

Business Plan Overviews

Aware Biotechnologies

Cancer is currently the leading cause of death in the United States for people under 85, and is the second largest killer overall. It is responsible for over 500,000 deaths each year and is estimated to cost the economy over \$150 billion annually. Early detection and treatment is key to curbing the effect of this deadly disease. However, most diagnoses today rely on physical detection, allowing cancer to go undetected until it is too late.

Currently available blood diagnostic methods, such as PSA tests for prostate cancer, are helpful, but are not available for many cancers such as breast, ovarian, and pancreatic cancer. Early, reliable, noninvasive, and inexpensive detection of cancer would save thousands of lives and billions of dollars in treatment costs.

Aware Biotechnologies is commercializing biomarkers for early-stage detection of cancer. We are developing diagnostic tests for breast, ovarian, and pancreatic cancers. Our detection methods are cheaper than existing methods, and we expect them to be more sensitive as well.

CLiPS Technology was developed by our founders, is patent-pending, and will be licensed from the University of California. Detection tests will only require standard blood samples and conventional, FDA-approved fluorescence detectors common in most diagnostic laboratories.

Our first goal is to develop a blood test for breast cancer detection using the CLiPS technology. Currently, mammograms are the standard screen for breast cancer, are recommended annually for all women over 40, and cost \$100-\$200 each. However, mammograms are uncomfortable, difficult to schedule, and have suboptimal accuracy. Our blood test would replace the initial screening mammogram at an estimated cost of \$25 to the patient. Sales of our kit will be done to central laboratories. Marketing will also be directed to primary care providers and HMOs, who are ultimately responsible for ordering and approving diagnostic tests. Future products will address ovarian and pancreatic cancers, for which there is currently no reliable screen.

Calipgen

Calipgen is a nanobiotech company at the interface of materials science and molecular biology. Through the merger of these two disciplines, we are positioned to become a market and technological leader for the delivery of all nucleic acid molecules into cells.

We provide multiple market solutions with applications as both a laboratory research reagent and a therapeutic delivery vehicle. The Calipgen technology platform utilizes novel, proprietary nanoscale materials that interact strongly with nucleic acids to form advanced nucleic acid delivery complexes. Nucleic acids are emerging as the

next generation of biotechnology therapies. One form of nucleic acid therapy, RNA interference (RNAi) was named "Breakthrough of the Year" by Science magazine in 2002. Currently used protein therapies attack targets that exist only on the surface of cells and by nature cannot access many known intracellular drug targets. Nucleic acid based drugs have the potential to treat diseases that have been untreatable with modern therapeutics, provided they can be delivered to the inside of cells. The current technologies used to deliver nucleic acids, such as those used for RNAi, have shown limited capability when used for either basic research or as potential therapeutic agents due to issues concerning toxicity, stability and efficiency.

Calipgen bio-delivery systems offers a complete and more effective nucleic acid delivery system for a broad range of cell types and offers advantages over existing technologies which include increased stability and decreased toxicity, resulting in more efficient delivery.

Using the Calipgen system, nucleic acids will have increased utility in drug discovery and in therapeutics for a variety of major diseases such as cancer, autoimmune disorders and viral infections. This provides the benefit of lower costs for drug development and safer therapeutics. Initial product offerings will be targeted towards the R&D market, currently valued in excess of \$380 million, which includes both basic research and target validation needs. Later efforts will be focused on the delivery of RNAi drugs that are expected to be approved for therapeutic use by 2010. By this time, the market is predicted to grow to \$3.5 billion even if only a handful of products get into the market. The continued success of our reagent and pharmaceutical products will make us a likely candidate for merger or acquisition with a strategic partner which is anticipated prior to year 7. At that time, we anticipate that initial investors will realize an 8-10 fold return on their investment.

Emergency Medical Technologies

Endotracheal intubation is a procedure routinely performed by medical personnel on unconscious trauma patients to provide an open airway by placing a tube directly into the lungs from the throat. To perform the procedure, a device called a laryngoscope is used to allow the medical practitioner to visually see down the throat of the patient. If the airway is blocked by fluid, such as blood, intubation must be suspended, the laryngoscope removed, and a suction device inserted to remove the blocking fluid. Once suction is completed the laryngoscope is reinserted and the process of intubation is attempted again. If the fluid was inadequately removed this process has to be repeated. During this rescue attempt the patient is not breathing and unsuccessful intubation results in patient death.

Emergency Medical Technologies proposes launching a combined laryngoscope with the functionality of a suction system to allow for increased efficiency when intubating a patient. This enhancement on a widely used medical

device would effectively address the problems associated with having two devices. This would decrease the time to intubate when suction is needed, and reduce user cost by eliminating excessive equipment. The technology allows for a compact suction device within the laryngoscope, while not adding significant weight, or cost. This dual functionality increases the chance of successfully performing a lifesaving procedure while maintaining the portability of a small device. Our product will be positioned to be used in emergency medical situations and will be needed in hospitals, fire trucks, ambulances, and military field medic bags.

The medical industry is a considerably conservative and competitive market. Competition includes the current standard laryngoscope manufacturers, and the suction device manufacturers. The most notable competition includes Heine and Welch Allyn in the first category, and Laerdal in the latter category. Currently there are no portable devices that allow for suction within a Laryngoscope. Emergency Medical Technologies will have the advantageous position of being first to market with this novel approach as well as securing vital intellectual property. A utility patent will block competitors from producing equivalent devices, both in cost and efficiency, producing the necessary competitive advantage.

Tamarisc Diagnostics

Although the completion of the Human Genome Project promised a new dawn in medicine, it is currently unmet. What keeps this new era from being realized is the inability to decipher the language in which the books of the project are written in. The conversion of the information contained in the books to practical biomedical applications will usher in the unprecedented advances in medicine promised by the Human Genome Project. Thus, reading and applying the books of life have become the new challenges in the post-genomic era. However, this conversion will require deciphering how, when, and which proteins turn genes on and off to be converted into RNA, as well as utilizing that information in a clinical setting. Tamarisc Diagnostics is developing several instruments to solve these challenges.

Imagine a small, portable device that can rapidly and extremely accurately detect viral, cancerous, bacterial and biological agents. Now picture that this device can be operated easily and cost effectively by a technician with minimal training. The uses for such a device in the medical diagnostic industry, as well as in homeland security and the defense sector are almost uncountable. The groundbreaking technology for such a device exists, and Tamarisc Diagnostics has the patents secured. In short, offering a device that provides near foolproof, inexpensive, on the spot diagnostic answers for all threatening biological samples is what Tamarisc will provide with patented technology.

Tamarisc will accomplish this via involvement in two areas: reading the books, or the discovery of biomarkers to be turned into probes, and applying the knowledge gained, or the optimization of probes to be used as medical diagnostic tools. To achieve these ends, Tamarisc is developing an applied point-of-care diagnosis instrument, the Tamarisc Diagnostic System (TDS), as well as an advanced biomarker

discovery system, or the Tamarisc SERS-based Proteomics System (TSPS).

Tamarisc Diagnostics is building instrumentation that will allow for medical technicians, security personnel, and others to quickly and cost-effectively identify threatening medical conditions on site. The first test the TDS will perform targets the Human Papillomavirus (HPV) diagnosis market, allowing every doctor to provide patients with diagnostics comparable to those at the finest molecular diagnostics laboratories in the world in their own offices. Over 24 million people in the U.S. are currently infected with this incurable virus, and it has been directly linked to over 90% of cervical cancer cases, the number two cause of cancer deaths among women.

VeriTint

Commercial buildings lose at least \$37 billion a year through inadequate conventional windows. In light of the geometric rise in energy costs, there is a pronounced need for a reasonable alternative that can not only help bring down this number significantly, but also be made available in the short-term - VeriTint Solutions can provide just that solution! A smart-window technology, enabled by VeriTint Solutions, will have a pronounced impact on the way we envision "windows", by reducing the energy consumption of a commercial building by nearly 30 percent, and consequently, ushering in a new era in glazing technology.

VeriTint Solutions' goals are as follows:

- Acquire 20% market share (glazing systems market in the U.S. is estimated to be \$15 billion) by year 5 of operations
 - Create a brand identity for VeriTint, to help generate a demand pull for our 'smart' glazing systems
 - Maximize shareholder satisfaction by providing a high return on investment and multiple liquidity events by year 5 of operation
 - Establish a symbiotic relationship with our customers to help realize the potential of the "smart" window market
- VeriTint Films, our flagship product, is the first variable tint glazing solution that meets the need of retrofitting existing commercial architectures with smart windows in an easy and cost-effective fashion.
- First cut-able and flexible electrochromic window film
 - Strong intellectual property position
 - Energy savings lead to payback within 5 years for end consumers
 - Novel combination of photovoltaic cells and RFID technology to eliminate the need of wiring.

VeriTint Solutions is an emerging technology development company with an innovative idea and patentable technologies. However, there is marked need for an infusion of Angel capital of \$600,000 to develop a prototype. Such an investment would be used to purchase materials and equipment, hire additional research staff, obtain dedicated laboratory premises and acquire a management team which can help steer VeriTint through the initial research into the product launch phase. An additional round of Series A funding of \$1.5 million would be later required to develop a market-ready version of VeriTint Film, and to obtain a competent sales and marketing team.

Changing the way we see the world... one window at a time.