economic and regulatory climate remains favourable

	YEAR 1	YEAR 2	YEAR 3
Long term Interest	0%	0%	0%
CPF	16%	16%	16%
Tax Rate	17%	17%	17%
Credit allowed	2 month	2 month	2 month
Estimated Totals			
Initial capital	275,500		
R&D Expenses	50,000	50,000	50,000
Payroll expenses	196,920	300,160	318,720
Deposits	6,000		
Startup Expenses	34,000	0	0

PROJECTED PROFIT AND LOSS STATEMENT

	Year 1	Year 2	Year 3
Income			
Revenue Services	250,000	300,000	450,000
Revenue from trade	0	200,000	250,000
Direct cost	0	140,000	175,000
Gross Margin	**250,000**	**360,000**	**525,000**
Expenses			
Startup expenses	34,000	0	0
R&D Expenses	50,000	50,000	50,000
Payroll	183,000	272,000	288,000
CPF contribution	13,920	28,160	30,720
Hired Services	5,000	5,000	5,000
Travel & Miscellaneous	12,000	15,000	20,250
Marketing	10,000	15,000	15,000

Rent	36,000	36,000	36,000
Overheads	20,000	22,000	25,000
Insurance	4,000	5,000	6,000
License	1,000	1,000	1,000
Total Expenses	**368,920**	**449,160**	**476,970**
Profit Before Taxes & Interest	**(118,920)**	**(89,160)**	**48,030**
Depreciation	0	0	0
Net Profit before tax	(118,920)	(89,160)	48,030
Tax @ 17%	0	0	8,165
Net Profit	**(118,920)**	**(89,160)**	**39,865**

PROJECTED CASH FLOW STATEMENT

	Year 1	**Year 2**	**Year 3**
Receipts			
Opening Balance	275,500	150,580	51,421
Cash sales	250,000	466,667	691,667
Total Receipts	**525,500**	**617,247**	**743,087**
Expenses			
Direct Expenses	0	116,666	145,833
Expenses payables	0	0	23,334
Operating Expenses	122,000	99,000	108,250
Payroll Expenses	196,920	300,160	318,720
Leasehold deposit	6,000	0	0
Capital expenses	0	0	0
R&D Expenses	50,000	50,000	50,000
Tax payable	0	0	8,165
Total Expenses	**374,920**	**565,826**	**654,302**
Closing Balance	**150,580**	**51,421**	**88,785**

PROJECTED BALANCE SHEET

	Year 1	Year 2	Year 3
Assets			
Cash	150,580	51,421	88,785
cash Equivalent	6,000	6,000	6,000
Receivables	0	33,333	41,667
Total current asset	**156,580**	**90,754**	**136,452**
Assets	0	0	0
Accumulated depreciation	0	0	0
Net asset Value	**0**	**0**	**0**
Total assets	**156,580**	**90,754**	**136,452**
Liabilities & Capital			
Current Liabilities			
Accounts Payable	0	23,334	29,167
Total current Liabilities	**0**	**23,334**	**29,167**
Long Term Liabilities	**0**	**0**	**0**
Total Liabilities	**0**	**23,334**	**29,167**
Capital			
Equity	3,000	3,000	3,000
Retained Earnings	272,500	153,580	64,420
Earnings	(118,920)	(89,160)	39,865
Total Capital	**156,580**	**67,420**	**107,285**
Total Liabilities & Capital	**156,580**	**90,754**	**136,452**