EMERGING GROWTH RESEARCH, LLP

Initial Report
Rating: BUY
Speculative
OTCBB: KBLB
Price Target: $4.00

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Analyst Certification

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July 17, 2008

Kraig Biocraft Laboratories, Inc.

- Kraig Biocraft Laboratories, Inc. is an emerging biotech company with a very strong intellectual property portfolio relating to genetic modification of silkworms to produce spider silk and other specialized proteins.
- Genetic scientists have already produced the first transgenic silkworms. Other genetic researchers have isolated the genetic sequences in spiders responsible for silk production. Kraig Biocraft Laboratories brings together some of the world's preeminent researchers in each of these areas in a collaborative effort to produce commercially significant quantities of one of the strongest and most resilient fibers known to mankind - spider silk.
- The company's technical team is making use of some of the most advanced insect-related genetic engineering techniques known including piggyBac transposition to create a germline stable transgenic silkworm capable of transferring the inserted spider silk genetic coding to future generations.
- A significant market valued in the tens of billions of dollars per year already exists for highly resilient technical fibers, with DuPont’s Kevlar dominating the market. Spider silk demonstrates similar strength characteristics to many man-made fibers in this category, but significantly exceeds all known fibers relative to its ability to absorb energy prior to breakage, making it a potential “super fiber” for a host of ballistic resistant, medical, fashion, and industrial applications.
- Should this company achieve its goal of creating transgenic silkworms capable of expressing significant amounts of spider silk proteins; we believe the technology will likely immediately be worth at least several hundred million dollars. Further refinement of the technology and initial acceptance by the technical textiles market could potentially yield an overall value for this technology well in excess of $1 billion.

Market Data

Market Cap (MM)	$12.5
Shares Outstanding (MM)	50
Float	n/a
Dividend Yield	n/a
52-Week Range	$0.20-$0.42

Financial Summary

Revenue FY 09E (MM)	Pre-revenue
Cash end of Last Quarter (MM)	Nil
Total Assets (MM)	Nil
Long-Term Debt (MM)	none
Shareholders Equity (MM)	($0.288)

Please see important disclosures, including analyst certification

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KRAIG BIOCRAFT LABORATORIES, INC.

Executive Summary

Kraig Biocraft Laboratories, Inc. is a biotechnology company pursuing a unique protein expression system with the goal of producing a new generation of technical fibers. The company is making use of the state of the art genetic techniques in order to develop a transgenic silkworm capable of producing silk that contains spider silk proteins – simply put, spider silk in commercially viable quantities.

In order to achieve this goal the company has aligned itself with two universities that are leaders in this field of research - the University of Notre Dame and the University of Wyoming. Noted genetic scientist and the developer of the piggyBac technique for gene transposition and a member of the first team of researchers to develop a transgenic silkworm, Dr. Malcolm Fraser of Notre Dame, is personally involved in the development of the technology. Dr. Randy Lewis, of the University of Wyoming, one of the world's foremost authorities on spider silk is also an important member of the team. The University of Wyoming, which holds significant intellectual property rights relating to the genetic sequencing of spiders, which it has licensed to the company, is a meaningful equity investor in the company

Spider silk is one of the strongest and most resilient fibers known to mankind. It is significantly stronger than steel on a pound for pound basis and comparable in tensile strengths to man-made fibers such as Kevlar. Spider silk, however, has no comparison relative to its ability to absorb energy before breakage occurs. Materials scientists in the textile and military industries have long desired to use spider silk for a variety of applications. Unlike silkworms, which live in harmonious peaceful coexistence, spiders are territorial and cannibalistic, and therefore cannot be raised in captivity.

Over the past 20 years, several companies have attempted to produce spider silk proteins through genetic engineering techniques. The most notable of these attempts was an effort by Canadian-based, Nexia Laboratories. The company was successful in introducing spider silk genes into dairy goats and achieved the desired protein expression in goat milk. The project, however, did not achieve the original goal as it proved difficult to spin the silk from the acquired proteins. Some progress has also been made in Asia Laboratories, but these efforts have also failed to produce a viable product.

The market for spider silk would be classified as part of the technical textiles market, which is dominated by industry giants DuPont and Honeywell. Both of these multinational corporations have seen considerable success with products in this area and it is believed either could be a licensor of the company's technology or an acquirer of the entire company should Kraig Biocraft Laboratories efforts yield significant results. A 2% penetration of the technical textiles market would likely be worth in excess of $3 billion per year. While the primary target for spider silk is thought to be the technical textiles market, we believe such a product could also be very popular relative to the apparel market, especially in Japan where silk purchases per capita are the highest in the world.

To date, Kraig Biocraft Laboratories has not yet produced the desired proteins in a transgenic silkworm, but efforts over the next six months are expected to significantly accelerate possibly leading to a breakthrough in the laboratory by the end of 2008. Should such a break through occur, we would expect it to take an additional year to perfect the technology.

We believe success in the laboratory yielding the first transgenic silkworm capable of producing spider silk would be a major scientific achievement and would also likely yield significant coverage in the business and popular presses, and of course, significant price appreciation of KBLB shares. While highly speculative these shares offer some exciting possibilities for substantial returns.

Introduction to Kraig Biocraft Laboratories, Inc.

Kraig Biocraft Laboratories, Inc. was founded by the inventor of the company's technology, current chief executive officer, Kim Thompson. The company is a fully reporting organization and trades on the over-the-counter market under the stock symbol KBLB. At the present time, there are approximately 50 million common shares outstanding, with approximately 64% of these being held by the chief executive officer.

At Kraft Biocraft Laboratories the chief executive officer serves as the overall coordinator for the company relative to business operations and ongoing research and development. Several very prominent genetic scientists, one at the University of Wyoming and another at the University of Notre Dame, are taking significant roles in the development of the company's technologies. Additionally, the laboratory staffs of these professors are also making significant contributions to the company's efforts.

The University of Wyoming Foundation has contributed significant intellectual property to the enterprise and is a major shareholder in the company. Several of the major discoveries from these associated researchers are pivotal to the company's product development efforts. Through careful and diligent negotiation the company has obtained exclusive rights to university owned technologies and has acquired rights for use in product development and commercialization of the company's targeted products.

The company describes its technology as a unique protein expression system that is potentially highly scalable and cost-effective in producing a variety of different proteins that can be marketed into the pharmaceutical, technical textiles and materials markets. While this explanation may mean a great deal to a scientist, a genetic engineer or an executive from a biotechnology company, it likely means very little to the average small-cap investor. At the risk of losing some of the accuracy in fully describing the company's technologies and what it hopes to accomplish with these technologies, we will offer the below outlined, but perhaps oversimplified, explanations and examples.

What's So Exciting About Spider Silk?

The silk produced by spiders is among the strongest fibers produced in nature. It is also extremely elastic and resilient. Depending upon how measurements are made, spider silk is nearly as strong, or in some cases even stronger, than Kevlar or steel. Spider silk has several properties that are unmatched even by the most exotic of man-made fibers. Spider silk has the unbeatable capacity to absorb energy and to dissipate this energy in a very controlled manner as the spider silk deforms. This unique property makes this fiber especially attractive for applications where energy absorption is a key design factor: bulletproof vests, artificial ligaments, parachute cords, suspension cables and many industrial applications.

As a shown in Diagrams Three, Four and Five spider silk is significantly stronger than ordinary silkworm silk and the vast majority of naturally occurring and man made fibers, but not as strong as Kevlar based at the same densities.

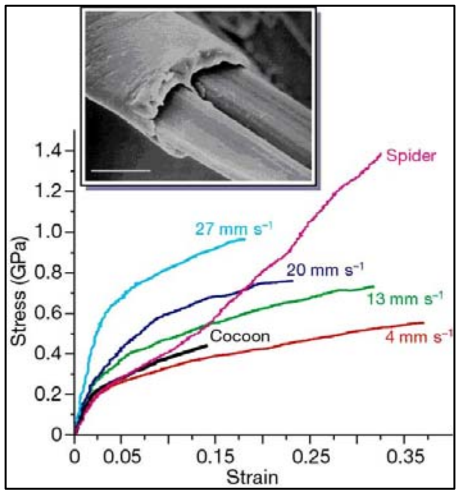

Figure Three Strength of Spider Silk versus Silk Worm Silk *Source: University of California*

Stress–strain curves of washed and degummed single-filament silkworm silk (motor-reeled at 25 °C at the indicated speeds), *Nephila* spider dragline silk (20 mm s^{-1} at 25 °C) and standard, degummed commercial silk from a cocoon spun by the animal in the natural 'figure of eight'[9] at speeds oscillating between 4 and 15 mm s^{-1} at 20 °C. The area under the stress–strain curve represents the energy that a fibre can take up before breaking, and thus indicates its toughness. Scale bar, 10 μm. Immobilized silkworms (*n* = 4) were forcibly silked[4], each providing 3–6 single filaments, which were tested in a stretching rig (force resolution, 30 μN; time resolution, <5 ms for 1 mN; strain rate, 50% per min)[4]; further details are available from the authors. For silk 'degumming', a traditional aqueous solution standard wash of 1% sodium hydrogen carbonate[10] was used, which led to a 30–40% reduction in fibre diameter. Inset, unwashed native silkworm silk

One of the significant properties of spider silk, however, is its extreme resistance to breaking under strain. Relative to this property, as is shown in the diagrams, spider silk significantly outperforms virtually all known natural and synthetic fibers. It is this property that makes spider silk particularly appealing for use as a “super fiber”.

Pound for pound, spider silk is clearly much stronger than steel with clear evidence of spider silk being at least five times stronger than steel of the same diameter.

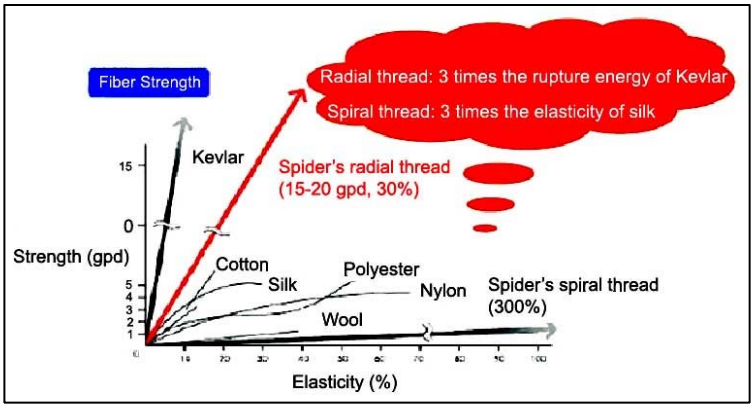

Figure Four Spider Silk versus Other Fibers *Source: Okamoto Corporation, Japan*

Spider silk also has some other interesting characteristics. For example, a single strand of spider silk is significantly finer than a human hair and significantly lighter. Research indicates that spider silk is so thin that a single strand long enough to circle the entire Earth would weigh less than 2 pounds.

Some spiders actually produce many different types of silk depending upon the particular need at the time. What scientists refer to as dragline silk, which is used by spiders to repel and to catch themselves while falling, is clearly the strongest type of spider silk and is at least twice as strong as the other spider silk types.

Table I. Average Values of Mechanical Properties of Silk Fibers and High-Performance Synthetic Fibers

Fiber Type	Density (g/cm^3)	Modulus of Elasticity E (GPa)	Tensile Strength σ_R (GPa)	Breaking Strain ε_R (%)	Resilience (MJ/m^3)
Spider Silk					
Argiope trifasciata	1.3	1-10	1.2	30	100
Nephila clavipes	1.3	1-10	1.8	30	130
Silkworm silk					
Bombyx mori	1.3	5	0.6	12	50
Nylon 6.6	1.1	5	0.9	18	80
Kevlar 49	1.4	130	3.6	3	50
PBO	1.6	270	5.8	3	70
Steel	7.8	200	3.0	2	6

Figure Five -Strength of Spider Silk versus Other Fibers *Source: JOM and TMS Publications, Inc.*

There is little debate relative to the superiority of spider silk over many man-made and natural fibers for certain applications. The issue, however, is how to produce spider silk in sufficient enough quantities at a cost that is reasonable.

Silkworms were domesticated over a thousand years ago and are easily raised in colonies of thousands of worms where they live harmoniously. Spiders on the other hand, are extremely territorial and cannibalistic and, therefore have never been raised in any commercially viable quantities.

The vast majority of researchers who have investigated the methodologies to artificially produce spider silk agree there are two main viable approaches. The first is to employ genetic engineering techniques to enable non-spider life forms to produce the proteins in spider silk. The second viable technique is believed to be to re-create spider silk-like fibers through chemistry.

Below, we examine the research and development that has taken place relative to these two approaches.

Genetic Engineering to Produce Spider Silk

Nexia Biotechnologies, Inc., which is a Canadian biotechnology company, is probably the company that has invested the most resources toward developing methodologies to produce spider silk proteins via genetic engineering.

Nexia’s research efforts concentrated on achieving expression of spider silk proteins in the milk of dairy goats. To achieve this goal, researchers at Nexia introduced spider silk genes into the mammary glands of dairy goats, with the effort achieving the desired protein expression. While this accomplishment was initially viewed as a significant success, the company quickly learned that while they were able to isolate the proteins, the issue of spinning the resulting proteins into viable fibers was extremely problematic. After several years of effort, and millions of dollars, Nexia was not able to meet its goal of actual silk production.

There are several researchers in Japan and China who have also been working on genetic modification of silkworms to produce spider silk or spider-like silk. One of the laboratories in Japan has been able to produce spider silk protein expression in transgenic silkworms, but the resulting silk contained very low percentages of the desired proteins relative to ordinary silkworm proteins. It is widely believed this laboratory is still working to improve its technologies, but at this time it is unknown the status of their development. While Kraig Biocraft Laboratories believes it will likely beat to this Asian competitor to a breakthrough in the laboratory science, we remind investors that Kraig Biocraft owns significant intellectual property relative to the production of such technologies in the United States, meaning that even if an Asian competitor did somehow find a viable solution for production, the competitor would likely be unable to sell its product in the United States.

Efforts to Create Spider Silk and Spider Silk like Products through Other Methodologies

Relative to research into the production of artificial spider silk using non-genetic engineering methodologies, researchers at MIT are likely to be considered competitors. The research team at this leading university is using research discoveries in the growing field of nanotechnology to produce an artificial spider silk via combinations of artificial polymers. The company's management team and its researchers believe these efforts are only in the early stages and that the science MIT team is pursuing is flawed and will ultimately fail. We believe these efforts at MIT, however, further emphasize the company's view a commercially viable product is highly desired by a variety of industries.

The Technical Background

Within a wide variety of scientific fields there is the need to work with isolated proteins of various different types. Genetic engineers, biochemists, medical researchers and many other types of scientists use proteins for many different purposes including drug discovery, clinical and diagnostic testing applications, genetic engineering, bio-production and many other scientific applications. These desired proteins are often difficult to obtain and must be produced so that the scientist can use the proteins for the desired purpose. Because of this difficulty in obtaining the required proteins an entire sub-industry of within the pharmaceutical and biotechnology industries has evolved. The products marketed by the participants in the industry that are specifically designed to produce the required proteins are called protein expression systems.

In order to provide a bit more understanding of protein expression systems in general and to gain an understanding of the technologies Kraig Biocraft Laboratories is bringing to the market we will need to take a brief look at how proteins are created and how genetic engineering is creating new forms of life capable of generating new and unique proteins.

The vast majority of cells within living organisms contain genes, which are regions on DNA strands that control hereditary characteristics. These genes act somewhat like a recipe or instruction book, providing information that an organism needs so it can build or do something - like making an arm, a brain or producing blue eyes versus brown eyes. In order to communicate the message to the organism, genes produce proteins, which act as the messenger system to tell the rest of the organism what to do.

The vast majority of proteins that scientists require occur in nature, but often in very limited quantities. Often, scientists need much more significant quantities of a certain protein. In such cases, the scientists often turn toward genetic engineering techniques for the needed protein production. Let's take a look at how such protein production takes place in the real world.

Let's say a hypothetical pharmaceutical company has developed a new cancer drug that is comprised of many different components one of which is protein produced by particular organism. Let's call this organism, "Organism A". Let's further speculate that "Organism A" is very difficult to breed and when breeding is successful it is very difficult to keep the particular organism alive long enough to acquire the needed proteins it produces. While such an organism may produce the protein that is needed by the pharmaceutical company for production of its new drug, such product production is extremely cost prohibitive. In order to solve its problem, the pharmaceutical company may turn to genetic engineering.

With genetic engineering techniques it is possible to create a new life form that is a cross between two other life forms. For example, relative to our hypothetical pharmaceutical company described above, it may be possible to take the genes out "Organism A" that cause the organism to produce the desired protein and to insert these genes into another organism so that the new organism will produce the protein that is desired.

For example, here is how this would work. Scientists would isolate the genes in "Organism A" that are responsible for producing the desired protein and record the chemical formula for recreating these genes. This process is called gene sequencing. Once the gene sequence is recorded it can be easily replicated at any future date. Additionally, because the desired chemical composition of the gene sequence is recorded, the pharmaceutical company would no longer have any need to keep any "Organism A" on hand.

The next step in the process for our theoretical company would be to find a host organism that would be capable of accepting genetic material from "Organism A". Many laboratories throughout the world use various types of bacteria as host organisms, with the E. coli bacteria strains being most commonly used. Other organisms that are commonly selected are various types of yeast, insect or mammal cells. For our theoretical example, let's assume that the company in question selects a particular bacterium as a host, which we will call "Organism B".

Using various genetic engineering techniques the scientists in the laboratory would re-create the genes of "Organism A" based on the previously recorded gene sequencing process. The re-created genetic material of “Organism A” would then be inserted into “Organism B” creating a new organism, which we will call “Organism C”. If the entire process is done correctly the genetic instructions from “Organism A” will instruct the newly created “Organism C” to produce the proteins that are needed. In the field of genetic engineering, “Organism C” would be called a protein expression system.

Please see Diagram One for a graphic representation of this process.

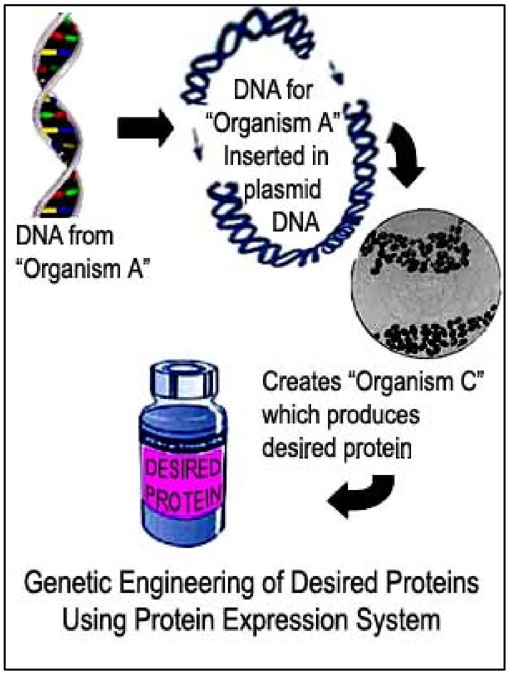

Diagram One A Simple Protein Expression System *Source: Emerging Growth Research, LLC*

While there have been many types of proteins produced using the above methodology there are still many other types of proteins that scientists have not yet been able to create. There are several issues that have hindered such progress. First of all, the process of obtaining the genetic sequences is a difficult one. Genetic researchers have been able to record the complete genetic code, called the genome, of only a few of the millions of different species on Earth. Gaining this genetic information is only one part of the process, however, as this genetic code must ultimately be inserted into the host organism. The science surrounding the insertion of this genetic code into a host is still in its infancy and only understood relative to a small number of organisms, however, the science is advancing rapidly relative to this issue. One of the most significant areas of genetic research centers on these above outlined issues.

Kraig Biocraft Laboratories is one of the companies that is on the forefront of these scientific advancements. Utilizing a set of state of the art genetic reengineering techniques the company is seeking to utilize the species *Bombyx mori*, commonly known as the domesticated silkworm, as a protein expression system in order to produce a revolutionary protein based product that could potentially be worth billions of dollars per year.

Please see Diagram Two for the life cycle of this insect.

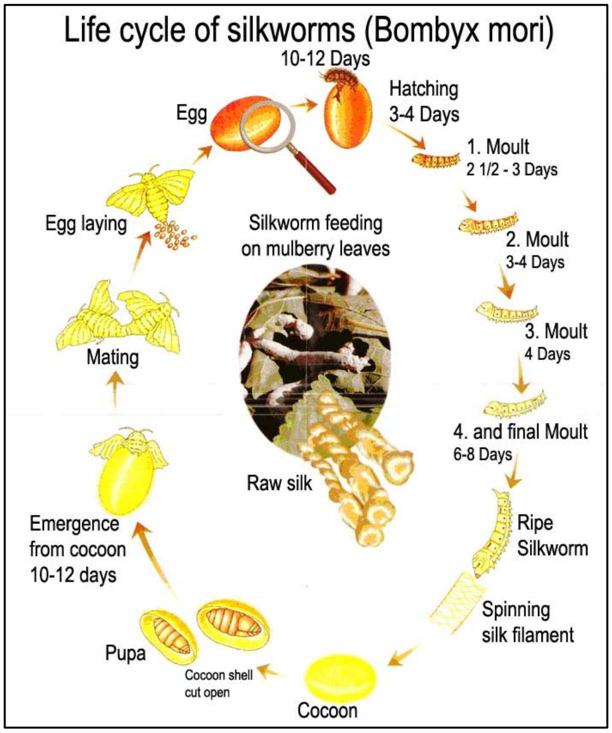

Diagram Two The Life Cycle of Bombyx mori *Source: Silk Worm Research Institute*

Before we get to the specifics of the technologies and the markets the company wishes to address, we will need to provide some background on how the silkworm has been transformed in some previous genetic experiments. Early in the year 2000, a group of genetic scientists published a paper explaining a successful experiment to prove the effectiveness of a new genetic technique in order to create the first silkworm that contained the genetic material from another organism, thus creating the first transgenic silkworm.

While the gene splicing techniques we discussed above are relatively new to mankind, the field of genetic engineering is not new at all, as mankind has practiced a form of it through crossbreeding of plants and mammals for thousands of years. Such “low-tech” forms of genetic engineering have produced significant gains for humankind.

As the science of genetic engineering progressed, the scientific community quickly moved to advance the understanding of genetic engineering relative to plants and mammals. As a result, there is currently a significant set of knowledge accumulated relative the genetic modifications of these species. However, the field of genetic engineering relative to insects is a much more recent science with the vast majority of research into the area occurring in only the past 10 years. Genetic modification techniques that had been developed for plants and mammals were simply not effective relative to insects; therefore new techniques were needed in order to genetically modify insect populations.

The project to produce the first transgenic silkworm was headed by Pierre Couble of the Universite Calude Bernard in France. While there were 13 other researchers and scientists involved in the experiment, the efforts of one of the scientists would become of particular importance to Kraig Biocraft Laboratories. The scientist was Dr. Malcolm Fraser, of the University of Notre Dame.

Dr. Fraser had previously discovered a significant innovation for transporting the genes of one organism into another organism. This technique is called piggyBac, which is a gene sequence Dr. Frasier isolated from the genes of a virus called baculovirus. This virus widely infects insects and as a result turned out to be perfect for use as a technique to genetically modify insect species. While the specifics of piggyBac are significantly too technical for this research report, there are a few attributes of the technology that are worthwhile to understand relative to the initial silkworm experiment and Kraig Biocraft Laboratories' goals.

Dr. Fraser currently supervises the development of the company's technologies and is a member of the company's advisory board, in addition to being a significant holder of the company's common stock.

The piggyBac technique, when used with other gene splicing technologies, is very efficient in the transportation of genetic material from an originating organism into a host organism. The technique allows for very accurate insertion of the genes into a very specific location on the DNA strand of the host organism. This very accurate insertion technique is important for two reasons. First of all, the technique, when used in combination with other recently introduced genetic techniques, allows for not only the insertion of one organism's genetic material into a host, but also allows the new genetic material to completely eradicate certain genes within the host organism. For example, if we had a particular insect that has blue wings, utilizing genetic engineering techniques we could extract the genes for blue wings from the blue winged insect and insert those genes into an insect that has red wings.

With some genetic engineering techniques the genes for blue wings would simply be inserted somewhere within the DNA of the host insect with the original genes for red wings surviving the process. The big difference with the piggyBac method, relative to our example, is that when it is combined with other genetic techniques it is possible to specifically target the placement of the genes for blue wings directly on the DNA strand where the red wings genes are located, effectively wiping out all of the genes for red wings.

While this methodology of specifically placing the genes into the host organism is a major feature of the piggyBac method it is only one of the major benefits. An additional important feature inherent to the piggyBac technique is that it creates something called a germ line transformation of the new organism, which means that the introduced traits are inherited by future generations of the organism. Because of this feature the genetic modification of the organism only needs to be done once and all future generations will be forever modified to carry the new traits.

The experiments outlined in the scientific paper we referenced above clearly showed that the piggyBac technique could be used to significantly modify silkworms and that these modifications would carry on into subsequent generations. While the genetic scientists on the team used a green fluorescent protein as the selected genetic marker, it is widely believed that silkworms can be modified in many other ways. For example, genetic mutations could be performed that would make the silkworm more resistant to viral and bacterial infections and to possibly increase the amount of silk produced. Additionally, the experiment showed that silkworms could likely be modified to develop immunity to certain bacterial and viral infections that currently plague the silk production industry.

The initial paper that reviewed the transgenic silkworm study also outlined the possibility of using these genetic engineering techniques to transform the silk produced by silkworms. One of the applications that has been widely discussed among researchers is the possibility to introduce genes into silkworms that would force the silkworms to produce colored silks. Additionally, the original paper outlined at the possibility of introducing spider silk genes into silkworms so that silkworms would produce silk that is either similar or exactly like the silk produced by spiders. Such a product would be highly desirable by the textile and a host of other industries.

The use of silkworms to produce spider silk seems to make sense to a significant number of scientists and researchers. The silkworm is ideally suited to produce such fibers because it has been cultivated in captivity for thousands of years and is a proven commercial and industrial producer of similar protein-based fibers. Over 40% of the silkworms bodyweight is devoted to it silk glands, which produce large volumes of mixed proteins called fibroin, which is then spun into silk. Non-genetically modified silkworms produce a single thread of silk that is nearly 1,000 meters long. Significant silk production can be gained in very small buildings because silkworms are housed in containers of thousands of silkworms. These containers are stacked into multiple layers allowing for millions of silkworms to grow in only a few thousand square feet of floor space.

Another factor that makes the silkworm a perfect candidate for the technology is the fact that silkworms can only survive in captivity because after many centuries of domestication the ability to fly has been lost. There are some concerns in different scientific circles about the use of the piggyBac method in insects that will be released into the wild because it is not known how these genetic modifications could affect other insect species. Due to the complete dependence on humans for survival, this issue is not a concern relative to silkworms.

In addition to applications for transgenic silkworms discussed above, there are also significant additional possibilities relative to protein production for the pharmaceutical, biotechnology and other scientific industries. The company has already identified several promising avenues of pursuit relative to this area.

Kraig Biocraft Laboratories' Utilization of These Technologies

Kraig Biocraft Laboratories is focused on the development of significant high performance technical fibers and polymers utilizing transgenic silkworms as a unique protein expression system - simply put, the company is heavily involved in research related to utilizing spider genes for insertion into silkworms to create a transgenic variety of silkworms capable of spinning a new "super fiber" that is either similar or an exact copy of natural spider silk, which is one of the strongest and most resilient fibers known. For many years the textile and material science industries have sought to replicate spider silk, but results have been elusive.

The company has acquired the exclusive rights, in their field of use, to the genetic sequences patented by the University of Wyoming and the genetic engineering technology developed by the University of Notre Dame and is working in conjunction with leading genetic engineers at these universities toward the above goals. As part of the company's intellectual property portfolio, Kraig Biocraft Laboratories has the exclusive rights to use the patented spider silk gene sequences in silkworms within the United States.

While the production of a "super fiber" is the company's primary focus at this time it is also considering the production of other unique proteins utilizing transgenic silk worms as a protein expression platform. It is thought there is a large viable market for these unique proteins within the pharmaceutical, biotechnology and other research driven industries.

The company's intellectual property portfolio also includes a separate US provisional patent application regarding certain methodologies, genetic sequences, organic polymers and composites of fibers. We are expecting this intellectual property portfolio to continue to grow over the coming years.

Potential Competition

While there is considerable desire by researchers to create artificial spider silk to be design into a variety of commercial applications, there is clearly another avenue to pursue relative to meeting the market need. Rather than concentrating on the production of spider silk, we believe it is likely that several industry giants including, industry leader Du Pont, are actively developing new types of artificial fibers that will have similar strength and resilience properties of spider silk.

DuPont Corp. has recently announced a new product, which it calls M5. The fiber is currently being developed under a joint effort between DuPont and a majority owned subsidiary, called Magellan Systems International. It is widely thought that M5 has the potential to capture the high end of the market for technical fibers due to its very high strength and its robust thermal and flame resistant properties.

Sizing the Market Opportunity

The market in which the company will participate is generally referred to as the “technical textiles” market. The market encompasses a broad range of products that are used for a huge number of different types of applications. The common characteristic of companies that participate in the technical textiles market is that the fibers, often which are engineered in the form of fabrics or yarns, are designed to meet specific performance characteristics specified by the final market or end customer. The products sold into the market are either finished products in themselves or are used as components to produce other products.

The specific sub-sector of the technical textiles market where the company is expected to participate is known as the high-performance fibers market and can be broken down into two main areas:

The first of these areas is aramid fibers. The best known of these fibers is DuPont's Kevlar, which holds a significant market share of the high-performance fiber market, likely producing over $5 Billion in sales for Du Pont each year. Kevlar combines very high strength with a lightweight profile. For more than four decades, Kevlar has dominated the market with wide adoption in a variety of consumer and industrial applications.

The second classification of these high-performance fibers is ultra-high molecular weight polyethylene fibers, such as Spectra, which is produced by

Honeywell International, Inc. and Dyneema, which is produced by DSM NV, a company located in Netherlands. Dyneema is an important component in ropes, cables and nets used in the fishing, shipping and offshore industries due to its ultra-high strength, its resistance to moisture and for the ability for the fiber to float in water. Spectra is used in numerous high-performance applications, including bullet resistant vests, helmets and armored vehicles, as well as in fishing lines, sailcloth in many other marine-related applications.

All the products in these categories are significantly stronger than steel of equal weights and diameters and due to this superior strength and toughness have been widely adopted into a variety of industrial, aerospace and ballistic protection applications.

The worldwide market for these fibers and other high performance technical fibers, as discussed above, is currently estimated at approximately $90 billion per year, with the United States accounting for more than half of the market. The market has experienced significant growth over the past 10 years and is expected to retain a similarly robust growth rate over the coming years.

While these products are well established in the marketplace and are expected to be considerable competition, there are certain properties that are inherent to spider silk that are still superior to these synthetically derived products. While Kevlar can be measured to have superior tensile strength versus spider silk on a pound per pound basis, Kevlar pales in comparison to spider silk relative to the ability to absorb energy prior to fiber breakage. Relative to this characteristic spider silk is unmatched by any man-made or naturally occurring fiber.

An additional unique property of spider silk is that it is derived from all natural sources. All of the competitive products mentioned above are manufactured using toxic chemicals, which pollute the environment. Additionally, none of these products are biodegradable. Spider silk on the other hand, of course, is an all-natural product that naturally breaks down in the environment and requires no chemical inputs for production. The only inputs that are needed for transgenic silkworms are Mulberry leaves, oxygen, and a bit of genetic material from their very distant cousins, the spider. Additionally, products made using spider silk could be completely biodegradable, a feature that has been purposely engineered out of competing high-performance fiber products.

Overview of the Kraig Biocraft Laboratories' Team

The CEO of the company, Mr. Thompson is the only member of the scientific advisory board who is also a part of the corporation's management. His formal education lies in the fields of economics and law. He received his B.A. in Applied Economics from James Madison College at Michigan State University. He received his Juris Doctorate from the University of Michigan Law School in 1994. His interest in genetic engineering dates back to the 1970s when, as a teenager, he witnessed the early success of cloning experiments with amphibians.

Mr. Thompson is the named inventor in a pending provisional patent application for a number of organic polymers. The patent application has been assigned to the benefit of the company. A central part of the company's work is in reducing those inventions to practice. Mr. Thompson founded Kraig Biocraft Laboratories in his pursuit of the development of new biotechnologies with industrial applications. As chairman of the scientific advisory board, he brings a unique perspective, and acts as the primary liaison between the advisory board and the corporation.

This is not to say, however, that the company is lacking in talent as the other team members, while not direct employees of the company, still contribute significantly to the company's efforts. These team members include:

Malcolm. J. Fraser, Jr. Ph.D.

Dr. Fraser received his Ph.D. from Ohio State University, and performed postdoctoral research at both Penn State University and Texas A & M University. At Texas A & M he was a part of the team which developed the genetic expression system which is now a widely used methodology for producing organic molecules, including pharmaceuticals, on an industrial scale.

He is the co-inventor of the gene splicing technology "piggyBac", as well as the inventor of various piggyBac improvement patents. It was his work on piggyBac which first caught the attention of Kraig Biocraft Laboratories.

He was recently selected as a fellow of the American Association for the Advancement of Science. This was awarded in recognition for his distinguished contributions to genetics and transgenesis, and for his discovery of the piggyBac transposable element and derived transgenic vector system.

In 2006, Dr. Fraser was awarded $2.5 million from the Bill and Melinda Gates Foundation to fund "deliverable technologies" in the field of transgenics, for the prevention of mosquito born disease.

Dr. Fraser is a member of the faculty at the University of Notre Dame, where he heads the Fraser Laboratory. The focus of his work is molecular genetics. He is the author or co-author of numerous scientific articles in the field of genetic engineering and gene manipulation.

Randy Lewis, Ph.D.

Dr. Lewis received his B.S. in chemistry from the California Institute of Technology. He received his M.S. in chemistry and his Ph.D. in Biochemistry from the University of California, San Diego.

Dr. Lewis is internationally renowned for his work on spider silk. He is also the named inventor of a number of patents relating to spider silk polymers. He is a member of the faculty at the University of Wyoming, where he heads the Lewis Laboratory within the Department of Molecular Biology. The study of spider silk polymers and their underlying genetics is a major focus of Dr. Lewis's research.

Donald L. Jarvis, Ph.D.

Dr. Jarvis received both his B.S. and M.S. in microbiology at Idaho State University. He received his Ph.D. in Virology at Baylor College of Medicine. After earning his Ph.D. he trained in molecular cloning at Baylor. In 1987 he undertook postdoctoral studies on glycoprotein biosynthesis at Texas A&M. In 1989, Dr. Jarvis moved into an independent position at Texas A&M.

In 1998, Dr. Jarvis accepted a position in the Department of Molecular Biology at the University of Wyoming. He received a professorship in 2000. Dr. Jarvis heads a research laboratory within the University's Department of Molecular Biology which focuses on biochemistry, biosynthesis, and practical genetic engineering applications. He has approximately eighteen patent applications and intellectual property licensing agreements to his credit, including biosynthesis technologies and technologies with potential applications for pharmaceutical production. He is the author or co-author of numerous scientific articles in the fields of biosynthesis, genetic engineering and biochemistry.

Status of Technology Development and Expected Time Frames

The company has yet to produce its first transgenic silkworm capable of production of spider silk protein expression. Work toward this goal continues under the direction of Dr. Fraser at the University of Notre Dame.

The company is in possession of the coded gene sequences relating to spider silk production and is currently working on microinjection of this material into silkworm eggs. The staff at the University of Notre Dame has recently been enhanced in order to further refine the micro injection process and increase the number of microinjections being performed.

We believe it will be possible for the company to achieve successful micro-insertion, which will yield its first transgenic silkworm capable of the correct protein expression by the end of 2008. The company further estimates that it will likely take an additional year to refine the process in order to achieve the exact desired genetic mutations.

The company is in a rather unique position within the biotech industry in that FDA approval of its resulting technologies and products is not required. While the core genetic technologies used in the company's research are overseen by the FDA, the company's university research partners take care any FDA requirements. This means that upon successful production of the desired transgenic silkworm, the company could move immediately into production, licensing agreements or a direct sale of the technology or of the entire company.

After achieving that goal of creating a line of silkworms capable of the production of new silk fibers, the company will likely follow one of two paths. We believe the most likely path will be the sale of the entire company or the licensing of the technology to one of the larger technical textile market participants. An alternative path would be to pursue bulk sales of fibers produced by the transgenic silkworms. This would likely require significant additional financing as the level of vertical integration that would be required would likely be substantial.

We believe it is unlikely the company will pursue this second path and believe either an out right acquisition or a licensing agreement is likely should significant developments take place in the laboratory that would allow the company to achieve its desired genetic modifications of the silkworm species.

Risk Factors

The single biggest risk factor relative to investing in Kraig Biocraft Laboratories is that the company may not be able to produce the desired transgenic silkworms. While some genetic modifications of the silkworm species have taken place, there can be no assurance that the genetic mutations the company's scientists are seeking to achieve are even possible. Should the company be unable to produce these genetic modifications, Kraig Biocraft's stock would likely lose a significant portion of its value.

Another risk factor that investors should closely monitor is the likely need for additional capital. The company has yet to produce any revenues and has been selling stock in order to raise cash to continue its research. It is likely that additional capital will need to be raised over the coming months. We believe the capital requirements for this company, however, are relatively conservative as the key scientific personnel have been given incentives via stock ownership and receive no monthly compensation directly from the company and are instead employees of major universities that have significant research budgets.

An additional risk factor for investors to closely monitor relate to the competitive issues raised earlier in this report. At least one Asian laboratory is working on similar technologies and it is unclear at this time where their development stands. This risk is somewhat mitigated, however, by the fact that Kraig Biocraft Laboratories has a strong intellectual property position relative to production and sale of the potential product within the United States. Relative to the competitive situation, we believe it is also important to watch the product development efforts of the dominant players in this industry, as it appears several major products are close to commercial viability.

Our Opinions and Conclusions

We are clearly excited about this company's prospects to develop a "super fiber" that can be sold into the technical textiles industry. The company's research and development efforts seem to be based on solid science that has been developed by some of the world's leading genetic researchers. The company's technical team now needs to move beyond the theory and into actual production of the transgenic species.

We see the major risk to the company not from the current industry leaders in the textile industry, but rather from delays in moving from theoretical to practical application of the technology. While scientifically speaking there appears to be no technical barrier for the production of the required transgenic species, it is unclear at this time how long it will take to produce the desired results.

The physical properties of spider silk are quite remarkable and artificial or transgenic production of these fibers will surely be viewed by the scientific community as a major breakthrough. Additionally, such a development would also likely yield significant coverage in the general business and popular press sectors, perhaps offering Kraig Biocraft Laboratories significant public relations exposure, which could easily drive the price of its shares to much higher levels.

Relative to the development of new technologies, there are numerous cases that can be referenced where it has been advantageous to be the second or third team that has attempted to develop a new technology, rather than the first. We believe this may very well end up being the case relative to Kraig Biocraft Laboratories. The initial work into production of spider silk proteins completed by Nexia Laboratories provided important information relative to the viability of various techniques. While Nexia was able to produce spider silk proteins they failed to reach their overall goal due to the difficulties in producing the actual silk fibers from the underlying proteins. This made it clear to all future researchers that the secret to success lies in the spinnerets of silkworms and spiders and not in the technologies to produce the actual proteins.

This research failure provides important insight into the sophisticated processes that spiders and silkworms utilize in silk production. With perfect hindsight, of course, the research direction pursued by Nexia seems rather naïve when compared to the much more elegant transgenic approach of modifying an existing silk producing organism, a silkworm, to produce something thousands of years of evolution has already well equipped it to produce. While the genetic scientists at the Kraig Biocraft laboratories will receive the accolades if the company's approach ultimately proves successful, it is the researchers at Nexia, who tried and failed, and the investors who funded their efforts, that perhaps too will likely deserve some credit.

While much of this research paper is devoted to a discussion relating to the production of spider silk and this is the primary driver for the company, we believe it is also important to point out that the use of transgenic silkworms for the production of other proteins seems to be an additional viable, and particularly lucrative, market for the company to derive revenue.

Additionally, while much of our above discussion has been targeted at the use of spider silk in the technical textiles markets, we believe the fashion and apparel industries could also be significant markets for spider silk fabrics. The angle of marketing spider silk garments as originating from a predator species versus silk worm silk that is produced by a prey species, seems to strike a chord with us and we believe may ultimately be a viable marketing angle for such fabrics.

We view it as very exciting that the company has aligned itself with Dr. Malcolm Fraser, who was the inventor of the piggyBac technique for gene transposition and Dr. Randy Lewis, who is one of the world's foremost authorities spider silk. Our information shows that Dr. Fraser is taking a very active role in the development of the science. As a meaningful shareholder in the company he stands to gain substantial monetary rewards, in addition to significant academic and scientific accolades.

Should the company achieved a major breakthrough in the laboratory we would expect that it would take an additional year to completely refine the process. During this period we would anticipate the company's management team to actively pursue licensing agreements or the outright sale of the company. Should the company achieve its desired transgenic goals, we believe it would be very unlikely that the company would pursue vertical integration in order to actually achieve production of fibers on its own as this would require a very specialized management skills and extensive amounts of fresh capital.

One of the major hurdles that most biotechnology companies must overcome is the FDA approval process. Because Kraig Biocraft Laboratories does not need FDA approval, we believe it will be much easier for investors to monetize their investment should a major breakthrough be achieved in the laboratory.

Placing a Value on This Technology Should It Prove Viable

We believe an analysis of the underlying monetary value of a robust technology for the production of a new “super fiber” based on spider silk is extremely interesting. Several years ago DuPont Corp. purchased a controlling interest in Magellan Systems International, the developer of the super resilient fiber known as M5. Terms of this deal, however, were never released to the public and therefore provide us with little assistance in determining the value on this technology.

DuPont currently realizes in excess of $5 billion per year from sales of Kevlar. While extremely difficult to place a value on only this part of DuPont's business, attempting to do so anyway yields some interesting numbers.

The market capitalization of DuPont is approximately 1.1 times estimated 2009 revenues. If we use this same price to sales ratio applied to the Kevlar product, we believe we can make an argument that the market value of Kevlar is at least $5.5 billion ($5 billion times 1.1, which is the price to sales ratio for the entire company). Kevlar, however, is one of DuPont's flagship products and, therefore, we would conclude that the market value of Kevlar significantly exceeds $5.5 billion. If, for lack of a better multiplier, we apply a 1.5 “flagship product” multiplier to the $5.5 billion number, we derived above, we could perhaps make the argument that Kevlar is worth approximately $8 billion.

Of course, comparing a completely undeveloped product such as spider silk to the most successful synthetic technical fiber ever produced calls for a bit of stretching of one's imagination. We do believe that this analysis is useful, however, as it demonstrates the very high value that is placed on such technologies.

Should Kraig Biocraft Laboratories produce a meaningful breakthrough in the laboratory over next year and if the company is able to further refine its technology into a commercially viable transgenic species capable of significant expression of spider silk proteins, we believe such a discovery will likely be immediately worth several hundred million dollars to one of the multinational corporations involved in the technical textiles industry.

Thus, we are establishing our price target for this stock at $4.00 per share, which represents a market capitalization of $200 million divided by 50 million outstanding shares. This is price target is predicated on the company reach this near term goal, however.

Should additional refinements be made and actual production of fibers commence resulting in the beginnings of a robust fast growing market for spider silk-based products, we believe the value of this technology could potentially skyrocket, ultimately being worth billions of dollars to the company's investors. Shares of Kraig Biocraft Laboratories are clearly speculative, but offer some exciting appreciation possibilities in the future. It will surely be exciting to watch developments at this company over the coming years.

Analyst and Other Important Disclosures

Analyst Certification - I, Joseph Noel, hereby certify (1) that the views expressed in this research company report accurately reflect my personal views about any or all of the subject securities or issuers referred to in this company report and (2) no part of my compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed in this company report.

Analyst:

Joseph Noel is a 29-year veteran of the research and investment industries. Joe was recently a senior analyst at Pacific Growth Equities, LLC, where he tracked the small capitalization and advanced industrial sectors. Prior to Pacific Growth, he covered both the small capitalization growth and industrial services industries at Hambrecht & Quist and was employed by Gartner/Dataquest as an industry analyst. Before becoming an analyst, Mr. Noel received solid industry experience at a number of telecommunications carriers, including MCI, where he was responsible for the frame relay product marketing launch; and British Telecom, where he was involved in strategic planning for the company's Internet access service. He was also employed by various Bell Operating Companies in both marketing and technical roles for nearly ten years. Mr. Noel received his MBA in finance from Wake Forest University, and holds a BS in business and economics. A four-time Wall Street Journal All-Star Analyst, Joe specializes in emerging growth companies in the communications, Internet and advanced industrial equipment sectors.

The coverage analyst uses a relative rating system in which stocks are rated as; BUY/SPECULATIVE, SELL, or HOLD.

Stock Ratings:

BUY/SPECULATIVE - the stock is expected to outperform the unweighted expected total return of the sector over a 12-month investment horizon.

SELL - the stock is expected to underperform the unweighted expected total return of the sector over a-12 month time horizon

HOLD - the stock is expected to perform in line with the unweighted expected total return of the sector over a 12-month investment horizon.
